



ROYAL GARDENS KEW.



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COTTAGE GARDENER,

AND

HOME FARMER.

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TO OUR READERS.

The years whirl round apace, and the more there are of them the quicker do the seasons appear to come in their turn. This will be the experience of all our old friends and helpers, and they will feel, as we do, that speeding time is made the more pleasant by the good influences of the gardens which they love to tend, and from which they derive health and inspiration. May their garden pleasures be much prolonged, not for themselves alone, but for others who benefit by their experiences as detailed by facile pens.

To the younger, but yet strong, as if in their zenith, the time will glide more steadily, and they we hope shall have a long, useful, and prosperous career before them. It will not be less so by their endeavours to incite in others the love of gardens they themselves enjoy, and by their efforts in imparting knowledge on subjects pertaining to the craft they adorn.

To the younger still—the probationers in that craft—time may seem to drag; to some their work may be hard, and they look longingly onward to what they hope may be an easier life. Their time will come, and it depends on themselves, and the assistance given them, whether they will fill the positions they will occupy as worthily as do men who fill them now, and as those who have gone before. We counsel young men to strive for knowledge and to win respect, and we trust those in authority over them will aid them in the commendable desire.

We rejoice in having the co-operation of men, amateurs and gardeners, of ripe experience, as well as of young men of great promise, and therefore it is that we are enabled to make the pages of the *Journal of Horticulture* not only substantial, but bright—even sometimes lively—and it is gratifying to know that our readers are satisfied. A gardener writes:—

"Besides the practical knowledge that I have gained from the Journal, I have learned to love gardening for its own sake, and that makes arduous duties appear light. As a result I have been able to give the utmost satisfaction to my employers, and have good recommendations from them. . . . I have to seek a fresh field of labour, but I still hope to be able to show that the teaching of the Journal has not been thrown away on me. Long may Editors and staff continue to advise, instruct, commend, and not to forget wholesome reproof where needed. . . . I make no apology for troubling, as you have forgotten to despise the small gardener."

Despise the small gardener! We have just the same respect for able men, who are doing their duty creditably and well in small gardens, as for those in large ones. Some of the great gardeners of the day won their spurs in small gardens, and we are glad to know that not a few managers of these small gardens are as happy in their homes as are the gardeners of lords and dukes. We trust our appreciative pupil has found a comfortable home.

A correspondent, who is not a gardener, but a country gentleman in the Midlands, has written to us from Biarritz:—

"The Journal of Horticulture is one of the very few papers I have sent on here. I have had splendid crops at home—beaten my 'practical' neighbours in growing Swedes, Mangolds, Oats, and Parsnips—by following your rules. Your Farm Notes are splendid. If 'practical' farmers would follow them as the amateur does, I do not think we should hear much more of the impractical—viz, a duty on corn imported."

We have said our Readers are satisfied; so are we, and we thank all most cordially, amateurs and gardeners, old and young, for contributing so ably in making the *Journal of Horticulture* the welcome guest it undoubtedly is in the homes of the wealthy and the workers in this and other lands.

Our best wishes to all for a happy close of the old year and an equally happy opening of the new.

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INDEX.

ACACIA GRANDIS, 88
Achimenes, at Reading, 32; in haskets at Chatsworth, 80
Acidanthera æquir octialis, 77
Achmea Mariæ Reginæ, 401
Aerides, notes ou, 3; Sanderiannm, 215
After the rain, 47
Agathæa cœlestis, 468
Agave Leopold II., 335
Aglaonema rotnndum (pumilnm), 297, 379, 400
Agricultural College, a new, 171
Agricultural Hall Show, report of 191, 219; comments on, 224
Agricultural science, 9
Albert Nurseries, Peckham
Rye, 531
Allamanda Williamsi, 171 Albert Nurseries, Peckham Rye, 531
Allamanda Williamsi, 171
Allotments, at Richmond, 8; at Kingston-on-Thames, 334
Alocasia Chantrieri, 297
Aloes, variegated, 266
Alstræmeria aurantiaca, 30
Amaryllis, the blue, 102; helladonna, 375
American Ginseng, 88
Ames, Mr. F. L., death of, 313
Analysis of solls, 347, 369
Anemones, polyanthes, 184; St.
Brigid's (A. coronaria semiplena), 504, 574; fulgens, 549
Anglo-American day, an, 69
Angus, Mr. A. K., death of, 553
Annuals, showing, 66
Anomatheca cruenta, 99
Anthemis, extraordinary fasciation in, 125
Anti-hlight powders, 201
Anthracnose in Vines, 221
Antirrhinums, white, 197, 219, 583
Ants, destroying, 300 Anthracnose in Vines, 221
Antirrhinums, white, 197, 219, 583
Ants, destroying, 500
Antwerp Exhibition, the, 534
Aphis life, peculiarities of, and east winds, 94
Apples, market, 76; New Zealand Apples in London, 76; early, 102; from the Himalayas, 153; Japanese, 149; Blsmarck, origin of, 164; at Swanmore, 187; gathering and storing, 206; notes on varieties, 213; Benoni, 232; in cooi chamhers, 221; in Durham, 242; scarcity of dessert Apples, 242; Benoni, 242; a fine crop of Peasgood's Nonesuch, 246; cheap, 244; ln America, 245; American Baldwin in England, 255; The Lady, 800; Wealthy, 817; Ecklinville, 317; Duchess of Oldenhurg, 317; Peasgood's Nonesuch, 317; from seed, 3:2; large soft, 355, 376; at Covent Garden, 355; the hest county for, 375; transparent patches in flesh, 388; dressing wounds of Apple tree, 388; in Surrey, 401; an immainent scarcity of, 437; preserving, 443; the keeping of, 487; Baidwin in England, 488; a good crop of Rymer, 489; losing flavour, 489; keeping, 508; mineral constituents of, 522; American, 528; Glœosporium fructigenum, 544; American, 548; some good, 572; Gascoigne's Scedding, 588
Apple blossom weevil, 580
Appicots, from open air stand-

Apple blossom weevil, 580
Apricots, from open air standards, 163
Aquarium (Royal) Show, 341
Araucaria wood, 221
Arboricultural (Royal) Society,
Ecottish, 178

Bogue, Mr. G., death of, 317
Bone ash as a manure, 566
Bone manures, 480
Bones, in Chrysanthemum pots,
112; and kainit, applying
dissolved, 322
Books—"The Garden Story," 55;
"British Fungns Flora," 56;
"Art Out of Doors," 250; "Tea
Roses: How to grow and exhibit them," 558
Boronla polykalifolia, 88
Botanical Congress, first international, 375
Botanic (Royal) Society's
evening fête, 34; scientific
work, 149; meetings and
shows for 1894, 553
Bouquet, a remarkahle, 313
Brighton and Snssex "New"
Horticultural Society, 491
Bristol notes—Springfield, 122;
Henbury Hill, 154; Malmains,
155
British fungus flora, 443 Aristolochia Slpho seeding, 554
Ashford Vlneries, 294
Asparagus forcing, 565
Augnst heat and garden produce, 163
Auricula and Primnla (National) Society's report, 401
Australian fruit, 76
Antumn foliage and berries, 391 BACTERIA, IN TOMATOES, 79, 99, 825, 372; microscope for examining, 545
Bananas at Knightshayes
Court, 576
Banhury Onion and Vegetable
Show, 275
Bank Holiday engagements, 115 115
Banksia integrifolia, 435
Barford Hill Gardens, 152
Barlerias, 155
Battersea Park, 215
Beale, Mr. H. E. C., death of, Beans, Scarlet Runners not setting, 80, 106, 117, 168; at Maiden Erleigh, Runner, Bedding in tropical weather, summer, 258 Bedding plants, propagating, summer, 258
Bedding plants, propagating, 212
Bees—Punics, swarming, 20;
Punics and crossed Syrians, 43; swarming, 43; at the moors, 65, 88, 111, 135, 208, 231; preparing for winter, 208; Punics, 83, 111; swarms not working, 111; Scottish decision on swarms, 159; at the Heather, can hees count? 183; do hees fly in a straight line? 183; useful hints, 254; rohher hees, 254; home from the moors, 277; practical hints for heginners, 321, 343, 365, 387, 433, 480, 500; supering, 387; hives and honey, 412; the season of 1893, 484; presentation of honey to the Lord Mayor, 434; repairing hives, 458; storms and wrappings, 458; foul hrood, 458; earwigs and hees, 458; the weather, feeding, 480; in Yorkshire, 500; Laoarkshire storifying hive. 544; and the weather, 665; humble bees in New Zealang, 565; in 1893, comh building, spreading brood, 552
Begonias, at Swanley, 9; at Bexley, 33; seed, sowling, 66; at Henhury Hill, 267; Duchess of York, 297; (tuberous) as bedding plants, 310; at Forest Hill, 310; smmmer and winter, 374; John Heal, 419; Glolre de Lorraine, 555
Belladonna Lily seeding, 375
Besson, Monsieur Antolne, death of, 469
Bexley Begonias, 33
Birds, our, 177; and the fruit, 266
Birkheck Bank, 33
Birmingham and District Ama-

266 Birkheck Bank, 33 Birmingham and District Amateur Gardeners' Association, 468, 533

Hackherries, culture of, 552 Black fly, winter condition of, 583

Blandford Horticultural Society, 172
Blood and Wood ashes, mixing,

Blood manure, making, 459

British fungus flora, 443
Broccoll, sub-leaveson midrih, 44
Brockhurst, jotting about, 168
Browallia macrantna, 419
Brussels Spronts, 491
Buchan Hill, 241
Buddieia glohosa in Kirkcudhrightshire, 76
Bulhs, forcing, 438; from Asia Minor, 76
Bnilfinches, trapping, 544
Bnyard's, Messrs, G. & Co., fruit trees at, 243
Bulbophyllum viride, 119;
B. spathaceum, 175 CACAO IN TRINIDAD, 468 Cadland Park, 143 Caladium Baronne de Maimore, 30 Caledonian (Royal) Horti-cultural Society, annual meeting, 553; Shows in 1894, cultural Society, annual meeting, 553; Shows in 1894, 575
California midwinter International Exposition, 236
Calia, a new rose coloured, 420; a new, 443
Camellia buds dropping, 522
Campanulas persicifolia Backhousiana alba, 3; grandifora Mariesi, 103, 124; nitlda alha, 239
Camphor, Formosan, 239
Canker, in fruit trees, 6, 50, 105, 120, 467; insects, 44; winter treatment of, 327
Canker mite in Pear trees, 222
Cannas, new varietles certificated, 131
Canterhury Bells, 8
Caper plant, the, 45
Cardiff, a botanic garden for, 533
Carex japonica, 420
Carnation and Picotee Union Show, 63
Carnation (National) Society's report, 401
Carnation and Picotee Society (northern section), 108; Midland (annual report), 554
Carnations, for market, 2; Margaret, 8; at Chelsea, 26; disease, eelworms, 34 and 35; National Show, 36; a flue, 101; at Slough, 105; Miss Nuna Balfour, 136; at Halton, 199; English, in America, 245; new, 362; new self, 383; as an annual, the, 439; improvement 46, 444; plants dise, sed, 566; Margaret, 572
Carnation shows — Mid and Counties, 86; West of E: g-land, 85

Carrots, culture of, 263
Caryopteris Mastacanthus, 401
Cassia corymbosa, 289
Catasetum Bungerothi, 269
Cattleyas, witholding water
from. 255; C. aurea, 237;
C.Gaskelliana. 237; hlesensis,
297; hicolor, 351; marginata,
394; Lord Rothschilo, 417;
¿itrina, 505, 529
Caullflowers in adverse seasons, 263 sons, 263 Cedrela, 492 Cedrela, 492
Ceiery, and Celeriac, 135; ieaves decaying, 255; culture, 397; protecting, 479; deeply planted, 508; decaying, 567
Cemetery, South Shields, flowers io, 198
Cereus. Night-blooming, 6, 2; Chatsworth. 80
Cherry wood, 522
Chicago, World's Fair, awards to British exhibitors, 312
Chi well, a call at, 493
Chinese Bean oil, 314
Chrysanthemnm (National)
Society's annual onting, 58; Committee meeting, 74, 339
sannal dinner, 516; early winter show (Aquarium), 519
Chrysanthemums, manurial mixture for, 20; early flowering, 58, 271, 292; prospects, 74, 105; a Japanese Show, 74; in New Zealand, 74; frozen hlooms from Australia, 74; prospects tn Ireland, eelworm infestation, 129; "himd" hy insect punctures, 136; a raiser honoured, in New Zealand, America, and Japan, hud formation, 154; foes, at Heywood, 176; in Japan, 177; early flowering, 249; show at Bordeaux, 249; housing, 278; manure water for, 278; big blooms in France, 290; hud mite, 291; certificated, 316, 445, 497, 514, Madame Desgranges, 316; an East-end show, Sheffield Chrysanthemum Society, Show, 352; at Waterlow Park, 352; as Waterlow Park, 352; as Waterlow Park, 352; as Waterlow Park, 352; and Waterlow Park, 352; and Katersea Park, 352; as Waterlow Park, 353; shows, 380; lnn r Temple Gardens, Battersea Park, Dulwich Park, 380; Fnshury Park, 341; The Priory Hornsey, 381; around Liverpool, 381; Highfield, Woolton, 331; Highfield, Woolton, 332; Camp Hill, Woolton, 382; Lim Hall, Wavertree, 382; Mossley House, 382; out of date varieties, 382; out of date varieties, white Viviand Morel, Nets on prize schedules, 382; notes on prize schedules CHRYSANTHEMUMS—Conlinued.
damping, 402; The Tribume,
403; in the south, 404; at
Chelsea, 405; at Swanley,
Forest Hill, and Lewisham,
406; at Exmonth, 407; Mr.
Smee's, 422; Lucy Kendall,
422; alargeViviand Morel, 422; at
Jesmond Towers, 422; at the
Crystal Palace, 422; Maidenhead, 423; Royal Gardens,
Windsor, 423; early and semiearly flowering Chrysanthemums, 423; exhibitors'
cards, 444; the N.C.S. and its
certificates, 444, 470, 497, 537; a
fracas at the Aquarinm
Show, 441; Mdlle. Thérèse
Rey, 445; judges and judging. 445; a large Viviand
Morel, 445; white Viviand
Morel, 445; experiments in
Chrysanthemum culture, 445;
Charles Davis, 445, 470, 497, 537;
novelties at the Aquarium
Show, 446; at Ketton Hall. 446; Woodhatch
Lodge, 446; Svon House, 446
The Grange, Hackhridge, 446;
Earlswool, 446; protests at
shows, 470; Lord Rosebery,
470; cup at Grassendale Show,
470; Beauty of Exmouth, 470;
White Viviand Morel, 470;
next year's shows, 470; at
Chilwell, 470; N.C.S. Committee meeting, 471; Analysis,
1885-92, 483; Mr. Molyneux
in Ireland, 497, 537; L6on
Frache, Mdile Marie Hoste,
497; an amateur's Chrysanthemums, 537; L6on
Frache, Mdile Marie Hoste,
497; an amateur's Chrysanthemum Show, 497;
a curious case of judging,
503; new, 514; cups
and tubes, 515; nempon
Fiorence Carr, 515; incnrved
Japanese, 515; Chrysanthemum catalogues, 515;
Mr. Mawley's analysis, 515;
the right bud, 515; in Ireland, 516; rooting, 522; incurved Japanese Chrysanthemums, 537; Florence Carr,
537; Rohert Petfield, 537; at
Philadelphia, U.S. A., 537;
Mdlle. Thé èse Rey, 537; new
Chrysanthemums, 581; incurved
Japanese, 515; incnrved
Japanese, 515; incnrved
Japanese, 516; Mrs, 562; Mrs.
A. Hardy, 562; damp-resisting
Japanese, 561; he "Shocsmith"
curved Japanese Chrysanthemums, 537; Florence Carr,
537; Rohert Petfield, 537; at
Philadelphia, U.S. A., 537;
Mdlle. Thé èse Rey, 537; new
Chrysanthemanns, 561; incrved
Japanese Chrysanthemums,
562; habits of Chrysanthemums, 581; inchroued Japanese, 561; the "Shocsmith"
curved

Lllies of the Valley, planting,

Chrysanthrmum; Shows—
Continued.

430; Watford, 430; Leeds Paxton, 431; Pntney, 431; Northampton. 432; Hull and East Riding. 447; Grimsby and District, 447; Liverpool, 447; Welis, 448; Torqnay. 448; Cirencester, 448; Kidderminster, 450; Hornsey, 450; Bath, 450; Bournemouth, 450; Weybringe, 450 Westonsuper-Mare 451; Birkenhead and Wirral, 452; Gioncester, 452; Leathernead, 452; Hitchin, 453; Windsor, 453; Exeter, 453; Tadeaster Paxton, 454; Bradford and District, 454; Pontefract, 454; Leleester, 455; Godalming, 454; Ipswich, 455; Twickenham, 455; Crovdon, 456; Piymonth, 456; Devizes, 466; Hull, 471; Birmingham, 473; Rngby, 473; South Shields, 474; Bristol, 474; Winchester, 475; Parkstone, 475; Hereford, 475; York, 475; Cndleigh, 476; Melton Mowbray, 476; Lincoln, 477; Sheffield, 478; Bolton, 478; Huyton and Roby, 478; Chester Paxton Society, 497; Sutton Coldfield, 498; Bafford, 493; Grassendale and Aigbourth decorations at Christmas, 54? Climicifuga serpentaria, 188 CHRYSANTHEMUM! SHOWS-

Church decorations at Christmas, 547
Clider refuse as manure, 254
Climicifug a serpentaria, 183
Cirrhopetalum Brienianum, 49;
ornatissimum, 400, 523
Clty gardens, past and present, 526 550; acreage of, 575
Clematis failing, 298
Clerodendrons, faliax, 125; trichotomum, 246
Clinboing in winter greens, 151
Clumber, 284
Cobœa scandens, a white, 266; alba, 300
Cocoa Palm weevil, the, 334
Cœlogynes, borneensis, 49; tenuis, 119
Codonopsis (Glossocomia) ovata, 273
Coleus Distinction, 55
Conifers, some fine, at Felbridge Place, 364
Convo vulus, cneorum, 89; dwarf, 101
Cooke's, Dr., retirement, 75
Coombe Court, 107
Copper (sulphate) and Paris green mixtures, 142
Copperas in plant manures, 220
Coreopsis monstrosa, 108
Cortett, Mr. H., 351

Copperas in plant manures, 220
Coreopsis monstrosa, 108
Coriett, Mr. H., 351
Cotton plant, wonders of, 290
Country charms, our, 468
Covent Garden Market, trade in, 100; fruit, 266; 180 years ago, 276; supplies, 355
Crabs, Siberian, for ornament, 125
Cratægus azarolus, 413
Crinum capense, 66, 344
Crocus hyemalis var, Foxi, 549
Crops in South Wales, 4
Croton Russelli, 492
Crystal Palace September fruit show, 598, 530, 555, 575
Cncumbers, Peerless, 147; for winter, 207, 417; gnmmed, 345; plant diseased, 366; root disease, preventing, 566
Cunila Mariana, 459
Cnrious spelling of names, 511
Currant shoots (Black) diseased, 11
Currants, crop ln Greece, 288
Cyclamen roots destroyed, 481

Currant shoots (Black) diseased, 11
Currants, crop in Greece, 283
Cyclamen roots destroyed, 481
Cyclobothra amema, 261
Cydonia japonica fruiting, 312
Cypripediums, new. volonteannm giganteum, 27; Massaianum and Stonei Cannarte, 30; Winnianum, 71; emosuperbiens and Thayerianum, 131; Sander-superbiens, 215; emo-superbiens, 269; Charlesworthi, 297, 307; Clonins, 395; Statterianum, 417; Insigne var. filustre, 573

CY270M

DAFFODILS, THE SCILLY
1SLES, 419

Dahlia (National) Show, 225

Dahlias—at Rowledge, 198;
Octavia, Mrs. Morgan, Captain Boyton, Miranda, Beauty
of Watford, Edith Turner,
Florence Woodland, Mrs.
Peart, Cherub, Grand Duke
Atexis, Norma, Duchess of
York, Ceres, Sovercign, 297;
at Salisbury, 341; Brilliant, Dalkelth, 316

Dalketth, 316
Datura cornucopia, 298
Davis, Mr. M., 167
Dendroblums, Hookerlannm,
49; ln autnmn, 233;
Dessert table competition, 519,
531, 562
Dianthus callizonus, 126 Digging competition, 7

Dinner, competition, 115; contest at Carshalton, 149; table decoration (Mr. Dunkin's paper), 393
Disas, Kewensis, 3; lacera, 237; the blue, 269
D'xon, death of Mr. Isaac, 492
Dobson, Mr. Thomas, death of, 193

193
Dodwell, death of Mr. E.S., 513
D'Ombrain, Rev. H. H., daughter, death of, 54
Dracæna indivisa anrea varlegata, 30
Drainage, philosophy of, 123
Draper, Mr. W. Y., death of, 355

Drought, lessons of the, 1; and caterpillar life, the, 174; ln France, 219; effects, 219
Dublin, jottings from; 574
Dutch flower garden, a walk through, 363

EARL'S COURT EXHIBITION, 297, 510 Earwigs, 402; white, 491, 511 Eastbonrae, flowers at, 76 East Lothian Garden in 1893, Est Lothian Garden in 1895, 533
Eelworms in Cucnmber and Tomato roots, 501
Echeveria retusa, 89
Edinburgh Botanic Gardens, 220, 491 Edinourga Boranic Gardens, 229, 491
Ensitage, 161
Enthustastic veteran, an, 236
Epidendrum pumilum, 120
Epidendrum pumilum, 179
Eria albiflora, 119
Erythrinas, culture of, 300
Euphorbia jacquininiæflora, 555; E. pulcherrima, 555
Evening Primrose as a vegetable, 246
Ewell Horticultural Society, 123
Exeter Gardeners' Society annual outing, 54
Exhibiting, curiosities in classing and judging, 222
Eynsford Show, 149

FARM—VACANT FARMS, 21, 46, 67. (clauses from a lease), 89; the drought and its probable consequences, 68; farm orchards, 118, 197; farming at home and abroad, 114; the first pockets of Hops, 114; barren orchards, field voles and enemies, 138; autumn tillage, ensilage, 161; fodder for winter, ensilage, 185; work on the home, 185, 216, 256, 280, 346, 368, 390, 436, 482, 502, 535, 568, 584; the dairy, fodder crops, 209; brewers' grains for cows, 210; a butter destroying weed, 233; farm homesteads, 253; poor milk, 230; Royal Commission on Agriculture, 280; mixed farming, 301; agricultural commission, 302; a Wheat straw, 323; New Zaland, a warning to farmers, 324; acorn polsoning, 324; the Board of Agriculture, Middlesex Agricultural Society, Lord Tredegar's Agricultural Society, Lord T FARM-VACANT FARMS, 21, 46,

Fenn, Mr. Robert, a day with, 235
Ferns, transplanting Tree, 232; houses at Inwood, 266
Fertilisers, and County Conncils, 147; and feeding stuffs bill, 242
Field voles, 198
Figs, seasonable work amongst, 132; forcing, 411, 499
Finsbnry Park, bedding at, 241
Floral nomenciature, 356, 383, 439, 536; speling at shows, 399; curious spelling of names, 465, 493
Floral Sketen Book, the, 420
Florists' flowers, notes on, 213; seasonable hints on, 551
Flower basket at Halton, 512
Flower garden, 65, 343; plants, propagating, 135; Insects, mites, 393
Flowers, for market, 2; at the Royal wedding, 10; hardy autumn, 282; hardy, notes on, 326; autumn and winter, 510; perfume of, 553

F ower shows, judging at, 176 Forestry Exhibition, prizes at, 492, 419, 444 Fox glove, campanniate, 44 Francoas, culture of, 439 Fraser, Mr. Robert, death of, 491

Fritiliaria armena, 107; bre-vicauus, 411 Fruit culture, remarks bearing

vicauus, 441
Fruit culture, remarks bearing on, 573
Fruit, forcing, 42, 64, 83, 117, 182, 207, 252, 276, 319, 342, 334, 386, 432, 479, 499, 519, 543, 564; culture at Wightwick Manor, 54; prospects in Beds, 122; unripe and decayed, dangers of, 124; painted, 148; St. Petersburg International Exhibition, 147; at Lowfield, 217; in Fiji, 221; in Australia, 221; improving the quality of, 214; storing, 278; high cultivation of, 281; at Earl's Court, 297; pruning trees, 298, 285; culture, soil and climatic conditions, 392; artificially coloured, 400; planting, 410; growing, 447; keeping question, 508, 527, 548; machinery, 534; canned fruit in Cautfornia and Anstralia, 534
Fruiterers' Company dinner, 354
Fruit trees, evils of crowding,

Fruiterers' Company dinner, 354
Fruit trees, evils of crowding, 141; management on walls, 159; trees, digging amongst, 174; bones and kainit for, 278; exuberant young, 36; the treatment of overcropped, 370; insects on, 415; pruning and nailling, 499; surface dressing, 499; surface dressing, 499; sulphate of iron for, 553
Fuchsias from seed, 434
Fuchsias from seed, 434
Fuchsias show, a, 198
Fuller, Rev. T. M., death of—in memoriam, 169
Fungicides, 142, 165

GALANTHUS OCTQBRENSIS (?)
from Albania, 548; G. corcyrensis, 549; G. Rachelæ, 549
Garden produce and August
heat, 163
Gardeners' Royal Benevolent
Institution, the (an appeal
to gardeners in Ireland), 525
Gardeners, the Worshipful
Company of, annual banquet,
55; and gardening, 550
Garden guns, 289
Gardening and Forestry Exhibition, prizes at, 419, 444;
medals at, 421
Garden, the romance of a, 249
Gas lime, a caution, 9; and

Garden, the romance of a, 249
Gas lime, a caution, 9; and
maggots, 33
Gateford Hill, 284
Gladioli, new varietles, certificated, 131; g owing, 552; a
note about, 580
Gienhurst, Esher, 489
Globe Amaranth (Gomphrena
globosa), 99
Gloriosa superba, 345
Gloxinias, a fine, 75; diseases
of, 245

Gloriosa superba, 345
Gloxinias, a fine, 75; diseases
of, 245
Gooseverry, history of Whinham's Industry, 102; Show
(Ripley), 157
Gourds, large, 420
Grafting, herbaceons, 512
Grape-room, constructing, 45
Grapes scalded, 45; Gros Colman, 66; Lady Downe's
scalded, 67; heaviest bunch
of, 83; colonring late, 91;
strains of, 123; seasonable
notes on, 134; Berdiansk,
173; keeping late, 184; outdoors, Black Hamburgh, 191;
shanking after ripening, 208;
an experiment with snanking, 233, 262, 292; cheap
Muscats, 244; rusted and
shrivelled, 254; in America,
288; causes of shanking in,
315; shanking, on an experiment with, 340; prices of,
511; culture of, 618; two
cropsin one season, 534; Lady
Hutt and Apple. Towers, 554
Greenhouse winter flowers, 467
Greenwich, temperatures at,
163
Grlmston Park, Tadcaster, 56

163
Grimston Park, Tadcaster, 56
Gronnds and orchards, arrangement of, 112
Guiliot, Jean Baptiste, death of, 272
Gnstavia pterocarpa, 400

HABENARIAS, CINNABARINA, 96; H. carnea, 283 Hail and heat, 33 Halton, 199; flower basket at, 512
Hammerwood, Sussex, 264
Hampton Court Paiace, bedding at, 260
Hardy flowers, notes on 117, 188, 298, 548; fn masses, 127
Hardy fruit garden, 42, 109, 206, 262, 457, 499, 543, 581 Hardy perennials for cutting, 118
Heating, steam versus hot water, 222; the principles of, 325,380
Hedges for shady places, 51; clipping, 92
Heliopsis scabra major, 297, 371
Heliotropes propagating, 136
Herbaceous plants, 305
Heuchera sanguinea, 7
Hiopeastrum procernm, 102
Hodsock Priory, 284
Holland, death of Mr., 32
Holland, reclaimed land in, 267
Holly tree, a large, 851
Horticultural Cinb, 356
Horticultural Cinb, 356
Horticultural (Royal) Society, Chiswick Show and Committee meetings, 30; fourdays Shows, 34; Show at the Agricultural (Royal) Society, Chiswick Show and Committee meetings, 78, 130, 247, 296, 337, 377, 441, 495, 538, certificates and awards of merit, 78, 195, 244, 333, 378, 442, 496, 539; lecture on alpine houses, 78; Scientific Committee, 99, 170, 351, 399, 469, 517; lecture on Onions, 376; and the Imperial Institute, 492; and South Kensington, 509; meetings for 1894; 558
Horticultural (Royal) Society of Ireland, 534
Horticultural Society, ageneral 266
Horticulture in South Africa, 170 Hardy perennlals for cutting, Horticulture in South Africa,

Hotbeds, present use of, 202
House for fruit and Chrysanthemnms, 545
Huil notes, 12
Hybrid Briar, autumnal
analysis, 1886-1893, 396
Hybridisation and cross-fertillsation, 356
Hyde Park, 215

INDEX KEWENSIS, 219, 553; translation of Latin, 574
Insects, eradication of, 4; flower garden, 24, 93, 189, 269; pests on fruit trees, 415, 554
Inwo d Honse Gardens, Blandford, 311
Ireland, notes from, 94; an appeal to gardeners in, 525
Irises, Pacific Coast, 554
Isle of Wight, holiday in, 168
Ivy on trees, 66

JAM SHARPERS, 148
Japanese gardening. 55
Japanese plants at Kew, 77
Japanese trees at the World's
Fair, 126
Jasmine harvest, the, 314
Judgesjudged—verdict: gnilty, 503, 529
Judges and judglng—a new catechism, 556; at Edinburgh, 579
Judg ments, curions, 198

"KEW BULLETIN," the, 76; appeadix 1894, 533
Kineton flower show, 149
King wood Flower Show, 174
Kitchen garden, 87, 183, 277, 320, 387, 489, 433, 520, 565
Knighton Horticultural Society, 172
Knowsley Hall, 143
Kola, 32

LADYBIRDS AND THEIR LARVÆ, 579
Lælias, majalis and purpurata, 3; tenebrosa and Novelty, 131; tenebrosa, Walton Grange var., 150; monophylla, 189; elegans Turnerl, Ingram's var, 297; grandis tenebrosa, 351; anceps Amesiana, 505; Lælia Finckeniana, 549; L. anceps resting, 566
Lælio-Cattleya, Pisandra, 394, 407; Statteriana, 462
Langley Nurseries, Messrs. Veitch & Sons, 359
Latham, death of Mrs., 288
Lavender, uses of, 126
Laxion, death of Mr., 123; record of werk, 151
Leaves, the movements of, 522
Leek culture, successful, 371
Leitneria floridana, 221
Lessons, from the past, 235; of the dry season. 355 Lessons, from the past, 235; of the dry season, 353 Lettnee, Daniel's Continuity, 124; root insects, 136; sum-mer, 191

mer, 191
Lignstrum ibota, 376
Liliaceæ from Tropical Africa,
new, 77
Lilies, eastern, 93; Belladonna,
at Grimston Park, 855

Lilies of the Valley, planting, 254
Lily of the Valley, foreing, 413; early force1, 568
Littonia modesta, 249
Liliums — Alexandræ, Low!, Ukeynri (Alexandræ, Low!, 79; L. japonicum var. Alexandræ, 79, 265; and bacteria, 160; lancitotium and varleties, 202; L. Henryi, 191; at Chetsea, 197; notes on, 292
Limewashing vinery wall, 566
Llquorice, 267
Liverpool Horticultural Association, 533
Llewelyn, Mr. W. D., fatal accident to, 196
Lloyd, death of Mis; 288
Loam for Peach and Vine borders, 322
London City gardens, past and present, 526, 550; acreage of, 575
London Parks, changes in, 511 575
London Parks, changes in, 511
London trees, 294, 318
Low, Mr. Hugh, death of, 265
Lubinia atropurpurea, 572
Lutisia Amesiana, 95
Lycaste Imschootiana, 549
Lycium europayum, 366 Lycium europæum, 366 Lyons, Exhibition at, 356

MACHIN, Mc. H. V., 58 Madame Pattl's love of flowers, Madame Pattl's love of flowers, 818
Maizz maturing in Wales, 467
Manning, retirement of Mr., 219; testimoniai to, 288
Manures, artificial, as a snbstitute for natural, 322; chemical, 366
Maples, Japanese, 538
Marchant, death of Mr., 219
Marguerite cuttings, rooting, 434
Marigolds, 490 Marguerite cuttings, rooting,
434
Marigolds, 490
"Martin" flower rack, the 318
Masdevalla Gelengiana, 119
Mealy bng, extirpating from
vineries, 137
Meconopais Wallichi, 67
Mechan, presentation to Mr.,125
Mediar, grafting, 413
Melon leaves, bacterial disease
in, 1i2
Melons — Hero of Isleworth,
Royal Prince, and County
Councillor, 131; bad at shows,
140; Blenheim Orange, 171;
a novelty, 2 8, 266
Melville Castie, 318
Melorological (R 191) Society,
466; November storm, 576
Mexican plants at Kew, 77
Michaelmas Daisles at Chiswick, 348, 377
Microbes on roots, 239
Microscope for examining bacteria, 545
Mignonette, varieties and cuture, 120
Miltonia Joiceyana, 131 Mignonette, varieties and cnture, 120
Mittonia Joiceyana, 131
Mina lobata, 365
Missouri Botanical Garden, 533
Montbretia croccosmæflora
piena, 143, 172; Ingestre
Hybrid, 143
Morisia hypogæa, 183
Mulberries, spirits from, 267
Mushroome, preparing for, 19;
aud Tomatoes, 125; at Inwood House, Blandford, 311;
property in, 420

NARCISSI, EXHIBITION OF, N
BIRMINGHAM, 75
Narcissns Show, a, for Birmingham, 554
National Co-operative Festival, 163
Nature's help to gardeners, (Syrphus fly), 383, 335; the laced-winged fly, 517; ladybirds, 579
Nectarines, Early Rivers, 54; shrivelling, 208
Nelumbium speciosum nuclernm, 148
Nemesia strumosa Suttoni, 193
Nepenthes mixta, 297, 315; at Cheisea, 340
Nerine elegans alba, 349
Newbattle Abbey, 316
Newnham Paddox, 268
New Zealand, Karmahi tree, 265; fruit culture in, 267; flora, 443
Nicotlana colossea varlegati, 30 Nicotlana colossea varlegata, Nitrogen, value of for plants, 132 Notes by the way, 96, 167, 19), 264, 489 Nothing pays—a wail, 493 Notospartium Carmichaeli, 481 Nymphæ i Trickeri, 511

OAKLEIGH, NOTES ABOUT, 9 Oaks, species of, 245; galls, 36 Oats, fine, 31 Odontoglossums, 215; planted cut, 279; crispum, 523

Oncidinms, lutenm, 95; incur-Oncidinms, lutanm, 95; incurvum, 237
Onion maggot, 33, 579
Onions — autumn sown, 101;
Golden Rocca, 124; and
Potatoes at Chiswick, 174; at
Reading, 362; certificated,
337; lecture on, 378; and the
maggot, 491; mineral constitnents of, 522; about, 579
Oranges, Jaffa, 333
Orchard pianting near Denver,
261

Orchids — ventilating, 2; Mr.
Sander in America, 27; Dendrobinm Hookerianum, 49;
Cirrhopetalum Brieniannm, 49; Celogyne borneensis, 49; Stanhopea Lowi, 49; Cypripedium x Winnianum, 71; Phalænepsis tetraspis, 71: Pleiones, 71; Sohralia leucoxantha, 95; new Orchids, 95; Polystachya imbricata, 95; Oncidium luteum, 95; Habenaria cinnabarina, 96; Luisia Amesiana, 96; In the open air, 96; Stanhopea Amesiana, Bubophyllum spathaceum, Pleurothallis puberula, Vanda teres, V. cærulea, 175; at Chelsea, 189; Lælia monophyli. 189; at Morpeth, Northumberland, 189; Cattleya aurea, 237; C. Gaskelliana, 237; Oncidium incurvum, 237; Orchids at Highbury, 237; Disa lacera, 237; from seed, 279; Cypripedium œno-superbieus, 269; Catasetum Bnngeroth, 269; Catasetum Bnngeroth, 269; Catasetum Bnngeroth, 269; Catasetum Bnngeroth, 269; Catasetum Euryandrum, 327; Lælia grandis tenebrosa, 351; Cattleya bicolor, 351; Orchids at Cliffe House, Heesle, 331; a warning to Orchid hunters, 372; Oncidium Sanderianum, 372; Cypripedium H. Ballantine, 372; Orchids at Woolton Wood, 372; notes on, 394; Cattleya bicolor, 351; Orchids at Woolton Wood, 372; notes on, 394; Cattleya Lord Rothschild, 417; Cypripedium Sanderianum, 372; Cypripedium Statteriannm, 417; Odontoglossums, 417; Dendrobium nobile, 439; at Forest Hill, 439; Disa Vettcbi x tripetaloides, 439; "The Orchid Growers' Manual," 462; Lælio-Cattleya Statteriana, 462; for flowering at Christmas, 505; Cirrhopetalnm ornatissimum, 528; Odontoglossum crispum, 528; Cattleya citrina, 529; Lycaste Imschootiana, 549; Lælia Finckeniana, 505; Cirrhopetalnm ornatissimum, 528; Odontoglossum crispum, 528; Cattleya citrina, 529; Lycaste Imschootiana, 549; Lælia Finckeniana, 549; Orchid lessons for young gardeners (roots and their requirements), 550, 573
Orton Hall, 284
Osiers, culture of, 272, 542, 568
Ostrowskia maguifica, 355, 585

Other lands—New South Wales, Ont of town, 307, 329 Oxylobinm callistachys, 13

PALM OIL TRADE, AFRICAN,

101

Palms, Sago, 184

Pansy, early history of, 141

Parks and open spaces, 124

Parona paniculata, 575

Parsley for winter and spring,
72; notes about, 570

Panlownia, a large, 534

Pavia macrostachya, 124

Peaches—early outdoors, 8;
origin of, 102; growing for
market, 116, 393; boxes, glands
on, 208; yeilows and potash.
245; origin of, 334; leaf
blister, 373, 421

Peaches and Nectarines outdoors and nnder glass, 157;
Golden Rathripe, 143; colour
in, 164; forcing, 479

Pears, stocks foi, 221; early,
286; from seed, 322; self-fertilising, 506; keeping, 508;
Doyenné du Comice, irom a
north wall, 533; the politination of, 586; mineral constituents of, 545; notes on, 578

Pears v. Peaches, 259, 287, 308,
372

Pear tree, gail mite causing Pears v. Peaches, 259, 287, 308, 372

Pear tree, gail mite causing canker, 228; blister moth, 273

Peas, in dry summers, 240; at Wem, 261; Veitch's Autocrat, 313; particulars about, 419; versus Peaches, 421, 495; dlseased, 459; The original Hessle, 469, 495; in 1893, 495; Bergamotte Hertrich, 501

Pelargoninms at Windsor, 418

Pentstemon antirrhinoides, 443

Pershore Flower Show, 173

Perry refnse as mannre, 254

Petræa volnbilis, 66

Phacelia campanulata, 124

Phalænopsis, Schilleriana, 8;
tetraspis, 71
Phygellus capensis, 278
Picotees, new, 394
Pine Apples, preserving at
Singapore, 555
Pines, 248; at Handsworth, 29;
on the Riviera, 222
Pinus insignis, shoots and buds
destroyed, 322
Pithers, Mr., death of, 76
Piant, a new Solanaceous, 355
Plant industries in the
Caucasus, 377
P ant bousea, 65, 110, 253, 320;
work in, 364, 321
PLANTS, FRUITS, AND VEGETABLES CERTIFIO: TED BY
THE ROYAL HORTICULTURAL SOCIETY—
Acalypha Macafecana, 496;
Actices Ballantineanum anreum, 195; Agave Leopoid II.,
195; A. univititata marginata,
196; A. univititata marginata,
197; Alstromeria aurantiaca, 30; Antburium
Wainbeckianum, 338; A.
Lindeni dora carmine, 378.—
Begonia Mrs. Bourne, 78; B.
semperflorens Vernen, 131;
B. Gloire de Lorraine, 378;
Bomarea patacœusis, 338.—
Cabbage, Christimas Drumhead, 538; Caladium Baronne
de Maimore, 39; C. Le Nain
Regina, 495; C. President de la
Devansaye, 131; Calanthe
Myleri, 496; C. Victoria
Regina, 496; Canana, Duchess of
York, Capitaine de Suzzoni,
Gloire d'Empel, Lohengrin,
Konigin Charlotte, Michelet,
131; C. Quasimodo, 243;
Cannation Esmeralda, 78; Mrs.
Leopold de Rothschild, 195;
C. Mary Godfrey, Reginald
Godfrey, Mdlle. The èse
Franco, 338; C. Canashan,
Andame Mrs.
Leopold de Rothschild, 196;
C. blesensis, 297; C. chloris,
338; C. Eldorado Lindeni,
338; C. Eldorado Lindeni,
338; C. Canashan,
A. C. Insigne, 196; C. Good
Gracions, Mrs. Martian Bourne,
539; C. Warnhamensis, 539;
C. Lowenser, 196; C. Spicerio-Lowianum, 339; C. Spicerio-Lowianum, 339; C.

PLANTS CERTIFICATED—Continued.
cana Indivisa aurea variegata, 30; D. Alexander Laing, 131; D. Jamesi. 442—Exacum macranthum. 195; Gladioli John Warren, Grover Cleveland, Alfred Henderson, Duke of York, 131; G. Bernice, Cassandra, Gertrude, Orlande, 196; Grape Cape Muscat, 246; Grevillea Banksi, 131.—Habenaria carnea, 196; Hæmanthus Lindeni, 338; Hedera helix tesselata. 131; Helianthus rig dus Miss Mellish, 198; Heliopsia scabra major, 297; Hollyhock Amaranth, 131.—Lælia crispa snperba, 78; L. Novelty, 131; L. tenebrosa, Walton Grange variety, 131; L. elegans Turnerl, Ingram's var., 297; L. elegans crispa, 338; L. anceps Amesiana, 496; L. Finckeniana, 539; Lælio-Cattleya cplcasta, 248; L. C. Nysa, 248; L. C. Pisandra, 378; L. Statteriana, 442; L. C. Nysa, 539; Liatris pycnostachya, 131; Lilium japonicum var. Alexandræ, 30; L. Lowi, 30; L. Ukeyuri (L. Alexandra), 30.—Melon, Lee's Perfection, 78; M. Hero of Isleworth, Royal Prince, County Councillor, 131; Mitonia vexillaria, Daisy Haywood, 78; M Joiceyana, 131.—Nepenthes Amesiana, 539; Nerine elegans alba, 338; Nico:iana colossea variegata, 30.—Odontoglossnm, Uro-Skinneri alba, 338; O crispum var. Thompsonæ, 539; Onions, Soutbport Yeilow Globe, Soutbport Red Globe, Deverill's Cocoanut, Globe Madeira, Italiau Trippli, Prizetaker, 337; Orange, seedling (Edith), 533.—Paphinia grandis var. glgas, 378; Peach, Duchess of York, 246; Pear Beurré Fouqueray, 337; Primula Forbesi, 442; Plum Golden Transparent, 247; Potatoes, Major T. Neve, Success, Crawley Prizetaker, 337; Orange, seedling (Edith), 533.—Paphinia grandis var. glgas, 378; Peach, Duchess of York, 26; Pear Beurré Fouqueray, 337; Primula Forbesi, 442; Putadens, 338.—Rose, Duke of York, 196; R. Ade ine Viviand Morel, 248.— Solanum Wendlandi, 333; Spiræa Anthony Waterer, 78; Stanhopea Lowi, 442; Sweet Peas, Eliza Eckfoud, Tne Belle, 78.—Trecoma Sirish, 13.—Veronioa hybrida, Purple Queen, 297.—Weigela Eva Rathke, 196.—Zygopetalum rostratum, 539.
Platycodons, 102; or Campanuia, 145; P. grandifora Mariesi, P. Mariesi

panuia, 145; P. grandiflora Mariesi, P. Mariesi a!ba, 170
Pletones, 71
Plinmbago Larpentæ, 314
Plums decaying, 118; culture under glass, 211; mineral constituents of, 545
Pocket-book notes, 94
Poinsettia pulch-rima 555
Polystachya imbricat*, 95
Pomona Farm Nurseries, Withington, Hereford. 440
Poppies, Iceland, 359
Potatoes, Snowdrop, 33; crop in Jersey, 197; culture of 240; prices for, 246; problem, a, 266, 334; shriveiied, 288; mulchiug, experimenta in America, 333; certificated at Chiswick, 332; in Lincolnshire, 375; diseased and scabbed, 366; grow ng experiments, 420; Perseverance with (Messrs, Sutton's experiments), 461; seed, 565; ware, 555
Pratt, Miss, death of, 102
Preparing for the winter, 48
Primula Forbesi, 489
Prize - giving, proportional, 156, 173, 202
Prizes at the Gardening and Forestry Exhibition, 419, 444, 492
Pruning fruit trees, plain

492
Pruning fruit trees, plain words on, 270
Pyrns japouica fruiting, 443

QUEEN AND GARDENER, 38 Queen's cottage, Kew, 468

RADISHES, WINTER, 401 Railway gardening, 554 Rain, after the, 47

Rainfall, heavy, 163
Ramsgate Public Park, 267
Ranunculus Lyalli, 467
Raspberries, authmn, 376; in October, 421; Jottings, 571
Raspberry moth (Lampronia rubiella) 536
Reading, flowers at, 74
Regent's Park, bedding at, 241
Retrospect, a, 509
Room plants, 575
Root fungus, 246
Rose analysis, 1886-1893, 303
Roselands, Southampton, 318
Rose (National) Society's
Provincial Show at Worksop, 51; N.R.S. catalogue, 72; N.R.S. Worksop Show, criticisms on, 72; National Rose Society, 201, 465; notes about Roses, 201; Mr. Mayley's analysis, 331, 384, 418, 440, 465; new cata ogue fund, 539; annual meeting, 540; annual dinner, 541
Roses Orange fungus, N.R.S.
Tea Exb.bition, 5; Margaret Dickson, writers on, Briers or Briars, orange fungus, 28; a fea-t of, 29; and the "Victoria" Fund, 51; and rosarians 51, 73, 93; the fragrauce of 72, 97; old Roses at Kirkconnell, N.B., 73; Mr. Grahame's questions to rosarians, 97; judging, 93; notes on the Metropolitan Exhibition of the N.R.S., 98; Ernest Metz, Souv-nir de la Malmaison, Mr. Grahame's circular, Teas from cuttings, N.R.S. Provitcial Sbow, 121; fungus and remedies, 137; En-st Metz, Roses, 146; Mr. Laxton and his work among Roses, National Rose Society. In memeriam—death of the Rev. J. M. Fruler, the fragrance in, 169; Mr. Grahame's circular, Ernest M. C. Tea scented, growing iu Saxony, 218; The Bride, 240; Rosa Polyan ha (Fairy Roses), 240; a new hybrid Rose. 240; Jean Baptiste Gui lot, 272; the late M. Gaillot, a large Marchal Nie, 287; hot season Roses, 538; hybrid Briar Roses, 539; Mose pests and their eradication, 539; Messrs. Harkness & Sons, 540; manuring and plenting, 540; protecting Tea Roses, 539; Rose pests and their eradication, 539; Messrs. Harkness & Sons, 540; manuring and the fragrance in, 199; Mr. Briar, 418; sow mg hep-, 435; the Rose in 1893, 455, 494; Aberneen Rose, 559; Hybrid Teas, 559, 577; Brussides Bijon on Tea Roses, 559; Hybrid Teas, 559, 577; a recent slander, 569; Mrs. W. C. Whitney, 576; cassification of, 576; blue Roses, 576
Rothams ed, honours, 7; we

Royal Gardeners' Orphan Fund, 490

490 Rueliia macrantha, 419 Russia, fruit culture in, 102

SABBATIA CAMPESTRIS, 159
Scale ou Kentia leaf, 434
Salvia Grahami, 419
Sand-binding grass, 245
Sawbridgeworth, a call at, 336
Saxifraga biternata, 527
Scablous, Sweet, 356
School gardens, 246; continuation, 201
Scotland, woods and trees in, 314 314 Scottish gardens, a glance at, Scottish gardens, a glance at, 316
Sennowe Hall, 128
Shading, fruit houses, 24; plants, 512
Shallots, exbiblting, 208
Shanking in Gr pes, an experiment with, 238, 262
Shortcomings, 563
Sbows, four days' condemned, 9
Shows—Lee, blackheath, and Lewisham, 17; Croydon, 17; Diss, 37; Brockham, 37; Hereford, 38; lpswich, 39; Norwich, 39; Bath, 39; Norwich, 39; Bath, 39; Farningbam, 39; Wolverhampton, 41; Earl's (ourt, 41; Wolverhampton, 59; Boston, 60; Woodorndge, 60; Chertsey, Walton, and Weybridge, 61; People's Pa ace, 62; Wood Green, 63; Ascot and District, 63; Calnation and Picotee Union, 63; Trentham, 82; Prescot, 83; Hnyton and Roby, 84; Bedford, 83; Newcastle, 84; SHOWS—Continued.
Earl's Conrt, 85; West of England Carnation and Picotee, 85; Mid and Connties Carnation and Picotee, 86; Liverpool, 107; Northern Carnation, 108; Southampton, 132; Earl's Conrt, 183; Leicester, 156; Taunton, 157; Taunton Deane, 179; Cardiff, 180; Witts, 181; Earl's Conrt, 181, 251; Dumfries, 171; Blandford, 172; Knighton, 172; Pershore, 173; Kingswood, 174; Sbrewsbury, 203, 218; Trowbridge, 205; Bising:toke, 206; Moselev, Bath, 227; Sandy, 228; Brigbton, 229; Royal Aquarium, 230; Derby, 250; Birkenbead and Wirrall, 251; Edinburgh, 273; Banbnry Onion and Vegetable, 275; Manchester, 276; Gloucester and Cheitenham, 319
Shrewsbury, floral designs, 75
Shropshire Horticultural Society, 575
Sbrubs, pruning, 92; thoughts on, 507
Sbuttleworth & Co., Ltd., Mc:srs, E. D., 531 Sbrubs, pruning, 92; thoughts on. 507
Sbuttleworth & Co., Ltd., Mc-srs, E. D. 581
Sliene pendula, 80
Sirex gigas, 279, 288, 332
Snowdrops, early, 548, 554
Snow Plough, the "Knowsley," 542
Snowstorms, 290
Sobratia leucoxantha, 95
Soils, improving light, 160; analysis of, 347, 339; enriching in the autumn. 349, 416, 571; and climate, influences of, 392; management of, 52)
Sparrows, ravages of, 145, 214; snburban, 244, 255; trapping, 289
Snethoglottle Fortune, 281 289 Spathoglottls Fortunei, 283 289
Spathoglottls Fortunel, 283
Sprayers, Vermorel's, 232
Spraying versus insect pests and fungoid diseases, 71, 92
Stapellas, at Kew, 101; gigantea, 533
Starch formation, 126
Stepbanotis floribunda frniting, 467
Sternbergia iutea, 376
Stokesia cyanea, 572
Strawberries — farming, 5, 84; in Hampsbire, 25; continental, 12; in pots, 299; in October, ripe, 355, 399; mineral contituents of, 545
Stuartia pentagyna, 100
Suihampstead, a day at, 236
Sulphate of copper solution for destroying scale, 522
Sulphate of iron for frnit trees, 553
Sunningdale Park, 36
Swainsonia galegitolia alba, 32
Sweet Peas, 150 Sweet Peas, 150 Sweet Sultan unsatisfactory,

TAKING OUR ENEMIES ON THE QUIET, 415
Tar and truit trees, 33
Tea, Pormosan, 314; enlitivation in C-ylon, 333
Tecoma Smithi, 356
Tennis lawn, weed on, 480
Testimonials, original, 344
Thisties, destrying, 186
Thames Embankment,, a new, 400 Thistles, destr ying, 186
Thames Embankment,, a new, 400
Thomson, Mr. W., death of, 500
Thorpe, Mr. G., death of, 575
Three days' holiday in the Isle of Wight, 168
Thrips, ontdoors and underglass, 159
Timber measurements, 292
Tomatoes—Notes on, 12, 19; unhealthy structures for, 21; difficulties, 833; bacterial disease in, 79, 99; Sutton's Ai, 124; disease dand remedy, 160; Lady Bird, 171; irregular in size, 184; a museum of, Messre, Sniton & Sons, 257; stray, 312; fine, 314; exhibiting, 321; are Tomato diseases controllable? (bacterium), 325, 372; stray, 333; diseases, bact rial and eelworm troubles, 350; stray, 356; in 1893, 392; cbem cal manner for, 501; custure, 518; ripening green (American method), 575
Trees, the value of, 166; the oldest in the world, 314; Trees, the value of, 166; the oldest in the world, 314; setting up wind-blown, 552; the rings of, 555
Tridax blsolor roses, 295
Trocaolum Mrs. Clibran, 8
Truffies, 209, 480
Thberoses, to flower in August, 582 Tynninghame, 317

Syrphus fly, 383

UNITED HORTICULTURAL BENEFIT AND PROVIDENT SOCIETY, 363; annual din-ner. 341 Uraria crinita, 376

VEGETABLE GROWER AND HIS WORK, A, 489 Vegetables, exhibiting in baskets, 126; culture in ad-verse seasons, 240, 263; grow-ing and showing, 397; large, 400

Vegetarianism, Lady Paget's p.ea for, 123 Verbaxnm Chaixi, 32 Veronica hybrida Purple Queen, 297 Vine heads

Vine border, making a, 888
Vines-Current notes on, 18;
leaves scorched, 21, 26; Muscat of Alexandria, thrning
yellow, 66; Goliaths, 139;
planter of the Hampton
Conrt, 147; the Breadalbane,
173; problem, a 268, 290; seasonable notes on, 410; cnithre, a retrospect, 416; mildew

VINES—Continued.
on, 544; liquid manure in winter for, 545; for a house without fire heat, 545
Vineyards, The Rhine, 376
Violas, good white, 32; Border Maid, 10; notes on, 120; for massing, 152; new, 220, 438, 496, 557; comments on, 558; new miniature, 580
Violets in the winter, 417

WAKBFIELD PAXTON SOCIETY
172
Walls, garden, price of, 388
Walsh, Mr. Dnucan, death of,
491
Waltham Cross revisited,
384

Wasps—nests and cyanide of potassium, 10; method of destroying, 27; and their destruction, 51; the plague of 126, 267; destroying, 162; destroying with turpentine, queens, wasps and benzoline, wasps and Tomatoes, wasps and muslin, wasps and Mac Dougall's smoke ferrets, 176, 201; queen, 266; nests destroyed, 266
Water, cold versus hard, 239, 271, 286, 317, 339; cost of boring for, 302; hard cold, for plants, 361, 274
Weather, in Scotland, 55, 534; in June, 55; and the crops, 198; mild October, 355; rough, in the North, 467; in the Isle of Wight, 468

Water Lily, a new, 511
Weede, destroying, 265
Welton House gardens, 12
Wembley Park, 310
Wem Peas, the, 281
West Ella Conifers, 13
Wicklow, Wanderings in, 486
Wild flower competitions, 173, 222
Wide, Grape and Rhubarb, 233
Winter flowering plants, 285
Winter greens, earthing up, 333
Winter moth, 421
Winter, preparing for the, 48; in a Scottish manse garden, 526
Winter's Bark, 159
Wistaria, propagating the, 55
Wood, a new, 312; ashes and blood, mixing, 522; exposing to rain, 522

Woodhatch Gardens, 156 Woolton Gardeners' Mutual Improvement Society, The, 543 Worms in flower pots, 20

YORK FLORISTS, ANCIENT SOCIETY OF, annual dinner, 554 York Gaia and city charities, 148; finances 401

ZEPHYRANTHES TREATIÆ, 89 20 at Pelargoninms, chemical mannres for, 481

WOODCUTS.

1	PAGE	PAGE	PAGE
Achimenes, a Basket of, at Chatsworth	81		. 14
Agave Leopold II	335	Dianthus callizonus 127 Mushrooms at Inwood House	31
Aglaonema pumilum (rotundum)	379		
Apple Benoni	232	Eelworms in Carnations 34 Nature's Helps to Gardeners—Syrphus Fly	38
" Gaseoigne's Seedling	583	" in Chrysanthemums 129 " Laced-winged Fly, The (Heme-	
			517
Banksia integrifolia	435	,, ,, Ladybirds and their Larvæ	
Barleria Gibsoni	155		31
			349
Campanula grandiflora Mariesi	103		. 48
" nitida alba	239	Fritillaria armena 107	
" persicifolia alba Backhousiana	3	" brevicaulis 441 Ostrowskia magnifica	. 53
Canker in Pear Trees, caused by Mites	223	Oxylobium callistachys	13
Carnations attacked by Eelworms	34	Habenaria earnea	1.
. Helminthosporium and Uromyces	35	Halton, Flower Basket at 513	
Souvenir de la Malmaison at Halton	199	1 40 TIOUSCOL COLINGATORS 40 40 40 TOO	. 50
Cattleya Lord Rothschild	425	meating, the principles of 325, 300	223
Chrysanthemum Bud Mite (Phytoptus Chrysanthemi	į		29
-Abbey)		Melinitiosportum on Carnations so	361
" Leaves infested with Eelworms	129	Hemerobius (the Laced-winged Fly) 517 " Davis, Mr. M	
. Mdlle. Thérèse Rey	449	I Hull and East Inding Onlysammeman Doctory's	15
" Lord Rosebery	471	Cups	
" The "Shoesmith" cup and tube	561	Primula Forbesi	489
The Tribune	403	Laced-winged Fly (Hemerobius) 517	
Olerodendron trichotomum	247		57
Codonopsis (Glossocomi) ovata	273	Lælia anceps Amesiana 505	
Oroton Russelli	493	1	527
Cunila Mariana	459	" tenebrosa, Walten Grange variety 150 Snow Plough, "The Knows'ey"	
Current (Black) shoots diseased	11	Lælio-Cattleya pisandra 4.7 Sobralia leucoxantha	
Cyclobothra amœna	261	DODIALE RECOGNISM	175
Cypripedium Charlesworthi	307		383
,, Clonius	395	" japonicum var. Alexandre (Ukeyuri) 57	•
" æno-superbiens	269	Lowing to the second se	
" insigne var. Illustre	573	Lattonia modesta	357
" Sander-superbiens	215	LIVCASTE THISCHOOTIANA	295
" Statterianum	417	Truffle, a Black	209
" volonteanum giganteum	27	'Martin" Flower Rack, The 318	
Winniannm.	71		. 31





OME time ago, when our "Home Farm" contributor had been referring to rich pastures and full crops as the result of the soil being well stored with plant food, a correspondent desired to know where such verdancy could be found. Residing in a high, dry, and not over-well tilled locality, the incredulity of the querist was not unnatural. Not in his district alone, but over a vast tract of country, notably in the southern and parts of the midland counties, fields, banks, and roadside margins were so parched that scarcely a tinge of green was visible. Not a "bite" could be found in the grazing pastures, and meads afforded little or nothing to the mower. Garden crops were languishing, and the anxiety of gardeners becoming extreme in view of the actual collapse of some crops, and the prospective exhaustion of others weeks before their time. Just when a breakdown of supplies for man and beast was imminent the rain came and cheered the falling spirits of the husbandman, and in some, perhaps many, districts gave a distinct flush to vegetation. The parched earth was moistened, enabling sowing and planting to be done that had long perforce remained in abeyance.

But this was not so everywhere. Some localities were visited by drenching thunder showers during the last week in June, a few doing damage by their violence; in other districts the showers extending more or less fitfully over two or three days, were just sufficient for the resumption of cultivation and "saving" established crops, but in some tracts of country the rain was so light that only the leafage of plants and herbage in gardens and fields was freshened and the surface of the ground temporarily cooled. It was a respite from exhaustion, nothing more; and we are now informed on reliable authority that there are stretches of country along the south coast, in Sussex, Kent, and parts of Hants and Surrey, in which, to quote a graphically descriptive phrase, "roads and pastures are all one colour, a cheerless, whitey brown."

We know from a passing glance through the country by rail and road between the English Channel and the Humber that the above statement is true as regards the localities to which it refers; and we also know that, much as northern farmers and gardeners have felt, and perhaps still feel, the exhausting effect of the drought, they ought really to be happy in escaping the immeasurably greater stress and strain that land workers in the dry uplands in the midland counties and the parched tropical slopes in the south have had to endure. But while being convinced of the general accuracy of the above comparison, we have to record our conviction of a fact which we believe to be indisputable. Whether in the north or the south, or anywhere and everywhere, land that is naturally rich and deep by alluvial deposits, and not exhausted by greed or misjudgment, also land that has been subjected to deep culture and generous enrichment by workers with means and knowledge, "holds out" the best, and supports crops of all kinds for use or ornament long after the poor and thinner mediums "give out," and vegetation withers and dies. There is not a square mile in the kingdom where the land is amenable to profitable cultivation that the accuracy of the above dictum is not demonstrated. We find, comparatively speaking, gardens full and fields bare almost everywhere. What is the reason? It is a case of land fertility on the one hand, and land sterility on the other. We

find striking examples of this over much smaller areas than a mile. Even in the same field they are evident, and to test the matter still more closely over an acre of land in almost any field devoted to small allotments the truth of the proposition stares us in the face, and cannot be obscured.

Take a glance say at four roods of Barley side by side belonging to as many cultivators, the previous crop in each case Potatoes. We find on one piece full healthy clean growth capable of yielding at the rate of at least five quarters of grain per acre, and probably six. The next piece is weak, thin, stunted, weedy, and cannot approach half of such yield. The plot adjoining this is very little, if any, better; but the next "jumps up" more than a foot higher, a fleecy mass of waving plume-like heads. All the plots have had the same amount of sunshine and rain, yet the crops in some flourish and in others fail. Let not the owners of the failures condemn the land and the sun, but rather take a lesson from their successful neighbours on the remarkable potency of high cultivation during periods of drought. As it is to be feared the average man who works on the land is a stubborn animal—too stubborn to believe in and learn the lesson so eloquently taught by the Barley, he must have another course. He can enter a field of twenty rod plots of Potatoes, take any eight of these plots side by side, which cover one acre. One or perhaps two of these plots are supporting plants with stout stems and broad thick leaves that meet across the space of 27 inches between the rows, and would be better with more room. Of the remaining plots half may not be half so good as the best, and the others stunted and miserable, not capable of paying the rent of the land. Again we ask what is the cause of the difference? and again the answer is enriched soil and good management in the one case, impoverished ground or errors in culture in the other. If there is any other valid reason we shall be glad to know what it is. As in small cultures so in large. One field is full of grain or roots—a cheerful prospect; the next thin in crop, weedy, or bare—a depressing spectacle. All have had the same quantity of rain and the soil is of the same original staple. Deep clean generous culture and timely cropping always "tell," but never so clearly as in a long period of drought. Shallow, late slipshod working and exhausted soil tell also, but disastrously.

Our farm contributor is right all through the piece in his insistence on a more generous and intelligent treatment of the soil. In no other way can either farming or gardening be rendered profitable in dry seasons, or any seasons. The striking differences in crops are as apparent on land in Surrey and Kent as in Huntingdonshire, Notts, and Lincolnshire, where inspection has been made. Starved farm land is dried out; deep fertile garden ground supports altogether superior crops. Highly farmed and well fed land is productive, and the grass remains green for weeks longer than in thin poor soil, and all other crops differ in the same way. "No grass in the midlands" is a familiar line. It is too true over a great extent of country; but go to Southwell, where Mr. Merryweather grows Roses, and a green district will be seen. The grass is knee deep in some of the least used nursery paths, or was ten days ago. Perhaps it is cut now. The roadsides are the same, and the fields the reverse of brown. Because the land is rich the grass is rich, if it were poor so would be the herbage.

Go to Gateford and see the splendid crops of all kinds on the excellent squire's estate near Worksop—Mr. Machin's—the Rose squire of the Midlands. The Roses and the crops are what they are because both are well managed by owner and tenants. Would that all were like them—that all had such land and equally, as the late Lord Tennyson said, "did their duty by it." Farmers are not going to ruin there, nor in the best farmed lands of Lincoln; but even among the best, indifferent crops occur here and there to mar the fair face of the country. It is just a question of individual means, ability, energy, and management. It is the same all round and everywhere. Starve the land and it will starve both worker and owner; deepen it where needed, feed it, clean it, stir it to keep

in the moisture, and it will support both to an immeasurably greater extent than so much of it does now.

It is announced that the Board of Agriculture are instituting nquiries for ascertaining the best means to adopt with land in dry seasons. The best crops, and there are good and bad everywhere, tell clearly enough what is needed. More thorough working, more manure-plant-food-in the soil, with surface working to conserve the scant moisture, and no weeds to devour what the crops so urgently require and must have to render them satisfactory. Such are some of the clear, plain, practical lessons taught by the drought of the present year. Let not their significance be disregarded.

WHAT PAYS BEST?

(Concluded from page 516, last vol.)

CARNATIONS succeed admirably in the 14 feet wide houses, either on low roughly extemporised stages or on the borders with boards, slates, or tiles under the pots. The common "Malmaisons" do not fetch very high prices in Covent Garden now-a-days, but the rage for them has extended to provincial towns, where they sell readily enough at from 6s. to 12s. per dozen, according to quality and the time of year. The pink or more richly coloured forms not being so extensively grown, still sell well in London, or somewhat better than they do in most provincial towns, most that I have sent to Covent Garden averaging 12s. per dozen. Provincial people also like good scarlet Carnations of the Winter Cheer type; the superior whites, notably Mrs. Moore, likewise finding ready sales at from 1s. 6d. to 3s. per dozen blooms. For selling in pots, the new race known as Marguerites, and which flower the same year as raised from seed, are among the best that can be grown, plants in 6-inch pots with six or more blooms expanded on them selling freely late in the autumn at 1s. each. This season I have raised about 2000 of these Marguerite Carnations, all being planted out where they are to remain till September—early or late in the month, according to circumstances. Very few of them will ever see the inside of pots, as the bulk will be prepared for lifting by being cut round in August and later on transplanted to the border of a house in succession to Tomatoes. All being well we shall have some grand blooms from these, selling them in mixed colours and in bunches thirteen in each, at prices varying from 6d. to 1s. 3d. per bunch. All will be cleared out by February, or in time to plant early raised Fomatoes. Where the water supply is not good and labour somewhat short, the same plan may well be tried with other winter flowering Carnations, Malmaisons excepted. The popular colours are red, scarlet, yellow, white, and flesh pink, and the varieties should be also those that do not invariably burst their pods. The prices for all such vary from 3s. per dozen in times of scarcity to

1s. 6d. per dozen when more plentiful—wholesale in each instance.

Bouvardias are by no means overdone in the provinces, the double-flowering forms being worn by gentlemen, and the single whites, notably the Jasmine-flowered varieties, in bouquets, wreaths and crosses. These succeed we'l when planted out in a warm position and rather light soil, lifting and repotting or transplanting to a border, sharing a house, if need be, with Carnations, the latter being given the coolest end. Callas, or Arums as generally termed, are too often a drug in the market to be very profitable, and the only times a good sale for them is certain are at Christmas and Easter. Those who succeed in flowering them well at the first festival and can contrive to have some for the latter busy time among church decorators can afford to sell them cheaply in the interval. At no time are the prices so good as formerly. Last Christmas 9s. per dozen was considered a fair price, and all we had at Easter did not realise 6s. per dozen. They need never be grown in pots. The old plants being dried off directly the Easter flowers are cut, then pulled to pieces, planted out on good ground, lifted before the middle of September, and replanted in the houses, will

pay fairly well for the little trouble expended on them.

This brings me to yet another useful class of forcing houses, and which market growers cannot very well dispense with. roofing for houses 12 feet wide and 100 feet long can be bought cheaply, and being duly fixed to well buttressed 9 inch walls, or to boarded sides, in either case 30 inches above ground, and glazed with the best 21-oz. Belgian glass, a cheap structure is the result. In this instance there ought to be a flow and return pipe up each side, or the return may be brought back on each side of the central path, while it also pays well to have a bottom heat pipe 2 feet or so from the sides. Such structures fitted up with wooden latticed staging, or better still with light T iron framework covered with sheets of galvanised iron, ashes or clean shingle being placed on this, are admirably adapted for propagating purposes, and in

particular for raising thousands of sturdy Tomatoes, Cucumbers, and other plants. These warm houses are also the best for Cucumbers, and these properly managed are, considering the short time they are about, even more remunerative than Tomatoes. Melons, again, succeed well in them, but for these to pay well the fruit ought to be fairly large, prettily netted, of an attractive colour, and perfectly sound when they reach Covent Garden in May and June. Later fruit had better be sent to provincial towns, and high prices will not be had anywhere for them.

After the Cucumbers and Melons are cleared (two distinct crops of the former being grown in one season) fit up stages for pot plants. Maidenhair Fern should certainly be grown extensively, the fronds finding a ready sale locally and in large centres at 4d. to 6d. per dozen, neat plants also going off well at 9s. per dozen wholesale, and 1s. each retail. Cyclamens ought also to be prepared by the hundred for flowering in such stage-fitted houses, the flowers of these selling freely at 4d. per dozen, or rather less at times, the plants also finding a ready market at remunerative prices. Double Chinese Primulas are not in great demand in a cut state, but when well flowered in 5-inch pots they sell freely enough at 9s. per dozen. When a good stock of A. F. Barron can be propagated, this superior variety will find ready sales in a cut state. Pelargoniums, especially Raspails, are largely used by church decorators, particularly at Christmas and Whitsuntide, and pay well at an average of 6d. per dozen. If strong plants are pre-pared in the open, and wintered clear of each other on stages in moderately warm light houses, they will flower grandly as long as desired.

This does not exhaust my list of plants that can be profitably grown during the autumn and winter in houses primarily intended for fruit culture, no mention having been made of Lily of the Valley, Roman and miniature Hyacinths, Freesias, Narcissi, Spiræas, and such like, but I must be content to add that orders for all the latter should be placed at once, or the bulbs or roots may not be obtained at similarly low rates if ordered much later on .-MARKET GROWER.



VENTILATING ORCHIDS.

Odontoglossums are very impatient of direct sunlight; they should, therefore, be shaded from sun at all times, from early spring until all danger of burning is past in late autumn. Even in the winter during occasional short periods of bright sunshine the blinds are let down. The plants are never allowed to become dry, and are kept very moist during the summer. The house is ventilated day and night all the year round. The bottom ventilators, or those placed below the staging and about a foot above the floor, are left partly open on the coldest of nights, full ventilation from this point being given throughout the warm season. The top ventilators are opened not later than 6.30 A.M. more or less during warm weather, a little air being left on all the night in weather like the present. The side ventilators, or those on a level with the side staging of the house, are occasionally opened, but only to keep down the temperature when it gets beyond the control of the top and bottom ventilators. Side ventilation has a tendency to dry the house and plants unduly, and should only be employed when absolutely necessary; 70° Fahr. may be considered the maximum summer temperature for Odontoglossums, and 60° the average during the summer. In winter 50°-55° is a good general temperature 5° either way doing no home according to a standard t ture, 5° either way doing no harm according to external temperature.

Cattleyas require plenty of light, air, and moisture during the summer and early autumn, with all the sunshine available in the autumn, winter, and early spring. Heavy shading should never be used, only sufficient to keep the plants from scorching. Advantage ought to be taken of every period of dulness, however short, to remove the blinds. Permanent shading of canvas or wash should never be used. An average temperature of 5° higher than the Odontoglossums is necessary. They require air at all times, but not quite so much as the Odontoglossums. I grow Odontoglossum citrosmum, O. Harryanum, and O. grande with the Cattleyas. The house should be kept moist, likewise the plants, during the growing season, with a drier atmosphere and less water at the root after the pseudo-bulbs have finished growth. A stagnant atmosphere must be avoided at all times. Under the foregoing treatment the Odontoglossums and Cattleyas in my care grow and flower freely.

—W. R. W.

DISA KEWENSIS.

This is a new hybrid which has been raised at Kew from D. grandiflora and D. tripetaloides. It is decidedly pretty. The leaves, scape, and general look of the plant are like those of the hybrid D. Veitchi, the parents of which are D. grandiflora and D. racemosa, but the flowers of D. Kewensis are smaller, being 1½ inch across. The lateral sepals are 1 inch long, ovate, slightly recurved and coloured rich rose; the posterior sepal is hooded, as in D. grandiflora, three-fourths of an inch in diameter and coloured rosy lavender, with red spots; the lip is yellow inside, with transverse lines and spots of crimson. The scape is 18 inches high and bears six flowers. The seeds were sown in November, 1891, so that this plant is only eighteen months old. There are numerous other plants of the same age, but only one has flowered.—W. Watson (in "Garden and Forest.")

LÆLIA MAJALIS.

This is a dwarf, compact-growing species, and rather a shy bloomer, but when well flowered it is very showy. The flowers, borne singly on the spike, appear on the young growth in spring, and are about 5 inches across, the petals broader than the sepals, rose colour, lip large and streaked with purple. It should be grown in a sunny position in the Cattleya house, and when the growths are made the plants ought to be removed to the open air for a time. This species succeeds best on a block or in very shallow pans.

LÆLIA PURPURATA.

This magnificent Orchid is now flowering in most places, but it is not everywhere that fine specimens are seen. Small plants do not show the character of the species; but when seen in good condition, and specimens 2 to 3 feet through, it is one of our grandest Orchids. The habit is very robust, therefore the culture is comparatively easy, and as plenty of water is required at the root while growing an open compost is necessary. It should be kept with the Cattleyas, and in a genial temperature while growing.

AËRIDES.

This is a beautiful genus of epiphytal Orchids, most of the species of which are easily grown. The flowers are produced in cylindrical racemes from the axils of the leaves, mostly near the tops of the plants. They are usually fragrant, last a long while in perfection, and vary in colour from white to pink and rose. All the large growing species, of which A. odorata is a well known type, can best be grown in broad and shallow wood baskets. Small plants should be suspended, but larger ones may be grown on the stages if allowed plenty of room.

Aërides require a strong moist heat in summer with something for the long white roots to catch hold of as they grow, and there is nothing to equal sphagnum for this purpose. If this is renewed every spring together with a few lumps of charcoal or ballast, large plants may be kept in health for years without being disturbed at the roots, and the number of flowers they produce under these conditions is remarkable, the growth also being very free. In the winter they should be kept drier at the root, but not sufficiently so to cause shrivelling of the foliage or the lower leaves to fall off, as

this greatly disfigures the plants.

As a proof of the rapidity of growth under these conditions, it may be worth mentioning that I once grew a plant of A. odorata in three years from a small piece in an 8-inch pot to a specimen over 2 feet through, with five or six stems, the highest of which would be about 30 inches, and which the last season it was under my charge produced sixteen racemes of flowers, many of them 18 inches in length. The smaller growing species, such as A. affine and A. roseum, are rather more difficult to grow. They require more attention in the autumn to ripen the growth made, and should in all cases be suspended near the ventilators, a constant supply of fresh air being of the utmost importance.—H. R. R.

PHALÆNOPSIS SCHILLERIANA.

ENCLOSED is a photograph of ten plants of Phalænopsis Schilleriana, which were grown here this year, and bloomed in March; the most blooms on one plant were sixty-two, and the least twenty. If you think this note worthy of a place in your valuable paper you will oblige by inserting it.—WM. MCHUTCHEON, The Gardens, Auchindennan, Alexandria, Dumbartonshire.

[We are always ready to insert records of good cultivation such as the photograph represents; it is, however, not quite suitable for reproduction in our columns, and we suspect hardly does justice to the plants as they were when in full beauty.]

SALE OF NEW ORCHIDS.

As announced in our advertisement columns last week, Messrs. Protheroe & Morris will sell by auction at their rooms in

Cheapside, E.C., to-morrow (July 7th) a number of new Orchids which have been imported by Messrs. F. Sander & Co., St. Albans. These will include Eulophiella Elisabethæ, Habenaria gigantea var. sumatrana, Cypripedium Nicholsonianum, Dendrobium Phalænopsis var. Schröderianum, and a rosy red Oncidium from Venezuela.

CAMPANULA PERSICIFOLIA ALBA BACKHOUSIANA.

THE Peach-leaved Bellflower, Campanula persicifolia, is a very old garden plant. According to a writer in 1797 the species was then



FIG. 1.—CAMPANULA PERSICIFOLIA ALBA BACKHOUSIANA.

becoming uncommon in gardens, its place having been taken by the improved varieties which had made their appearance even at that early date. The number of varieties has been considerably increased since then, and perhaps the most popular as well as the most useful is the white form C. persicifolia alba. This has in turn been undergoing improvement, and the variety now under notice is a considerable advance on the older form, the pure white flowers being much larger and finer than in the typc. It is a first-rate variety for pot culture, as it continues a long time in flower, and is said to force well. Fig. 1 represents it.—A. B.

NOTES FROM SOUTH WALES.

THE present season will be remembered as one of the hottest and driest on record for many years past. The rainfall during March was only 0.35 inch, which fell on six days, and the fall in April was still less—0.25 inch, which fell on three days. The rainfall in May was 2.49 inches, but owing to the dry state of the ground and the prevailing hot bright weather it soon evaporated, and vegetation was little benefited by it. The fall in June was very low, 0.60 inch, with a high temperature and scorching sunshine. The ground has been dried now to a considerable depth, and vegetation is suffering severely for the want of rain.

All kinds of fruit trees flowered profusely this year from a fortnight to three weeks earlier than usual. The weather was favourable during the time they were in flower, and the fruits set well and swelled freely until the trees began to feel the effects of the drought, when the Apple trees began to get covered with red spider and American blight. The fruits dropped off in great numbers, and they have continued to drop more or less ever since, although many of them are more than half grown. The set of Apples and Pears was enormous, and the Pitmaston Duchess Pear trees here had to be propped up six weeks ago to keep the branches from being broken by the weight of fruit. Plums are a much better crop than I anticipated early in the season, but the trees are very much blighted with aphis. If we are favoured with copious rain, of which there is no sign at present, there would be a good crop left; but the fruits will be smaller than usual.

The crops of small fruits have been very good, notwithstanding the long-continued drought. The Strawberry plants were mulched with rough stable litter early in January, and they have withstood the dry hot weather well and produced a good crop, which began to ripen at least three weeks earlier than in ordinary seasons. Scarlet Queen ripened fully eight days before Noble, both growing side by side on a south border. The fruits are not so large nor so handsome looking as Noble, but they are much firmer and better in quality. Gooseberries, Raspberries, Black, White, and Red Currants were plentiful and of good quality in this district, but the

birds were troublesome upon those not netted.

Vegetable crops have suffered most. The early crops of Broad Beans are covered with black aphis, and the successional crops withered and died before coming into flower. Scarlet Runners are also infested with black aphis; the flowers are dropping off and pods not setting well. Peas have grown fairly well, but soon ripen and get too old for use. Onions, Carrots, and Turnips have made little progress, and I am afraid they will do little good this season. It is difficult with a short supply of water to keep up a succession of Lettuces; they are withering up in the drills before they are fit for use. The winter crops—Savoys, Broccoli, Brussels Sprouts, and Celery—are at a standstill, and in some places the plants of the Brassica family are still in the seed bed, where planting was delayed with the expectation of getting rain soon. Asparagus and Seakale, also Tomatoes trained on walls, luxuriate in this dry hot weather, which seems to suit them admirably; but Potatoes are losing their leaves and ripening off prematurely.

The loss among newly planted forest trees is very great. In some places (on the hills here) all those that were planted last season have perished, and we have lost thousands of Scotch Pine and Larch on this estate that were planted four years ago, and had grown to the height of 6 feet. The Larch plantations in this district are badly diseased this season, which may in some measure

be attributed to the long drought.

The Vines in the vineyards at Castle Coch, Swanbridge, and St. Quintin's Castle, never looked better since they were planted. They are covered with fruit, and the bunches are as forward now as they usually are at the end of August. The foliage is clean and healthy, and the young canes are stronger this year than ever I remember them.—A. Pettigrew, Castle Gardens, Cardiff.

INSECT PESTS.

INSECT pests are most abundant this year, and correspondingly harmful to plant life. I have, on former occasions, seen a greater plague of insects on the vegetation of a poor peaty soil, but have never witnessed anything like the same multitude in a garden. Up to the present the red spider has not made itself conspicuous in the garden of which I have charge, but various aphides are to be found on many plants, fruit trees, and shrubs. It is a marked feature of this insect visitation that vegetation growing in deep rich soil has kept comparatively free of the pests, while, on the other hand, plants growing in dry and shallow ground, as well as trees or shrubs which have stood a long period on the same site without having received any cultural help, have been infested with insects. This points most clearly to the beneficial aspect of

high cultivation as a deterrent to insect attack. It cannot, however, be regarded as a settled point, because Carnations in luxuriant growth have been much preyed upon, while Chrysanthemums in

pots have suffered from repeated attack of the aphis.

Hymenoptera have been very early afield and in great numbers. Three species at least of the humble bee have been largely represented. The mischief they confine themselves to, so far as the garden is concerned, is the destruction of Carnation and Pink flowers. Few of these have escaped them, and practically nothing can be done to prevent their visits. The common wasp is also more numerous than usual, hanging nests in particular being common. I do not much object to these, as at present and for a few weeks longer they are not frugivorous, but distinctly insectivorous. The foliage of infested fruit trees, more particularly Pears, is swarming with wasps. Some cottagers have been endeavouring to destroy those colonies settled in their gardens. Where hanging destroy those colonies settled in their gardens. nests are easy of access no better method of extinction need be followed than this. On a fire shovel place a few embers and keep them in a glow until wanted by means of a little added charcoal. Then throw a handful of flowers of sulphur on the glowing mass, and with this stupefy the wasps. Cut down the nest, letting it drop on the shovel, and few, if any, wasps will remain. Cyanide of potassium is sometimes applied to wasps in burrows, but unless the nest is dug out and destroyed within twelve hours the colony quickly resembles in vigorous life.

Respecting the eradication of aphis, and also of other insects which infest trees and other plants growing outdoors, it is as well to see whether anything cannot be effected in the way of helping the plant itself to greater vigour. To this end I advise the removal of all superfluous, and on that account hurtful growth. Take for example, an old wall-trained Rose tree. Even should the spring pruning have been well done there is now sure to be many weakly growths unable to produce buds, or in any way to further the well-being of the tree in general. Every one of these shoots ought to be removed. In the case of Plum trees, which are very subject to insect attack, similar measures must be followed; and the same remark applies to all kinds of trained trees. The benefit of thinning is apparent in the number of insects which are at once cleared out, as it is these worthless growths that harbour vermin. The vigour of the tree is also enhanced, and any help afforded in the way of water or manure at once reaches those shoots which are alone capable of receiving benefit. With the growths thus thinned remedial measures can be applied more successfully. There are fewer leaves to reach, and these are more easily cleansed.

For cleansing on a large scale I do not know anything better or generally easier to procure than soapsuds. Progressive laundresses do not now employ soda as a softener of water, but in cases where soda is used it is doubtful if it does any harm. To a large tubful of suds add a quart of petroleum, then with a syringe churn the suds until the mineral is assimilated. To any tree requiring cleansing apply this solution in the evening. Follow in an hour with another cleansing of pure water, and if the work is properly done few, if any, insects of any sort will be left. American blight succumbs to the same agent. In this case, however, it is necessary to direct with some force the spray from the syringe on the insectinfested spots. Currants and Gooseberries, which are sometimes attacked by aphis, are most expeditiously cleaned by removing the points of the shoots. I clean the buds of Carnations by means of a slight dusting of tobacco powder. Chrysanthemum shoots are

rendered clean in the same way.

Turning to the inmates of glass structures, the only difficult pest I have had to deal with has been mealy bug. During the time the heat lasted mealy bug multiplied with rapidity. Stephanotis in flower was attacked perhaps the worst; but also on some old Vines, which have given little trouble for many years, the pest increased most alarmingly. Asparagus in a hot stove also became quickly dirty. The break up of the drought brought a desired opportunity, and with one day's cleaning not many of the enemy was left. The Grape Vines took longest to clean, as it was needful to go carefully over every rod, shoot, leaf, and bunch, the latter with a camel hair pencil, the others with a sponge. I used as an insecticide a strong solution of softsoap, with a very small quantity of petroleum added. The sponge and the pencil were dipped in the solution, then squeezed almost free of moisture, and the insects thereafter touched lightly with either. The Vines will require to be looked to again in order to destroy those which escaped notice, and I am hopeful that not much mealy bug will be seen again for a long time to come. Stephanotis, Asparagus, Palms, and other plants not easily injured were syringed with a solution of soapy water and petroleum, followed closely with clean water. It is we'll to note that shade from sunshine is advantageous for a few days after cleansing.

It is curious to observe how insects attack the same plant year after year. I had a Vine which regularly developed red spider at

a certain stage of its growth. In another structure a Vine with the same regularity experienced an attack from thrips. On examination it was found that both Vines were growing in positions where they were likely to become dry at the roots more quickly than their neighbours. By increasing the supply of water along with an extra application of manure the insects have entirely disappeared. Thrips are almost always introduced to plants by maintaining a high temperature. In the case of a heat-loving plant like the Croton, one is apt to think that this could not be the case; but it is so if a hot drying sun shines directly on the plants. Red spider is most often brought into prominence by dryness at the root. Warm soapy water applied at about 110° is an excellent inscrticide for eradicating red spider. In all cases, however, it is best to see that there is no check to healthy root action, and if there is to remove the cause forthwith.—B.

STRAWBERRY FARMING.

DURING any ordinary season Strawberries should now be coming in (in bulk) from our English fields, but a visitor to any of the gardens in Hants or Kent would clearly see that for this year the picking is over. As a rule the crop lasts about a month, and 1893 has been no exception to the rule. Since the last fortnight in May the beautiful and wholesome fruit has been pouring into the London and provincial markets by the ton. Prices have been good, and many growers have had solid reason to rub their hands with delight; but although in some cases the returns have been far beyond the average, in others probably ruin, on account of the long drought, stares men in the face. As the season has been so exceptional, and the success of growers so diverse, it may be advantageous to look a little closer into the mystery of Strawberry farming, with the experience of the past three months still fresh in the mind, and inquire if anything can be done to ensure still further success another year.

It goes without saying that Strawberry growing is a paying occupation. I have watched the business for the past nine years in Hampshire, and have seen acre after acre laid down. Young men start with say half an acre, and after the second scason a pony-cart appears on the scene, and more land is taken up and planted. There must be money in the business. Further, it seems that Surrey is making a start, for I saw two large fields not far from Farnham a few days ago, and I honestly say that the plants and crop were fully up to the standard of Hampshire beds; and if Surrey starts, I see no reason why this crop should not be beds; and if Surrey starts, I see no reason why this crop should not be much more extensively grown in the south of England generally, for the demand for fruit is increasing, and even if the price realised is only 1s. 6d. to 2s. per gallon, the yield is quite three times the value of Potatoes grown upon an equal area, and the risks of failure are not nearly so great. Foreign fruit usually appears in advance of English, but we know well the superiority, not only in appearance and colour, but in flavour also, of our English-grown Tomatoes and Strawberries, and this superiority governs the market. Certainly all the returns come during one month, or at most six weeks of the year, and the labour is spread, more or less, over the other eleven months; but to men who contemplate taking allotments, if the land is fairly suitable as regards aspect and retentive power, I would strongly advise them to try a few rods of Strawberries, particularly if they are within reach of a fairly large town. There is room for speculation here. Many people hardly know the meaning of a gallon of Strawberries, who would be pleased to buy such for 2s. or 2s. 6d., fine freshly picked fruit, at 4d. or 5d. per pound.

I might say much more, but we propose looking at the experiences gained during the past three months, and to do this tersely and yet thoroughly is a difficult matter. I have certainly found it a general rule that the men who have done best are those whose plots are situated upon a fairly rich loamy soil with retentive subsoil, who have gone in heavily for autumn manuring and cleaning, and who have simply throughout the spring right up to the period of bedding up, kept the hoe at work, in many cases to such an extent that the surface (but surface only) soil was almost as dusty as the road.

Some have done well upon light soils, but only in cases where the soils have been consolidated by continual treading during the hoeing process. Whatever the class of soil, I believe most strongly that the hoe can account for much. A good porous gravelly subsoil for an early crop, but unless the season is a rainy one there is little chance of a month's picking. I am perfectly certain that any cleaning work done in the spring is disastrous, for the young fibrous roots of the plants make growth very early, and growers cannot afford to injure these and weaken their plants.

It is clearly seen that by continual hoeing the soil must be compressed, and evaporation retarded. Moisture is greatly needed for the Strawberry, as the size is thereby regulated; and it is only those who have watched the development of the fruit, and its wonderfully quick manner of filling out and ripening, who can testify to the importance for suitable soil and retentive subsoil.

There are many other points of interest that readily suggest themselves to the mind, but I may later on deal with the varieties most suited for market purposes, the modes of general cultivation in the Hampshire district, the gathering and marketing the crop, the treatment of the beds after the crop is off, and when running out of condition

The profit and loss account is hardly obtainable, as in many cases,

and perhaps wisely, the growers would not care to tell us much; but I must add that they are often deprived of a good share of their well-earned cash by the middleman. — EDWARD H. SMITH, Warminster.



Rose Show Fixtures in 1893.

July 6th (Thursday).—Bath, Farningham, Manchester, and Norwich., 7th (Friday).—Ulverston.

7th (Friday).—Ulverston.

11th (Tuesday).—Harleston and Wolverhampton.†

12th (Wednesday).—Earl's Court and Tunbridge Wells.

13th (Thursday).—Worksop (N.R.S.), and Woodbridge.

14th (Friday).—Helensburgh.

15th (Saturday).—New Brighton.

20th (Thursday).—Bedford and Trentham.

25th (Tuesday).—Tibshelf.

27th (Thursday).—Halifax and Southwell.

29th (Saturday).—Bedale.

† Show lasting three days.

-EDWARD MAWLEY, Rosebank, Berkhamsted, Herts.

NATIONAL ROSE SHOW AT WORKSOP.

I SHALL esteem it a favour if you will allow me to make the following communication to intending exhibitors through your columns this week. To the train leaving King's Cross at 10.40 P.M. of July 12th, the Great Northern Railway Company has kindly consented to attach a special van for Rose boxes. This train will take up at Hitchin. It will be met at Worksop, where it arrives at 2.18 A.M., and the boxes can, if exhibitors so wish, go direct to the Show ground and be placed in charge of a night watchman.

The next train out of King's Cross is 5.15 A.M. (morning of 13th July). This, Mr. Cockshott, the Superintendent of the line, tells me is one of the heaviest and fastest trains of the day, and on that account it will not be practicable to attach to it an extra van. Mr. Cockshott will, however, make arrangements for conveyance of exhibitors' boxes by this train, if I can give him some idea of the number of boxes and from what stations they will require to be conveyed. The train will take up at Retford at 8.20 and reach Worksop at 8.31 A.M. There is another train from Retford at 8.23, reaching Worksop at 8.40 A.M., and exhibitors joining the M.S. and L. system at Retford (especially those bringing much cargo) will find more accommodation by it than by the express.

From Sheffield exhibitors will find a van for their boxes on the train leaving at 7.15 A.M., and I am asking the Midland Company to make due provision on the train leaving Nottingham at 6 A.M. and Mansfield

at 7 A.M.

I shall be much obliged if exhibitors intending to make use of the 5.15 A.M. train will at once let Mr. George Baxter (our Hon. Secretary, 69, Bridge Street, Worksop) or myself know, as near as may be, what they will bring with them, and where they will join the train, so that I may be able to reply to Mr. Cockshott's inquiries. No doubt so far as the railway company is concerned the 10.40 P.M. train is best. It will be a help to the local Committee to know the number of boxes they will have to meet by the other trains, but this is of less consequence. JAMES SNOW WHALL, 31, Park Street, Worksop.

ORANGE FUNGUS ON ROSES.

I HAVE not seen Mr. W. G. Smith's "clear and well illustrated" contribution on this fungus in the "Rosarian's Year Book" for 1887. My experience of the parasite does not accord with "W. R. Raillem's" (page 497, last vol.). But different fungi are termed "Orange" that infest Roses besides the one above named, as Coleosporium pingue, Lev., and Dothidea Rosæ, Fr. I must also demur to your correspondent's dictum that it is the latter stage of Phragmidium mucronatum that does the most harm to Roses, for it is the mycelium of the fungus that does the whole damage, and this first produces the Lecythea Rose, whilst the Phragmidium is borne from the same mycclia and has none independent of the other.—G. ABBEY.

NATIONAL ROSE SOCIETY'S TEA AND NOISETTE EXHIBITION.

This was unquestionably the best of the series of Exhibitions that the Society has held, and the quality and correctness of the blooms were far in advance of any show of the kind held anywhere. We have had some in wet seasons, when the outer petals of the flowers had to be pulled off, and the blooms looked very naked; we have had others in showery weather, when the flowers were spotted and discoloured; but this long season of drought has enabled exhibitors to show their flowers in the perfection of colour and form. The date on which it flowers in the perfection of colour and form. The date on which it was held caught these flowers just in their prime, and I very much doubt whether at the Crystal Palace or elsewhere we shall see during the present season such a collection of Teas and Noisettes brought together.

The peculiarities of the season brought about some curious results, There has always been a keen competition between the growers of Tea Roses in East Anglia and the West of England. During the two last years victory has remained with the latter, but this year the course of things has been changed. It is true that Dr. Budd of Bath was sucoessful, but of our two champions, Mr. Alex. Hill Gray and the Rev. F. R. Burnside, we might well say "How the mighty have fallen!" Knowing well as I do the warm situation in which Mr. Gray grows his plants I was quite prepared to find that in this season he had suffered From the long drought and the invasions of thrips and other attendant calamities. I cannot quite as well understand Mr. Burnside's position, because last week he carried everything before him at York. I am told that his flowers there were of a very first-rate character, but I was sorry to hear him say that he doubted very much whether he should be able to put in an appearance at the Crystal Palace. But the East Anglian Rose growers were this year very much to the front. In the nurserymen's class all the principal prizes fell to the Colchester growers, Messrs. B. R. Cant, Frank Cant, and Prior & Son. It is true that at the trial of East Anglian parsons the Revs. H. A. Berners, F. Page Roberts did not put in an appearance, but the Rev. Foster Melliar exhibited in a form we have never seen before. His box of twelve was I think the most perfect one in the Show, and his bloom of Souvenir d'Elise which gained the N.R.S.'s silver medal as the best bloom in the Show, was a splendid flower. I have seen larger blooms of the variety, but never one in which the perfection of form and colour were more strikingly developed.

Another satisfactory feature of the Exhibition was the keen competition that took place in many of the amateur classes. There had been times when there were hardly stands sufficient for the prizes offered, and when the question arose whether some of those to which they were awarded were really worthy of it; but in the case of this Exhibition nothing of the kind occurred, for in many of the classes from seven to fourteen stands were shown; and although not very pleasant to those who were left out in the cold, it was more agreeable to those who won to know that they had had a hard fight for it. On some former occasions, too, a large proportion of the blooms had been either from walls or from houses, but I doubt very much whether there were any shown at this Exhibition that were not from the open ground, hence it more answered the wishes and expectations of the Society, which never intended that it should be a show for Teas and Noisettes under glass. Although the general character of the flowers was that which I have endeavoured to describe, one of great excellence, there were few blooms that stood out pre-eminently grand. There were some fine blooms of Comtesse de Nadaillac and Souvenir de Thérèse Levet in Mr. Foster-Melliar's stand, very bright, though a colour, I think, out of place amongst the delicate and refined Teas. One of the most remarkable blooms in the Exhibition was one of that fine Rose of old Margottin's, Boule d'Or, shown in Mr. Budd's stand of Bath, one nearly equally good being in Mr. Foster-Melliar's stand. Marie Van Houtte was exhibited in many stands in excellent form, having that beautiful yellowish ground with pink on the edge which is really its true character. Mr. Grahame of Croydon had also some excellent blooms, and it is pleasant to find that both he and Mr. Foster-Melliar, who have done so much to instruct rosarians by their writings, have shown that they can carry into successful practice theories they have advocated.

It is hardly necessary to say that in the stands from Colchester in the nurserymen's class there were a number of very superior blooms; indeed, as I stood by the experienced amateurs who judged in this class I was struck by the high number of points given to each stand. can I omit a word of praise to the beautiful dozen of Maréchal Niel exhibited in this division. It is a somewhat curious thing that although the Society offers very good prizes for a decorative arrangement of Teas and Noisettes in basket, vase, epergne, or indeed anything suitable, we never seem to be able to get beyond three competitors. The competition is confined to ladies, and the Committee had hoped that there would have been a larger number of them to enter the lists. The three competitors is this instance were Mrs. Orpen of Colchester, Miss Bloxam, and Mrs. Mawley, to whom the prizes were awarded Mrs. Orpen's was a delightful arrangement in in the order named. which apricot colour predominated. Miss Bloxam had a very neatly arranged basket, the foliage of which mainly consisted of the leaves of Rosa rubrifolia, the dark colour of which afforded a good contrast. Mrs. Mawley's arrangement was very pretty, and the Roses in it were excellent in quality.—D., Deal.

CANKER IN FRUIT TREES.

THE following cutting from the "Revue Horticole" may be interesting to your readers:—"It is now known that the cause of canker in fruit trees is a microscopic fungus named Nectria ditissima, which rapidly extends its ravages, but which can be effectively brought under control. For this purpose the cankered parts should be cut away and dressed with a pruning knife, after which a mixture of the bouillie bordelaise containing 3 per cent. of sulphate of copper and 6 per cent. of lime should be applied to the affected parts with a paint brush. This application may be repeated once or twice in the course of the summer." This, it will be seen, bears out Mr. Abbey's remarks on page 115 of the Journal of Horticulture, February 9th of this year.—ONE INTERESTED.

WHATEVER may be the cause of canker in fruit trees, there certainly is a great deal more of it when a severe winter follows a cold wet summer. Is it because the sap is frozen and bursts the cells, causing a rupture through which the sap comes, forming a gummy substance? When a dozen trees of one sort are planted, and only one is cankered, may not that one be rooted deeper, or in some way have more moisture at the root, causing it to grow later, and consequently get the sap frozen in it while the others escape? Has anyone noticed whether those varieties most subject to canker are naturally later in finishing their growths?

On February 16th, 1892, we had 38° of frost here, which killed

many branches of fruit and other trees; and as we had mild weather previous, which caused the sap to move, may I ask if the cause of death would be frozen sap? These are only thoughts from observations of canker after severe winters, and are not proven facts of canker from that cause.—B. L. J., Leicester.

THE above is such an important matter that in a paper that treats on pomology so fully as the Journal of Horticulture no apology is needed to introduce the subject. I have not the pleasure of the personal acquaintance of Mr. Abbey, but I have reason to think that his theory of the cause is the right one, and that the remedy for the cure is a good one which was fully detailed by Mr. Abbey in the Journal of Horticulture early in the present year. I purchased the necessary ingredients at a chemist's in our nearest market town, and mixed it according to the directions given, and applied it to seventy standard Apple trees which have been planted, some ten and others fourteen years, thirty-four pyramid Pear trees, and twenty-four espalier Apple

trees, mostly of about twenty years' growth.

What caused my anxiety with regard to canker was this. Some of the first planted Apple trees (standards) were very healthy, with fine heads; but in the autumn and winter of 1892 I noticed several trees badly attacked with canker, notably Cox's Orange Pippin and Warner's King; and among the Pears Glou Morçeau and Seckle. I applied the remedy, and I am pleased to say that the trees are already healthier. Canker seems to be arrested, and the trees are carrying a fine crop of fruit. I shall have to prop many of the Apples and Pears, and the trees that were dressed with the canker mixture were not nearly so much affected with caterpillars as those trees left undressed. We have a new orchard containing several hundred trees, and I hope to

dress the trees in the same manner next year.

Why I think Mr. Abbey's theory of fungus being the cause of canker, and being propagated by spores carried by the wind, insects, or other means of infection, is this. In the early spring of 1891 I purchased some new maiden Apple trees, thinking to form them into espaliers. procured them from a good source. Among them was a plant of the new Apple Bismarck. They were clean, healthy little trees on the Paradise stock. For want of other space I was obliged to plant this particular tree of Bismarck near to a tree of Old Hawthornden which was affected with canker, and in the autumn of 1892 I noticed one of the branches on the small tree of Bismarck was cankered, which I have enclosed for your inspection. Now, in this case the soil was good, the roots near the surface, and the ground had been specially dressed with supposed antidotes to canker and its cause in the soil.—R. MAHER, The Gardens, Yattendon Court, Newbury.

NIGHT-BLOOMING CEREUS.

MR. MARK B. F. MAJOR is, I think, mistaken in supposing Cereus Macdonaldiæ to be the plant which was lost a number of years ago in Journal for June 12th, 1884, page 464, he will find a paragraph on the same flowering at Cromwell House under the care of the late Mr. W. Wright. The bloom when expanded measured 14 inches across. On the following week, June 19th, page 492, the plant is mentioned again. The variety referred to is the result of a cross between C. grandiflorus and C. speciosissimus. It was a remarkably fine healthy plant, trailing with other night-bloomers over a large wire arch figured in the Journal for May 22nd, 1884. I have had the pleasure of seeing it in flower on more than one occasion since then. It was raised by Mr. Kenny, gardener to Viscount Maynard, Easton Lodge, Dunmow.—G. W.

Mr. Major's very clear description of some varieties of this Cactus enables me to determine with more confidence that my free-flowering variety is Cereus grandiflorus. Will you once more extend the courtesy of your columns to me to ask any grower of this Cereus what is the greatest number of blooms he has had on any one evening on one plant? Mr. Major says, "We seldom had more than one, and I think never more than two out on the same plant at one time." This, as far as it goes, seems to bear out my idea that nine fully expanded blooms of Cereus grandiflorus on one plant on the same evening may be a very unusual, as it certainly is a very magnificent display.-RICHARD J. HILTON.

[It is recorded in the Journal of Horticulture, page 422, May 29th, 1884, on the authority of Mr. Siddal of Chester, that a large specimen of Cereus grandiflorus in a house at Pendyffryn, Wales, has had from sixty to eighty flowers open at one time.]



EVENTS OF THE WEEK.—Horticulturists will be busy during the ensuing week. Apart from the Rose shows, a list of which is given on another page, several events of special horticultural interest will take place. As mentioned elsewhere, the Royal Horticultural Society will on July 11th have an exhibition at Chiswick, with which the show of the Carnation and Picotee Society will be held. On the following day a special show of Roses, Carnations and fruit will take place at the Gardening and Forestry Exhibition, Earl's Court, whilst in the evening the Worshipful Company of Gardeners will dine at the Hôtel Métropole. Wolverhampton Floral Fête opens on the 11th inst. Woodbridge (Suffolk) Show will be held on the 13th. A great Orchid sale will take place on Friday next, the 7th, at Messrs. Protheroe & Morris' Auction Rooms.

- THE WEATHER IN LONDON.—Warm, bright weather again characterised the greater portion of the past week. Sunday was very hot, and the same may be said of Monday. Tuesday was likewise warm tut less sunny than the three preceding days, and a refreshing rain fell at night. Wednesday opened cloudy but very warm.
- —— Show Reports.—The crowd of Rose and other shows is so great that it is impossible the whole of them can be reported, but efforts are made to report those which have been advertised in our columns, or exhibitions of general interest of which schedules have been sent and reporters' tickets received. Reports arriving on Wednesday morning, and for which no space has been reserved, are too late for insertion. We desire to thank all correspondents who send us notes on local shows and matters of public interest.
- CARNATIONS AND PICOTEES AT EARL'S COURT. Arrangements have been made for Carnations and Picotees to be exhibited at the Rose and Fruit Show to be held at the Gardening and Forestry Exhibition, Earl's Court, on July 12th. Seven classes are provided in the supplementary schedule just issued, and liberal prizes are offered.
- THE employes of Messrs. RICHARD SMITH & Co., St. John's Nurseries, Worcester, had their nineteenth annual excursion on Monday, the 19th ult. Llandudno was the place chosen for this year's outing, and accompanied by their wives and friends, the whole party numbering 450, travelled by way of the Severn Valley in a special train of carriages provided by the G.W.R. Co. The firm have intimated their intention to close their nurseries and seed establishment to-day (Thursday), in honour of the Royal wedding, and to pay their employes for the day as usual.
- WOODBRIDGE HORTICULTURAL SOCIETY.—The annual Exhibition of this Society will be held in the Abbey Grounds on Thursday, July 13th. Roses form a special feature at this Show, the principal prize being a 25-guinea challenge cup with the National Rose Society's silver-gilt medal for twenty-four distinct varieties. The competition in this tempting class ought to be keen.
- WOLVERHAMPTON EXHIBITION FLORAL FETE.—This annual event will be held in the Public Park, Wolverhampton, on July 11th and the two following days. A liberal prize schedule has been prepared, and in addition to the money awards for plants, Roses, flowers and fruit, gold, silver, and bronze medals are offered for exhibits of Pansies and Violas.
- CHISWICK GARDEN FLOWER SHOW.—On Tuesday, July 11th, the Royal Horticultural Society will hold a special flower Show in the Chiswick Gardens, which are close to Acton Green, Turnham Green, Gunnersbury, Chiswick, and Kew Bridge Stations. The Fruit, Floral, and Orchid Committees will meet at 11 A.M. precisely. Lady George Hamilton has kindly consented to distribute the prizes in the afternoon. The band of Her Majesty's Royal Horse Guards (Blues), under the direction of Mr. Charles Godfrey, R.A.Mus., will perform during the day. The Exhibition will be open to the public from 1 to 8 P.M. The Fellows of the Society and special subscribers will be admitted at twelve o'clock noon. Intending exhibitors should communicate the nature of their exhibits to Mr. Barron at once, so that the proper space can be allotted.

- —— FRENCH HONOURS.—We learn from Nature that the French Academy has awarded the Prix Desmazières to M. P. Viala, for his researches on viticulture; the Prix Montagne to M. l'Abbé Huc, for his work in lichenology; and the Prix de la Fons Mélicocq to M. Maseleff, for his work on the Botanical Geography of the north of France.
- AWARDS FOR SCIENTIFIC AGRICULTURE. We understand that the Albert medal of the Society of Arts for the present year has been awarded to Sir John Bennet Lawes and a like medal to Mr. John Henry Gilbert "for their joint services to scientific agriculture, and notably for the researches which throughout a period of fifty years have been carried on by them at the experimental farm, Rothamsted."
- BULBOUS IRISES.—The lecture on "Bulbous Irises" given by Professor Michael Foster at the meeting of the Royal Horticultural Society on May 8th, 1892, has been published in pamphlet form. Some of the species are illustrated, which enhances the eighty-five pages that form the brochure. Much useful information is conveyed in the lecture, which is well worth a perusal by all admirers of these beautiful flowers.
- HEUCHERA SANGUINEA.—Looking over a large bed of this beautiful hardy plant I saw the other day growing in Mr. B. Ladham's nursery at Southampton, I was struck with the rich colour found in one seedling plant, that gave at once darker foliage and larger flowers, of more intense colour. This is a form that could hardly help displacing the common variety. When it becomes abundant it will probably be termed atropurpurea.—A. D.
- A USE FOR TOMATO LEAVES.—An Indian paper remarks, "Tomato leaves have proved to be of value in an unexpected direction. It has been found that water in which a quantity of fresh Tomato leaves have been steeped, when sprinkled over Peach, Roses, and Orange trees, had the effect of totally routing the numerous insects of all kinds which infested the trees, and in two days' time not one of these pests was to be found." A trial would be interesting.
- THE DAISY PEA. I saw this fine dwarf Pea growing admirably at Claremont, Esher, recently, and Mr. Murrell is greatly taken with it. In height and appearance it much reminds me of Robert-Fenn Pea, a very delicious dwarf Marrow it was my fortune to raise some years ago by crossing Premier, a variety then well known, with Little Gem. The Daisy Pea should be in great request for cottagers and allotment holders who wish to utilise to the utmost every inch of their soil.—A. D.
- Double Annual Chrysanthemums.—Amongst the annual Chrysanthemums flowering outdoors the new double varieties promise to give excellent results. They are dwarfer than the single forms. A great per-centage of them come perfectly double, and the colours cover many shades we looked for in vain amongst the single varieties. For cutting they are of great value, remaining in perfect condition for several days. When once they become better known they are sure to be extensively grown.—R. P. R.
- Wakefield Paxton Society.—At the meeting of the members of this Society last week Mr. J. G. Brown, gardener at Hatfield Hall, read a practical paper, in which he clearly and fully explained the best mode of cultivating Strawberries, and named some of the best varieties suitable for the soil in the district. He also explained the manner in which Strawberries are grown in Kent, in the district of Bath, and at other places where they are extensively cultivated. A long and interesting discussion followed the essay.
- A DIGGING COMPETITION.—The monthly meeting of the Widcombe Institute Horticultural Club, held recently, took the form of a digging competition. At half-past seven a large number of members assembled at Wansdyke, Claverton Down, the residence of Mr. R. A. Moger, the Hon. Secretary, and proceeded to a large garden at the rear of the house, where the space set apart for the digging had been marked out. Each competitor, who could use a fork or spade, had to dig half a perch of ground in a manner most suitable for a crop of Cauliflower or Broccoli, and to use the manure provided in the way he considered most suitable. Seven entered for the contest, and their work was watched with interest by the spectators. Messrs. T. Collett and W. Crew were the Judges, and points were given for time, style, and the application of manure. The Judges had a considerable difficulty in awarding the prizes, but finally the first was given to Mr. Wale, the second to Mr. Ball, and a third prize (kindly given by Mr. Heafield) to Mr. F. Hooper, Mr. G. Hooper receiving a certificate of merit. After the competition the company adjourned to the lawn of Wansdyke, where Mrs. Moger provided an excellent supper.

- —— GARDENING APPOINTMENT.—Mr. Henry Angus, late general foreman at Wykeham Abbey, Yorkshire, has been appointed gardener at Coupland Castle, Wooler, Northumberland.
- TROP HOLUM MRS. CLIBRAN.—This is unquestionably a great acquisition to our list of bedding Trop colums. Throughout all the dry weather the plants have been covered with bloom. It associates well with the scarlet variety Fire King.—R. P. R.
- ALEXANDER PEACH OUTDOORS.—I began to gather this early Peach on June 23rd. Early Beatrice will soon be ready. This is exactly four weeks in advance of last year at this place (North Hants), showing what effect the excessive heat and drought has had on Peach trees.—H. C., Froyle Park.
- Mr. Joseph Theobald.—This faithful servant of Mr. George Bunyard and much respected man died on the 29th ult. after a short illness. He was for thirty years "florist" foreman in the Maidstone establishment, previously with Mr. B. Cant of Colchester, and was well known in the southern counties.
- —— DR. NANSEN'S ARCTIC EXPEDITION.—We are requested to state that Messrs. Cadbury, of Bournville, have supplied about 1500 lbs. weight of their cocoa essence and chocolate in hermetically sealed tins, as a portion of the provisions, which must keep good for at least seven years, taken for this expedition.
- THE WEATHER IN HERTFORDSHIRE.—Mr. E. Wallis, The Gardens, Hamels Park, Buntingford, Herts, writes:—"The weather during the past month has still remained exceptionally dry and bright, there being only one full dull day. Rain is everywhere needed. During the past four months only 2.67 of rainfall have been registered. Rain has fallen on eleven days during the past month. Maximum in any twenty-four hours was 0.25 on the 22nd; minimum in any twenty-four hours was 0.01 on the 25th. Total during the whole month, 0.88, against 2.71 of 1892."
- AWARDS AT THE EARL'S COURT SHOW.—Extreme pressure on our space last week prevented us mentioning that Messrs. W. Paul and Sons, Waltham Cross, were awarded a silver-gilt medal for a charming collection of Roses at the Earl's Court Show on June 28th. Mr. W. H. Divers, Ketton Hall, Stamford, secured a silver medal for some well-grown Peaches; Mr. J. R. Chard, Stoke Newington, for floral decorations; and Mr. J. Forbes, Hawick, for a collection of Delphiniums. Extra prizes were awarded to Messrs. T. Rivers & Sons for a collection of fruit; J. Cheal & Sons, for cut flowers; Jarman & Co., for vegetables; and W. Berridge, for Tomatoes. First-class certificates were awarded to Mr. T. S. Ware for Begonias Queen Victoria, Champion, and Miss Fanny Fell; Mr. W. Allan, Gunton Park Gardens, for Strawberry Gunton Park; and to Mr. Anthony Waterer, Knaphill, for Spiræa "Anthony Waterer," a very dwarf growing pink flowered form.
- ALLOTMENTS AT RICHMOND.—Two years since a large demand for allotments in Richmond having arisen, the Corporation, as the local authority under the Allotments Act, sought to obtain a portion of the Old Deer Park for the purpose, but failed. Effort was then made to obtain land in another direction, and eventually some 20 acres that had been for many years under market garden cultivation, and situated between the Sheen Road and the South-Western Railway on the eastern side of the town, were secured; this the Corporation obtained a long lease of, and after setting out roads, marked off into 196 allotments in areas ranging from 10 to 20 rods. The ground is of an excellent nature, but had been worked only some 10 inches deep at the most, and whilst this season for the first time is, in spite of the drought, carrying excellent crops, yet will be greatly improved when more deeply worked and manured. The allotment holders comprise men engaged in every description of occupation, not a few had ever had a garden or allotment previously. The general aspect of the plots is excellent; cropping is perhaps too crowded, but that will be amended by time; weeds are entirely absent, and in every part there is remarkable neatness. The appreciation in which the allotments are held is indeed in many cases bordering on enthusiasm. The men seem as if a new life, with new aims, desires, and enjoyments had opened up before them. A more complete vindication of the capacity of workers of all descriptions to properly cultivate and appreciate allotments cannot be found in the kingdom: On Saturday 24th ult., representing the Surrey County Council Technical Education Committee, Mr. A. Dean, Kingston, inspected the allotments and afterwards addressed the workers on the ground, describing the best methods of cultivation, forms of cropping, dealing with plant pests, and was listened to for an hour with the deepest interest.

- MARGARET CARNATIONS.—Plants of these Carnations appear to be wonderfully quick in producing flowers. I sowed some seed about the middle of February and grew the plants in heat, afterwards giving them cool treatment, finally planting some outdoors. These and others in pots standing out of doors are now full of buds.—E. M.
- THE GUNTON PARK STRAWBERRIES.—I fully agree with Mr. Dean of Kingston in his estimate of the Strawberries he refers to on page 521. I have had the pleasure to receive a box of each variety. They travel well, and are in colour, shape, and flavour excellent. I think they are worthy of a trial in large and small gardens.—John Andrews, Hon. Sec. to the Woodbridge Horticultural Society.
- THE PHYLLOXERA.—It is reported that "the phylloxera has appeared in the vineyards of the province of Trapani (Sicily), in which Marsala is situated. This is the only province of the island which has hitherto been exempt from the visitation. The districts where the disease has been discovered are Alcamo and Partinico. A Government-commission has been despatched to the spot to combat the scourge."
- SUN HEAT.—Mr. S. Arnott, referring to the "intense heat" near Dumfries on Monday last, says the thermometer hanging against a wall in the full sun registered 100° at 2.45 on Monday last. This would indicate pleasant weather to some southerners, who have languished under 90° in the shade this year and 120° in the sun. We have known this heat exceeded on more than one occasion on a south wall.
- EXHIBITING RASPBERRIES.—It is a common occurrence to see these exhibited without stalks at cottage shows, and even amongst amateurs the practice is prevalent; but I do not remember having noticed a gardener stage them in that way. It is difficult to initiate the former in the correct method of presenting all their exhibits, but the latter should surely need no such drilling. They would hardly send fruit as dessert to the table minus the stalks.—E. M.
- Canterbury Bells.—These plants make a grand display in the borders during May, June, and July. If the seed is sown late in the year the plants are weakly in the autumn, and from them strong flower spikes cannot be had. The middle of June is a good time to sow seed of any approved variety. Dean's strain I consider very good, the colours being decided, and the flowers large. The single flowers are the most effective. If the weather is dry, well water the ground a few hours before sowing the seed. Cover the seed thinly with fine soil, and shade the bed until the seedlings appear above ground, when they should have all the light available to induce a sturdy growth. When the plants are large enough to handle put them out where they are to flower, or in well dug land 8 inches apart until the autumn.—S.
- ROYAL METEOROLOGICAL SOCIETY.—The last meeting of this Society for the present session was held on Wednesday evening, the 21st ult., at the Institution of Civil Engineers, 25, Great George Street, Westminster, Dr. C. Theodore Williams (President) in the chair. Mr. R. H. Scott, F.R.S., read a paper on "Fifteen Years' Fogs in the British Islands, 1876-1890," which was a discussion of the fog observations made at the stations which appear in the "Daily Weather Report." The winter is the foggiest season, and the greatest number of fog observations are reported from London, Yarmouth, Oxford, and Ardrossan. In the summer half year the fog prevalence attains a local maximum in two different districts—viz., at Scilly, St. Ann's Head, and Roche's Point in the south-west, and at Sumburgh Head and Wick in the north. These are evidently sca fogs, accompanying warm weather. Mr. Scott has made a collation of the observations of fog and the force of the wind, and finds that fog almost invariably occurs only with ealm or very light winds. The author says that it seems to be generally assumed that fogs in London are increasing in frequency and in severity. From the observations it appears that there is no trace of a regular increase either in the monthly or in the annual curve. All that can be said is that taking the three lustral periods of five years each, the last of these (1886-90) comes out markedly the worst, the successive totals being 262, 250, and 322. A paper on "Upper Currents of Air over the Arabian Sea," by Mr. W. L. Dallas, F.R.Met.Soc., of the Indian Meteorological Office, was also read, in which it is shown that there exists a regular arrangement in the vertical succession of the upper currents; and that the Doldrum region, and not the geographical equator, is really the dividing line between the currents of the northern and southern hemispheres. Mr. E. D. Archibald, M.A., F.R. Met. Soc., also gave an address on "Australian Climate and Weather," which was illustrated by a number of interesting lantern slides.

Cambridge is about to institute an examination in agricultural science. The subjects of examination—each subject of course treated with special reference to agriculture—are botany, chemistry, physiology and hygiene, entomology, geology, mechanics and engineering, book-keeping, and agriculture. The last, however, with surveying, veterinary science, and economies in relation to agriculture, will, or may, form part of a further examination to be taken after the others. The candidate who has passed both will be entitled to a diploma, and the candidate who has passed one to a certificate. It is also recommended that the managing syndicate shall entertain applications for the appointment of persons to inspect schools of agriculture or horticulture that receive grants of public money, and give regular instruction in these subjects.

Gas Lime.—I note "A. D." (page 500) advises the use of gas lime on land in the occupation of allotment holders for the purpose of preventing the Onion maggot injuring the crop. While admitting its efficacy, I would caution those persons to use the lime very sparingly, as only last year I saw a garden where it had been used too freely during the previous winter, and the crops of all kinds were in a most deplorable condition, seeds of Onions, Carrots, and Beet failing to germinate. In some cases at least three sowings were required, and transplanting from other gardens was necessary to obtain a crop. In looking over the same garden a week or two back, I remarked how well the crops looked. The Potatoes were in marvellous health considering the extreme drought experienced, the haulm was high, erect, and the foliage deep green. Far better use the lime sparingly and often, rather than to dress heavily.—E. M.

— KINGSTON GARDENERS' ASSOCIATION. — The usual monthly meeting of this body was held at the Edenholme school-room on Tuesday evening, on 27th ult. There was a large attendance. Mr. Cushon occupied the chair. Some good examples of Thorpe's Queen and Sutton's Matchless Marrow Peas, both very fine varieties, and some sports from the former were exhibited by a member. Mr. Yeabsley, gardener to Mrs. Bryant, Surbiton, read a very practical paper on the Indian Azalea, from which much useful discussion arose, and a cordial vote of thanks to the reader was accorded. Mr. Dean read a letter from Messrs. Sutton & Sons, Reading, respecting the visit of the Gardeners' Cricket Club to their firm next Wednesday, giving a cordial invitation to members to see over their nursery trial grounds, also from Mr. Greig, station agent S.W.R., announcing a large reduction of the ordinary fare to and from Reading to members of the Association.

SUSSEX RAINFALL.—The total rainfall at Abbots Leigh, Haywards Heath, Sussex, for June was 2.44 inches, being 0.64 above the average. The heaviest fall was 1.31 inch on the 19th. Rain fell on nine days. The total fall for the six months was 9 inches, which is 3:17 inches below the average. The highest temperature in shade was 90° on the 19th, the minimum 37° on the 1st. Mean maximum, 69.22°; mean minimum, 48·26°; mean temperature, 58·74°—1° above the average. The drought in the above-mentioned district lasted for fifteen weeks. During the four months (100 days) rain fell on only twenty-two days. From March 2nd to June 19th only 1.10 inch rain fell, and with the exception of a few days (from the 15th to the 20th May, when it was dull and showery, with a thunderstorm), the sun was all the time remarkably hot, and the wind hard and parching, and an almost entire absence of dew at nights. Crops have suffered much; watering seemed to have little effect. Early Potatoes have so far matured that they will have to be lifted as speedily as possible to prevent them growing again. The intense heat of the middle of June ended in a severe thunderstorm, during which 1:31 inch of rain fell in an hour, doing some damage; it was followed by a few dull days and more showers, that have done much good. The first two days of July has been quite hot, and every appearance of its continuing.—R. I.

BEGONIAS AT SWANLEY.

It is always a pleasure to visit the Home of Flowers, as Messrs. H. Cannell & Sons' nursery at Swanley is named. There are flowers in abundance to be seen whenever one may go, and my visit was chosen when I thought the Begonias, for which the Swanley firm is justly eelebrated, were at the zenith of their beauty, and amply was I repaid for my journey. Several large structures are devoted to these beautiful plants. Begonias are, however, to be seen everywhere—in the houses, and in the open air. Innumerable varieties are grown, as many readers of the Journal who have seen them will know.

Apart from the named kinds there are many thousands of seedlings which have not yet flowered, and from these it is anticipated many new and excellent sorts will be selected. I will give a list of some of the

best that were in flower at the time of my visit, commencing with the double varieties, amongst which Cannell's Rosebud stands pre-eminent. It combines all the good points essential in a first-rate Begonia. The blooms are the shape of a good Camellia flower, but are larger, the petals overlapping each other in precisely the same manner as is so much admired in that popular flower; the colour is a delicate pink of the most pleasing shade of colour. There were many flowers showing blooms of what would by many be considered perfect, so excellent were they, but not like Rosebud. General Owen Williams is one of the most floriferous, its large erimson blooms full of substance standing out boldly above a dwarf compactly habited plant. A distinct and pleasing flower is found in Thos. Whitelaw. The flowers are of a soft fawn charmingly shaded buff, and have a very elearly defined edging of rosy red. The various colours blend with the most perfect harmony, and form a combination which cannot fail to please the most fastidious. Miss Nora Hastings bears a flower somewhat after the same style, the ground colour being soft fawn with the back of the petals rosy salmon, with the blooms large and substantial. For a beautiful clear yellow Miss Falconer would be difficult to equal. The habit of the plant is fine, and the flowers, which are of good size, are borne in profusion.

Amongst the deep salmon shades Sir J. D. Hooker is perhaps one of the finest. The blooms are of great size and extraordinary substance, and show above the foliage in an admirable manner. Llangattoek, which received an award of merit at the Temple Show, is one of the richest crimsons, with flowers of excellent shape and immense size. For a Begonia suitable for culture in a basket I can conceive nothing better than Miss E. Wynne, the flowers of which are pure white, and droop in an exceedingly graceful and faseinating manner. One of the prettiest is Mrs. Cornwallis West, the colour of which is most uncommon, and can only be described as a soft yellow shaded with apricot, the centre petals being of a delicate cream shade edged with pink. Octavia is a beautiful variety with pure white flowers borne with astonishing freedom. Though the blooms are small in comparison with many others, this is a variety which should be included in every collection. Madame la Baronne de St. Didier has a very large flowers of a soft yellow colour, and is one of the most striking varieties in the eollection. Flamingo, as is implied by the name, is a brilliant searlet eoloured variety. The flowers are plentiful, of good shape, and the habit of the plant is perfect. Cannell's Gem is the freest flowering variety in the whole collection, and will be most popular when it becomes known. The habit is good, and the bright searlet flowers very ereet. Throughout the collection it is noticeable what a preponderance of varieties there are which earry their blooms perfectly erect instead of hanging over, as was the case with almost all but a very short while ago.

From amongst the singles it is even more difficult to make a selection, the flowers on the majority of the plants being large, substantial, and of good shape. Mrs. John Thorpe was, however, one of the very finest and most effective, the ground colour being white, and having an edging of what can only be termed a reddish lake. The plant is most floriferous and the habit excellent, the flowers standing boldly above the healthy leafage. Miss Agnes Stewart is a variety with immense flowers, colour being soft yellow clearly edged with pink. One of the most prominent is Mrs. W. H. Forster, the brilliant red flowers of which have a pure white centre. The massive shapely flowers of Colonel Kidd, of a deep red shade, are very attractive; as also is Mr. Packe, which has soft rosy red flowers, flushed and shaded light rose. It is one of the most distinct colours I have yet seen, either amongst Tuberous Begonias or any other flowers. The orange-buff flowers of W. Marshall are singularly beautiful. This is a colour which should be increased, as it will most assuredly be most popular. One of the brightest flowers is Earl Grosvenor, orange-searlet, with blooms of great size and substance. There were many other varieties equally well worthy of mention, but time, the inexorable, would not allow me to take notes of more, much as I should have liked to do so.—Nomad.

THE ROYAL HORTICULTURAL SOCIETY'S FOUR DAYS' SHOW.

THE remarks of "A Fruit Grower and Exhibitor" anent this subject, on page 480 of the Journal of Horticulture for June 15th, seem to me to be both forcible and opportune. Judging from my experience of exhibiting I am convinced that many would-be exhibitors will be prevented competing at the Show in question if the produce staged in the fruit classes has to remain four days before removal. Many employers who grow fruit largely would strongly object to having their finest specimens eneased in the thick coating of dust which would result from so lengthy a sojourn in a crowded room or tent; and, moreover, such a practice is calculated to bring shows into disrepute, for some of the finest dishes frequently look the reverse of inviting at the end of a two-days show. This seems to be the opinion of some of the leading judges at the metropolitan shows, who look with extreme disfavour upon any produce exhibited which is not perfectly fresh, and I have frequently seen them leave unplaced dishes of fruit only because they had been staged at another show a day or two previously, although they were superior in other points to the winning dishes. Granting this is the right course to pursue, does it not conclusively prove that a four-days show is a step in the wrong direction?

Another point to be considered is the expense attending so long an absence from home. In the case of those at a considerable distance from

London all who compete cannot win, and many will prefer not to measure their strength with the veteran showmen, if the result of failing to win a coveted prize is also to bring them considerable loss financially. For these, as well as the weighty reasons pointed out by "A Fruit Grower and Exhibitor," I trust the Council of the Royal Horticultural Society will see their way to give some relief to would-be exhibitors.—A MIDLAND COUNTIES FRUIT GROWER.

FLOWERS AT THE ROYAL WEDDING.

TWICE within a few months the walls of historic Fleet Street have resounded with the cheers of the multitude over a spectacle in which the products of the garden play an important part. In November last the pageantry of the Mayoral procession through the main thoroughfares of the ancient city was varied for the first time in history by a trophy of British fruit which aroused the enthusiastic plaudits of the lookers-on, and to-day there is a deeper swell in the myriad voices which cheer on the bride and bridegroom of an hour as they pass with the music of a thousand joy-bells and the perfume of a million flowers beneath the windows of the Journal of Horticulture. It is not the function of an organ which for nearly half a century has been devoted to furthering the interests of horticulture to dwell on the general features of an occasion such as this, moving and tremendous though they may be; but it is within its province to refer with pride and rejoicing to the floral aspects of a ceremony which has evidently stirred the heart of the nation deeply, and called forth a demonstration almost pathetic in its intense and spontaneous delight. Grim, repellent London, mighty assemblage of gloomy streets, to-day blossoms like the Rose. It has garlanded itself with flowers to do honour to the event which unites the heir to the throne of Britain with one of the most gracious and beloved of her daughters, and they could have but a shallow love for horticulture who would fail to derive satisfaction in observing how largely its resources have been drawn upon for an occasion of such national and historic

Considering how universal the custom of associating flowers with every function which it is desired to invest with beauty and refinement has become, it is not surprising that on an occasion of such supreme importance they should play a prominent part. The Society hostess who spends hundreds of pounds in order that her guests may listen to the most gifted artistes of the opera does not hesitate also to provide them with other pleasures in the form of costly floral decorations, for without them her rooms would be cheerless; nor is expense spared to procure all that is rarest and most lovely in flowers at balls and other And these are but events of the hour, exciting no social assemblies. comment outside the Society journals. In the wedding of H.R.H. the Duke of York and Her Serene Highness the Princess Victoria May of Teck we have an event which is talked of in Birmingham as well as in Belgravia, in Manchester as well as in Mayfair, and which excites the same interest in the village cottage as in the town mansion. Strange therefore would it be if in bowing to the wishes of the nation for a ceremony in which it could openly testify its gratification and pleasure the treasures of the garden had been overlooked.

Few, perhaps, of the thousands to whom the floral appurtenances of the Royal nuptials have proved an object of interest were able to form any impression of their value or of the magnitude of the task of preparing them, contenting themselves with a casual admiration. But those to whom flowers represent something more than the value of a glance not unnaturally seek to get at least an approximate impression of the principal material, and the extent and manner of its utilisation. A call on Mr. Thomas at Windsor, and an inspection of his labours at St. James's Palace and in the Chapel Royal, together with a visit to Mr. Wills at South Kensington, have demonstrated on how magnificent a scale those gifted horticulturists have carried out the duties allotted to them. Her Majesty's gardener has had to fulfil the task of embellishing the Palace and Chapel referred to with plants and flowers, and the work has been carried out with an ability and completeness which could hardly have been excelled. Our representative called in the height of the preparations. Every group, whether large or small, every window arrangement, and every floral device, such as pillar wreathing, that was subsequently displayed at St. James's, had the various plants allotted and placed together at Frogmore in the approximate order of their later arrangement, so that when conveyed to their destination the "dress rehearsal" could be followed by a rapid, smooth, and effective manipulation of the material. The recourses of the Royal gardens had manipulation of the material. The resources of the Royal gardens had been drawn upon to the extent of four huge vanloads of plants, and it is a sufficient evidence of the richness with which they are stored to say that there still remained plants enough to have repeated the decorations.

St. James's Palace and the Chapel Royal in the early morning of and throughout Wednesday presented a most animated appearance. To the on-looker ignorant of the systematic manner in which the work was being carried out, there appeared to be bewildering masses of lofty Palms, huge Crotons, graceful Ferns, and brilliant flowering plants; but with astonish-

ing deftness and rapidity they were arranged in beautiful banks and groups, until when completed staircases, landings, windows, and columns were garnished with beautiful floral adornments. Passing through the state rooms the wedding assembly traversed the armour room, the windows of which were filled with plants. On the right as they descended the stairs was a magnificent group, and at every turn fresh banks of foliage and flowering plants were disposed. The pillars of the colonnade were wreathed with Roses and Ivy, the flowers being twined round the columns, and festoons of Roses and Ivy sprays stretching from the pillars, together with baskets of Roses, were suspended above the heads of the bridal party. A beautiful glade of Ferns dotted with flowering plants flanked another flight of stairs, at the top of which an admirable effect had been secured by placing a tall Palm at each side of a lofty picture. Near the entrance to the chapel was the retiring room of H.M. the Queen, who entered the Palace at this point. The surroundings were beautifully decorated, and a magnificent bouquet awaited the arrival of the Sovereign.

The most beautiful feature of the Chapel Royal was the great window, the stone facings of which, 18 feet high and 1 foot 10 inches broad, were completely draped in pink and white Roses. At each side was a tall Bamboo, arching over. The large recess at the base of the window was filled with cut flowers and tall glasses appropriately furnished, the whole forming a picture of wonderful beauty. On the wall under the window, and just above the altar table, was a floral emblem in Gothic lines, executed in white York Roses on a groundwork of green moss. The altar table was beautifully furnished with bouquets

and glasses of flowers.

It would be bewildering to attempt a description of every method that had been adopted to beautify the palace and chapel, or to enumerate all the plants and flowers utilised. The complete composition of all the groups would fill a page, and consequently only a brief reference need be made to the material employed. One very fine group was composed of some splendid Palms, Latania borbonica being conspicuous amongst them; noble Crotons, such as pictum, 8 feet high, nobilis, Disraeli, and Weismanni, Aralia Sieboldi variegata, grand plants of Anthurium Andreanum, Clethra arborea, Coleuses and Grevilleas, lightened with Hydrangea paniculata grandiflora, Liliums, the lovely "Bridal Wreath" (Francoa ramosa), and many other flowering plants. At the front a most unique effect had been secured by associating the very rare and lovely White Water Bean, Nelumbium speciosum nuciferum, with a groundwork of Cyperus and various aquatics. A charming group had been put together at the side of the grand staircase in St. James's Palace of various Crotons, Palms, Ferns, and Araucaria excelsa, with such popular flowering plants as Marguerites, Tydæas, Achimenes, Hydrangeas, Ericas, and Gloxinias. The windows were filled with Fuchsias, Marguerites, Pelargoniums, Hydrangeas, and other flowering plants associated with Caladiums and Ferns. Amongst the Palms utilised in the different groups were some splendid Arecas, Kentias 15 to 20 feet high, and Cocos plumosus quite 20 feet. Grand plants of Anthurium crystallinum and A. Warocqueana, also of Alocasia Thibautiana, were noticeable, while a beautiful basket of Orchids was greatly admired.

The cut flower decorations were a vast work in themselves. There was 476 feet of wreathing on the colonnade, this being composed, like the baskets, of white and red Roses. There was also 20 feet of wreathing in Roses on the altar, and Her Majesty's retiring room was decorated with Tea Roses and Gladiolus The Bride. Altogether upwards of 5000 Roses were utilised, with large quantities of white

fladioli, Stephanotis, Tuberoses, and Carnations.

The bouquets and floral decorations, made and carried out by Messrs. Wills & Segar, were quite worthy of the reputation of the firm. Fourteen Royal Princesses carried beautiful bouquets. That of the bride was an exquisite shower bouquet, in which the "old Provence Rose Duke of York?" was the flower most largely employed, and it was associated with Carnation The Bride, Odontoglossums, Cattleyas, Orange Blossom, and Lily of the Valley, interspeised with Myrtle, Fern, and other leafage. This and the ten bridesmaids' bouquets, which were composed of similar flowers shaded with Cattleya Mendeli, were exquisite examples of taste and skill. York Roses, white Carnations, and many choice Orchids were noticeable in the beautiful bouquets carried by H.R.H. the Princess of Wales and her daughters. Gardenias were the buttonhole flowers of the Prince of Wales and the Duke of York.

The floral decorations at Buckingham Palace were most extensive and beautiful, the experience of over twenty years there and at Marlborough House having well qualified Mr. Wills for producing something worthy of so auspicious an occasion. Large quantities of the most choice and beautiful plants and flowers were employed with a taste and judgment which rendered the mansion of the Sovereign a floral fairyland. The superb gold plate displayed at the Royal banquet and the Royal wedding breakfast was interspersed with choice Palms and other exotics by the South Kensington firm, while the setting apart of the spacious ballroom for a public breakfast room gave them another opportunity of showing their exceptional skill.

A word may be devoted in conclusion to the efforts of private residents and the proprietors of business establishments in the City and West End. Thousands of balconies and windows were adorned with flowering plants and Ferns, transforming sombre streets into pleasant promenades. For those not gaining admission to the Royal Palaces or Chapel, these public decorations proved most pleasing and attractive It would add to the pleasure of those whose special love for and work amongst flowers adds a powerful significance to what has been observed on this occasion if it could be thought that they would have

permanent influences for good. The old City has come out of itself, but reaction is inevitable, and it may be hoped that it will not be a complete return to the status quo. Flower-furnished windows are still the exception in our huge towns, and a great work must be accomplished before the masses are educated up to the sense of beauty and refinement which finds expression in bright and fragrant blossoms. They bring refreshment to the heart and contentment to the mind, giving new pleasures to those who, if past the first "lexicon of youth," are not so in the sense of being on the threshold of gardening life, but have the bright rubicon of manhood before them, opening up fresh fields of thought and happiness, even though the sands of their material existence be running down.

Something, too, may be hoped for from the love that those who have to-day, with every token of a nation's affection and esteem, entered upon a new and momentous epoch in their lives, are known to bear for flowers. At Sandringham, where the Royal honeymoon is to be spent, few of the flowers so admirably cultivated by Mr. McKellar are more extensively grown than Tea Roses, and for these chaste and delicious blossoms the bridegroom is reputed to have a special regard. But both he and his Consort, possessing in a rare degree the attributes to which

leaves below are simply blotched (a), and one leaf (b) is perfectly clean. The attack looks like frost-bite, or blackening by an overdose of an insecticide or fungicide. If one of the young leaves be examined on the under side a number of small dots will be seen. These appear concave and whitish, but they are really convex and yellow, with a minute black central spot or spots. The dots are just visible to the unaided eye, as shown at B—a small leaf, natural size, blackened and destroyed. There is nothing whatever on the upper surface of the leaf but dead hairs as outgrowths. Taking a still smaller leaf, and examining it by an ordinary pocket lens, I find the yellow pustules spread over the whole of the under side, and they still appear concave, not unlike the "cups" of an Æcidium, the whole tissue of the leaf (C) being destroyed down to the point c, that part being black; but below c the footstalk is perfectly healthy. One noticeable feature is, the dots or spots are not present on the footstalk nor on the midribs and veins of the leaf. This is a remarkable characteristic of mites—they never, or very rarely, produce galls from those parts. By mites, I mean those of the sub-family Phytoptidæ (four-legged Phytoptus).

If a minute portion of an undeveloped leaf be examined by a lens, we find the pustules are a beautiful transparent yellow colour, and

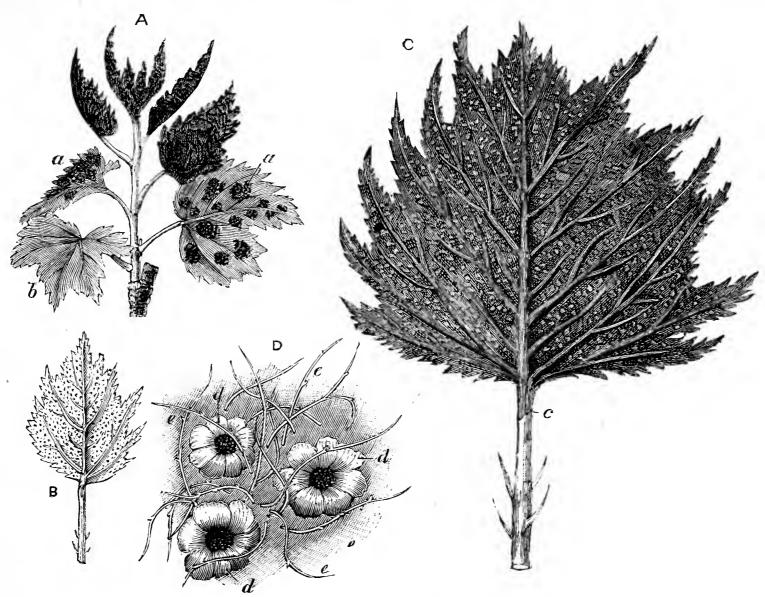


FIG. 2.—BLACK CURRANT SHOOTS DISEASED.

flowers specially appeal, are broad and catholic in their tastes, and the freedom with which they may be trusted to utilise flowers can hardly fail to popularise the garden and widen its influences for good. A great step will have been gained if the ever-widening eddies thus set in motion carry the germs of flower-love into new waters, bringing brightness and delight to those for whom at present the Roses bloom not.

BLACK CURRANT SHOOTS DISEASED.

A DISEASE has appeared in recent years on the tips of the shoots of Vines, Figs, Tomatoes, and other plants grown under glass. It first contracts the margin of the lcaves and causes them to enrol or enclose (in Vines it is the reverse—i.e., invert), and the affected growth becomes of a dirty dark brown or black, the leaves dying. The disease in Figs, Vines, and Tomatoes is certainly contagious, but there is no trace whatever of fungal attack, and though the appearance is that of red spider attacks with the leaf tissues blackened, there is no evidence of animal parasites. I am persuaded, however, that it is due to mites, which have the property of producing chemical changes, and that always takes the primordial colour of the host, as seen in the younggrowth before chlorophyll is formed.

But we are now concerned with the blackened condition of Black Currant shoots submitted by Mr. F. Q. Lane. The tips of the shoots are hardened in tissue, dirty brown or black, as shown at A, while the instead of being concave they are convex, and not unlike the fruits of Nectria ditissima (the Apple and Pear canker fungus) in form, or an Oak blister-gall, with a conspicuous black centre, composed of one or more irregular dots. Transparent yellow pustules may be discerned, and springing from the surface of the leaf (under side) between the blisters are some transparent white hairs. These are Erineum, and no creature can produce them but mites, nor any chemical known to science. Subjecting a still minuter portion of a young infested leaf to a higher power of the microscope we get to see that the blisters have been raised from the cells of the leaf and immediately around the black central dot or dots, which are raised with the blisters. Three are shown in D, at d, and the hairs, e, are seen to be forked, and that division is produced by budding, as represented by the little knobs along them, here and there

Now that before mentioned is all there is to see on the leaves and shoots. The black spots or dots in the centre of the transparent yellow blister are the oxidised excreta of the mite, and the blister is caused by the chemical ferment set up in the plant tissues or cells by the liquid portion or poison absorbed, and corresponds to those raised by ants on the human skin. The abnormal growth of the hairs is due to endeavour on the part of the plant to throw off the poison, and this only provides pasturage for the mites, for they browse on those, and when they defoliate the crop of Erineum the mites must do or die. I am aware that the mites are said to "stray about upon the leaves and the shoots, and make their peculiar gold-coloured galls [which are shown in D] upon the

young and tender twigs [we have seen with a certain result—death to the parts] as well as upon the sheathing scales or embryonic leaves of the buds, it is believed that they live upon these, if not upon the leaves also until the buds are again formed." This is partly true, for they cannot and do not live on the leaves and young shoots, nor are the yellow pustules in any sense galls, but mere blisters, poisoning and killing

the young leaves and young wood.

The Hazel-bud gall mite has already (May 30th) possession of the newly formed buds of the Hazel, the leaves corresponding to the buds having a large purple blotch in the centre of the leaf, and the Erineum is being produced abundantly by the scales, but there is not a mite to be seen (except in the buds galled), nor are the central or embryonic blossom or wood buds yet touched, but soon will be when the mites emerge, for their "buds" penetrate the leaf buds at the base of the scales, and they, dropping their poison on the growing parts, produce the gall, and Erineum hairs spring forth bounteously inside, upon which they live and pass the winter in safety, feasting and fattening, and reproducing on what would otherwise be the young shoots, and leaves, and puts of the suggesting year. It is the same with the Common that and nuts of the succeeding year. It is the same with the Currant-bud gall mite. The question, Where are the mites now? I am unable to find any on the shoots and leaves sent by Mr. Lane. I have shown what they have done, and it is questionable if they can or do enter the embryonic buds in any form than that completing the cycle of their existence.—G. ABBEY.

NOTES ON TOMATOES.

TOMATO SUTTON'S DESSERT.

THIS appears to be an excellent variety where large fruit are not In a Peach house at Rooksbury Park many plants of it are now growing, they all have set a wonderful crop of fruit. This is borne in long racemes, ranging from 1 foot to 2 feet long, and carrying as many as nineteen fruit on one raceme. The fruit is about the size of a large walnut, quite smooth in the skin, bright red in colour, and of excellent flavour, just the right kind to eat in a raw state.—E. M.

TOMATO DISEASE.

THE new disease to which Tomatoes are subject, so ably described by Mr. Abbey (page 471, June 15th), made its appearance at Ivy Lodge, Bridge of Allan, four years ago, the first year the late Mr. M'Tavish grew Tomatoes there. The water used is a natural supply, which enters the garden at the highest point from the grounds above, and is collected into a tank from which it is led by pipes to wherever wanted. Whether it is contaminated with sewage or any other deleterious matter from the houses on the higher ground I cannot say; but there is a contamina-tion somewhere, for the tank, cisterns in the houses, and a pond are continually covered with a green confervoid. Once, when talking with Mr. M'Tavish about the sudden collapse of his plants, he said Mr. Thomson of Clovenfords, who was calling a few days previous, attributed it to the attack of wireworm. As I could not observe any of the usual signs of a wireworm attack I misdoubted the statement without any farther evidence than the sudden dying of the plants; therefore several of them were examined, but neither wireworm nor

any appearance of their work could be found.

"J. F. D.," at page 505, says, "Seeds should be purchased from one of the best houses in the trade." Even although we do so it does not always turn out as we wish. I enclose several seeds which are discoloured. Is it the nidus of some species of disease? Fully a third of the seed from a healthy fruit had the same discolouration as those sent. If it is the seat of a form of disease it will account greatly for the spread of such diseases. Would any of your readers who may have grown "Sharpe's First Little Beauty" give their opinion of it?—G. M'DOUGALL,

We have examined the seeds and fail to find any spores of bacterium attached to them. The seeds, however, are not only discoloured, but very weak, and not likely to produce sturdy, healthy seedlings. Seed should be saved from the finest and best ripened fruit, selecting the largest and most plump clean seeds, rejecting those which are small discoloured, and manifestly not well developed.]

TOMATOES AT WEST HILL HOUSE.

THE description of successful Tomato growing is of interest to all those—and they are many—who, either commercially or for family use, are trying to make their crops as good as they can with whatever means they may have at command. A very successful system of culture is pursued by Mr. Hawtin, gardener to Mr. Samuel Herrick Sands, late Mayor of Nottingham, at West Hill House, on the Lenton side of the borough. He devotes one of his houses, through the summer season, entirely to Tomatoes. It is some 30 feet long, by 18 or 20 feet wide; span-roofed, and curvilinear, thus having plenty of light. In the centre, on the stone bench which covers a water cistern, he has them growing in 13 or 14-inch pots, well drained, but standing in pans to retain the waterings, and keep the plants always cool and moist at their roots. On the side benches he puts boxes made the whole length and width, 2 feet wide and 6 inches deep, holding say $4\frac{1}{2}$ or 5 inches of soil. In these boxes the plants are placed in a double row on the outer and inner sides; they stand about 18 inches apart, and grow straight up, fastened to stakes until they reach the wires of the roof, to which they are afterwards

From this it will be seen that the plants are rather close together, but being grown on the single-stem principle, and daily attended to, there

is no crowding. In all there are about eighty plants in the house, and Mr. Hawtin told me that since he commenced cutting he had cut some 150 lbs. of fruit, and when we saw them, June 26th, there would be about 50 lbs. of fruit quite ready. The majority of his plants are a sort selected by him, a few years ago, from a very fruitful plant out of a packet of seed of Hepper's Goliath, though, in most years, he adds a few plants of the other varieties which are said to be excellent by other growers. He has tried all the forms of Perfection, Conference, and others; but as he does not grow for show but for use, he finds none to fill his basket like his variety of Hepper's Goliath. Hepper's, though a corrugated fruit, and much like Sutton's Earliest of all in habit, fruit, and prolificacy, grows with him to an excellent size, and a very high colour. He is trying Sutton's Maincrop this year, and in some things it suits him, but does not give him such satisfactory results as his own variety does. The compost used is a mixture of half and half turf and decayed cow manure. This is found to hold out the longest, besides giving firmness and short-jointed growth to the plants. The plants are top-dressed every now and then through their fruiting stage with guano, and are occasionally watered with liquor from the garden tank, into which all the house sewage goes.

Mr. Hawtin uses the syringe very slightly, if at all, he believing that trying to grow Tomatoes on the lines of Cucumbers has been the cause very largely with those who do so of the dreaded Tomato disease. With him he has never had the least sign of it, and he attributes it partly to his non-use of the syringe, a soil not too rich nor in too great quantity, and good feeding by top-dressings of soil and guano, and occasional rich waterings, and his light and airy house. We agree with him, and his results show that he is right. There may be a point or two in these notes which will be of advantage to some Tomato grower or other, and every little helps.—P. H. N.

ABOUT HULL. -- III.

WELTON HOUSE.

Two friends from the north took a pair of northern appetites with them into a southern restaurant some time ago, and one whispered to the other to "give him a bit of broad Yorkshire" as the waiter approached to solicit their orders. No. 2, not being too hungry to appreciate a joke, complied, and the confusion of the waiter was as complete as though he had been asked to bring Solanum tuberosum or Brassica oleracea. No. 2, when on his native heath, is Mr. Charles Lawton, head gardener to Colonel Harrison Broadley, Welton House, near Brough, but he spared me a Yorkshire accent in the hearty Yorkshire welcome extended to me when I made my call. But there is shire welcome extended to me when I made my call. But there is breadth about Mr. Lawton apart from the speech in which it sometimes pleases him to indulge. He is broad in person to begin with, and broader still in mind, one of those gardeners who combine practical knowledge with scientific culture, keen intelligence, and a sturdy

independence of thought.

Welton House stands in beautiful grounds close to the far-famed Welton Dale, which is a part of the vast estate, and to which troop numbers of excursionists from Hull, for Colonel Broadley throws it open to them, and thousands are glad to avail themselves of the privilege. Bills are frequently on view in Hull town inviting would-be visitors to part with eighteen pence, and in return to be transported per waggonette to and from Welton. The vehicles are not, to speak frankly, models of luxury, but they are comfortable, so that anyone who feels inclined to go by road has a fair opportunity of gratifying his desires. If the rail is chosen I am doubtful whether Ferriby or Brough is the nearer station. independent of both waggonette and train it was not a special poin with me, but it would be a pleasant and not very long walk from either. Welton village and the surrounding country has an interest for lovers of the "good old times" in its connection with the exploits of Dick Turpin, Scarborough, Snowden Dunning (or Dunhill), and other notorious persons. Mr. Lawton pointed out an old hostelry there in which the lamented Richard was incarcerated pending his transmission to York under other conditions than prevailed on his famous ride. I was fortunate in seeing Welton under the favourable conditions of glorious summer weather, and the fine views from the head of the Dale were at

The gardens and grounds around the mansion possess the immense advantage of abundant leafage. Beeches and Elms flourish wonderfully well, particularly the Copper Beeches, which excel their brethren in vigour and luxuriance, and make a fine feature. One tree near the house has attained to enormous dimensions, and the branches, having spread across the drive, have been raised on a frame-work of stout poles, forming a natural arch of great beauty. An extraordinary instance of vitality in a tree is afforded by an enormous Sycamore, the branches having a spread 33 yards in diameter. At a height of about 5 feet the trunk split in a heavy wind, and one portion was dragged to the ground. It was resolved to raise it and bolt the two Failure was the universal prognostication, being voted as certain as that a ship must come to grief if an attempt were made to drive it by steam; but the ship went and the tree grew. A bolt was driven right through the pith, and a large plate was affixed. The plate is now covered with bark, the wounded parts healed, and the tree is in perfect health.

There is a great deal to interest old timers in the houses at Welton for hardwooded plants are well represented there. Some are "specimens" of quite an aldermanic corpulence. For instance, there is huge plant of Polygala grandis 4 to 5 feet through, and without exaggeration a very beautiful object; also a grand example of Statice profusa 5 feet across. Ericas are well represented by ventricosa globosa 4 feet in diameter, and Lindleyana, which is about half the size, and has been in bloom three months. Franciscea Lindeni, with its beautiful purplish mauve flowers, which are borne later than those of the other species, measures about 3 feet across, and being covered with flowers is something to admire. There are some bulky old Azaleas, such as Magnificent (about 6 feet across), Duc de Nassau, and Iveryana, not pyramids, but broad, evenly furnished specimens full of bloom. Boronia elatior is an object calculated to surprise the southron, who is not used to calculating the size of members of this genus in feet. Other noteworthy plants are Streptosolon Jamesoni wound round stakes in a large pot and freely bloomed; Cassia corymbosa, 4 to 5 feet across; Dasylirion gracile glaucescens and D. acrotrichum; magnificent specimens of Gleichenia Mendeli and G. speluncæ, the former about 8 feet through, the latter a couple of feet less; Lapageria alba on a balloon-shaped trellis 4 feet in diameter, which has been clothed in flowers; Euterpe edule, Stevensonia grandiflora, Dion cdule, Ixora Williamsi, I. Duffi, and Rondeletia speciosa. Eucharis amazonica is in splendid health. One large piece has not been repotted for eighteen years, and is rarely without flowers, blooming seven and eight times in a season. It is supported with liquid manure and soot water, and proves its vigour by bearing seven flowers on a spike.

The conservatory, which is about 60 feet long by 45 feet wide and 30 high, contains an assortment of material such as is not often met with. Some of its occupants are familiar enough, but others are less so. Amongst the former may be mentioned the Camellias, which are a wonderful feature; the Abutilons, which go right up to the roof; Cantua dependens, which has been full of bloom since January and is a lovely sight now; Fortune's Yellow Rose, which has been planted forty-seven years and eovers one end and part of the roof, bearing thousands of flowers; Lardizabala biternata, and a number of fine Palms and Tree Ferns. Draco Banksi erythrochysis is more of a stranger, at least to me, and there is plenty of it to study, for it is 30 feet high, and two other stately exotics on which I gazed for the first time were Dacrydium cupressinum and Alectryon excelsum. Feeling rather dubious about being able to give a description of them in the short space at command I take refuge in the useful generalisms that both are "handsome and effective," while the latter is found "useful for cutting." I think that if the names of the plants sound strange these phrases will make up for it. There are many other odds and ends of a more or less attractive character, and one is tempted to think that Colonel Harrison Broadley has either roved afar or had many wandering friends, so strangely is his conservatory stored. It is likely enough that it would not entirely satisfy the present generation, but it is interesting, and beautiful withal.

Peaches and Nectarines do wonderfully well at Welton. They are not far from the limestone, and appreciate it more than the wanderer whose way takes him over many a white and dusty highway, where Peaches grow not. We have had thirsty weather of late. The Lawtonian trees include specimens of the past as well as present generations, not dating quite back to the days of Turpin perhaps, but still venerable. There is a Grosse Mignonne of impressive rotundity, reputed to be fifty years old, which has not missed a crop, the present gardener told me, for twenty-four years, and has yielded as many as twenty dozen Peaches as one season's quota. In its younger days 10 and 11-oz. fruits were not uncommon; it does not reach that figure now, but bears crops quite good enough to insure its retention, and he would be callous indeed who could condemn such a faithful old slave without a sigh. Trees four years planted promise to follow the parental example, so vigorous, so healthy, and so fruitful are they. The Vines are equally satisfactory, and afford ample evidence that although Mr. Lawton has earned special repute as a plantsman, he is equally at home in other departments of the garden.

CONIFERS AT WEST ELLA.

A hint from the Welton gardener took me to West Ella, the residence of C. P. Sykes, Esq., where, he told me, there were some particularly fine Conifers. The place adjoins the village of Kirk Ella, which is one of the most beautiful it has been my pleasure to discover about Hull. There is quite a family party of Ellas in the neighbourhood, all having derived their name from a worthy savage of the pre-Normanic era. Doubtless he had a soul above Conifers and such like effeminate delights

of an effetc generation.

The gardener at West Ella, Mr. Sturdy, is an old junior of Mr. Lawton's. He was making his way down the village when I arrived on the scene, but executing a strategic movement I captured him near the village pump, which, by the way, is an elaborate and ingenious institution that would have astonished the primitive understanding of the ancient Saxon. West Ella is a very beautiful old house flanked by irregular sweeps of lawn, on one portion of which is a small lake dotted with Water Lilies, edged with yellow Irises, and looked down upon by heavy masses of Rhododendrons. The walls of the building are clothed in Roses and Honeysuckle, so that it presents a most pleasing aspect. There is plenty of good timber in the vicinity, and the Conifers, although not numerous, comprise some noteworthy specimens. Picea nobilis is represented by a fine tree about 50 feet high, and which has borne some splendid cones, and there is a P. Smithiana of equal proportions. An otherwise grand tree of Cedrus atlantica glauca, 40 feet high, has been broken about by the snow, and its beauty unfortunately marred. The best specimen of Wellingtonia gigantea is a noble example, and there are

also some fine Cedars, notably a Doodar, 50 fect high, and a spreading "Lebanon" with an altitude of about 60 feet. The Araucarias are also remarkably fine. Less imposing, but quite as perfect in its way, is the 4 feet specimen of Abics Parryana glauca, a very beautiful little lawn tree.

Space only permits of the briefcst possible reference to West Ella, and I can only add that throughout the establishment there is ample proof of Mr. Sturdy's capacity to do justice to a place that in itself and its surroundings can claim a special charm and attractiveness.—W. P. W.

OXYLOBIUM CALLISTACHYS.

This ornamental shrubby plant does not appear to be so generally well known as it might be, or it would be more extensively cultivated. Either as small plants for the side stages of the conservatory or as



FIG. 3.—OXYLOBIUM CALLISTACHYS.

plants 4 feet high in large pots it would be found very useful. Like most of the Australian plants Oxylobiums require only ordinary greenhouse treatment, but to make them flower freely allow them enough sun to thoroughly ripen their shoots. They will be found to thrive best in a compost of fibry loam and peat of about equal parts, with plenty of silver sand added. Oxylobium callistachys, shown in fig. 3, has bright yellow pea-shaped flowers produced in dense clusters, and is very showy, as are also many of the other species. The genus is a large one, but many of the species are not known in English gardens.

WASPS' NESTS AND CYANIDE OF POTASSIUM.

I NOTICE some remarks (page 518) re cyanide of potassium and the destruction of wasps' nests. Mr. Molyneux has had far better results from its use than I have had. I have used cyanide of potassium now for eleven seasons, and my experience of it is that it only kills the ingoing wasps. Where the nest is close to the entrance, which very often happens, it kills a portion only of those inside, whilst the rest are merely

held prisoners until the fumes of the cyanide have evaporated, when the wasps pass in and out as usual. I find also that it has not the slightest injurious effect on the larvæ or young wasps, which alone will soon form a very strong nest; but if a piece of turf be placed over the hole and pressed tightly in, it often prevents their escape.

I have used cyanide of potassium in different forms—in the solid about

the size of a small walnut, placed at the entrance to the nest; in its powder form as recommended by Mr. Molyneux, also dissolved in warm water, pouring it into the mouth of the nest. All these different methods of using it have produced precisely the same results, viz., that of killing all wasps passing over it almost instantly, and preventing those inside from escaping till its fumes have evaporated, which takes In the meantime it has no effect whatever upon the several days.

With due respect to Mr. Molyneux's suggestion, I should like to hear the experience of others on the effects of cyanide of potassium in the destruction of wasps' nests.—E. BROADY, Hooton Grange Gardens.

ROSE SHOWS. NATIONAL ROSE SOCIETY.

GREAT SHOW AT THE CRYSTAL PALACE, JULY 1ST.

Rose exhibiting as regulated by the fickleness of our English climate is a game of see-saw, the northern and southern exhibitors occupying each end of the plank, and rising gracefully up or coming heavily down according as the presiding genius throws its weight on the one balance or the other. The game is exciting to the participants, and diverting to lookers-on, the more so if among the fallen champions one is descried who had expressed roseate hues about his prospects long before the season commenced, only to have them dashed by some peculiarity of the weather later on. For three years past the southern growers have had the best of the play so far as the first "National" is concerned, for we have to go back to 1889 to find the great trade trophy out of Essex; but once more climatic conditions have given the northerners the advantage, and their southern rivals have been signally

A glance back over the records of the six years 1888-93, shows that on three occasions victory has rested with the young and energetic exhibitor, Mr. Frank Cant of Braiswick, Colchester, his successes being achieved in 1888, 1890, and 1892, which goes to show that he lays himself out for biennial victories. In 1891 Mr. B. R. Cant was triumphant, and in 1889, as this year, the coveted prize fell to Messrs. Harkness of Bedale. Rose growers in the South will well remember the character of the season in which the first success of the Yorkshire nurserymen was achieved. We had such a long spell of hot, dry weather, that southern Roses were hurried on with alarming rapidity, and when show time came they were distinctly past their best. Then came a trio of late seasons, in two of which Messrs. Harkness were unable to stage at all, and consequently the Essex growers came up smiling. But if the season of 1889 was early owing to the hot and dry weather, what are we to say of 1893? It has out-Heroded Herod, and everybody put it down as a foregone conclusion that the trophy must once more, like Hatteras, face the North. The Cants must have felt themselves beaten before a bloom was staged, but they bravely did their best, and may console themselves with the reflection that they showed much better than the majority of people expected.

With respect to the amateurs' trophy it is a different story. Sublimely indifferent to the character of the seasons Mr. Lindsell comes and conquers. He despises the climatic seesaw, and sails ever upwards. If it is a late season he wins; if it is an early one he "gets there" just the same. With a sequence of four consecutive victories to point to, success for him appears to have become an institution. His chief opponent of last year, Dr. Budd, did not institution. compete in the leading class, and throughout the Show there were some notable absentees. Where, for instance, was Mr those wonderful Teas of his, and where Mr. Burnside? Where, for instance, was Mr. Prince, with The latter was in evidence in the flesh, but in many classes where he is wont to show prominently he was not represented. Of the amateurs who exhibited more conspicuously than they have hitherto done may be mentioned

Mr. Machin, Mr. Drew, Mr. Orpen, and Mr. Foster Melliar.

And what of the Show as a whole? Truth compels the admission that it was the worst for several years past, a large number of the flowers being not only undersized, but coarse and soiled; still there were some brilliant exceptions, and the general opinion appeared to be that if below the average it was still a great deal better than might have been expected. The number of blooms appeared to be far less than at any preceding show of late years. A correspondent says there were 2000 fewer than in 1892.

NURSERYMEN'S CLASS.

As is well known the principal class in this section is for seventy-two distinct varieties, single trusses, and which usually brings forth a keen competition. As we have remarked, the fight between the northern and southern growers for the premier position, with which goes the challenge trophy, was not, however, quite so close as usual. Messrs. Harkness and Sons, Bedale, were declared the winners without much difficulty for a collection of fine blooms. The varieties were staged as follows:—First box, back row: Ulrich Brunner, Duchesse de Morny, Charles Lefebvre (fine), Suzanne Marie Rodocanachi, Duke of Fife, Gustave Piganeau, (good). Middle row: Madame Caroline Kuster Barthelemy Joubert,

Madame Bravy, Duc de Montpensier (fine), Cleopatra, Dr. Andry (splendid). Front row: Augusta Rigotard, Comtesse de Serenye, Comte de Raimbaud (good), Souvenir de Paul Neyron, Sir Rowland Hill, and Innocente Pirola. Second box, back row: Exposition de Brie, Lady Mary Fitzwilliam, Général Jacqueminot, Marquise de Castellane, Victor Hugo, Mrs. John Laing. Middle row: Margaret Dickson, A. K. Williams (grand), Princess Beatrice, Fisher Holmes, Boule d'Or, Horace Vernet (magnificent; the silver medal H.P. in this section). Front row: Madame C. Crapelet, Marguerite Boudet, Reynolds Hole, Etoile de Lyon, Harrison Weir, Madame E. Verdier. Third box, back row: Dupuy Jamain (fine), Madame G. Luizet, Gloire de Margottin, Ernest Metz (grand), Louis Van Houtte, Merveille de Lyon. Middle row: Marie Verdier. Charles Derwin (grand). Compage de Nadaillea Estador Verdier, Charles Darwin (grand), Comtesse de Nadaillac, Earl of Dufferin (splendid), Catherine Mermet, Madame V. Verdier (grand). Front row: Beauty of Waltham, Viscountess Folkestone, Mons. E. Y. Teas, Merrie England, Le Havre, Violette Bouyer. Fourth box, back Camille Bernardin, La France, Etienne Levet, Madame H. Jamain, Duc de Rohan (good), Baroness de Rothschild. Middle row: Souvenir d'Elise, Crown Prince, Francisca Kruger, Alfred Colomb (magnificent), Souvenir de S. A. Prince, Duchess of Bedford (good). Front row: Edward Andry, Mrs. Harkness, Prince Arthur, Jean Ducher, Duke of Wellington, and Countess of Oxford. Mr. B. R. Cant, Colchester, was second, the best flowers in this exhibit being Alfred Colomb, Ethel Brownlow, Jean Soupert, Prince Arthur, The Bride, and Maréchal Vaillant. Mr. F. Cant secured a third position with flowers good, but not up to the customary standard. Five exhibitors competed in this class.

In class 2, for forty-eight, distinct, three trusses of each, there was a very strong competition. Again, however, the northern growers secured the leading position, the first prize going to Messrs. Harkness & Sons. The blooms were very good, and comprised the following varieties:—Lady Mary Fitzwilliam, A. K. Williams (fine), Margaret Dickson, Barthelemy Joubert, Souvenir d'Elise, Mons. E. Y. Teas, Dr. Andry (good), Dupuy Jamain, Général Jacqueminot, Madame Bravy, Duke of Connaught, Comtesse de Nadaillac, Marie Verdier, Charles Lefebvre, Duchesse de Morny (fine), Reynolds Hole (splendid), Etoile de Lyon, Duchess of Bedford (grand), Marquise de Castellane, Alfred Colomb (good), Suzanne Marie Rodocanachi, Fisher Holmes, Caroline Kuster, Sir Rowland Hill, Gustave Piganeau, Mrs. J. Laing (good), Horace Vernet, La France (fine), Prince Arthur, Catherine Mermet, Dr. Sewell, Mrs. Harkness, Madame Verdier, Captain Christy, Exposition de Brie, Innocente Pirola, Duchesse de Vallombrosa, Ulrich Brunner, Madame G. Luizet, Senateur Vaisse, Madame Cusin, Countess of Rosebery, Merveille, Beauty of Waltham, Cleopatra, Merveille de Lyon, and Madame Willermoz. Mr. Frank Cant was a good second, the best flowers in this stand being Fisher Holmes, Marie Van Houtte, Xavier Olibo, Reynolds Hole, Souvenir d'Elise Vardon, and Ella Gordon. Mr. B. R. Cant followed with smaller flowers. There were four competitors in this class.

Mr. Henry Merryweather, Southwell, Notts, was awarded first prize in the class for forty-eight single trusses, again proving that northern growers have the season in their favour this year, the blooms being exceptionally fine. The varieties shown were Auguste Rigotard, Mrs. J. Laing, Général Jacqueminot, Jeannie Dickson, Marie Baumann, Baroness Rothschild, Charles Lefebvre, Duchess of Bedford (good), Madame Hauseman, John Stuart Mill, Madame Gabriel Luizet, Gustave Piganeau, Heinrich Schultheis, Sir Rowland Hill, Dupuy Jamain (fine), Victor Hugo, Gloire de Margottin, Souvenir de S. A. Prince, Comte de Raimbaud (good), La France de 1889, Horace Vernet (splendid), Marquise de Castellane, Camille Bernardin, Marie Margot, Ulrich Brunner, Her Majesty, Earl of Dufferin, Merveille de Lyon, Jeanne Sury (good), Spenser, Alfred Colomb, Suzanne Marie Rodocanachi, Beauty of Waltham, Duke of Teck, Senateur Vaisse, Prosper Laugier, Ernest Metz (fine), Dr. Sewell, Etienne Levet, Duke of Wellington, Brightness of Cheshunt, Catherine Mermet, Madame H. Pereire, The Bride, Fisher Holmes Francisque Rive, Abel Carrière, and Eclaire, Messers G. and Holmes, Francisque Rive, Abel Carrière, and Eclaire. Messrs. G. and W. H. Burch, Peterborough, were second in this class. These flowers were fresh, Horace Vernet, Camille Bernardin, A. K. Williams, Pierre Notting, and Charles Darwin being especially good. Messrs. Perkins and Son, Coventry, were third. Five competitors were forthcoming in this class.

Mr. W. H. Frettingham, Beeston, Notts, was first in the class for twenty-four, distinct, single trusses, staging some grand blooms. The varieties shown were—back row: Ulrich Brunner, Jean Lelièvre, Comtesse de Ludre (good), A. K. Williams (grand), Pride of Waltham, Alfred Colomb, Duchess of Bedford (richly coloured), Louis Van Houtte. Middle row: Duc de Wellington, Her Majesty, Auguste Neuman, La France, Charles Lefebvre (fine), Duke of Edinburgh, Marie Baumann, Lord Macaulay. Front row: Duke of Teck, Reynolds Hole, Madame C. Crapelet, Dinge Conard, Mrs. J. Laing, Ferdinand de Lesseps, Charles Darwin, and Mons. E. Y. Teas. Mr. J. Mattock, New Headington, Oxford, was a good second. This stand included some grand blooms of Marie Baumann, Mrs. J. Laing, La France, Ulrich Brunner, and Earl Dufferin. Messrs. D. Prior & Sons, Colchester, were third with fair Dufferin. Messrs. D. Prior & Sons, Colchester, blooms. There were four exhibitors in this class.

In the class for twenty-four, distinct, single trusses, the competition was keen. Messrs. G. & W. H. Burch were awarded the first prize for a stand of small, but fresh, and well coloured blooms. The varieties shown were Her Majesty, Reynolds Hole, Marie Verdier, Earl Dufferin, Mrs. J. Laing, Gustave Piganeau, Marie Van Houtte, Fisher Holmes, Madame Rady, Exposition de Brie, Merveille de Lyon, A. K. Williams, Xavier Olibo, Innocente Pirola, Marchioness of Dufferin, Duke of Wellington, Senateur Vaisse, Comte de Raimbaud, Alfred Colomb,

Comtesse de Nadaillac, Horace Vernet (good), Ulrich Brunner, Madame E. Verdier, and Marie Baumann. Mr. W. H. Frettingham, Beeston, was a very close second, showing, amongst others, grand blooms of Duchess of Bedford, Her Majesty, Comtesse de Ludre, and Merveille de Lyon. Mr. G. Mount, Canterbury, was third.

AMATEURS' CLASSES.

The trophy class for forty-eight blooms which always excites so much interest, brought five stands. It would be idle to state that they formed as high class a display as last year, but the season has always to be considered. A really fine stand from Mr. E. B. Lindsell, Bearton, Hitchin, secured the premier award and added to his already high reputation. The flowers were large, fresh, and full of colour, the varieties being as follows—Back row: Horace Vernet (very fine), Mrs. J. Laing, Prince Arthur (very fine), Madame E. Verdier, François Michelon, Ulrich Brunner (splendid, selected as the best amateur's H.P. in the Show), Her Majesty, Maurice Bernardin, Duchess of Morny, A. K. Williams, Mdme. J. Desbois (poor), Lady Sheffield, Louise Van Houtte, Merveille de Lyon, Countess of Oxford (out of colour), and Gustave Piganeau. Middle row: Mdme. Hoste, Duke of Wellington, Maréchal Niel, Dr. Sewell, Comtesse de Nadaillac (very good), Alfred Colomb, J. S. Mill, Ethel Brownlow, Prince Camille de Rohan, The Bride (fine), Dupuy Jamain, Caroline Kuster, Etienne Levet, Comte Raimbaud, Marie Van Houtte, and Abel Carrière. Front row: Fisher Holmes, Mdme. Cusin, Earl of Dufferin, Marie Verdier, Rosieriste Jacobs, Innocente Pirola, Madame V. Verdier, Chas. Lefebvre, Camille Bernardin, Xavier Olibo, Catherine Mermet, Sir Rowland Hill, Reynolds Hole, Souvenir d'un Ami, Beauty of Waltham, and La France. The Rev. J. H. Pemberton, Haveringatte-Bower, Romford, took the second prize. He had distinctly less weight than the Hitchin grower and one or two of his flowers were badly tarnished, but as a whole the stand was a good one. Marshall P. Wilder, Auguste Rigotard, J. S. Mill, Horace Vernet, Sir Rowland Hill, and Ernest Metz were extremely good, and the last named was a splendid flower. Mr. H. V. Machin, Gateford Hill, Worksop, was third with a highly creditable stand.

There were four stands of thirty-six single trusses, and the first prize went to the Rev. A. Foster-Melliar, Sproughton Rectory, Ipswich, for an excellent collection, the flowers being large and well coloured. The varieties were as follows—Back row: Mrs. Paul, Lord Macaulay, Comtesse Panisse, Madame Isaac Pereire, La Boule d'Or, E. Y. Teas, Baroness Rothschild, Emilie Hausburg, Duke of Wellington, Hippolyte Jamain, and Madame Hoste. Middle row: Marie Verdier, Le Havre, Victor Hugo, Maréchal Niel, Charles Darwin, Horace Vernet, Abel Carrière, Ethel Brownlow, Ernest Metz, Madame Charles Crapelet, Margaret Dickson, and Alfred Colomb. Front row: Camille Bernardin, Merveille de Lyon, Eugène Furst, François Michelon, Souvenir d'un Ami, Jean Liabaud, Souvenir d'Elise, Penelope Mayo, Comtesse de Nadaillac, Ulrich Brunner, Marie Baumann, and Beauty of Waltham. Mr. W. Drew, Uplands, Ledbury, took second place with an excellent stand; it contained no specially meritorious flowers, except perhaps a Général Jacqueminot, but the blooms were fresh and in good colour. The Rev. J. H. Pemberton was a good third. The twenty-four class only brought two stands, but both were good ones. Mr. Gurney Fowler, Woodford, had a very even, fresh, and richly coloured collection, and was placed first. His back row flowers were J. S. Mill, Rosieriste Jacobs, Duchess of Leeds, Charles Lefebvre (very good), François Michelon, Earl of Dufferin, Madame Eugène Verdier, and Prince Arthur. Middle row: Fisher Holmes (very fine), Xavier Olibo, François Louvat, Black Prince, Dr. Sewell, Mrs. J. Laing, A. K. Williams, and Victor Hugo. Front row: Le Havre, Princess of Wales, Madame Norman Neruda, Duchess of Caylus, Camille Bernardin, Comtesse de Paris, and Duke of Edinburgh. Colonel Pitt was second. Mr. Lindsell had the better of two stands of circum trebles his flowers being large and on the whole good, although sixteen trebles, his flowers being large and on the whole good, although one or two were very weak. The varieties were A. K. Williams, Horace Vernet (very fine), Her Majesty (poor), Lady Sheffield, Duke of Wellington, Louis Van Houtte, Catherine Mermet (bad), Dupuy Jamain, Reynolds Hole, Charles Lefebyre, Alfred Colomb, The Bride, Contagge do Nedeilles Fisher Helmes Printer And Louis Indiana. Comtesse de Nadaillac, Fisher Holmes, Prince Arthur, and Madame J. Laing. Mr. Machin was second. Mr. W. Drew won with twelve trebles from Colonel Pitt, his only opponent. The winner had Alfred Colomb, A. K. Williams, Général Jacqueminot, Mrs. J. Laing, Lady Sheffield, Charles Darwin, Comte Raimbaud, Marie Baumann, Louise Van Houtte, Horace Vernet, Ulrich Brunner, and Earl of Dufferin. Mr. Drew scored another victory with twelve of one variety, a fine stand of Mrs. J. Laing representing him. Mr. Budd was second with Marie Baumann, and Mr. Machin third with La France.

The five classes open only to growers of less than 2000 plants of varieties of exhibition Roses were interesting. The Rev. H. Berners, Harkstead Rectory, was first in the class for twenty-four distinct, single trusses. The varieties shown were Marguerite St. Amand, Marie Baumann (good), Her Majesty, A. K. Williams (rich), Baroness Rothschild, Camille Bernardin, François Michelon, Madame Marie Cointet, Earl of Pembroke, Dr. Hogg, Eclaire, Heinrich Schultheis, Le Havre (good), Duke of Edinburgh, Merveille de Lyon, Reynolds Hole, Gustave Piganeau, The Bride, Horace Vernet, Prince Arthur, Madame Hoste, Jean Soupert, Francisca Kruger, and John Bright. Mr. A. Slaughter, Steyning, Sussex, was second, the best flowers in this stand being Fisher Holmes. A. K. Williams, Dr. Andry and Boonts of Wolthers.

Holmes, A. K. Williams, Dr. Andry, and Beauty of Waltham. Mr. W. C. Romaine, The Priory, Old Windsor, was third.

Mr. A. Whitton, Asken, Bedale, was first in the class for eighteen distinct, single trusses, with a box of grand blooms. The varieties shown were Ulrich Brunner (good), Madame E. Verdier, Marie Baumann,

Merveille de Lyon, Duke of Wellington, Dupuy Jamain, Lady Mary Fitzwilliam, Thomas Mills, Viscountess Folkestone, La Havre, Mons. Gustave Guinneseau, Victor Hugo (good), Charles Lefebvre, Mrs. J. Laing (fine), Dr. Andry, Madame Gabriel Luizct, Countess of Rosebery, and Margaret Dickson. Mr. J. Parker, Oakfield, Hitchin, was second, and Mr. E. Mawley, Rosebank, Berkhampsted, third, both staging good flowers. Mr. J. Ough, Clifford Street, Hereford, was given the premier award for twelve distinct, single trusses, showing Sir Rowland Hill, Gustave Piganeau (good), Général Jacqueminot, Merveille de Lyon, Marie Baumann, Camille Bernardin, Her Majesty, Earl of Dufferin (good), Reynolds Hole, Mrs. J. Laing, Suzanne Marie Rodocanachi (grand), and The Bride. There was no other exhibitor in this class. The Rev. H. Berners was first with eight distinct, three trusses of each, showing fine blooms of Her Majesty, Henrich Schultheis, Ulrich of each, showing fine blooms of Her Majesty, Henrich Schultheis, Ulrich Brunner, Mrs. J. Laing, Merveille de Lyon, Camille Bernardin, Crown Prince, and Alfred Colomb. Mr. A. Slaughter was awarded the second prize, there being no third competitor. The Rev. H. Berners was again first for nine single trusses of any Hybrid Perpetual, showing a grand bloom of Merveille de Lyon. Mr. W. C. Romaine was second with Dr. Andry, and Mr. Whitton third with Merveille de Lyon.

Division E was open to growers of not more than 1000 plants. There were six stands of twelve, the best being that from Mr. Orpen, West Bergholt, Colchester, who had Alfred Colomb (very good), Maréchal Niel, Gustave Piganeau (very fine), Souvenir d'un Ami, Baroness Rothschild, Horace Vernet, La France, Camille Bernardin, Mdlle. Marie Rady, Marie Van Houtte, Fisher Holmes, and Marie Suzanne Rodocanachi. Mr. C. J. Grahame, Coombe Road, Croydon, was second, losing a little in weight, but gaining in freshness. Mr. Parker was third, and Dr. Tucker fourth. Mr. Conway Jones had the best of three stands of nine, his varieties being Prince Camille de Rohan, Catherine Mermet, Chas. Lefebvre, Niphetos, Louis Van Houtte, Marie Hoste, Benoit Comte, Alfred Colomb, and Earl Dufferin. Mr. M. Hodgson, Shirley Cottage, Croydon, was second; and Mr. C. E. Cuthell, Chapel Croft, Dorking, third. Mr. Parker had the best six trebles, his varieties being Alfred Colomb, Comtesse de Nadaillac, Mrs. J. Laing, E. Y. Teas, Earl Dufferin, and Suzanne Marie Rodocanachi. Miss Mellish and Dr. Tucker were second and third. The best six of one variety came from Dr. Tucker, who had very heavy blooms of Her Majesty. Mr. Parker was second with the same variety; and Mr. Hodgson third with Alfred Colomb.

There were two other stands.

The blooms in the classes open to growers of less than 500 plants of varieties of exhibition Roses were not quite up to the standard of last year. Mrs. L. P. Times, Hitchin, was first with nine distinct, single trusses, showing Her Majesty, Etienne Levet, Horace Vernet, Alfred Colomb, Earl Dufferin, Mrs. J. Laing, Marie Baumann, Madame C. Crapelet, and Duc de Wellington. Mr. G. Moules, Sim Street, Hitchin, was second, and Mr. H. P. Landen, Shenfield, Brentwood, third. Dr. Freshfield, The Wilderness, Reigate, was first for six distinct, single trusses, staging Duke of Teck, John Bright, Comtesse de Nadaillac, E. Y. Teas, Marguerite Brassac, and Star of Waltham in good condition. The Rev. J. R. Buchanan Horne Vicarage, Canterbury, was second in this class; Mr. F. S. Francis, Crofton Hall, Orpington, third; and Miss Denton, Orchard Court, Stevenage, fourth. Miss E. B. Denton was, however, first for four distinct, three trusses of each. These were Charles Lefebvre, Mrs. J. Laing, E. Y. Teas, Alfred Colomb. Mr. F. Francis was second, and Mr. A. F. Grace, Christy Green House, Steyning, Sussex, third.

In the class comprising six distinct, single trusses, and open only to marie Rady, and Comtesse de Nadaillac. Mr. A. F. Grace was second, and Mr. H. Browne, Spa Hill, Upper Norwood, third. Mr. J. Bateman, Highgate, first in the class for six single trusses grown within eight miles of Charing Cross, with Ulrich Brunner, Rosieriste Jacobs, Her Majesty, Marie Rady, Suzanne Marie Rodocanachi, and Camille Bernardin in good condition. Mr. Rivers H. Loughton, Hendon, was second, and Mr. Hugh White, 5, Woodside Cottage, Highgate, third. Rev. J. H. Pemberton, Havering-atte-Bower, Essex, first in the class for six "new Roses," single trusses. The varieties shown were Augustine Guinoisseau, Caroline Testout. Elise Fugier, Gustave Piganeau, Jeannie Guinoisseau, Caroline Testout, Elise Fugier, Gustave Piganeau, Jeannie Dickson, and Duchess of Fife. Mr. J. Bateman was a close second. There was no other competitor in this class.

TEA AND NOISETTE DIVISION.

In Class, 26, for twenty-four Teas and Noisettes, single trusses, there were three stands, and the winning one was that of Mr. B. R. Cant, whose flowers were even but by no means so clean and fresh as usual. He had a grand Ethel Brownlow, while Madame Hoste, Madame de Watteville, The Bride, and Souvenir d'Elise were also very good. Mr. Frank Cant was second with Ethel Brownlow, Niphetos, and Madame Cusin as the best of a moderate collection, and Messrs. D. and W. Croll were third. Mr. B. R. Cant again won with eighteen trebles, and this was a stronger stand than the twenty-four singles, the flowers as a whole being cleaner. Comtesse de Nadaillac, Madame Cusin, Madame de Watteville, and Ethel Brownlow were the best. Mr. Mount followed with much smaller but fairly fresh blooms, Marie Van Houtte, Comtesse de Nadaillac, Madame Cusin, and Niphetos being clean, though lacking size. Mr. Frank Cant was third. The Tea and Noisette trophy class for eighteen blooms brought out one of the very best stands in the Show. It came from the Rev. A. Foster-Melliar, Sproughton Rectory, Ipswich, and was distinguished for the size, freshness, and cleanliness of the flowers. The varieties were as follows:—Back row: Maréenal Niel Madame Cusin (a magnificent flower), Ernest Metz, The Bride, Comtesse Panisse, Ethel Brownlow (very fine). Middle row: Hon. Edith Gifford, Anne Ollivier, Innocente Pirola, Souvenir d'Elise (very fine), Jean Ducher (weak), and Souvenir de S. A. Prince. Front row: Catherine Mermet, Comtesse de Nadaillac, Caroline Kuster, and Marie Van Houtte (very good), Madame Hippolyte Jamain, and Souvenir d'un Ami. Mr. O. G. Orpen, Colchester, was second, and Mr. H. V. Machin third.

The Rev. H. Berners won with twelve, his blooms being very neat,

The Rev. H. Berners won with twelve, his blooms being very neat, clean and fresh. Ethel Brownlow was very richly coloured, and so was Madame Cusin. Colonel Pitt, Turkey Court, Maidstone, was second. Mr. Foster Melliar won with twelve trebles, his stand being of fair quality though the flowers were somewhat soiled. Mr. Machin was a close second. The best stand of any Tea or Noisette, nine blooms, came from Mr. Berners, who had a delightful stand of Madame Hoste, the flowers being in beautiful condition, though not large. Mr. Machin was

second with Caroline Kuster.

There were five stands of twelve in division 2, open only to growers of less than 500 plants of Teas and Noisettes, and the best was that of Mr. Orpen, the blooms being small but fairly fresh. Mr. Parker, The Croft, Headington, Oxon, was second with larger flowers, but some past their best. Mr. A. Tate, Downside, Leatherhead, was third, and Mr. Conway Jones, Hucclecote, Gloucester, fourth. The Rev. J. H. Pemberton won with nine, Mr. Mawley being second. Both had small blooms, but they were in excellent condition, the greater weight of the Essex blooms gaining them the chief award. Mr. Orpen was victorious with six trebles, having Marie Van Houtte particularly good, and Mr. Parker was second. They occupied the same positions for six of one variety, Maréchal Niel representing Mr. Orpen, and The Bride Mr. Parker. Dr. Tucker, Swanley Junction, was third with the Hon. Edith Gifford.

Division 3 was for still smaller growers, 200 being the maximum number of plants allowed. Dr. Tucker was victorious with nine singles, his flowers being very fresh and good, except Catherine Mermet, which was a decided blot on the stand. Miss Mellish, Woodstock Priory, Worksop, was second; and Mr. W. D. Freshfield, The Wilderness, Reigate, third. Mr. A. Whitton, Askew, Bedale, defeated four opponents with six, and he had a very good stand, Souvenir d'Elise and Rubens being admirable. Mr. J. S. Francis, Orpington, was a creditable second; the Rev. J. R. Buchanan, Canterbury, third; and Mr. G. Moules, Hitchin,

fourth.

The single variety classes were, as usual, very attractive. Mr. B. R. Cant had the best twelve of any yellow, winning with Madame Hoste; Messrs. Croll were second, and Mr. Mattoek third with Marie Van Houtte. There was one other stand, Messrs. Maek & Son won from four opponents with twelve of any white except Niphetos, Merveille de Lyon in good condition representing them. Messrs. Harkness and Croll were second and third with the same variety. Eight competed with twelve of any crimson except Marie Baumann or A. K. Williams. English Fruit and Rose Co. won with a grand box of Alfred Colomb. Mr. Mount was second with Fisher Holmes, and Messrs. Paul & Son third with Alfred Colomb. There were seven stands of dark velvety crimson varieties. Messrs. Prior & Son won with Fisher Holmes, Mr. Frank Cant was second with Xavier Olibo, and Mr. Mount third with Abel Carrière. Messrs. Prior & Son won from four opponents with Maréehal Niel, having a capital box. Mr. Mount was second, and Mr. Orpen third. Five competed with Marie Baumann, Mr. Mount winning with smooth bright examples. Messrs. Frank Cant and B. R. Cant were second and third. Mrs. John Laing was splendidly shown. Mr. Mattock won with a grand box. Messrs. Harkness & Son were second with smaller but beautiful flowers, and Messrs. Burch third. There were seven other boxes. Messrs. Mack & Son won with A. K. Williams; Messrs. Perkins and Son second, and Mr. B. R. Cant third, one other competing. There were only two stands of Niphetos, both very good. Messrs. Burch were first, and Mr. Mount second. Mr. B. R. Cant was victorious with Her Majesty, large but tarnished. Messrs. Burch being second, and Mr. Mount third. Two competed with Ernest Metz, Mr. B. R. Cant winning with a beautiful box, and Mr. Frank Cant being second. Mr. B. R. Cant was also first for Ethel Brownlow in splendid condition, Mr. Mount being second, and Mr. Frank Cant third. For twelve of any H.P. not named Mr. Frank Cant was first with Fisher Holmes, Mr. Mount second with the same variety, and Mr. B. R. Cant third with Alfred Colomb. There were eleven stands in all. Mr. Mount won with six of Catherine Mermet and six of The Bride, and Mr. B. R. Cant was second; no others competing. For twelve of any new Rose Messrs. Harkness & Son were first with a splendid box of Gustave Piganeau; Mr. Frank Cant was second, and Mr. B. R. Cant third with the same variety. Messrs. Dickson & Sons, Newtownards, had a beautiful silvery blush variety named Mrs. Sharman Crawford, for which a gold medal was awarded, and they were accorded a similar honour for a splendid ivory white variety named Marchioness of Londonderry. A gold medal also went to Mr. Chas. Turner for the garden Rose Crimson Rambler, which produces huge clusters of blooms. Messrs. Paul & Son, Cheshunt, won with twelve new Roses, exhibiting Gustave Piganeau, Mrs. Paul, Marie Magat, Dowager Duchess of Marlborough, Gustave Regis, Duke of Fife, Waban, Violet Queen, Chas. Gates, Paul's Early Blush, Bruce Findlay, and Frère Marie Pierre. Mr. Pemberton was second.

GARDEN AND BUTTONHOLE ROSES.

Messrs. Paul & Son showed garden Roses splendidly, as indeed they always do, and were placed first for thirty-six varieties. Gustave Regis, Madame Pierre Cochet, Rugosa, Camoens, Lucida, and Perle d'Or were

much admired. Messrs. Croll were second. Mr. Alfred Tate secured the first prize and Lord Penzance's silver cup for eighteen bunches. He had a splendid stand, but unfortunately it was overcrowded. Gloire de Rosomene, Gloire des Polyanthes, Queen of Bedders, Moschata nivea, and Perle d'Or were particularly beautiful. Mr. Pemberton and Mr. Machin were placed equal second, and Miss Mellish fourth. Mr. Cuthell won with twelve, Mr. Orpen following.

Mr. J. Mattock, New Headington, Oxford, first for twelve buttonhole

Roses. The varieties shown included Innocente Pirola, Comtesse de Nadaillac, Catherine Mermet, Marie Van Houtte, W. A. Richardson, Niphetos, W. A. Capucina, Madame de Watteville, L'Ideal, Souvenir de Paul Neyron, and The Bride. Messrs. Keynes, Williams, & Co., Salisbury, were second; and Mr. H. V. Machin third. Miss Mellish was first for

nine bunches of single-flowered Roscs.

THE PREMIER BLOOMS.

The premier H.P. in the trade classes, as already remarked, was a magnificent example of Horace Vernet in Messrs. Harkness & Sons' first prize stand of seventy-two, and in the amateurs' section a noble flower of Ulrich Brunner in Mr. Lindsell's first prize stand of forty-eight. The premier trade Tea was a beautiful bloom of The Bride, exhibited by Mr. B. R. Cant, and the premier amateurs' Tea a superb bloom of Madame Cusin, one of the best ever seen, in Mr. Foster-Melliar's first prize box of eighteen.

MISCELLANEOUS.

Miscellaneous exhibits were not so numerous as on former occasions. Messrs. W. Paul & Son, Waltham Cross, sent a large collection of cut Roses and ornamental foliage shrubs. The Roses were very bright, L'Ideal, Alfred Colomb, Mrs. J. Laing being specially good. Messrs. J. Cheal & Sons sent hardy flowers and Violas, and Messrs. J. Laing and Sons had a charming group of tuberous Begonias tastefully arranged. Mr. W. Rumsey, Waltham Cross, sent some Roses not for competition and Lord Penzance had a stand of garden Roses. Messrs. G. Jackman and Sons, Woking, also sent a large collection of cut Roses, which attracted some attention.

TORQUAY.—June 27th and 28th.

A Rose Show was held in the nursery grounds of Messrs. Curtis, Sanford & Co., Torquay, on July 27th, and continued the following day. The primary object of the Show was to provide a Devon Rosery Gardeners' Relief Fund. As in previous years, the whole of the arrangements were undertaken by the above firm, the members of which did everything in their power to render the Exhibition successful. About 400 feet of staging were erected in the house set apart for the Show.

Mr. Morton Sparke was awarded first prize for a box of twenty-four distinct varieties, which included an exceedingly fine Captain Christy and good specimens of Madame Willermoz and Lord Bacon. Mr. Sparke also obtained the gold medal for nine Tea and nine Hybrid Percetual The finest flowers comprised Madame Picrre Guillot, Etienne Levet, Hon. Edith Gifford, Baroness Rothschild, and Duke of Edinburgh. The honours again went to Mr. Morton Sparke for his thirty-six distinct varieties, including good examples of Ulrich Brunner, Xavier Olibo, Maréchal Niel and Anna Olivier. Mrs. J. M. Browning in her winning box of twelve distinct varieties sent admirable specimens of Baroness Rothschild and Merveille de Lyon. Mr. Fortescue was awarded the first for six distinct varieties, his most noteworthy blooms being Merveille de Lyon and Dupuy Jamain. Duchess of Bedford and Catherine Mermet were the pick of the half-dozen varieties with which Mr. J. Armitage secured honours, while in the class for six blooms of one variety Lady Macgregor won easily with a magnificent box of Maréchal Niels. Among the prizes offered by the Torquay Horticultural Society were two silver medals, one for the best Hybrid Perpetual and the other for the best Tea Rose in the Show. Both the medals were carried off by Mr. Malloek, Louis Van Houtte being adjudged the finest Hybrid Perpetual and his Alba Rosea the best Tea bloom.

The most striking feature of the Show was the splendid collection of cut Rose blooms exhibited by Messrs. Curtis, Sanford & Co., between thirty and forty boxes of the choicest varieties being staged with

admirable effect.

Messrs. Robert Veitch & Son of Exeter sent an interesting collection of Alpine plants.

SITTINGBOURNE.—JUNE 29TH.

THE Sittingbourne and District Rose Society is a new body, and as the Committee includes such well-known rosarians as Mr. R. L. Knight and Captain Christy, with Mr. Prideaux Selby as Secretary, its career should be as successful as enthusiasm and practical knowledge can make it. The first Show was an excellent one considering the trials brought about by the peculiar season, heavy wind and rain having followed the prolonged drought, and it may be expected to increase in importance as each year comes round. An admirable schedule had been formed, and the awards are briefly noted herewith.

In the first of the open classes, which was for thirty-six varieties, Mr. Geo. Mount won with a first-rate stand, the blooms being large, fresh, and bright. Gustave Piganeau, Duchess of Bedford, Mrs. John Laing, Niphetos, and Alfred Colomb were fine blooms. Messrs. W. Ray and Co. were second. Mr. Mount had another fine box of twelve trebles, the flowers being heavy, and except for one or two in beautiful condition. Messrs. Ray & Co. were second, and, as before, many points in the rear. With twelve Teas Mr. Mount scored his third victory, and again richly deserved it, for his blooms were in beautiful order. Ethel Brownlow, Madame Cusin, Souvenir de Paul Neyron, Comtesse de

Nadaillac, The Bride, and Souvenir d'Elise were all delightful examples. Colonel Pitt followed with much smaller flowers, of which Marie Van Houtte and Souvenir de G. Drevet were the best.

The classes reserved for members of the Society followed the rules of the National Rose Society, being divided into sections to suit small and large growers. Colonel Pitt won with twenty-four in the class for growers of any number of plants. His stand was uneven, and some of the blooms were weatherworn, but John S. Mill and Alfred Colomb were excellent, while Madame Bravy, Marie Van Houtte, and Camille Bernardin were very good. Major Knight was second, not far in the rear, for though there was less weight in his stand, the flowers as a whole were a little fresher. Captain Christy won with twelve. He had very fresh bright blooms, amongst which Marie Van Houtte, Mrs. John Laing, The Bride, and Dr. Andry were very fine. Colonel Pitt was second, and Major Knight third. Colonel Pitt was first with twelve Teas and also with six trebles, both being very good stands. In the latter class Major Knight was second.

Mr. Frank Honeyball was first with twelve in the section open to growers of not more than 500 plants, Mr. Edward Prentis second, and the Rev. W. J. Mellor third. With nine Teas and four trebles (Teas) respectively Dr. Selby secured the leading position, the other prizes going to Messrs. Mellor and A. J. Thomas. Mr. F. T. Knight had a bright stand of nine in the 250 plants section, and won somewhat easily from Mrs. Tylden, Mrs. F. Neame being third. Mr. Knight also won with three trebles, Mr. Mellor being second, and Mr. Neame third. Mr. Mellor had a very good stand of six Teas, the blooms including a fine one of President, and he won easily, Mrs. Tylden being second. Miss Vallance and Miss Walter secured the principal prizes in the remaining classes. The National Rose Society's medal for the best bloom in the Show was awarded to Major Knight for a grand example of Madame Victor Verdier.

The floral decorations were very attractive. Miss Ray was victorious with an epergne, in the arrangement of which she had displayed a commendable lightness of touch. Miss Knight was second, and Mrs. Selby third. Miss Ray won with a soup plate and tumbler of flowers, Mrs. R. L. Knight with a spray, and Miss Christy with buttonboles, Miss Vallance, Mrs. Selby, and Miss Sutton making themselves responsible for the minor awards. Mr. Kennett, gardener to the Rev. W. J. Mellor, exhibited a promising seedling Tomato.

CROYDON.—JULY 5TH.

THE best Show that the Croydon Horticultural Society has yet held took place in private grounds close to the east station yesterday (Wednesday). Roses, specimen plants, and vegetables were admirable, and it is only to be regretted that time and space do not admit of full particulars being given. Mr. Roffey had, as usual, arranged matters well.

The Rose classes were not well filled in all cases, but the flowers were surprisingly good. Messrs. Paul & Son of Cheshunt were not opposed with forty-eight, but they would have taken a great deal of beating, for their flowers were very clean and fresh. One of the best blooms was the rosy crimson H.P. Duc d'Orleans, while Niphetos, Viscountess Folkestone, and E. Y. Teas were excellent. Mr. B. R. Cant was unopposed with twenty-four trebles, and as usual in such classes had a strong Victor Hugo, Prince Arthur, and A. K. Williams were very fine, particularly the latter. Mr. Mount was victorious with twenty-four singles, showing an even and fresh stand in which Thomas Mills, Alfred Colomb, and A. K. Williams were very good. Mr. T. Durrant Young was second, and Mr. Butcher third. Mr. B. R. Cant had a splendid stand of twenty-four Teas, albeit a few of the blooms were a little tinged. Souvenir d'Elise, Niphetos, Luciole, and Catherine Mermet were all fine flowers, while there were many other good blooms. Mr. Mount was a very good second, and Messrs. Prior & Son third. Mr. Mount had the best twelve of one variety, a splendid box of Mrs. John Laing. Messrs. Prior & Son were second with Fisher Holmes, very even and well coloured; and Messrs. Paul & Son third with Mrs. John Laing. In the corresponding Tea class Messrs. Prior & Son were first with a beautiful stand of Maréchal Niel; Mr. Mount second with Comtesse de Nadaillac; and Mr. B. R. Cant third with Ethel Brownlow.

The fact of Mr. Lindsell showing in the amateurs' section was evidence enough of quality there. He won with thirty-six with a very good stand, in which a grand Horace Vernet was very conspicuous. Mr. Brown, gardener to Mrs. Waterlow, was second, and Mr. Alfred Slaughter third. Mr. Blundell, gardener to G. Christy, Esq., defeated the Hitchin amateur with twenty-four, but not by much, both stands containing flowers in good colour. Mr. Slaughter was third. Mr. Lindsell had a very fine box of six trebles, Horace Vernet and Alfred Colomb being excellent. Messrs. Blundell and Slaughter were second and third. Mr. Lindsell had the best twelve of one variety, small, but very neat flowers of Comtesse de Nadaillac representing him. Mr. Slaughter was second with Alfred Colomb, and Mr. Wright third with Mrs. John Laing. Mr. Blundell won with eighteen Teas, and Mr. Mawley with twelve, the latter also taking first for twelve H.P.'s. He had small but very clean flowers. Mr. Slaughter won with four trebles, and other prizewinners were Messrs. C. J. Grahame, Bateman (the latter being first for nine), G. Moules, K. H. Gifford, J. de la Marc, H. Shoesmith, and the Rev. W. Wilks. Mr. Grahame showed to great advantage in the district classes, and secured two medals with a beautiful example of Mrs. John Laing. The floral decorations, cut flowers, and table plants formed a good display.

The larger tent was filled with splendid material in the way of

specimen plants and Orchids. Mr. H. C. Tilbey, gardener to F. Berns, Esq., won with six of the latter. Mr. Carr, gardener to Mrs. Stephenson

Clarke, had some very fine Selaginellas, and won from Messrs. King, gardener to P. Crowley, Esq., and Simmonds, gardener to H. C. Mayhew, Esq. The latter won with Zonal Pelagoniums, and Mr. Slater, gardener to Mrs. Hulse with Gloxinias, Mr. C. Perrett also taking a first for the latter. Mr. Slater was most successful with Ivy-leaved Pclagoniums, and Mr. Tilbey with Ferns. Begonias were finely shown by Mr. Slater, the plants being large and well bloomed, while Mr. Kirk and Mr. Simmonds also had good plants, Mr. Slater and Mr. Kirk took the chief prizes. The famous specimens of W. Warren, Esq., Handcross Park, Crawley, now under the charge of Mr. W. Hallam (Mr. Offer, with whose name they have long been associated, having, we hear, been promoted) were very conspicuous in the classes for those plants. Mr. Hallam was first with nine and Mr. Carr second. The latter had much the larger plants, and would no doubt have won but for the backward state of his Rondeletia. Mr. King was third. Mr. Hallam had some magnificent ornamental leaved plants and won easily with nine, his Crotons, Alocasia maerorhiza variegata, and Cycas revoluta being pietures of health. Mr. King's giants were also in good order, his Anthuriums being very noticeable. He was placed second. Messrs. Hallam first for three plants, and King had another tussle for Ferns, the Sussex exhibitor emerging victorious, his plants were in splendid order. Mr. Simmonds was successful with both Carlot Sussex and Sussex exhibitor emerging victorious, his plants were in splendid order. ful with both Caladiums and Coleuses, and Mr. Carr with Dracænas. First prizes for groups went to Messrs. Scott, Wooldridge, and King. Messrs. B. S. Williams & Sons, Messrs. Laing & Son, Mr. J. R. Box, Mr. Butcher, Messrs. J. Cheal & Son, and Messrs. Pecd & Son had

characteristic miscellaneous exhibits.

An idea in connection with this Show well worth copying is to collect surplus Roses, and sell them in a tent on the ground on behalf of the Royal Gardeners' Orphan Fund. Last year £12 was secured in this way. Mrs. Gunner and Mrs. Dart presided over the stalls.

LEE, BLACKHEATH, AND LEWISHAM .- JULY 5TH AND 6TH.

THE Shows of this Society during the quarter of a century of its existence have always been of a high class character, and that held on the above dates was, notwithstanding the season, no exception to the rule. As usual the Exhibition was held in the grounds of The Cedars, Belmont Hill, Lee, by permission of Mrs. Penn, and the exhibits staged were quite up to the usual standard. Speeimen flowering and ornamental foliage plants formed a feature at this Show, and groups were well represented, the same remark applying to fruit and vegetables.

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Specimen plants were shown in first-rate condition. Mr. J. Lambert, gardener to H. W. Segelcke, Esq., Herne Hill, was first for six foliage plants; Mr. Jeffery, gardener to Mrs. Crundell, Eltham, being second. Mr. C. Nunn, gardener to B. Soames, Esq., Maze Hill, Greenwich, carried off the honours for four foliage plants; Mr. Aley, gardener to R. Kersey, Esq., High Road, Lee, following. Half a dozen Caladiums were best shown by Mr. W. Payne, gardener to C. D. Abel, Esq., Blackheath; Mr. Fox, The Cedars, Lee; and Mr. C. Nunn following as their names are given. Mr. Lambert gained the premier award for four exotic Ferns, showing grand plants, Mr. Fox being second with smaller specimens. Mr. Jeffery had a good half dozen Ferns, for which the specimens. Mr. Jeffery had a good half dozen Ferns, for which the leading prize was awarded, the second place being accorded to Mr. C. Nunn. Mr. Fox was first for six Palms, and Mr. C. Nunn had the best six stove or greenhouse plants in flower. These included two fine specimens of Allamanda nobilis and A. Hendersoni. Mr. W. Jeffery was second with six flowering plants, showing smaller specimens. Mr. Nunn had the best single specimen plant in flower, Stephanotis floribunda, Mr. J. Pearee being second with Allamanda Hendersoni. Messrs. W. Jeffery and C. Nunn divided the awards for twelve stove and greenhouse plants. Mr. J. Lambert was first with six Dracænas, Mr. Jefferys and Mr. Fox following.

The class for a collection of twenty-four plants brought forth a good apetition. The prizes, however, went to Messrs. W. Jeffery, F. Fox, competition. and C. Saville in order named. Mr. Nunn was placed first for a group of plants, Mr. J. Pearce being second. Mr. C. Helmer, gardener to Miss Hooker, Lee Terrace, was first with twelve Gloxinias, and Mr. C. Nunn first for six plants. Mr. H. Horton also gained a prize for Gloxinias. Tuberous Begonias were best shown by Mr. T. Bell, gardener to Rev. G. T. Oldham, Blackheath; Mr. J. Lambert, and Mr. C. Helmer. Ornamental-leaved Begonias were good, the best plants coming from Messrs. J. Lambert, T. Aley, and G. T. Shrubb. A table of plants staged by Mr. W. Jeffery secured this exhibitor the leading award, the second prize being accorded Mr. F. Fox for a tasteful arrangement. Coleuses, Fuchsias, and Pelargoniums, table plants and hardy flowers, were also well shown by some of the above mentioned and other exhibitors.

Roses were shown in very good condition considering the season. Mr. B. R. Cant, Colchester, was awarded the premier prize for seventytwo blooms. The best of these were A. K. Williams, Beauty of Waltham, Victor Hugo, Marie Verdier, Madamei G. Luizet, Ulrich Brunner, and Alfred Colomb. Messrs. G. & W. H. Burch, Peterborough, were second with smaller flowers. There was no third competitor in this class. Messrs. Burch were, however, placed first with forty-eight Roses, showing good flowers. The second prize went to Messrs. J. Laing & Sons. Mr. J. Batcman, Highgate, had the best dozen blooms; Mr. H. Cole, gardener to T. A. Mitchell, Esq., Chislehurst, following. The same exhibitors secured awards for six Roses in the order given. Messrs. Burch gained the leading award for twenty-four blooms, Messis. B. R. Cant and J. Laing & Sons following.

Fruit was well shown. Mr. J. Neighbour, Bexley Park, was first for a collection of fruit, Mr. T. A. Kester, Plumstead, being second, and

Mr. Jeffrey, Eltham, third. Mr. Neighbour was again first for another collection of fruit, Mr. G. F. Shrubb, Blackheath, following. Grapes were best shown by Mr. J. Rhoden, Blackheath Park, gardener to J. Vavasseur, Esq., Mr. Neighbour being second, and Mr. Goddard, gardener to T. W. White, Esq., Eltham Road, third. The last named exhibitor was first with a single bunch of white Grapes, and Mr. Rhoden similarly for three bunches, showing Duke of Buccleuch in good condition. Mr. Shrubb was first with Strawberries, and Mr. Neighbour with Melons and Peaches. Other successful fruit exhibitors were Messrs. J. Pearce and W. H. Struckett.

Vegetables were shown in first-rate condition by Mr. Fox, who was first for a collection; Mr. Jeffery being second. The last-named exhibitor secured the leading award offered by Messrs. Sutton & Sons for vegetables from their seeds, the others going to Messrs. Neighbour and C. Nunn. Mr. Fox had the best six Tomatoes in pots. Mr. Turpin, High Road, Lee, gained the first prize given by Messrs. C. Sharpe & Co., Sleaford. In other classes vegetables were also well represented, special prizes being offered by Messrs. Daniel Bros., Norwich, and Carter, Page, & Co., London Wall.

Amongst the miscellaneous exhibits Mr. H. J. Jones, Ryecroft Nursery, Lewisham, secured a silver medal for a grand group of Fancy Pelargoniums tastefully arranged. Some splendidly bloomed Zonals staged by Mr. Jones also attracted attention, especially the new variety, Mrs. W. Wright. This is of a robust constitution, and the nearest approach to blue we have seen, meriting the first-class certificate It will unquestionably become a popular variety. Laing & Sons, Forest Hill, sent some Tuberous Begonias, well flowered; and Messrs. J. Peed & Sons, Roupell Park Nurseries, Norwood Road, S.E., had a group of Caladiums and other foliage plants, also a collection of Gloxinias. Messrs. W. Butcher & Sons, Blackheath, had a stand of weed killers; and Mr. W. Colchester, Ipswich, a stand of ichthemic guano.

EMIGRATION.—The July circulars of the Emigrants' Information Office, 31, Broadway, Westminster, and the penny and other hand-books, with maps, show the present prospects of emigration. A short pamphlet on Newfoundland is also issued. A new branch office has been opened at the Public Library, Nottingham. Work in New South Wales, especially in towns, continues to be very scarce. The best openings are for men who are experienced in fruit growing, in the drying and packing of fruits for export, in the management of irrigated and unirrigated orchards, in wine making, and in the manufacture and packing of butter and cheese. Domestic servants continue to be in steady demand throughout the colony. The towns of Victoria, and especially Melbourne, are full of men seeking work, and no working man should go there at present. With the object of providing employment, and drawing men away from the overcrowded towns, the Government have thrown open more land for settlement, and have taken steps to initiate village settlements, to construct two or three country railways, and to assist the formation of labour colonies. In Queensland the depression at Brisbane, Ipswich, Townsville, and other places still continues. New Zealand is in a prosperous condition, and offers many advantages to settlers. In Natal there is no special demand for labour. New land regulations have been issued under which cultivation is no longer made a condition of occupation by purchasers of crown lands. Agricultural farmers and their families are now given assisted passages to the Colony on certain conditions. Official information has been received that an agent has been sent from Brazil to induce British emigrants to go to the State of San Paulo in that country. In view of the suffering and loss of life which have been occasioned by previous schemes of this nature, all persons are again most strongly warned not to go to this or any other part of Brazil.



FRUIT FORCING.

Vines .- Early Houses .- When the Grapes are cut thoroughly cleanse the Vines from dust and insects by forcible syringings, keeping the house as cool as possible by free ventilation, and withdraw the roof lights where practicable when steady rains prevail. Vines that are becoming exhausted through long subjection to early forcing and bearing heavy crops should have one of the borders renovated where there are two, and the roots laid in fresh material near the surface. they are confined to inside borders the roots may also be lifted. Preparation should now be made for this operation by getting the materials together, so that the work may be executed at the right time and with dispatch. One of the borders only should be acted upon at a time, say the inside border one year, following on with the outside border the next. The proper time to attend to the roots in the case of early Vines is as soon as the foliage gives indications of ripening. Shade should be provided during the operations and the Vines syringed, keeping rather close for a time, or until they have pushed fresh roots, when free ventilation is necessary.

Houses of Ripe Grapes.—Give constant ventilation, and on hot days sprinkle water on the borders and floors to prevent the Grapes shrivelling. A temperature of 55° to 60° will be sufficient for Black Ham-

burghs by artificial means, but Muscat of Alexandria and other heatrequiring varieties will need fire heat to prevent the temperature falling below 60° to 65° at night. Muscat of Alexandria Grapes colour in proportion to the light and air they receive. Black Hamburghs finish best beneath a good spread of foliage, and a slight shade is absolutely essential to their keeping colour for any length of time after ripening. Some doubled herring nets drawn over the roof lights is mostly sufficient.

Grapes Stoning.—During this process the Vines should not be hurried, either by artificial heat or early closing. Supply the Vines with plenty of food in an available form at the commencement of the stoning, which is soon after the Grapes are set, and continue this up to their changing colour. There is nothing better for Vines than phosphatic and potassic manures, with nitrogenic in proportion to the vigour of the Vines. If they are heavily cropped and the foliage is relatively small they will require more nitrogen than where the foliage is ample. Nitrate of soda may in such cases be given with advantage, especially where the soil is light or calcareous. Root growth should precede or be simultaneous with leaf growth, and the growth produced must be stable, therefore the manure ought to contain other elements besides nitrogen. A good mixture for weak Vines in light and calcareous soils may be formed of three parts bone superphosphate, two parts carbonate of potash (pearlash), two parts nitrate of soda (powdered), and three parts ground gypsum; mix and apply quarter of a pound per square yard after watering, and wash in moderately. Sulphate of ammonia may be used where the soil is rather strong instead of the nitrate of soda. a good all-round manure for Vines there is everything they require in three parts bone superphosphate, two parts powdered saltpetre, and one part ground gypsum mixed, supplying a quarter of a pound per square yard at intervals, say when the Grapes are set or thinned, half swelled, and commencing to colour. If the roots are near the surface half the quantity only should be given at a time, but at less distant intervals.

Grapes Scalding.—The best preventive for this consists in admitting air rather freely towards the close of the stoning period, especially in the early part of the day and through the day, with a little at night, and a gentle warmth in the pipes, so as to maintain a temperature of about 70° artificially. Scalding is most prevalent during bright weather following a dull period. The essential point is to avoid the deposition of moisture upon the berries, for if they are allowed to be covered with moisture and the sun raises the temperature considerably before ventilation is given the leaves will assuredly scorch and the berries scald. The most critical time is just before (a fortnight to three weeks) the Grapes change colour for ripening. Muscat of Alexandria, however, scorches badly even after the Grapes are advanced in colour, and a slight shade, as that of garden nets drawn over the roof lights, is of great benefit in

breaking the fierce rays of the sun.

Shanking.—This is seldom altogether absent from the best cultivated Grapes, and often causes great trouble through deterioration of crop. It is known to be accelerated by suspended root-action at the critical period of the Grapes ripening, and certainly is a result of error in management, border formation, and soil constituents. No one really knows anything for certain about this tantalising disease, but it has been attributed to fungal and bacterial agencies. There are, however, no fungous outgrowths to be found in shanked Grapes, except those usually found on dead vegetable matter, but there is an affection on the shanks of the berries and footstalks of the bunches of Muscat of Alexandria Grapes that contain mycelia in the living tissue, and the outgrowths, though not well developed, are evidently those of a Gleosporium, not unlike G. laticolor. This is a rather unusual ailment in Muscat of Alexandria Grapes, and may or may not be associated with ordinary shanking (a contraction instead of swelling) in the footstalks of the berries.

To avoid shanking the borders must be well made and the Vines properly managed, fully exposing the foliage to light and air, allowing no more growth to be made than can have those essentials. Deficiency of ventilation in the early stages of growth, combined with too much moisture, inducing long-jointed growth and thin foliage, are unfavourable to the building up of healthy tissues, and food derived from a cold wet border, with the roots deeply situated, are not likely to produce well finished fruit. Vines liable to have shanked berries should be given time, particular attention being paid to the ventilation, and avoiding and an electron of the particular attention of the particular atten sudden fluctuations of temperature, so as to secure a steady supply of nutriment, and allow for its due assimilation by permitting a good spread of, foliage. Regulate the growths on the extension rather the restrictive system where there is room for it without crowding, keeping all gross laterals stopped so as to cause an equal flow and distribution of the sap throughout the Vines, and this will assist them to perfect their crops. It is, however, necessary to renovate the border in bad cases of shanking, and lay the roots in fresh compost near the surface.

Young Vines.-There are two methods of treating those of this season's planting. 1, Allowing them to grow unchecked so as to secure plenty of roots and stout stems, little regard being paid to the growths except as regards the leaves corresponding to the pruning buds, which are not suffered to be crowded, and this gives three good buds at the bottom of the trellis to which the canes are shortened at the winter pruning. 2, The young canes are permitted to grow to a length of about 9 feet, and are then stopped. The lateral at the joint will push strongly, and should be let grow to the extent of four to six leaves, when its point may be pinched off; then its laterals may be pinched to one leaf, also sub-laterals as made. Laterals proceeding from the joints along the cane being stopped to one leaf, and the sub-laterals also to one joint of growth, the vigour will be concentrated on the cane and principal buds without starting the latter into growth, and they may be pruned

so as to bear a moderate crop of fruit the following year.

Vines in Pots for Early Forcing.—Those intended for this purpose should by this time have completed their growths. Supply water only to prevent the foliage becoming limp, exposing the Vines to all the light and sun possible, so as to thoroughly ripen the wood and the buds. Keep them free from insects, as it is important that the leaves perform their functions to the last. After the wood becomes brown and hard the Vines may be stood on slates or boards in front of a wall with a south aspect, securing the canes to the wall to prevent the foliage being damaged by wind.

Melons.—Plants Swelling their Crops.—Ventilate early, or at 75°, keep through the day at 80° to 90°, as sun avails, and close so as to run up to 95°, or even 100°, with plenty of atmospheric moisture. A little ventilation about 6 P.M. will allow the vitiated air to escape and the temperature to fall gradually, but this is only necessary in closely glazed frames, pits, or houses, and when the weather is warm at night. Add fresh soil to the ridges or hillocks as the roots protrude, and press firmly. Syringe the plants in houses at closing time, and damp well in the morning and in the evening of hot days. Plants in frames should be sprinkled at closing for the day, keeping the water from the collar. Afford liquid manure copiously, always weak and tepid, and keep it from the foliage of frame plants, which in exceptional cases only need manurial applications, as they root into the fermenting material and grow quite vigorous enough without manure water.

Afford support to the fruit in good time, placing slates under those in pits or frames. Keep the foliage fairly thin, avoiding removing a large quantity of growths at one time, as this induces gumming. As the fruit approaches ripening reduce the supply of water at the roots, but not to cause flagging, and admit a little air constantly, withholding water from the fruit. Cracked fruits are mostly caused by a moist atmosphere at night, but any plants that become stunted while the fruit is swelling, and then given more generous treatment, are more subject to this defect than those encouraged in the early stages of the fruit swelling, and afterwards kept rather dry for ripening. This is

essential to secure high quality in the fruit.

cucumbers.—A few seeds may now be sown for late summer and early autumn fruiting. The plants from this sowing will be fit to plant out in about a month; they do well in frames, and the fruit is finer than that of old plants. Plants in full bearing must have attention in thinning exhausted growths, removing tad foliage, stopping, tying, and regulating the young so as to keep up a succession of bearing wood. Add a little fresh loam to the surface from time to time, and if sprinkled with some bone superphosphate occasionally roots will multiply at the surface, where they can be fed by light mulchings, as advised for Mel ns. Supply liquid manure in other cases copiously once or twice a week, according to circumstances. Syringe at closing time, and maintain a good moisture all day by damping surfaces. Flagging must be prevented by employing a shade lightly for a few hours in the forenoon and midday when the sun is powerful. Avoid too much moisture in dull weather; it only tends to promote soft growths, and renders the foliage more susceptible to injury on a bright period ensuing. Close early or before the temperature has receded to 80°, and so as to gain 5° to 10°, only employing fire heat to maintain it at 60° to 65° at night, and 70° to 75° on dull days.

THE KITCHEN GARDEN.

Tomatoes Under Glass.—If the stems of those late planted are abnormally thick, more especially towards the points, the young leaves also curling badly, this is a sure sign that the treatment has been too liberal. Tomatoes should never be planted in very rich soil, the other extreme also being avoided, what assistance they require in the shape of fertilisers being best applied from the surface. If, therefore, they are growing too rankly give less water at the roots, and keep up a good circulation of warm dry air. Should there be plenty of head room, allowing some of the side shoots to spread, laying these in not less than 12 inches apart, and pinching out all secondary growth is a good preventive of grossness, and the same plan may be followed in the case of plants trained or staked uprightly, a shoot being reserved on each side, always provided this can be done without any undue crowding. If the fruit fails to set well at this time of year this is almost a sure sign of either grossness, or the other extreme poverty at the roots. Those swelling off extra heavy lower clusters of fruit soon give signs of exhaustion of the soil unless well fed, the haulm becoming thin and hardening prematurely, and the bunches of flower puny, also failing to give fruit. Anticipate this by surfacing over the soil with a fairly rich compost, liquid manure also being freely applied. In the case of market growers top-dressing with compost would be a too expensive proceeding, but where the soil is at all poor and non-retentive a mulching of short manure ought to have been applied some time since to the plants cropping, and to those later planted before they had made much Where the soil is either non-retentive of moisture or naturally progress. poor, water ought to be supplied to the borders very freely during hot dry weather, twice and sometimes thrice in a week.

Tomato Diseases.—Complaints of disease attacks were rife even during the exceptionally hot and dry weather so long experienced, and now that a change to weather of a somewhat opposite character has taken place the chances are that diseases of a fungoid nature will spread rapidly unless timely preventive measure are taken. Wholly dispensing with fire heat was a great mistake, and many will have good cause to regret this false economy. The circulation of warm dry air is one of the

best preventives of disease, and also promotes a hard, productive habit of growth in the plants. Watering ought always to be done as much as possible in the morning of clear days, and the foliage wetted but little if at all. Creating a soft moist atmosphere such as suits Cucumbers well is just the condition that favours a spread of disease. Where the Cladosporium, which is quickly recognisable by the broad yellow spots on the upper surface of the leaves, is rapidly spreading, something drastic must be attempted to stop its progress, or the whole of the fully formed leaves will be quickly ruined by it. "Killmright," frequently advertised in these pages, where given a fair trial, has been found an effective preventive. It is the under side of the leaves that should be reached principally, that being where the disease germs lodge and spread.

Mushrooms.—Manure ought now to be collected and prepared for making into Mushroom beds, more especially in the open or other quarters than the Mushroom house proper, the latter being largely reserved for the later or cold weather crops. Open air beds have of necessity to be ridge shaped, and the materials used should differ somewhat from those required for flat beds. Do not wholly separate the litter from the droppings, the correct course being to reserve about onethird of the short stained straw with the manure, and to take good care of the longer portions for the purpose of well covering the beds after they are made. The beds may be of any length, about three loads of prepared manure being required to make a bed 3 yards long. Do not leave the stable manure for weeks together in a heap or pit to overheat and become dry and musty, but keep it well opened out till enough has been savel for a bed, then fork away the long strawy portion, and throw the rest into a heap to ferment. In the course of three or four days, or before it is violently hot in the centre, turn the heap inside out, gently watering it if at all dry. Continue this treatment about every second day for the next ten days or fortnight, and by that time there should be a good heap of well sweetened steadily decaying manure ready for making into a bed. If the first bed is to be a flat one and formed under cover of some kind, more of the stained straw should be forked away from it; but in other respects the method of preparation ought to be much the same as that just detailed. Good fresh spawn is always to be preferred to any that is either cheap and stale, therefore order the requisite supply from a reliable source in readiness for use when warted. Any beds formed and spawned early in July with a view to having Mushrooms from the middle of August onwards require particularly good attention. Unless the manure has been very well prepared it will heat very violently, the centres of the beds attaining a white heat, and the manure generally spoilt for the growth of Mushrooms accordingly, while if it is too dry decay will cease, and an insufficient moisture be the cause of the Mushrooms failing to appear in due course.

PLANT HOUSES.

Begonias.—Plants of various kinds intended for autumn and winter flowering should be placed into the pots in which they are intended to flower. After potting, put the plants in cold frames, and keep moderately close until established, when give more air. Shade lightly during the brightest part of the day. Insert cuttings of B. Ingrami in thumb pots. These will be useful early in the year as plants in 5-inch pots. This variety, if placed in baskets of moderate size and the plants pinched for a time, will yield abundance of flowers in the autumn. Cuttings of B. nitida and its variety rosea may be inserted at once. These are useful for flowering in the stove early in spring.

Euphorbia jacquiniæfiora.—Place all the earliest-rooted plants in the pots in which they are to flower, and when established gradually harden them to cool frame treatment. Turn these plants to the sun, so that the wood ripens as it is made. Insert cuttings either singly or a number together. If the latter the cuttings should be placed round the side of 5-inch pots, and if properly grown will not attain more than 1 foot in height; they will prove useful for various decorative purposes. The old plants may be cut back and placed in warmth until they break into growth, when repot. Do not overwater these plants.

Panicum variegatum.—When decorations have to be carried out

panicum variegatum.—When decorations have to be carried out on a large scale well furnished plants in 5-inch pots are very useful. Cuttings should be inserted thickly into such pots. They will root freely in any moist shady house. They can be stood on the floor if no more suitable position can be found them. Well developed plants in baskets are very effective, especially when grown in warm houses and suspended from the roof amongst Palms and other green foliaged plants. Fittonias are also very useful, and should be extensively grown.

Poinsettias.—These ought to be in cold frames and grown fully

Poinsettias.—These ought to be in cold frames and grown fully exposed to the sun. Those still in small pots repot from time to time as they need more root room, using good loam, sand, and one-seventh of decayed manure. Established plants may have a little artificial manure applied to the surface or given clear soot water occasionally. Water carefully, and syringe the foliage twice daily.

Justicia flavicoma.—Few plants are more worthy of extended cultivation in gardens than this old Justicia, especially for warm conservatories and intermediate structures. Its cultivation is easy when plants are raised annually from cuttings. The cuttings should be rooted and grown for a time in heat, and when well established gradually

hardened and grown with Euphorbias and Poinsettias until September.

Caladium argyrites.—Plants that have been used for decoration and have become shabby should be rested and then again started into

growth, when they will be found useful. A supply of this useful foliage plant in good condition for furnishing in occasional batches will be found very useful.



APIARIAN NOTES.

PREPARING FOR THE MOORS.

AMONGST my letters on the morning of the 26th, one from Crawford stated "The Wild Thyme is in its prime, owing to the great heat and dry weather. The Heather has made long growths, the young Heather is flowering, and in eight or ten days will be well in bloom." It will be observed that dry weather favours the Heather, and this year it is about six weeks earlier than usual. The Clover serson is only beginning with us, the Heather is ready, and

the highly prized Thyme will soon be past.

After a week's rain and cooler weather a renewal of the high temperature has taken place. A few days' continuation will favour the filling of supers but cause the hives to heat, which makes it very risky for moving bees such long distances. The Heather and the Thyme honey is the most valuable, so we must risk the adventure. Our hives are in excellent condition for moving to the Heather, being well ventilated from below a few days previous to starting, then the supers uncovered a little or wholly at the top, the lid of the super case or protector not being quite close permits the heated atmosphere to pass off, and gives a slight current of air. As the doorway is completely closed the bees do not make an effort to escape. Hives so managed cannot with ordinary care get overheated.

PUNIC NUCLEI AND PUNIC QUEENS.

I have formed a few nuclei of pure Punics, and intend taking them to the Heather a week earlier than my entire stock, for the purpose of making a trial whether they can be kept pure at that place. Punic queens are so numerous that they are very serviceable to supply stocks that may be queenless. My old Punic stock has been divided and swarmed into seven, and it may swarm again. It is surprising to see how active the smallest of these swarms work and gather honey. My old stock swarmed twice within an hour, and both are doing well.

MUTILATED QUEENS AND SWARMS.

One day lately I saw an enormous number of drones on the ground, and on the alighting board a few bees were caressing a spot where probably a queen had stood. A few days later a similar thing occurred, and to my astonishment I saw an abnormally lengthy queen enter the hive. It struck me that the queen being unable to fly had crept to the ground, and then up on to the landing board which touches the ground. As this queen is a

month old it is evident she was unable to fly.

To the bee-keeper there is nothing more tantalising than to have several hives issuing at same time without the slightest warning. Such a thing happened to me on the 26th. During a bright blink of sunshine between drenching showers, no less than six swarms commenced to come off at same time. Two were intercepted and three hived. One of the three, through either a stranger queen or bees, returned to the parent hive. One swarm refused to enter a hive. A heavy rain fell, which threatened the destruction of every bee, as they were scattered about, but byand-by I managed to get them to take to a hive. On some future occasion I will revert to the subject, as it is important beginners should be well posted up in hiving swarms.

PREVENTING BEES SWARMING.

"B. B. H." wishes to know something about preventing bees swarming. There is no method of managing bees that will prevent swarming at all times, nor perhaps at any period when circumstances are favourable to it. A young queen with plenty of breeding space is the surest of any. The plan mentioned on page 512 last volume was not found out by Mr. Simmins, but has been practised with the Stewarton hive for at least half a century, contemporaneous with the two queens in one hive system. The plan Mr. Simmins adopts I believe is this. The sections are placed in the front of the hive where brood combs used to be put by him to prevent swarming—i.e., the combs are parallel to the entrance, and it is in the front of the hive or in advance of the brood nest the sections are put, then when well begun they are lifted above. The principle is identical to the way we manage our hives under the Stewarton system, and is no doubt the best plan known to delay or retard swarming when a young fertilised queen is not at hand. We do not know whether the hive mentioned is adapted for the purpose. The Lanarkshire hive is suitable for all places and all modes of management.—A LANARKSHIRE BEE-KEEPER.



*All correspondence should be directed either to "THE EDITOR" or to "THE PUBLISHER." Letters addressed to Dr. Hogg or members of the staff often remain unopened We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Bee subjects, and should never send more than two or three questions at once. articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post, and we do not undertake to return rejected communications.

Books for Examinations (M. B.).—You had better write to the Secretary of the Royal Horticultural Society, 117, Victoria Street, Westminster, S.W. The list first published by the Society was far from perfect.

Grapes Scalded (J. G.).—You should have sent sooner. The night temperature has perhaps been too low, and the house not properly ventilated sufficiently early in the morning. This is all we can say this week.

Cymbidium Seed (F. J.).—With no more convenience than is mentioned in your letter, we think the experiment of raising Cymbidiums from seed is scarcely worth trying. Even were you successful in germinating the seed, it would be many years before the plants flowered, and then it is quite probable that the flowers may be of an inferior type. It would be advisable to remove the seed pod at once if you decide not to try the experiment.

Thuia Hedge (Grove).—No doubt the nurseryman is right in respect to his particular plants. The smaller would be likely to grow better, and make a screen sooner than the larger ones if these have stood long in the nursery ground without being transplanted. In our experience Thuia gigantea, often sold as T. Lobbi, makes a more pleasing screen, and continues so over a greater length of time than does T. occidentalis; but tastes vary, and you may prefer the latter. The leaf, a very fine one, 11×8 inches, is Hedera coriacea.

Preserving New Propagating Wood Trays (D. I.).—Although creosote is used for dipping Hop poles, by which process they are rendered durable, we have no experience of it for cutting boxes, and should be obliged by particulars of its use in preserving wood from decay, both as to the strength and manner of application, whether applied hot or cold, and when steeped, how long, also whether it is likely to prove injurious to the cuttings or otherwise. We do not think it would be, but assurance on the point is desirable.

Worms in Flower Pots (Perplexed).—Worms can be expelled from flower pots with lime water made as advised to another correspondent under the heading of Chrysanthemums. The best plan, however, is to prevent their getting in first by carefully examining the soil before potting, then by using Porter's invincible crocks as a flooring in flower pots before placing in the ordinary drainage. These are an effective barrier to worms, while allowing superfluous water to pass away. Moreover, they are so cheap that a hundred can be had for 3s.

Grapes and Maggot (J. P. E.).—The maggot you send is the larva of a small moth, Tortrix angustiorana. You will have no difficulty in seeing the moths as they flit about in the egg-laying season, on the Vines being disturbed. Every one should be caught, also the maggots, which let themselves down by a web when the Grapes are moved. have known this pest do much harm in puncturing ripe Grapes and these communicating decay to others. The Tortrix is supposed to have come from America, and has not been prevalent in this country very many years.

Artificial Manure for Top-dressing Chrysanthemums and Roses in Pots (Constant Reader).—1, The mixture you name—three parts bone superphosphate, two parts powdered saltpetre, and part ground gypsum, mixed, and kept dry, is an excellent manure for Chrysanthemums and Roses, also any plants requiring support and growing in loam, or being of a free-rooting nature. It must not, however, be used for delicate rooting plants, as Heaths and Azaleas, nor be given excessively to any, but judiciously employed it is excellent. 2, Bone superphese hate is generally sold at 7 a per ant the price heins more for superphosphate is generally sold at 7s. per cwt., the price being more for less quantities, and less is charged for greater weights.

Gooseberry Leaves and Fruit Damaged (F. I.).—The spray is, barring the affected leaves and fruit, in excellent health, the wood being stout and short-jointed, and the foliage thick. There is no disease, but the whitish leaves have had their chlorophyll abstracted by some insects, popularly termed red spider, which have been unusually prevalent this season, and completely arrested the growth of the bushes in many places during the drought. Probably the rain has washed off the



MHOUGH no plants are probably more easy to grow than 1 Tomatoes, none appear to give more trouble to many persons who essay their cultivation. Notwithstanding all the information that has been given in our columns from time to time by men who have succeeded in growing the most satisfactory crops and men who have failed detailing the cause of their failures and eventually winning success; and notwithstanding the replies that have been given, we had almost said over and over again, in our answers to correspondents' columns, on almost every conceivable point in connection with Tomato culture, Tomato diseases, Tomato prices, further inquiries, perplexities, disappointments, regrets, challenges relative to the soundness or otherwise of advice that has been given, come pouring in. All this betokens wide interest in Tomato culture, and we are g'ad that it is so; but we are not exuberantly delighted when we find among our correspondents a select few who, after all that is done to help them, disposed to question almost every statement, and express regret that some other information was not given them, or different steps taken in dealing with a case, or cases, imperfectly presented.

Tomato culture is a question of common sense. It cannot be successfully conducted by a course of elaborate argument founded on fanciful theories deduced from conflicting results that have been observed under varying conditions, the significance of which can rarely be appreciated by inexperienced people. Than assisting those who have not been taught in the school of practice, and giving hints of guidance that may be helpful to them, we feel nothing more pleasurable. It is work in which, after years of experience in it, we do not grow weary; but we have a right to expect that the advice we take pains to give shall be followed intelligently and perseveringly, as in no other way can its soundness be tested and benefit derived from it. This, we have good reason to believe, is the practice of at the least 90 per cent. of seekers for information. Not a few have found the advantage of their own efforts in that direction, and a very substantial advantage it has been to many; but there is a residuum. There always is in every body of individuals who have a common object in view, who do not appear to be able to accept plain teaching, and turn it to practical account. They prefer, like a certain Handy Andy of old, to argue the point.

We may tell an inquirer that the night temperature of his Tomato house has been kept too low by the want of a little warmth in the water pipes, and he retorts by saying that so-and-so has no means of heating the house in which he grows healthy plants free from the disease and obtains good crops of fruit. Evidently he assumes the low night temperature theory is all fudge. We may inform another querist that he errs in his method of ventilation, and forces his plants too rapidly into growth when young; that he ought to strive for firmer growth, employ less moisture, and provide more air. Such advice does not quite fall in with his views, because he has been told his plants have had too much air. A third does not seem able to move a finger in checking disease till he learns not only the generic but the precise specific name of the attacking fungus; yet he is told of measures that if promptly resorted to and properly carried out will arrest the spread of all fungi. He sends an apology for a Tomato leaf which arrives like tinder through its enclosure in a letter and the paper abstracting from it what little moisture it contained when plucked from the plant. He is asked to send fresh specimens, so packed that they may arrive in a fresh state. He then plucks two small leaflets, throws them into a box that would hold fifty such like, without anything to keep them fresh and firm, never thinking that by the shaking they receive in the post in their dry enclosure and a "roasting" temperature, that they arrive much in the same state as if they had been carefully pressed round a heated curling iron. He is told the nature of the disease and how to proceed; but that is not enough, and he must have the exact name, sending at last a sample encased in a Cabbage leaf. This sample arrives fresh with the fungus all alive, and is identified at a glance.

In consequence of the thoughtlessness of the sender in that case and nothing else, and his want of the "name" of the foe, it has been afforded an excellent opportunity to establish itself, and has done so, for the last leaflet received was worse than the first. Yet the steps to take in dealing with such attacks were plainly and fully given a fortnight previously. That is a case of grasping after a shadow and losing the substance, or a resort to pedantic rather than common sense methods in the emergency. There may be yet time to save the plants, and we strongly hope the enemy will be conquered; but whatever of failure ensues will be through the mistake of the owner and no one else, though we may expect he will be the last to admit it; but the fact does not permit of argument.

We are as pleased to acquire information from experienced correspondents as we are to impart it to the inexperienced; but when the latter rise superior in their knowledge to men who have won success through many long years of labour, study, and observation, we have to place ourselves on their side, and not silently permit their teaching to be questioned and controvened by dialecticians, who, by lack of cultural knowledge, are apt to base their arguments on false premises, and do so base them.

Because Tomatoes are healthy and free from disease in glass structures, in which there is no means for supplying artificial heat, that is no argument that the fungoid disease will not attack the plants that have been grown with the aid of artificial heat, and this withdrawn to save fuel. There is no analogy between the two cases. We know of Tomatoes as healthy as plants can be, and ripening excellent fruit in elevated Pearson's frames that can only be heated by the sun. The plants were sturdy and strong requiring no stakes to support them when planted from 5-inch pots, nor for some time afterwards. They were planted in fresh loam, not rich, but very firm. They were not watered daily, nor bi-daily, often not more than once a week, on a bright morning, sufficient air being given so that the surface of the soil became perfectly dry before night. Failing this it was dusted with dry soil. On cold clear nights the glass was covered to prevent too great a disparity between the night and day temperature. With the comparative absence of moisture in the frame, and the leaves not unduly cooled, there was no appreciable deposition of dew on them. They have never been syringed. The stems are short-jointed and firm, the leaves not particularly large, but remarkably thick and rustle like parchment. The plants produced a mass of flowers, clouds of pollen, and are now laden with fruit. There is not a speck of disease on them. They are in a condition to repel rather than favour parasitic growths. They are fully ventilated in the day, moderately at night, air being increased very soon after the sun reaches the frame at 5 AM. So long as there is no Potato disease about, nor Tomatoes affected with either the Phythopthora and Cladiosporium fungi in gardens near, the system of ventilation will be pursued, always in accordance with the weather; but should those fungi appear anywhere near outside the Tomato frame this would be kept closed entirely at night and practically in the daytime to exclude the fungus spores, and the later fruits would ripen well. It is surprising the heat that

Tomatoes will endure, and the drought they will resist. They are all right in a close dry air, like a desert, but would soon be a mass of decay if kept close and moist.

Contrast the plants alluded to with others grown in a heated house, watered probably too often, syringed, it may be, too frequently. A night temperature of about 60° has been provided, and a genial atmosphere maintained to "encourage" growth and obtain early fruit. The soil in many such cases is too much in bulk, too rich, and too lightly put together. The growth of the plants is succulent rather than firm; the stems rather long than short-jointed; the leaves large but thin and soft in texture. Space is covered freely; the days are hot, and a few nights warm. Then the thought arises of saving a shilling or two by ceasing firing. The pipes get stone cold, there is a sudden fall in the night temperature outside, and of course in. The house has been sprinkled, and there is consequently moisture in the atmosphere which condenses on the colder leaves, and if there are fungus spores about they find the precise conditions for germination, both as regards moisture, leaf texture, and temperature. In a warmer, drier atmosphere there would have been no moisture on the leaves for the tailed zoospores to float in-the real communicators of disease-and the plants would remain healthy. They are first made tender with fire heat, this is withdrawn, and they are then made vulnerable to the disease; the historic "'haporth o' tar " is saved, but the ship—the Tomato crop—jeopardised.

That Tomatoes like abundance of air is evident by the sturdy, healthy growth of plants now ripening excellent fruit in the open air; also in frames with the sashes drawn off most of the time. But that is because the air has been dry and days warm and bright. Had the weather been close and wet with a murky atmosphere the fungoid enemy would probably have taken possession of them. In large, airy, heated houses the right conditions can be maintained. The chief requirements are a free circulation of air, but please mark well-it must be warm, dry, or dryish air, not chilling currents, while a close moisture-laden atmosphere is a forerunner of diseased plants. Dry heat on the other hand is inimical to fungoid growths on the plants, as many large growers have found who provide them with a temperature of 80°-90° over three or four days and nights. Bordeaux mixture and other preparations, which have been repeatedly named, will if applied in time be of enormous benefit; but it should be remembered that they are preventive rather than curative. This has been said at the least a hundred times, and will perhaps have to be said a hundred more, before the fact takes possession of the minds of all Tomato growers. We should like to reduce their difficulties and ours too.

SHADING FRUIT HOUSES.

It has long been an established belief with many fruit growers that shading under almost any circumstances is inimical to the well-being of fruit trees, whether they are grown under glass or in the open air. They are, moreover, inclined to look with a combination of mystery and contempt upon the cultivator who advocates and practises giving shade to Vines or Peach trees, except in the case of newly planted ones or those carrying a crop of ripe fruit, these being exceptions in which shading is generally acknowledged to be beneficial. That harm may be done by overshading I do not deny, but between this and the other extreme of not shading at all there are instances innumerable in which shade when judiciously given is productive of superior results, which under similar circumstances in other respects could not be obtained without its aid.

It might be advanced that I have chosen an exceptional season during which to bring this matter forward, but in my opinion there are times in the majority of summers when fruit houses may with advantage be shaded, although perhaps it may be only in hot seasons that converts to the practice are so readily made. Red spider is at present unusually rampant in houses which during ordinary seasons are entirely free from it, and I am fully convinced that where such is the case a much more satisfactory state of affairs might have been maintained had timely shade been given, for it frequently happens that during a long fight against drought

Vines and fruit trees do not get enough moisture at the roots or in the atmosphere. Shade, by lessening evaporation, would have done away with the necessity for so much water. The supply given being, therefore, more proportionate to their requirements would have maintained the trees in a healthier condition, in which state they do not easily fall a prey to the attack of insects.

In determining whether or not the practice of shading fruit houses at certain times is a good one, we must bear in mind the great diversity in the size, situation, and construction of the innumerable houses in use for fruit growing throughout the country. Some of these being small, imperfectly ventilated, and situated in very warm positions are veritable sun traps, in which during a season like the present it is almost impossible to keep either plants or fruit trees healthy without resorting to shade. In such instances the Vines or fruit trees growing in them should be shaded by the time the growth of the fruit stops temporarily till the stoning process is completed. A little whitening strained through a fine wire sieve mixed in water, and syringed evenly over the roof, effects the object in view. Light houses, the framework of which is iron or other metal, ought also to be similarly treated, for however large they may be, the materials used in their construction being such great conductors of heat as well as cold, render very strong sunlight too powerful for vegetation growing inside them, especially if trained near the roof. Houses of all descriptions are now built much lighter than formerly, and for this reason alone it is absolutely necessary to provide shade for many plants, which under more antiquated conditions did not require it.

Thus far I have dealt with the management of houses requiring special treatment in the matter of shading, and I wish it to be distinctly understood that I do not advocate the indiscriminate shading of all fruit houses at the stage above indicated, though in nearly all instances a little shade later on is beneficial should the weather prove hot. The exact stage at which I consider this should be given I will endeavour to describe. Black Hamburgh Grapes colour best when direct sunshine does not reach the bunches during the latter part of the afternoon. I have always experienced the least difficulty in colouring them perfectly where the aspect has been an east one. When dealing with a house principally occupied by this variety, and having a southern aspect, I always give a light shade after colouring has fairly begun all over the house provided the weather is bright at the time, and I am convinced the practice does much toward securing good colour and bloom. With a house having a west aspect the practice is quite as necessary, for the sun generally comes upon such a house suddenly, and with full force near the middle of the day. The rapid change thus brought about is not conducive to good colour in the fruit. Madresfield Court will colour under bright sunshine better than any black variety I know, but even this should be shaded when fully ripe, or the colour will not be retained. If Muscats are trained from 2 to 3 feet from the glass, shading will not be required till the fruit is ripe to prevent shrivelling, but in many instances the rods are unfortunately not more than 15 or 18 inches from it, often a less distance than that. Under these conditions during hot weather the leaves cannot properly perform their functions. In such cases a light shade when the colouring process is somewhat advanced is of great benefit in preserving the foliage in a healthy state, a few of the main leaves immediately over the best bunches being afterwards tied back to allow the fruit to get plenty of subdued light.

Turning to Peaches and Nectarines I find the former will bear sunshine with impunity much better than the latter, and it is only when trained very near the glass in particularly hot positions, or very small houses, that shading is required till the fruit commences ripening. If it is necessary to retard this a canvas shade should be given. If only to prevent the fruit drying by sunshine, whitening applied with a syringe will answer admirably. Nectarines require more careful treatment, especially such varieties as Lord Napier, Pineapple, or Victoria; these become much disfigured, and frequently burnt, when disposed near the glass unless shading is resorted to shortly after colouring begins.

Intimately connected with the question of shading is that of training the shoots of Vines and fruit trees at a reasonable distance from the glass, and until the advantage of the latter practice is more fully recognised shading during hot weather becomes imperative if the best results are to be obtained.—D. W.

INSECTS OF THE FLOWER GARDEN.

(Continued from page 476, last vol.)

THE dry spring and summer of this season have had very remarkable effects upon animal as well as on vegetable life. I have observed that among the spiders many have made more rapid progress towards maturity than is usual; this may be because the

continued warm weather has hastened on those frequent changes of skin through which these insects pass, or perhaps their food has been extra abundant, the development of numerous species having been earlier from the cause just mentioned. Along the lanes in some parts of England the profusion of spider webs on the banks has been noticeable, these appearing very conspicuous. Owing to the dryness of the herbage, also from the absence of rain, the spiders have not had to expend silk in the manufacture of new webs, so

have used the material to strengthen the old ones.

About gardens spiders have been plentiful, but in these they meet with molestation, if they escape with life, few people being of Mr. A. Murray's opinion, that "spiders are the most powerful insect friends of mankind." Obviously, in the case of the web Obviously, in the case of the web makers, those that furnish food to the spiders are only a percentage of the insects that are snared and killed; and in the group of hunters, though the species are less destructive, each victim being a separate seizure, they are abundant and very I find it is a common supposition that spiders are blind, but they have from two to eight simple eyes, though in securing their prey they seem to be principally guided by the sense of touch, and not sight. A proof that they do see is the excitement they may be noticed to manifest when a party of social flies are passing their webs. By sight, too, evidently a spider decides concerning some insects it may capture in its web but does not choose to meddle with, and therefore ejects by cutting the cords round them, or else leaves them alone. It is not at all uncommon in the garden to see an unlucky earwig struggling in some spider's web, and we should be grateful to the insect if it helped to diminish the numbers of this foe to choice flowers; but usually spiders refuse to touch earwigs. Apparently the forceps at the tail of an earwig, which has no power as a weapon, and serves to adjust or fold the wings, is regarded by a spider with alarm.

Many caterpillars fall by accident, or are blown, into spiders'

Many caterpillars fall by accident, or are blown, into spiders' webs; some of these are not to the taste of a spider, and so they are left to escape if they can; some are secured, and afterwards sucked. It is amusing to see a spider's surprise when it has in its web one of the leaf-rolling caterpillars that may have dropped from some Rose. The spider turns it round and round in silk, hoping to secure it; but the captive objects to the operation, and unrolls itself speedily, having plenty of muscular force, till the matter is ended by some punctures from the spider's fangs. Hunting or wandering spiders are seldom killed by gardeners, except accidentally. The web-makers are not unfrequently destroyed with their webs; we must sometimes remove these, but if we gave the worker a chance of escape it might spin another web in a spot where it would kill insects without annoying us.

I have already referred to the conspicuous and regularly formed webs of the spiders which are well known in our gardens, and by which hosts of insects are captured to our benefit. Very different webs are formed by other spiders; that of Ciniflo ferox and its relatives, for instance, is so irregular and ragged that it looks like an old or waste web. But it serves as a snare, and is indeed very sticky, taking many small insects, though it appears open. One thing is that some of the threads are fine and scarcely noticed by the eye; under the microscope they are beautiful in form, also having a bluish tint. Then there is the spider often called daddy longlegs, though the name is also given to the crane fly. This occurs both in and out of doors. The web is placed on walls or palings in gardens; it is loose and net-like. The maker, in science called Pholcus phalangoides, frequently wanders far from its web. The pale body, which is slightly marked, is long; the legs much longer, with knee-joints curiously thickened.

In the genus Therideon, where the rounded abdomen of the spider overhangs the thorax, the snares that are made are very irregular fine threads running in various directions over the tops of plants or the sides of bushes. Occasionally we notice about the flower garden the cocoons made by this genus for the protection of their eggs. A familiar one is that of T. pallens, a little brownand-white spider, which puts its cocoon on the under side of some leaf. This few would connect with the spider; it is a Pear-shaped object of a glossy white, and has several points projecting from Another species, T. lineatum, which has black lines on its greenish body, secures its cocoons from peril by doubling over the leaf on which it is placed. This cocoon is round, and blue or bluish green. A species rather uncommon makes in gardens a tentlike nest, about 2 inches long, close to the irregular web. It is generally not far from the ground, and the spider called T. riparium roofs it to keep out the rain, covering the top of this nest with fragments of earth or bits of leaves and flowers. The eggs are enclosed in a slight covering of silk as well. What is more remarkable in this spider's history is that she feeds her progeny for some time, and they live amicably together; the food is chiefly ants, it is stated, which she catches on the soil or on twigs. A Therideon that is abundant about gardens in South Europe is much favoured

by growers of Grapes, because they think that its filmy webs extended over the Vines keep away some insects from the ripening fruit. There is a larger species, brown in colour, mottled with black, that is found in many conservatories, and which is supposed to be of foreign parentage, having been imported with plants. A species allied to the preceding constructs amongst masses of foliage in gardens and shrubberies a web, which appears large as compared with the size of the spider, Linyphia montana, which, though small, is active and ravenous; it is greyish brown, or sometimes blackish. The snare it constructs is a fine horizontal sheet, over this are suspended numerous lines crossing each other, and some helping to secure the web. Insects that might escape this strike against these upper lines, and falling are seized by the vigilant spider below.

Prominent amongst the hunting spiders are those of the genus Thomasus, mostly garbed in showy tints of black, yellow, green, and red. They are decidedly crab-like, having broad bodies, and long, powerful fore legs; some of them that chase their prey can move either forwards, backwards, or sideways with great rapidity. Others have a habit of lurking in crevices, or under little stones in the soil. The common wolf-spider (Lycosa saccata) has its Latin name from the bag of eggs which the female is often seen dragging about. This is a wandering spider, allied to the famous tarentula of Italy. Some hunting spiders leap upon their victims. Salticus scenicus is one of these, frequent upon the leaves of garden plants; it destroys many flies. We know it by the grey ground and white bars, also by its habit of jerking out a thread when it springs.— Entomologist.

STRAWBERRIES IN HAMPSHIRE.

In spite of the great heat and drought experienced some market growers consider this to be a good season for Strawberries. There may not have been such a quantity of fruit as in some seasons, but the prices have ruled fairly high throughout. The Strawberry crop in this neighbourhood was an early one. Picking commenced May 14th with some growers as compared with the first week in June in past seasons. The best price realised that I can hear of was 5s. 6d. per gallon of about $5\frac{1}{2}$ lbs., or 1s. per lb. By June 8th the price had dropped to 2s. 6d. per gallon, a little later to 1s. the gallon; even at this price the crop is remunerative.

Strawberry growing for market in this part of the county is undoubtedly on the increase. Within a radius of five miles from Botley there cannot be less than 400 acres under cultivation, ranging in plots from a quarter to five acres. From Botley Station the bulk of the fruit used to be sent, but since the opening of the line from Fareham to Netley much of the fruit is despatched from Swanwick, a small station on that line. The output from this station alone was from 30 to 40 tons per week, as many as 50 tons going away in one week. The punnet and box are now superseded by cross-handled baskets holding one gallon each, as many as from 15,000 to 16,000 leaving the station named in one day. So much has this method of despatching the fruit come into vogue that the railway company have specially fitted vans with tiers of shelves for the reception of these baskets. The simplicity of these baskets is all in their favour; no packing material whatever is needed, the fruit is picked direct into them, a sheet of white paper is fastened securely over the fruit by tying it to the basket rim. The fruit is picked before it is dead ripe and therefore does not suffer in transit, but any barely ripe at the time of gathering becomes thoroughly so during the long railway journey to the midland and northern towns. Some growers who send their fruit to the local towns of Portsmouth, Southampton, and Winchester pack in square light deal boxes holding a gallon; these being made of the same size, are easily stowed away tier upon tier in spring carts and vans without any packing material whatever. Some, however, lay a single frond of the common Bracken on the top of each box, which has a tendency to keep the fruit cool, but as the journey by road is done during the night or very early in the morning the fruit does not suffer from the effects of the hotsun. Much of the picking is done in the early morning, therefore is in a better state for travelling than when gathered during the daytime.

In a season like the present the quantity and quality of fruit vary according to the soil in which the plants are grown. In one garden, where the subsoil is clay, the top soil is heavy loam, the situation being low, the yield of fruit has been a heavy one. Several rows of plants (five years old, 18 feet long) gave one gallon of fruit cach at one picking, averaging 2s. 6d. the gallon, which cannot be regarded other than a remunerative crop. From the same garden 100 gallons were gathered at one picking, and sold at the price quoted, this quantity being taken from less than a quarter of an acre. This was the best picking from that plot, many more of less quantity being gathered from the same plot. These few figures tend to show the remunerative character of Strawberry growing when carried out on proper lines. The same garden of 13/4 acre in the Jubilee year yielded £3 worth of hay, which cost 30s. to make; it was then under grass. By degrees the whole of it has been broken up and planted mainly with Strawberries, which more than once since that year have given the occupier a net gain of £100.

As to varieties, but few arc grown by the market men. Sir Joseph Paxton is the sheet anchor of the whole district. This sort is the best for either a wet or a dry season, grows freely and crops heavily, and is

decidedly better in flavour than is supposed to be the case when thoroughly ripened. Some plants of Noble are grown, but this variety does not meet with much favour. Instead of its being earlier in ripening it was this year behind the old favourite. A variety rather highly spoken of for its earliness is Eleanor.* Locally it is named Melton and Garnier's. It crops heavily and comes in quickly, but travels badly and soon decays after being gathered. Lucas is a favourite with some for its large size, but is looked upon as being "soft." Perhaps the earliest sort of all is Princess Frederick William, but owing to its extremely small fruit but few plants are grown. Alice Maud is much liked by some growers for the earliest pickings.

Strawberries in pots are found to pay by some with one or two small Those that get the fruit ripe by the 1st of April realise 3s. per 1b. Noble is highly spoken of for this purpose, owing to its free qualities. Sir Joseph Paxton, however, is preferred for its setting qualities. flavour. The plants are afterwards sold for putting out in the quarters; they give a full crop of fruit the following year, the price obtained being about 4s. per 100 plants.—E. MOLYNEUX, Swanmore

Park, Bishops Waltham.

[* Eleanor is a large late firm Strawberry.—ED.]

BORDER CARNATIONS AT CHELSEA.

Most lovers of border Carnations in the neighbourhood of London like to inspect the collection in the nursery of Messrs. Veitch & Sons at Chelsea, for a representative display of new and select varieties is always to be found there. It would be too much to expect that in such a parching season as the present the plants would be as vigorous and luxuriant as in former years. They have suffered, like everything else, from the drought, notwithstanding that the beds were carefully re-made, strong plants put out, and mulching resorted to. Moreover, the flowers have lost colour very rapidly in the fierce sun glare. "Here to-day and one to-morrow" has been the rule. Considering the disadvantages ander which the plants have had to fight the bloom is surprisingly good, few varieties being completely out of character, though not a few are

One of the most beautiful and promising of the novelties is Border Maid, a dwarf grower and very free bloomer. The centre of the flower is deep rose, the margins of the petals much paler. Few varieties have a more pleasing appearance, and, what is little less desirable, the flowers are very sweet. That it will become very popular as a general border and cut flower variety there can be no doubt, and it is quite within the bounds of probability that it will also become a favourite as a winter 30rt. Some plants in pots are noteworthy for neat habit and freedom of blooming. Near it at Chelsea are a quartette of good older varieurs—Magnum Bonum, scarlet; W. P. Milner, white; Alice Ayres, white with carmine flakes; and Celia, rose, all of which have good qualities with carmine flakes. to recommend them. W. P. Milner has hardly so good a flower as Mrs. Frank Watts, but it blooms more freely, and for cutting purposes is therefore quite as desirable. It is gratifying to notice how profusely the delightful Alice Ayres is producing its flowers under difficulties. A dark Fancy named Lord Beaconsfield is quite likely to win a good deal of admiration, and so is a purple self sport from it called William Tovey, which has a good flower and blooms freely.

The bizarres, flakes, and Picotees are too numerous for all to be The bizarres, flakes, and Picotees are too numerous for all to be referred to under name, and moreover most of them are well known; it will suffice to say that a complete collection of the best varieties is open to inspection. But there are many selfs and Fancies besides those already named which are worth a special reference. Beauty of Foxhall is one. It has a good flower, of which the colour is purple, is a capital doer, and an excellent winter bloomer. Lothair is another fine sort. The flowers are of a soft blush hue, at first showing a core, but subsequently developing admirable character and form. Brilliant is now pretty well known and is very difficult to excel in colour. Germania pretty well known, and is very difficult to excel in colour. Germania. too, is so familiar as to need no description, but there is a lemon-coloured seedling from it of beautiful form and quality, besides being a good doer. Rose Celestial is another of the time-tried sorts which have won lasting popularity, and in the same category may be classed the lovely Fancy Almira and Mrs. Reynolds Hole. Winter Cheer is even more sought after than this trio. A grander Carnation was perhaps never seen out, for it is as good out of doors in summer as it is in pots in winter. The large array of rose-coloured sorts is supplemented by Dr. Parker, an excellent variety for cutting; and Grant Allen, which blossoms up the stem very much like Alice Ayres, and possesses splendid colour.

The Picotee Carl Schurz, white with broad purple margin, has meritorious qualities, and so has the self Cantab, which might be classed as a scarlet Clove, possessing a full rich Clove perfume. It was raised by Gifford, and another of his seedlings is Sultan, a fine crimson variety. A third from the same raiser is Maggie Lawie, a free, beautiful, and very fragrant variety of the familiar Miss Joliffe colour. It ought to become a great favourite. Florence, buff, very free; Crimson Pet, which possesses an excellent bloom; and Empress, white with a stout smooth petal, all win admiration, and at least as much falls to the share of a Fancy emanating from Guernsey, and called The Lady. It is rellow with a deep crimson suffusion and blossoms in sheaf-like proyellow with a deep crimson suffusion, and blossoms in sheaf-like profusion. A pair of excellent varieties originating with Turner are Ruby and Queen of Bedders. The former is noteworthy for its brilliant colour and splendid petal, the latter for dwarf habit, free blooming, and bright shade of rosy red. Cara Roma is a good purple, having rich colour and

The season is not only earlier but will certainly be much shorter than

usual this year. Should the maggot supplement the effects of the drought by extra vigour, 1893 will be a year which Carnation lovers will not look back to with unmixed pleasure.

SCORCHED LEAVES IN VINERIES.

In this neighbourhood I have heard complaints of Vine leaves being scorched by the excessive sunheat. Not even during the Jubilee year was the sun so powerful as upon June 17th and the two following days. I do not allude to the scorching of the leaves in vineries caused by neglect in airing the house properly. Scorching perhaps takes place between the hours of twelve and two, and when sufficient air is admitted

for all ordinary circumstances.

Several reasons are advanced as to the burning of the leaves, but in my opinion in nine cases out of ten the right theory is not hit upon. I allude to the question of dryness at the roots of the Vines, and if this occurs scorching of the leaves will take place if every ventilator is wide When the roots are devoid of a sufficiency of moisture the foliage is robbed of its enduring power, rendered flabby, weak in tissue matter, and susceptible to the power of the sun. Very often the glass is blamed for the injury caused; it is said to be full of blisters or defects caused in the process of blowing, but it is strange these spots have not been found before when probably the vinery has been in existence twenty or more years. Experienced persons know that where any defective spots are present in the glass they have damaging effect upon the foliage, and the usual plan of dealing with these is to smear them over with white paint.

Varieties differ in their susceptibility to scorching. Perhaps Muscat of Alexandria is the most liable to be injured, Madresfield Court following, and then Mrs. Pince. Black Hamburgh is the least susceptible of any to this foliage defect. The varieties named possess slender leafstalks, more so than any other sort that I am acquainted with. This fact may have some bearing on the cause of why these slightly built leaf-stemmed kinds are more liable than those with stout leafstalks to scorching. Very often the damage done is owing to the outside border being covered during the winter, thus no rain can get near enough to it, and by the time the hot days of June come round the goil in the border is now days in the horder. the soil in the border is very dry in seasons like the present. Where the soil is light in character and the border raised well above the surrounding surface it is surprising what a quantity of water Vines will absorb, even when in an outside border.

The best way to prevent scorching of the leaves if the border is in want of water, whether it be an inside or an outside one, is to slightly shade the glass outside by aid of liquid whitening syringed on. has the effect of providing a slight shade, and is easily taken off after a day or two after the border has been well soaked. Of course a careful cultivator who has water at hand will never allow the Vines to suffer at the roots, but water in sufficient quantity is not available everywhere this season. I know a garden at the present time not far from here where every drop of water has to be carted over a mile. The person in charge cannot very well be blamed if a few Vine leaves should be scorched under such conditions.—S. P. H.

NIGHT-BLOOMING CEREUS.

MAY I, through the pages of your Journal, thank Mr. G. W. Cummins (page 6) for his kindly correction of my error as to the name of the second variety of Night-blooming Cereus that was formerly in the collection of my father, the late Mr. C. M. Major? Having referred to the references he gave I am quite satisfied that it must have been C. Macdonaldiæ and not C. nycticalus, as I was previously inclined to think. I have also no doubt now that the variety we lost must have been C. Maynardi.—MARK B. F. MAJOR.

I AM not responsible for about four lines in the note that appeared in the Journal last week (page 6)—viz., "The variety referred to (C. Macdonaldiæ) is the result of a cross between C. grandiflorus and C. speciosissimus. It was raised by Mr. Kenny, gardener to Viscount Maynard, Easton Lodge, Dunmow." According to the Journal for June 19th, 1884, this belongs to the history of C. grandiflorus Maynardi, and C. Macdonaldiæ is described as a species introduced from Honduras to Kew by Mrs. General Macdonald, and first flowered in the Royal Gardens in 1851.—G. W. CUMMINS.

The accidental omission of the specific names supplied by our correspondent led to the error, which we thank him for correcting.

I HAVE been much interested in the articles respecting the Night-flowering Cereus, and a few particulars of some plants I have here might be useful. I have four Cereus nycticalus which have opened as many as 111 blooms in one night. The largest plant opened fifty-four blooms on June 19th, and fifty-five on Saturday, July 1st. On several intervening nights there were from three to twelve flowers, and there are several yet to open. I measured one bloom on Saturday, July 1st. It was $9\frac{3}{4}$ inches diameter; but, unlike Mr. Major's plant, mine has white petals. I have one plant of C. hexagonus, which has opened fifty-six blooms this year, and has ninety more to expand. I have not seen more than eight open at once. They remain open until about ten o'clock the following day. The plant is 30 feet high, has two side branches about half-way up 8 feet long. The flowers are the same in colour as C. nycticalus, but smaller.—A. PARROTT, Crymlyn Burrows, Swansea.



CYPRIPEDIUM VOLONTEANUM GIGANTEUM.

COMPARED with the typical form of C. volonteanum the above is a decided improvement both as regards size and colour, and it is no wonder that the Orchid Committee of the Royal Horticultural Society deemed it worthy of an award of merit when exhibited at the Temple Show by Messrs. Hugh Low & Co., Clapton. The plant shown bore but one flower, but that was sufficient to indicate its distinctive character, which is pourtrayed in the illustration (fig. 4). The dorsal sepal is large, of a pea-green colour, the petals also being pea green in the middle, and covered with brown spots, margined light rosy purple. The lip is dark green shaded purple.

NEW CYPRIPEDIUMS.

Or more than 500 plants of Cypripedium Chamberlainianum which I have seen, says a writer in the "Garden and Forest," the variety magnificum is the finest and largest both in foliage and

flower. The plant measures 2 feet 4 inches across, and the leaves, which are faintly tessellated, are 3 inches broad. The polyflorous scape is pubescent; the flowers are borne one at a time, and each one measures over 4 inches across the petals. The dorsal sepal is $1\frac{1}{2}$ inch across, pale green, shading to primrose yellow on the margin, with ten dark brown rays, and pilose on the reverse side. The inferior sepal is pale green with brown rays. The petals are pale apple-green, with rows of brown purple dots, and are twisted in a reverse direction. The lip is 2 inches long, crimson, with the infolded lobes, base and the border of the aperture a pale yellow, the whole specked with carmine. The staminode is a deep glossy green.

The plant of C. Germinyanum aureum resembles the type, but the flowers are larger; the dorsal sepal an umber brown, bordered with dull orange; petals vinous purple on the superior half, and dull orange on the inferior half, dotted with red near the base; the lip a sombre orange, dotted inside with brown, the staminode yellow.

AMERICAN METHODS.

Our cousins are ahead of us. One of them, according to the "American Florist," appears to have been interviewing Mr. F. Sander by telephone on his visit to the World's Fair. Asked if he thought Orchids had a future as commercial flowers in America, Mr. Sander replied: "Perfectly sure of it. The demand doubles itself every year for cut flower purposes. The Orchid is the real élite of the flower kingdom. The Rose comes next. First of all the Orchid is very quaint

and extraordinary in form and shape; then you have in them all the colours of the rainbow; many are very sweet scented, and above all there is no flower of such lasting quality as the Orchid. If you don't want to cut it to-day you can cut it to-morrow or a month hence. That is not so with other flowers; the Rose must be cut at once. Orchids are often kept a month in water. There are some exceptions, but with nearly all this is true. Take for instance Cymbidium Lowianum. I have known it to last on the plant for three months, and cut for eight weeks. The love for Orchids has simply grown with education and wealth, and so it will grow from year to year, and as the supply of Orchids gets less so prices will advance from year to year."

"Then you believe that the time is coming when these plants will become scarce?"

"I am quite sure of it. Every ounce of silver taken out of a mine must make one ounce of silver less, and every Orchid out of the woods one less, and as they are slow growing and the competition is now very great in importing, the only pity is that soon the supply will not be big enough. Seedling growing is now beginning, but they can never be produced to the extent needed. I am quite sure that what I say is true, and you will find as the years roll on that I'm right.

"What are the most fashionable varieties in England at the present time?"

"Cattleyas and Odontoglossums are always fashionable. Through nearly every Orchid there is a trace of magenta, and they are very brilliant at night. Trianæs come out great at night, so does Phalænopsis Schilleriana. In England old gold colours in Orchids are very much in fashion now, such as Oncidium pretextum, O. Forbesi, and O. crispum. We never have enough of them, and the rage is spreading all over the world, in France particularly. It is nothing unusual for ten dollars to be paid for a single spike of Oncidium curtum. For a succession of bloom take the old Cattleya labiata, which comes in October and November up to Christmas; at Christmas Cattleya Percivalliana, which is followed later on by Trianæ and Mendelli. These are not expensive varieties, and the first year they will produce bloom enough to pay for the plants."

WASPS AND CYANIDE OF POTASSIUM.

I HAVE used cyanide of potassium since 1883 or 1884 for destroying wasps' nests built in the ground, and always successfully. My method is to take an old piece of sponge or flannel and wring it out with plain water, then let it absorb as much as possible of a saturated solution of the cyanide. It is then put, with a long stick, well into the hole, and left till evening, when a piece of turf should be placed over the hole. With

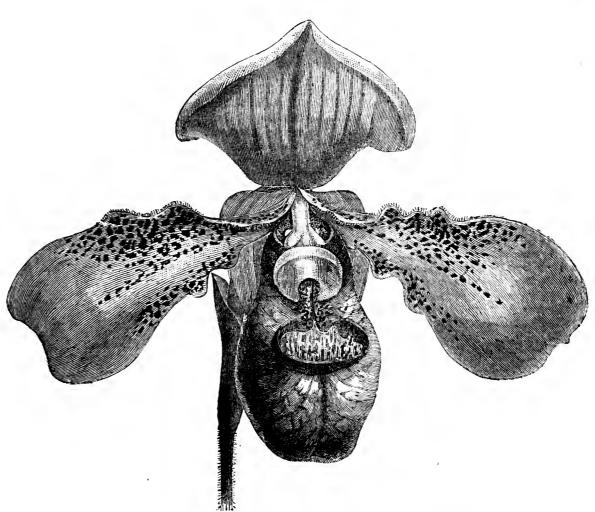


FIG. 4.—CYPRIPEDIUM VOLONTEANUM GIGANTEUM.

a very strong nest it is necessary to dig up the comb the following day, as the fumes of the cyanide do not affect the grubs.

The greatest care must be taken in using this chemical, as about half a grain is a poisonous dose, and the poison is equally active whether swallowed or taken in through broken skin. The fumes which are given off are dangerous to human beings. To be quite safe, after using the cyanide, wash the hands with a strong solution of sulphate of iron, and then with soap and water.—J. COCKBURN.

WASPS are unusually numerous here this year, and the nests are easily destroyed by pouring a small teacupful of turpentine in the hole at night, pressing a foot on to close the hole. It will effectually kill every wasp and grub, and there is no danger of accidental poisoning. Cyanide of potassium is dangerous, and, judging from my own experience, not effective.—Thos. Woodford, Atherstone.

SEEING a query as to results of cyanide of potassium on wasps on page 13 of last issue, I wish to state I have used it this season, having during the past few days taken about thirty nests, some exceptionally strong ones. I find it does not kill the larvæ, but all the ingoing wasps. My mode of procedure is to go around the nests, dropping in a table-spoonful of cyanide of potassium (liquid form), and in a short time afterwards, not a wasp being seen, I dig the nest out and burn it.

The advantage of using the above in place of the old squib of

powder and sulphur, or tar, is a nest can be taken any time during the day, and clean and short work made of it.—A. ALDERMAN, Effingham Hill, Dorking.

I SEE in this week's Journal a correspondent has been giving his experience with cyanide of potassium for the destruction of wasps and their nests. As he would like to hear the experience of others who have tried cyanide, I quite corroborate your correspondent's remarks. I have repeatedly tried cyanide of potassium (strength as much as 90 per cent. of cyanide), and although I have poured as much as 6 ozs. of strong solution at a time down the holes of their nests, I have never yet succeeded in destroying a nest completely. The most efficacious remedy my gardener has found is gas tar poured down the holes, and this is a very cheap and certain destroyer of wasps and their nests.—J. R. G.

I NOTICE Mr. Broady (page 14) is not very much in favour of cyanide of potassium for destroying wasps, because it does not at the same time destroy the larvæ; but he would himself confer a boon on the fruit-growing community by suggesting some other chemical so easy of application that would destroy at the same time the adult wasp as well as the larvæ. The value of cyanide of potassium is found in the extreme convenience of its application, because no night journeys are demanded such as that occasioned by the use of gunpowder and sulphur squibs commonly adopted for their extermination. Anyone on a wasp-destroying expedition with the cyanide in a soluble state might, by carrying a spade, dig out the nests on the return journey after an application of the liquid an hour or two previous.

Mr. Broady says, "When the nest is close to the entrance, which very often happens, it kills a portion only of those inside, whilst the rest are merely held prisoners until the fumes of the cyanide have evaporated, when the wasps pass in and out as usual." This experience certainly does not coincide with that I have gained by observation; so long as the entrance is open they are not held prisoners, because of the presence of the deadly fluid placed for their destruction. In an hour or so after the cyanide has been poured in at the mouth of their nest I have noticed that not a wasp was seen to move inside or out; all would be quiet. Even should it not kill the larvee it certainly would be worth an extra journey to dig out the nest, and the expense and trouble in its application must be repaid.

It is well to have a store of Scott's wasp destroyer in hand, in anticipation of attacks on choice fruit; usually this is effectual in checking their depredations, but not always. Last year I knew of more than one case where this was used persistently with no good effect, while in other years wasps were careful to avoid fruit where it had been used. To be effectual it should be put on the first fruits they attack, and particularly so on Grapes. I am under the impression that the eyanide would be more effectual in a liquid than a dry state, and perhaps more economical. When kept in a corked bottle there is less loss of evaporation.

—W. STRUGNELL

I HAVE tried several plans for dealing with wasps' nests, but I have never found anything so convenient, and to my mind so safe as the cyanide, but Mr. Broady (page 13) is certainly right in some degree in his assertion that it only kills the wasps going in. I give it credit for more than this, it stupefies those in the hive. The vapour is, I believe, heavy and goes down into the nest. Let me tell of one nest I took some years ago. A friend told me he was bothered with a nest in the roof of his dining room bow window, could I take it? Well, I said I would try. I found that the wasps had three entrances under three different tiles. At each entrance I put a piece of linen well soaked in a strong solution of cyanide, and suggested lunch for myself. In the course of twenty minutes I repaired to the roof. There was a stillness, and I removed one tile, this brought me on the edge of the nest, and all was still yet, so we removed some six or seven tiles and then the nest in all its beauty was revealed, and beautiful it truly was, clean as if carved out of some yellow veined marble, there it lay about 2 foot in length and 1 in breadth, and from 6 to 10 inches in thickness. Still no sign of life; so I placed the spade flat on the roof between two rafters, and pushing it as far as I could lifted the major portion bodily down on the spade and deposited it in a foot tub filled with water. The smaller divisions were removed in the same way. Neither the lookers-on or I were stung, but the stable boy playing with the pieces of comb soon after managed to squeeze a half dead wasp and was rewarded for his inquisitive attentions.

The vapour certainly does not affect the pupe covered in, and as numbers of these are hatching daily, the nest will very soon become lively again; indeed, I have frequently after digging out the nest placed it under a bell-glass, just lifting the bottom, and they soon begin enlarging the nest and increasing in numbers, but if the queen have succumbed to the poison the nest must, I suspect, come to an end in a few weeks, when all the pupe in the nest have hatched. Wherever it is possible to dig out and break up the nest I think this should be done, and I think it may be done safely in a quarter of an hour or so after placing the cyanide at all the entrances to the nest.

How long are the working wasps absent from the nest? This is a question somewhat difficult of solution, but judging from my experience with the cyanide in taking nests, I should say that in fine weather it would be exceptional for them to be away twenty minutes. I recollect many years ago my old friend Mr. W. Taylor, then at Longleat, narrated

in your columns his plan for destroying the outsiders; this was to bury a bottle in the old nest, the entrance to the nest being the mouth of the bottle, containing some syrup.

Applying cyanide and nothing else being done may be disappointing, as Mr. Broady seems to feel, but complete the business, dig out the nest, and cyanide is our most useful and most manageable help, at least that is my experience.—Y. B. A. Z.



MESSRS. W. PAUL & SON'S ROSES.

MESSRS. WILLIAM PAUL & SON request us to state with reference to the notice at page 8 of the *Journal of Horticulture* of their exhibit of Roses at the Show at Earl's Court on June 28th last, that a gold medal (instead of a silver-gilt medal as mentioned) was awarded to the exhibit in question.

Rose Margaret Dickson.

WHAT your interesting contributor, "W. R. Raillem," has said in recent numbers of the Journal of this beautiful Irish Rose is perfectly true. When half blown I find it exceedingly impressive, surpassing in purity of colour and majesty of aspect Merveille de Lyon. But at that picturesque stage of its development it indicates a central fulness which is not subsequently adequately sustained. In other words, when fully expanded, it discloses an "eye," though by no means so conspicuously as some other equally famous varieties, such for example as the Baroness Rothschild from which it is descended. — DAVID R. WILLIAMSON.

AN OLD MAN'S VIEWS.

If the Rev. David Williamson desires to be an authority on Roses he would surely do well to be less flattering in his references to individuals and look more carefully into the subjects on which he writes. He will doubtless learn in time what most experienced rosarians know, that it is not prudent to dogmatise on the merits of Roses or anything else on the mere authority of their raisers. I have heard it said that Mr. Williamson cannot have studied the new catalogue of the N.R.S. as an official guide; and it is also a matter of comment that he does not appear to appreciate the cardinal difference between the raiser and the introducer of a Rose, since he praises both alike, except when he confounds them. Something more than a generous heart is needed to fit a person to write with general acceptability on the subject of the Rose. As one of the oldest contributors to the Journal of Horticulture I feel I shall be doing a kindness to young, talented, and well meaning writers if I can induce them to temper their zeal in extolling their friends. The temptation may be great at times, and "sweet are the uses of advertisement."—A Jubilee Rose-Grower.

BRIERS OR BRIARS.

I see that a contemporary, which is not often wrong in spelling, and was able lately to defend the word "Chesnuts" learnedly against an impugner, speaks of Lord Penzance's hybrids as "Sweet-Briers." "Briars" is certainly the commonest form of spelling to which we are accustomed; but probably, as in so many other cases, either mode can be defended. However, I remember an amusing incident as to the spelling of this word, where "a" or "e" was not the question. It was at the examination of a night school for the Government grant, and the teachers were allowed to examine subject to the rules sent to them. A young East Anglian labourer was going through the reading ordeal, and his teachers, of whom I was one, were anxiously watching his struggles. He had sunk twice—I mean he had made two mistakes in his allotted piece, and three would mean a failure. He came to the word in question, stopped dead, and spelt it slowly. We encouraged him, and patted him on the back, for he had all the appearance of having a word in him, but of being afraid to part with it. At last, after much exhortation to play the man and "out with it," he spelt it again very carefully, "B-r-i-a-r," and then the word burst forth quite suddenly like an explosion, "Brumble bush!" "Well, well! yes, oh yes! eh, Raillem?" said my dear old colleague (long since deceased) "pass that—oh yes! He knows what it means." My conscience was against it, my rosarian conscience, which knew that to the Suffolk rustic both Briars and Blackberries were "Brumble bushes." However, I said nothing, and the Education Department was defrauded, but rosarian taxpayers will, I hope, forgive.—W. R. RAILLEM.

ORANGE FUNGUS.

ALL rosarians, and the more modest Rose growers and lovers, must feet grateful to Mr. Abbey (page 481, June 15th) for his interesting article on this great pest. So far as my experience has gone, what I have called orange fungus is not very common. The beautiful orange spots have been with me comparatively rare, but the sort of powdery dull yellowish brown appearance of the under portion of the leaves has

been common enough towards the latter part of the season. Are we to understand that this, which certainly detracts from the beauty of the foliage and very decidedly from the healthy condition of the plant, is what Mr. Abbey has figured at D in fig. 87, and that it is the orange fungus in another stage? If so, it seems to me we are fortunate in not having the orange fungus much more frequently, because with me it seems a very common trouble. I have on the first sight of the orange spots picked off all I could see and burnt them, but with the later condition I have let matters take their course, and I certainly have

seen plenty of it in exhibition stands.

It has long been my plan, right or wrong, to cut off all shoots of Rose bushes that I should cut away in the following spring in the autumn. At the same time I have shortened very fine growing shoots to between 30 and 40 inches. This saves them in some degree from injury from wintry winds. In future all this, whether affected or not, I shall have burnt at once. If I take exception to any advice that Mr. Abbey gives, I desire to do it in all humility. I cannot think that "burying" the leaves can be a wise plan. Earth is a deodoriser certainly, but not a disinfectant, and I cannot help thinking that whenever that ground is dug, the spores must be set free to go on their evil deeds. fathers certainly had the notion that to bury was to destroy. in the present day many of their sowings, to our misery and cost. Fire is, after all, the great purifyer, the great destroyer of germs, and in that alone, as to cut-off leaves and branches, should I have any faith.

—Y. B. A. Z.

A FEAST OF ROSES.

In marked contrast to last year, June has been virtually "a month of Roses." Roses in abundance have shed infinite variety and beauty on our fairest garden scenes. Noisette Roses on overhanging arches have been studded from base to summit with clusters of pink and white miniature Roses; also in groups and beds with their numerous flowers and tiny buds, affording a fitting contrast to the giants of other kinds. Teas of the tenderer class have revelled in the late tropical weather, and even Hybrid Perpetuals in open positions, have produced blooms of fine size, substance and form, but unfortunately, owing to the great heat, their beauty has been of short duration.

A better season for our national flower, could scarcely be wished for in all instances where water has been copiously given, but where this has not been done I have heard but poor accounts of the progress of Roses. One thorough soaking being followed up by mulching with short manure, has in many instances made a vast difference between the results obtained from bushes so treated and others not given this necessary attention, for as soon as a Rose tree begins to suffer from want of rich food or water it becomes a prey to aphis, mildew, and caterpillars. It is then but small wonder that such meagre results are obtained. This, however, is a point which I do not intend to enter largely upon at present, but rather to point out a few of the peculiarities exhibited by some

varieties during a season like the present one.

Those who pruned early have this year been rewarded with decidedly the best blooms, especially among Hybrid Perpetuals. Bushes or standards left unpruned till the usual time were much weakened by having to cut away a large amount of young growth. I pruned some bushes during the first week in March, and have cut some of our finest blooms of the season from them, the growth made having been wonderfully strong and healthy. La France has given us some beautiful blooms of the fine rounded form for which this variety is noted when in good condition. Countess of Oxford, Victor Verdier, Marie Baumann, John Stuart Mill, Mrs. J. Laing, Madame Nachury, Madame Gab. Luizet, and Captain Christy have all succeeded remarkably well, but that generally fine variety Merveille de Lyon has not been nearly so good as usual; the petais seem to lack substance and to be entirely unable to withstand hot sunshine when accompanied by a parched atmosphere. Duchess of Bedford, Jules Margottin, and Baroness Rothschild also seem to delight in tropical weather, the latter variety being so quickly spoilt by rain; indeed pink or white Roses are generally

injured more quickly by rain than darker coloured kinds.

Excellent as the Hybrid Perpetuals have been, the Teas have done still better with us this season. In a warm sunny position, when they received abundance of water, the trees have made strong healthy growth kept quite free of insects, and produced many grand blooms. Even that handsome variety Jean Ducher, which generally produces large promising buds, but unfortunately fails to open them properly by reason of the petals being so quickly injured by rain or dew, has this season developed fine blooms. Bougère is another wonderfully free flowering kind which has given a multitude of blooms. Ernest Metz in my opinion is one of the most beautiful coloured Teas grown, the blooms being of fine form and soft colour, and Grace Darling, though by no means large, is unique in appearance by reason of the peach-coloured shade which predominates in the flowers. Madame de Watteville has, as yet, given but few blooms, the severe frost of the last two winters having killed much of the wood. I look forward, however, to having a large number of blooms later on. Madame H. Jamain and Innocente Pirola, though not remarkable for the amount of growth made, have given an unusual number of blooms. This is perhaps accounted for by the fact that they were less severely pruned than most other varieties on account of having made a large amount of growth early.

Princess of Wales is the dwarfest growing Tea we have, but it

flowers very freely, and is particularly attractive in the bud. Goubault, Souvenir d'un Ami, and Catherine Mermet have opened their flowers without the slightest blemish being apparent in their delicate petals. Rubens is a variety which does not appear to me to be sufficiently well

known. It is simply perfect in the bud, being white delicately tinted rose, and of fine conical form. The Bride has this year proved to be quite worthy of its name, having produced blooms which stood peerless among a wealth of Roses.—H. DUNKIN.

PINKS AT HANDSWORTH.

I HAVE for two or three years past sent you some notes on exhibition laced Pinks in the collection grown by Mr. Arthur R. Brown of the Crompton Road, Handsworth, Birmingham, a collection famous in the Midlands for its inclusion of the newest as well as the best oldest varieties, and for excellent cultivation. Mr. Brown's father was a wellknown and greatly esteemed old florist, and always made Pinks a favourite flower. He was the raiser of Mrs. Dark, Ethel, and that finest of all the laced Pinks, Amy; and this flower, with the Carnation and Picotee, finds a thoughtful and excellent cultivator in the son. The extreme heat of the early and middle part of June brought Pinks rapidly into bloom, and when the flowers were not shaded the colour of the lacing was destroyed to a great extent. Mr. Brown had his plants growing under a structure like that used for Tulips, with a canvas shading, but with plenty of air. It was difficult to preserve them in good character for any length of time in such tropical weather.

Campbell's Extra is dark purple lacing, a refined flower with fine petal this year. Last year it generally came heavy and not so good. This season's blooming shows it to be a desirable variety. Brown's Amy is a grand Pink, and the finest in cultivation. A large flower of perfect form, with broad smooth petal, and a heavy lacing of dark maroon, a variety that should be in every collection. Fellowes' Pandora, light red or rose laced, is a large back row flower, but lacking refinement and form. Campbell's Nothing Better is a most refined flower, dark purple laced, and an evident acquisition, but as yet very scarce. Paul's Chastity has a fine petal, the bloom is small but of good quality, and with bright rose lacing. Paul's Emeline is a dark purple laced flower of first-rate quality, and will be sought after by growers. Brown's Ethel is a large full flower with good petal and fine form, with narrow reddish purple lacing, and an acquisition. Turner's Berard is an old well known and still fine variety of large size, and a good exhibition flower, with dark red lacing. Hooper's Mrs. Fred Hooper, clear rose laced, is a very fine flower, with large petal, and stands in the foremost rank of fine varieties. Paul's Bertha is a grand flower with a fine petal, with dark reddish purple lacing. Fellowes' Lorina is a large flower, bright in colour, dark red lacing, but faulty in petal and form. Turner's Godfrey is an old variety still worth growing with reddish purple lacing and a reliable exhibition but faulty in petal and form. Turner's Godfrey is an old variety still worth growing, with reddish purple lacing, and a reliable exhibition flower. Fellowes' Hebe is very heavy in colour and rough; large, but wanting in refinement. Douglas' Empress of India is a beautiful flower, with an excellent petal and rich bright dark lacing. It has only one fault—thinness; and another row of petals would make it a very first-class flower, but as it is it is a most desirable variety. Fellowes' Minerva is a fine flower with dark red lacing, and an improvement on Turner's Bertram, and is a fine heavy laced flower. Hooper's Ne Plus Ultra at Handsworth is identical with Boiard, or at all events, so like it that a distinctness cannot be seen. it that a distinctness cannot be seen.

Paul's William Paul, with clear rose lacing, is a very fine variety, but such a bad doer, else it would be valuable. Paul's Ada Louise, rosy purple lacing, is bright in colour, but rough in form as grown here. Turner's Dr. Maclean, rosy purple lacing, is a fine flower, but a bad grower. Rosy Morn, heavy rose laced, has a fine petal, and is one of the best of Mr. Fellowes' raising. Hooper's Harry Hooper, a first-class very fine full flower with broad petal, and rich and bright reddish-purple lacing. Hooper's Emerald, red lacing, is like Ada Louise, and is rather rough. Brown's Mrs. Dark, an old flower now, is still a useful one and a good grower. Paul's Tottic, a small but chaste flower, with good petal and bright red lacing. Love's John Love for the future is to be rejected, as "Modesty" is so much finer. Paxford's Ne Plus Ultra, an Love's John Love for the future is to be Oxford raised flower with dark red lacing, is very pure in the white, Paul's Modesty is always a first-class flower, and should be but coarse. in every collection, however small, and with light reddish-purple lacing. Maclean's John Ball is still a good old flower, with dark rich purple Arthur Brown is the name given to a very fine seedling raised by Mr. George Chaundy of Oxford, a coming flower with bright medium rosy-purple lacing, the white pure, and with a fine well-formed petal. This flower must be described as extra fine. Fellowes' Princess Louise last year I described as almost a good flower; this year it is good, with a broad petal and of fine form, and with red lacing. Fellowes' Bessie is a very large flower, reddish-purple lacing, but rough. Fellowes' Olympia, red laced, large but rough. Fellowes' Lustre, reddish-purple lacing, is large, but with a small petal. Fellowes' Ophelia, reddish-purple lacing, was rough last year, but a little better this year, but still Taylor's Alderman Thorp, dark red lacing, and Taylor's Samuel rough. Barlow are both thin but with good petals, and too small for midland growers.

Croak's Noble Grand is dark red laced, and has a fine petal, but is so thin. Croak's Mrs. J. Croak is a very useful telling flower, and if smoother on the edge would be in every way a first-rate flower. Fellowes' Jeannette is one of his best, and must be regarded as a fine back row flower with bright purple lacing. Fellowes' The Rector is a grand variety, the best he has sent out and first-elass in every way, with purple lacing. Fellowes' Captain Kennedy, reddish purple lacing, a newer and very fine flower of good form, fine petal, and bright colour. Fellowes' Maggie, rosy purple lacing, full of petals and a flower of fair quality as reen here, but it has not the fine petal and quality of The Rector. Fellowes' Melanee, new, small in petal, still a pretty and full flower of medium quality and with bright red lacing. Fellowes' Enchantress, new, is a very profiled to the contract of the this variety is not fairly tested here this season. Paul's Undine is rose laced, pretty but small. Fellowes' Favourite is new, a promising flower of "Rector" colour, but with small petal and with reddish purple lacing. This must have another season's trial, as the plants were small, but it is a variety evidently worth growing. (Since writing these notes another bloom has opened, and it is evidently a very fine Pink, and the best Mr. Fellowes has raised excepting The Rector.) Hooper's James Douglas and Douglas's John Drake were not in good character; and Campbell's Sancho had not bloomed, so I am unable to send notes of these, also of Mr. Thurston's new varieties.

Border Pinks are also grown here, and side by side were Mrs. Sinkins, Her Majesty, and Mrs. Lakin, all white varieties, the latter being the best, and with a better pod than the others. Hooper's Mrs. Barlow has a pale rose pink ground colour, with pale purple lacing, of good form, and is a very pretty border variety.—W. DEAN.

ROYAL HORTICULTURAL SOCIETY.

JULY 11TH.

CHISWICK LOCAL SHOW.

An Exhibition of fruit, flowers, and vegetables was held in the Gardens of the Royal Horticultural Society at Chiswick on the above date, and from an horticultural point of view it was a success. Flowers and plants were well shown, but fruit was not, in the competitive classes, so well represented as might have been expected. Several exhibits were brought to the notice of the various Committees, and these are referred to in their respective places. The annual Exhibition of the National Carnation and Picotee Society (Southern Section) was held at the same time and place, and a report of the Show will be found elsewhere in this issue. There was but a moderate attendance at the Exhibition in the afternoon, although fine weather prevailed.

FRUIT COMMITTEE.—Phillip Crowley, Esq. (in the chair); Messrs. 3. T. Wright, J. Cheal, W. Bates, F. Q. Lane, Geo. Wythes, G. Taber, W. Warren, T. F. Rivers, P. C. Veitch, G. Reynolds, Harrison Weir, H. Balderson, G. H. Sage, W. H. Divers, A. Dean, and J. Willard. Messrs. Jas. Veitch & Sons, Royal Exotic Nurseries, Chelsea, staged a

magnificent collection of Gooseberries, comprising many of the leading varieties in cultivation. Noticeable amongst others were Hebron Prolific, small, fine flavour; Jays Wing, Rumbullion, Warrington, Whitesmith, Green Laurel, Ironmonger, Gipsy Queen, Keen's Seedling, Yellow Champagne, very fine flavour, one of the most distinct and best. A silver-gilt Knightian medal was recommended for this collection. Apples, Cherries, Currants, and Raspberries were also shown by the same firm. The Red Currants were particularly fine, La Versaillaise being the finest so far as size of berry may be taken as a criterion. Mr. J. Hudson, Gunnersbury House Gardens, was awarded a cultural commendation for six bunches of Black Hamburgh Grapes, which had been cut from a Vine growing in a 12-inch pot. The combined weight of the six bunches was 9 lbs. 6 ozs.

Mr. J. Douglas, Great Gearies, Ilford, staged a fine bunch of his seedling white Grape, the result of a cross between Black Hamburgh and White Muscadine. Messrs. Hurst & Son, Houndsditch, staged a basket of Tomato Dunedin Favourite. The fruits were very shapely and of a rich deep red colour. Mr. Owen Thomas, Royal Gardens, Windson showed seedling Malons in fine condition. The same exhibitor Windsor, showed seedling Melons in fine condition. The same exhibitor also staged fruits of Walburton Admirable Peach, for which he was accorded a cultural commendation. Messrs. Thomas Rivers & Son, Sawbridgeworth, staged a grand collection of fruit, including Peaches, Nectarines, and Plums, for which a silver Knightian medal was recommended. Peaches Princess of Wales and a seedling were very fine, also were Early Rivers and Hale's Early, which had been grown in a cold house. A box of Early Rivers Nectarine was also striking. Early Rivers, Emperor Francis, White Bigarreau, Bedford Prolific, and Bigarreau Monstreuse de Mezel were amongst the best of the Cherries, and Grand Duke, Victoria, and Monarch of the Plums.

Mr. Miller, gardener to Lord Foley, Ruxley Lodge, Esher, staged a collection of Peaches and Nectarines, for which a cultural commendation was accorded. Mr. Miller also staged a dish of Ponderosa Tomatoes. Mr. Leach, Albury Park Gardens, showed Peaches, Grapes, and fruiting branches of Plums and Damsons. A vote of thanks was accorded. Messrs. Robert Veitch & Son, Exeter, staged a dish of Lotus tetragololobus (Asparagus Pea), for which they were accorded a vote of thanks. Mr. Payne staged a creditable collection of Tomatoes. Mr. Thos. Kerridge, Norwood Lodge, Southall, showed a fine plant of a seedling Tomato Norwood Lodge.

FLORAL COMMITTEE.—Present: W. Marshall, Esq. (in the chair), Messrs. Jas. Walker, George Stevens, W. C. Leach, Chas. E. Shea, Thos. Godfrey, R. B. Lowe, J. H. Fitt, Chas. Noble, Chas. Jeffries, Robert

Owen, and Frank Ross.

Messrs. Sutton & Sons, Reading, had a beautiful display of their specialtics, these including a fine strain of bedding Stocks, Achimenes longiflora and Rosy Queen, also some splendid Begonias, described as being six months from the seed-sowing stage. They were large, bealthy plants full of bloom. Semperflorens compacts roses; S. Coral Gem, a charming variety, with soft blush pink flowers; Duchess of York, bright rose; Duchess of Edinburgh, white, with broad rose

margin; Crimson Gem and Reading Snowflake, white. A silver-gilt Flora medal was deservedly recommended. A large and beautiful collection of Ferns and foliage plants was sent by Mr. H. B. May. The plants were in beautiful condition and most tastefully arranged; indeed, the group was one of the best Mr. May has put together. A silver-gilt medal was recommended.

Messrs. B. S. Williams & Son had a beautiful mixed group of Orchids and other plants, these including Brassavola Digbyana, Cypripedium superbiens, Demidoff's variety, Ochna multiflora, Epidendrum nemorale, and many others (silver Flora medal). Messrs. Hugh Low, Clapton, sent a new Lilium named L. Lowi, for which a first-class certificate was awarded. This is referred to elsewhere. Messrs. J. Laing & Sons, Forest Hill, sent some Begonias and other plants, obtaining awards of merit for Dracæna indivisa aurea variegata and Caladium Baronne de Maimore. Mr. Anthony Waterer, Knaphill, sent plants of Spiræa "Anthony Waterer," and Mrs. Blake, Croydon (gardener, Mr. Lewrey), a basket of Lewrey's Beauty Lobelia. Messrs. Wallace & Co., Colchester, sent plants of a new Lily, named Lilium Alexandræ provisionally, for which a first-class certificate was awarded.

Messrs. J. Veitch & Sons sent apparently the same Lilium under the name of L. Ukeyuri, and a first-class certificate was awarded. Messrs. Veitch also secured a botanical certificate for Ferraria antherosa, and they had Begonia decora, Strobilanthes Dyeriana, and other plants. Mons. Lemoine, Nancy, sent a number of fibrous-rooted Begonias, the best of them being B. Sieberiana, Illustration, and Bajocensis. J. Sallier sent a variegated Nicotiana which is described elsewhere (award of merit). Messrs. H. Cannell & Sons, Swanley, had a group of Tuberous Begonias, the plants having been grown from seed sown last February. They were well in flower, and attracted much attention. Messrs. Chas. Lee & Son, Hammersmith, arranged an effective group of hardy ornamental shrubs, for which a silver-gilt Flora medal was

ORCHID COMMITTEE.—Present: H. J. Veitch, Esq. (in the chair); J. O'Brien, E. Hill, Chas. Pilcher, and Dr. Masters.

Orchids were not shown very extensively. Messrs. Hugh Low & Co., Clapton, sent a small group, amongst which Cattleya Harrisone, C. Eldorado splendens, C. gigas, Cypripedium Schroderæ, and the beautiful Stanhopea Amesiana were conspicuous. Messrs. F. Sander & Co., St. Albans, sent a small collection of choice Orchids. Amongst these were Cypripedium Massaianum (award of merit), Anguloa Clowesi, Cattleya granulosa, and C. Gaskelliana, Cook's variety. T. Statter, Esq., Stand Hall, Manchester (gardener, Mr. R. Johnson), sent a plant of Cypripedium Stonei Cannartæ, for which an award of merit was given. This is described below. Mr. Statter also sent blooms of other Orchids, and Mr. W. C. Clark, Orleans House, Sefton Park, Liverpool, sent a spike of Cattleya Rex. Messrs. W. Lewis & Co., Southgate, had a plant of Cattleya Gaskelliana var. Southgatense.

CERTIFICATES AND AWARDS OF MERIT.

Alstræmeria aurantiaca (G. H. Cannell, Esq.).—This is a well known hardy plant, the orange red flowers being most attractive (award of merit).

Caladium Baronne de Maimore (J. Laing & Sons).-An attractive variety with medium sized leaves of a light colour and prominent red

veins (award of merit).

Cypripedium Massaianum (F. Sander & Co.).—This is the result of a cross between C. superciliare and C. Rothschildianum. The plant shown bore two flowers on one scape. The blooms show the parentage of C. Rothschildianum in the petals. The lip is dark brown (award of merit).

Cypripedium Stonei Cannarte (T. Statter, Esq.).—This is a fine form of C. Stonei. The dorsal sepal is broad, light coloured, veined brown; the petals being long, narrow, and of the character of the type. The lip is light purplish brown and yellow (award of merit).

Dracæna indivisa aurea variegata (J. Laing & Son).—A decorative plant with greenish yellow stripes in the centre of each leaf (award of

Lilium Alexandra × (Wallace & Co.).—This is a new Lily, and was certificated subject to its being correctly named by Mr. Baker, who on a cursory examination, we are informed, considers it to be a garden hybrid. It is a grand kind from Japan. It is apparently a dwarf form, the plants exhibited being less than 18 inches in height and each bearing three flowers. The blooms are very large and pure white (firstclass certificate).

Lilium Lowi (H. Low & Co.).—This is a tall-growing Lilium, the plant (which was in a 5-inch pot) shown being upwards of 3 feet in height. The flowers are medium size, white, the throat being densely

spotted with crimson (first-class certificate).

Lilium Ukeyuri (J. Veitch & Sons).—This is apparently the same
Lilium as was shown by Messrs. Wallace & Co., and which is described above (first-class certificate).

Nicotiana colossea variegata (J. Sallier, Paris).—This is a variegated form with large leaves. The variegation consists of a creamy margin and light coloured ribs (award of merit).

COMPETITIVE CLASSES.

The competitive classes were fairly well filled, and in most instances the exhibits were of a good quality. Mr. Porteous, gardener to E. H. Watts, Esq., Devonhurst, Chiswick, exhibited some large and fine Ferns, very healthy and fresh. In the class for nine hardy sorts, Mr.

Waite, gardener to Colonel Talbot, Esher, was first with some large specimens. A. Russell, Esq., Woodlands, Isleworth, had some well coloured Fuchsias in the class for six. and was placed first. Mr. J. Ford, gardener to Sir C. Pigott, Wrexham Park, Slough, was first for twelve Tuberous Begonias. They were splendid plants, being large, clean, and well furnished with fine flowers. It is not often that such admirable quality is met with in Begonias at an Exhibition. Mr. Ford had arranged his plants with Ferns and Caladiums, so that their effect was enhanced. Mr. W. H. Davis, gardener to T. E. Hodgson, Esq., Ranelagh House, Grove Park, was placed first for twelve trusses of Zonals; they were a little thin, but still far superior to those of Mr. Hoar, gardener to T. J. Cooper, Esq., The Grange, West Molesey. Mr. Porteous won with twelve bunches of stove and greenhouse flowers, his Orchids being excellent. Mr. Aspland, gardener to Dr. Tuke, Chiswick House, was second; Mr. Davis third, and Mr. Hoar fourth. Mr. Sage, gardener to Earl Dysart, Ham House, Richmond, won with hardy flowers, Mr. Aspland being second. Miss Debenham was first with eight bunches, Mr. Hudson, Gunnersbury House, Acton, following. Mr. W. H. Davis had some excellent Gloxinias, and was placed first for them; while Mr. Jones, gardener to E. Hyde, Esq., had some grand plants not for competition.

In the class for twenty-four Roses, distinct, Messrs. Harkness & Son, Bedale, were awarded the first prize, showing some very fine blooms, amongst the best of which were Gustave Piganeau, Horace Vernet, Reynolds Hole, Madame Hausman, and Fisher Holmes. Mr. G. Mount, Canterbury, was second with a very creditable stand; and Mr. B. R. Cant, Colchester, third. There were four competitors in this class. Messrs. Harkness & Son were again accorded the first prize, a silver cup, for twenty-four Roses, distinct. three trusses of each, staging Duke of Wellington, Duke of Connaught, Etienne Levct, A. K. Williams, Alfred Colomb, Dupuy Jamain, Exposition de Brie, and Madame John Laing in excellent form. Mr. B. R. Cant was second with a fine stand, and Mr. Frank Cant, Colchester, third. Six competitors. John Bateman, Esq., Rose Vale, Archway Road, N., gained the second prize in the class for twelve distinct Roses. There were only two competitors the second being the only prize a warded

petitors, the second being the only prize awarded.

For a group of plants arranged for effect, Messrs. W. Fromow and Sons, Sutton Court Nurseries, Chiswick, were awarded the first prize. This group was tastefully arranged, comprising Palms, Crotons, Ferns, Liliums, Orchids, Begonias, and Caladiums. Mr. Porteus, gardener to E. H. Watts, Esq., was first for another group well arranged, Dr. Tuke being second in this class. Both exhibits were attractive and well arranged. Mr. C. Turner, Royal Nursery, Slough, was awarded first prize for a group of Pelargoniums, showing well flowered plants. Miss Lilian Hudson, Gunnersbury House, Acton, W., secured the leading prizes for a stand of flowers. The floral classes for amateurs were fairly well contested, and the exhibits in many cases were very creditable to their growers, the window box for which Mr. J. Gale, Chiswick, was accorded the first prize, being particularly noticeable. Vegetables were also staged in fine condition in the cottagers' classes, the collection of Mr. A. Farmer, Gunnersbury, being remarkably good for the season.

Fruit was not so extensively shown. For two bunches of black Grapes Mr. T. Osman, The Gardens, Ottershaw Park, was first, showing Black Hamburgh in good condition. Mr. C. J. Waite, gardener to Col. the Hon. W. P. Talbot, was second, there being no other competitor. There were four exhibitors of two bunches of white Grapes. Mr. Osman was again first with well-grown Mrs. Pearson; Mr. C. Payne, gardener to W. A. South, Esq., Neasdon House, Neasdon, being second with Muscat of Alexandria. E. H. Watts, Esq., Devonhurst, Chiswick, was third. Mr. W. H. Divers, gardener to J. T. Hopwood, Esq., Ketton Hall, Stamford, was the only exhibitor of Strawberries, and the first prize was awarded for a fine dish of British Queen. Mr. C. J. Waite was first with a dish of Nectarines, showing Stanwick Elruge in fine condition. Mr. J. Ford, gardener to Sir C. Pigott, Bart., Wrexham Park, Slough, was second with the same variety; and Mr. G. H. Sage, gardener to Earl Dysart, Ham House, third with Victoria. Of Peaches there were four exhibitors, Mr. J. Debnam, gardener to A. Pears, Esq., Spring Grove House, Isleworth, being first with splendidly coloured Violette Hâtive. Mr. J. Ford was second with Barrington, and Mr. Waite third with Royal George, well coloured.

Mr. C. J. Waite, gardener to Colonel the Hon. W. P. Talbot, Glenhurst, Esher, was accorded Messrs. J. Carter & Co.'s special prize for six dishes of vegetables, showing Carter's Ashtop Fluke Potato, Green Globe Artichoke, Carter's Perfection Tomato, Holborn Onion, Summer Favourite Carrot, and Telegraph Pea, all in very good condition. Mr. C. Payne, gardener to W. A. South, Esq., Neasden House, Neasden, being second, and A. Russell, Esq., Woodlands, Isleworth, third. Mr. H. Balderson, Corner Hall, Hemel Hempstead, secured the leading prize offered by Messrs. C. Sharpe & Co., Sleaford, for three dishes of Peas, showing Sharpe's Queen, Triumph, and Sir F. A. Millbank in fair condition. Mr. G. J. Waite was second, and Mr. T. Watkins, Grove House, Merrow, third. Mr. Waite gained first prizes for three dishes of Potatoes, showing Reading Giant, Sutton's Seedling, and Carter's Ashtop Fluke. Mr. Farmer, Railway Cottages, Blenheim Road, Gunnersbury, was second, and Mr. G. H. Sage third. Tomatoes were grandly shown by Mr. Sage, who had Conference, Sutton's Al, and Perfection. Mr. C. Payne was second. Mr. W. H. Davies, gardener to T. E. H. Hodgson, Esq., Ranelagh House, Grove Park, was first with a brace of Cucumbers, showing Sutton's Peerless. Dr. Tuke, Chiswick House, was second.



EVENTS OF THE WEEK.—Events of horticultural interest are not particularly numerous during the ensuing week. To-day (Thursday) the provincial Show of the National Rose Society will be held at Worksop, and the Woodbridge (Suffolk) Exhibition takes place. Several Rose shows will take place in various parts of the country, and a list of these will be found in our last issue.

— THE WEATHER IN LONDON.—After a few days of abnormal heat heavy thunder showers occurred at the end of last week. Rain fell heavily on Saturday afternoon, and in some parts of the metropolis much damage was done by the lightning. On Sunday, Monday and Tuesday occasional showers also occurred, these refreshing vegetation considerably. Wednesday opened showery, and at the time of going to press the weather appears unsettled.

—— ROYAL WEDDING DECORATIONS.—Mr. J. W. Wimsett, Ashburnham Park Nursery, King's Road, Chelsea, requests us to state that his firm supplied half of the floral decorations for the Royal wedding, the remainder, as stated on page 10 in our last issue, being done by Messrs. Wills & Segar.

THE TRENTHAM SHOW.—We are informed that the Exhibition to be held in the grounds of the Duke of Sutherland on the 20th inst. is expected to be of a very interesting and comprehensive nature. The schedule is an excellent one, and prizes good. Gardeners are expected from various parts of the country. All the "best people" from the surrounding neighbourhood visit the Trentham shows, and the company generally has always been very large indeed.

FROZEN CHRYSANTHEMUM BLOOMS.—Chrysanthemum growers will be interested to learn a special meeting of the General Committee, and also of the Floral Committee of the National Chrysanthemum Society, will take place at the Royal Aquarium, Westminster, on Friday, July 21st, at six o'clock in the evening, to examine the frozen blooms of Chrysanthemums sent from Sydney, Australia. Members of the Society not being members of the General or Floral Committees are invited to attend at seven o'clock to inspect the frozen blooms.

—— SHRUBS AND TREES BURNT AT THE ALEXANDRA PALACE.—
On Saturday, July 1st, the shrubbery and trees immediately in front of the Alexandra Palace, Wood Green, N., through some unexplained cause, became ignited, and the fire spread with such alarming rapidity that in a very short time several acres were ablaze. The local steamers, in addition to the Palace hydrants, were quickly at work, but the fire was not got under for some hours. The conflagration covered an area of ten acres, and considerable damage was done to shrubs and trees.

Some Fine Oats.—In reference to your leader in last week's issue respecting the effect of the drought, I send you herewith a sample of Oats growing on 10 acres of nursery land. We have had only one night's rain since the first week in March. The days are too short to count the number of corns to each head, but I estimate the yield at at least 10 quarters to the acre. The Oats are 5 feet high. The curious part of the whole matter is that most landowners charge extra rent for land used for nurseries, because they say nurserymen spoil the land.

—A. H. Pearson, Chilwell Nursery. [Good nurserymen improve it by deep cultivation. The Oats were splendid.]

— United Horticultural Benefit and Provident Society.— The quarterly meeting of this Society was held on Monday evening last at the Caledonian Hotel. Mr. Nathan Cole occupied the chair. Three new members were elected, making thirty-five in the six months. The death of a non-paying member occurred in May last, and the amount standing to his credit (£24 7s. 4d.) was paid to his widow. The late member ceased to contribute in 1886. One member only is on the Sick Fund at the present time, thus showing the health of the members to be good. The Treasurer reported having invested £200 in West Bromwich 3 per cent. stock since the last meeting. The usual vote of thanks to the Chairman terminated the proceedings.

- Wakefield Paxton Society.—At the usual meeting of the members of this Society last week an excellent essay on "Summer Salads" was read by Mr. W. Hudson, The Lodge, Sandal Grange The paper contained several excellent suggestions and some valuable advice.
- THE MIDLAND CARNATION AND PICOTEE SOCIETY.—We are requested to state that, owing to the earliness of the season, the date of this Exhibition, which will be held in the Botanical Gardens, Edgbaston, has been fixed for Saturday, July 22nd, instead of August 5th as in the original schedule.
- JOHNSON'S GARDENERS' DICTIONARY.—The fifth part of the new edition of this standard work has come to hand. It deals with the genera from Inga to Agaricus campestris (Mushroom), inclusive, full cultural details of the latter being given. As we have before remarked, the edition will be completed in eight parts.
- GARDENING APPOINTMENT.—Mr. Thomas Winkworth, who for the past eighteen years has been gardener to Ralph Brocklebank, Esq., Childwall Hall, Liverpool, has been appointed gardener to that gentleman's eldest son (of the same name), who is leaving Childwall, having purchased Haughton Hall estate, near Tarporley, Cheshire.
- Were a plant of it amongst some Rhododendrons which has thrown up its flower spikes 8 feet high, where it has an imposing effect, the foliage of the evergreens below making a pleasing setting to its pale yellow flowers. The plant in question has been established half a dozon years. The strong soil in which it is growing appears to suit it well. Where a suitable site can be found this is just the plant to grow for the borders or shrubberies."
- VIOLAS WHITE DUCHESS AND COUNTESS OF WHARNCLIFFE. —The first is a new Viola of merit. Its colour is white, distinctly edged with blue. That it will become a favourite with Viola cultivators I cannot doubt. It was raised by Mr. Baxter of Daldowie. Passing to the Countess of Wharncliffe, it is to my mind the chastest, sweetest, and most fragrant of pure white Violas. Its colour is exquisite, resembling that of white satin. Let any of the readers of this Journal who cultivate the Viola compare the Countess of Wharncliffe with Countess of Hopetoun, and they find that the difference is very discernible. Another of my most precious floral possessions is Dr. Stuart's miniature Viola, entitled "Violetta," which may be described in the language of Thomas Gray, as "a gem of purest ray serene."—DAVID R. WILLIAMSON.
- PANSIES AT THE WORLD'S FAIR.—An American contemporary says:—The Pansy display at the World's Fair, Chicago, will no doubt soon lose some of its attractiveness from the continuation of excessively warm weather. The great beds in front of the horticultural building are daily admired by thousands. These Pansies, which represent the best strains of growers in England, France, and Germany, as well as in America, were sown in the open ground July 12th–18th last year. The locality chosen was one of the inner courts of the horticultural building, so, although in the open ground, they would be at least partially shaded at some times during the day. They received their first transplanting when about five weeks old, being given more room for the purpose of encouraging a more stocky growth. They were finally planted out in the autumn, and were all wintered outside. Some of them were covered with littery manure, while others were protected by temporary frames. The Pansies were very late in coming into bloom.
- FOREIGN FRUIT CROPS. Latest advices from Greece show that the downy mildew has attacked the Currant plants in Patras, Zante, and some of the other coast districts, and there is reason to fear that much damage will be done, although Currant growers in the east have learned to use the copper compounds for spraying against mildew. It is probable, says the "Garden and Forest," that in a few years Currants from California will be as common in our markets as other fruits are now, since the experiments in cultivating this berry there have proved most encouraging. Fruit dealers are looking forward confidently to the time when European Currants will be subject to competition with the California product, just as European Prunes and Raisins now are. The Prune crop of Bosnia and Servia is likely to be up to the average, and the crop of French Prunes will be abundant and good. Encouraging reports come from Spain as to the crop of Valencia Raisins, and a careful review of the situation in the "Journal of Commerce" concludes that there is likely to be an abundance of fruit from all sections of the world with low prices.

- —— DEATH OF MR. ROBERT HOLLAND.—We regret to hear of the sudden death recently, from heart disease, of Mr. Robert Holland of Frodsham, Cheshire, a well known authority on agriculture, and the joint author, with Mr. James Britten, F.L.S., of the Natural History Museum, South Kensington, of the "Dictionary of English Plant Names."
- —— SUMMER MARGUERITES.—These are beautiful flowers when blooming superbly in huge masses. At the same place as I saw these there are Helenium pumilum, clear yellow, 15 inches in height; Erigeron speciosus superbus, large flat bluish mauve flowers; and Chrysanthemum maximum, white, the fine dwarf form of the Ox-eye Daisy. Later in the season this latter is well replaced by Chrysanthemums lacustre and uliginosum; the Helenium by various single Helianthuses and Harpaliums; and the Erigeron by some of the finer forms of the Michaelmas Daisy.—A. D.
- DEATH OF MR. JOHN FIELDEN.—We learn with extreme regret of the death of Mr. John Fieldeu, of Grimston Park, Tadcaster. He was, we believe, about seventy years of age, and had been in a weak state of health for a considerable time. He was buried on Friday last in the pretty churchyard adjoining the fine old parish church of Kirkby Wharfe, mourned deeply by a wide circle of friends, and by those who had served him. A more kind, considerate, and when merit deserved, a more appreciative employer did not exist. He took an interest in everyone on his place, and showered benefits upon those who had won his confidence. It is considered probable that the magnificent estate will remain in the Fielden family.
- —— SWAINSONIA GALEGÆFOLIA ALBA.—The finest specimen of this greenhouse plant that I have seen is growing against the back wall in Mr. Agate's Chrysanthemum house in Havant. The space covered is 15 feet by 7 feet, and is a sheet of pure white blooms. The floor of the house is composed of soil in which are planted Tomatoes, with Tea Roses against the back wall. The plant in question is in a 12-inch pot, but the roots have found their way through the hole at the bottom, and are now rambling in the border. I have seen this same plant many times, but never found it flowerless. Mr. Agate speaks highly of it in producing flowers, which are extremely useful for wreaths, bouquets, or in fact any form of decoration.—E. M.
- ACHIMENES.—There is just now in profuse bloom a very large collection of these pretty old fashioned tuberous-rooted flowers at the London Road Nursery, Reading, where not only have the Messrs. Sutton and Sons collected all the best varieties, chiefly in 48-size pots, and in that perfection of cultivation which always characterises all that is there done, but they have them filling the long span-house. From out of the whole number I sclect as, to my mind, the most beautiful—Ambrose Verschaffelt, white, veined with dark blue; Celestial, lavender blue; Longiflora major, deep blue; Masterpiece, purple; Alba major, pure white; Harry Williams, deep rich rosy crimson; Lady Lyttleton, ruddy carmine; Rose Queen, rosy magenta; and Splendens, fiery scarlet—as being a beautiful collection, although all the varieties are very charming.—D.
- Kola.—Some useful information with reference to this valuable plant is contained in a report on the botany of Sierra Leona presented to the Colonial Office and published as an official paper by Mr. C. F. Scott Elliot. The tree Kola acuminata, Mr. Elliott says, grows freely everywhere, and is found from the sea level to fully 3000 feet at Sumbauaya, in the Talla highlands. It appears to thrive wherever planted, and is well able to hold its own in the original native bush. Mr. Elliot could not find any special conditions of soil as necessary, but it certainly grows on disintegrated gneiss, red grit or laterite, dolerite, and occasionally on dry alluvium. He does not think he ever saw it on marshy ground or soil liable to be overflowed, and in planting the tree such places ought to be avoided. It begins to bear in seven years, and is in full bearing after eight to ten years. Each tree is said to yield £3 to £4 per annum, and hence a plantation ought certainly to include a large number of these trees. The yield given by Mr. Fawcett is 125 lbs., or 4000 seeds per tree—that is, £8 to £10 per tree, or £800 an acre. Semler says it produces 50 kilog. in the tenth year. At present the nuts are chiefly used by the natives, but so much has been done of late years to bring their valuable properties before the public that it may be safely said that the demand in Europe is sure to increase. The following are some of its properties. A nut, or even half a nut, will enable a man to go without food and support great fatigue for twenty-four hours or more. It is an excellent nerve tonic, and is especially good for keeping the brain clear and active at night. It, however, prevents sleep almost too thoroughly, and should not be taken less than four hours before bed.—(The Times.)

Weather at Liverpool.—Last week the heat was intense, all kinds of vegetables showing greater signs of distress than has been apparent this season, more particularly Lettuces, which were simply scorched. Friday last was one of our hottest days, the thermometer on a south wall registered over 100°. On Saturday welcome rain descended. Sunday more rain fell in gentle showers, and on Monday at 11.30 A.M. we had a thunder shower of unusual severity, which rendered spouts and grids in many places quite ineapable of taking away the immense volume of water. As I write (6.30 P.M., Monday) a steady rain is falling.—R. P. R.

— THE QUEEN AND THE GARDENER.—A daily contemporary says, "At the luncheon of the Council and Judges, held at the Royal Botanical Gardens, Manchester, last week, Mr. Bruce Findlay, the Curator, in proposing the health of the newly married Royal couple, said, 'I may perhaps be excused for mentioning an incident (not a secret, inasmuch as it is known to Her Majesty the Queen). In the year 1821 my father was a gardener in the then Duke of York's garden at Oatlands Park, in Surrey. The Princess Victoria, then a baby, was in the garden with her nurse and fell into a pool of water. My father, who was near at hand, pulled the baby out of what might have been a watery grave.'"

MIGNONETTES.—Somewhat of a surprise this wonderfully dry season was it to see the extraordinary free growth from seed at Reading of these hardy annuals. The product was as good at the seed farm where there was no watering as at the nursery, where possibly beds may have been watered. Out of the many varieties grown a few seemed to stand out as specially good, and of these for purity of whiteness none excels the Double White, a variety that is not yet thoroughly fixed, but doubtless will be so in good time. The best single white is the Giant White, a first-rate variety for massing and cutting from. Golden Queen is a really beautiful golden yellow, very true and of a compact habit, and the Giant Red Pyramidal is the best of its section. Those who like Mignonettes, and they are literally everybody, should secure these four varieties at least.—D.

HAIL AND HEAT.—A correspondent, writing to the Standard, says, "It may interest readers to learn that this locality, Amisfield Tower, near Dumfries, N.B., was visited, about half-past 12 to 1 P.M., July 8th, with a severe thunderstorm, with lightning accompanied with very large hailstones, formed of solid ice, averaging from 3 to 4 inches in eircumference, and were picked up by the writer $4\frac{1}{2}$ to 5 inches; it seems almost incredible. As a matter of course a large quantity of glass in vineries has been destroyed, in many cases riddled as if with rifle bullets. At the time the thermometer was 73° in shade. Such a visitation is unknown to the oldest inhabitant." The conjunction of heavy hail and great heat is a characteristic of certain climatic belts of the temperate zone. We have seen in South Africa, on a day when the temperature was about 96° in the shade, hailstones fall which riddled the corrugated iron verandah above our head till it resembled a colander.

- THE BIRKBECK BANK .- The forty-second annual meeting of the Birkbeck Building Society was held on the 5th, at the offices, 29 and 30, Southampton Buildings, Chancery Lane. The report adopted states that the receipts during the year which ended March 31st last reached £12,169,030, making a total from the commencement of the Society of £163,297,213. The deposits received were £9,857,817, and the subscriptions £215,871. The gross profits amounted to £213,867. The surplus funds now stand at £5,727,331, of which £1,670,210 is invested in Consols and other securities guaranteed by the British Government. Upwards of two millions (2,093,590) registered in the books of the Governor and Company of the Bank of England. The subscriptions and deposits withdrawable on demand amount to £5,883,572. The new accounts opened during the year were 13,752, and there are altogether 67,244 shareholders and depositors on the books. Since its establishment the Society has returned to the shareholders and depositors £135,309,265, the whole amount having been repaid upon demand. During the panic brought about in September last by the collapse of the Liberator and its allied companies, the run on the Birkbeck lasted eleven days, and £1,578,005 was withdrawn. Only when it became known that every depositor could be paid in full did the panie subside. So large has been the amount of deposits received since that panic that the Directors have thought it prudent to reduce the rate of interest on deposit accounts from March 31st, 1893, to 2½ per cent., a step which they believe has materially strengthened the position of the Society, and which will enable them in future to invest a still larger proportion of the funds entrusted to them in Consols and other British Government securities.

POTATO SNOWDROP.—With us this season the above-named variety has yielded a wonderfully fine erop of handsome tubers, and the quality has been first-rate. We planted a good breadth a yard distance between the rows, and half that space between the sets, and the ground was perfectly hidden by their vigorous stalks. In these gardens Potatoes are not usually of good quality, the ground being too strong, but Snowdrop is an exception, and as a consequence obtains more space than other sorts. It remains good, too, over a long season. For exhibition purposes it is well suited, because of its clear skin and handsome form. It is a very early variety to mature, and for this reason should be useful to those having restricted garden space, because of planting the ground with another winter crop after the Potatoes are lifted. Snowdrop is also a good market Potato, that is where it grows as it does hereabouts. I have seen no other sample in the greengrocers' windows equal to this variety up to now, or command the same prices.—W. STRUGNELL, Rood Ashton.

- COAL TAR TO PROTECT TREES FROM INJURIOUS INSECTS .-Discussions continue as to whether coal tar is or is not injurious to the bark of trees. It has often been recommended, in order to paint around the base of trees that are liable to the attacks of borers—for instance the Apple borer, Quince borer, and Peach borer. Certainly, the writer has known of cases where it has been applied without the slightest injury, while there are undoubted eases of trees having suffered by its use. Just how this variation in effect comes about is not clear, nor does it much matter to the practical man. If is safe to say that sometimes coal tar so applied is a serious injury; but why use coal tar at all? Pine tar is just as effectual in preserving trees from the ravages of these noxious insects, and certainly does no damage to the tree. It is one of the best preventives against the inroads of stem borers, that is, when these borers operate near the ground, and it is also effectual in preserving the trees from the ravages of mice in winter time. Many trees, especially in regions where the ground is covered by snow in the winter time, suffer seriously from the attacks of micc.—(Meehans' Monthly.)

- EMPLOYMENT OF GAS LIME.—Your correspondent "E. M." (page 9) may rest assured that I have advised the use of gas lime to allotment holders only with the greatest possible care. A dressing is laid on to vacant ground, especially that previously occupied, or to be occupied with Onions, early in the winter, and allowed to become disintegrated through the action of the frost, then forked in several inches in depth a month at least before the ground is sown. Where ground is trenched the dressing of gas lime should be put on after that work is done, as it is the top several inches of soil that contain the elements of harm in the shape of chrysaloids, of course that is assuming that the top soil is kept on the surface in trenching, and is not thrown into the bottom of the trench. I have read of a thin dressing of gas lime being advised to be strewn along the spaces between the rows of the young Onion plants as giving off a perfume that is obnoxious to the fly. That seems to be dangerous advice, especially that it might lead to much tramping of the plants. I very much doubt whether, having regard to the relative values of the two vegetables, the present plague of maggots is not worse for Onions than is the Peronospora infestans for Potatoes. In any case, apart from any ameliorative action, more harm relatively seems to be done to the Onion than to the Potato. Whosoever ean devise any practical and perfect cure for the Onion maggot will deserve well of his country.—A. D.

THE BEXLEY BEGONIAS.

"Not at home," was the response to my inquiry at the door of Mr. Horticultural Builder Burton on the occasion of a recent visit to the Bexley Peacheries, and "Not at home" was the same dismal refrain when after a mile and a half's walk I reached the residence of Mr. Begonia Pope, near the famous wayside hostelry known as the Old Crook Log, Bexley Heath. It was a double disappointment, not tempered by the fact of having to take the sunny side of the familiar reading, "90° in the shade, 120° in the sun" for the aforesaid walk; but the Begonias had returned from Earl's Court if the grower had not, and so the danger of my disposition becoming as erooked as the ancient billet itself was happily averted.

I ventured to pen a few remarks last year about Mr. T. S. Ware's Begonia Enterprise at Bexley, and am glad to observe that there has been a further advance in the high merits of his strains during the past season. The novelties embrace some very beautiful and distinct varieties, which can hardly fail to be widely sought after. The inevitable Princess May was amongst them. It is a fringed double flower, pure white and pleasing, by no means a commonplace addition to the whites. More distinct is a magnificent seedling double, as yet unnamed, the colour of which is not easily to be described. It is a rich, brownish bronze with a deeper edge; but the words give no adequate idea of the unique shade the flower possesses. There is a sunset glow

about it which cannot be transferred to paper. These bronzy hues vary greatly; but all are beautiful, and it is to be hoped that we shall get many of them. Another bronzy double, a totally distinct type of flower, is Iona, a light golden bronze of great beauty. Its blooms partake of the Ranunculus shape, a clear break from the Hollyhock section. Amongst many other good doubles the following may be noted:—Queen Victoria, rosy blush, is a fine variety which received a certificate at Earl's Court; the bloom is excellent, and the plant flowers freely. Mrs. Fell, which was seen last year, is a large and very fine salmon pink, free and good; Bexley Gem is a glowing carmine of great beauty, representing a first-rate type of plant and flower. Rosebud is now well known; this charming little variety is becoming a universal favourite. Alba Magna is an admirable type of white, flowers and habit both being of the best. Beauty of Belgrove, soft silvery pink, free and good in every way, may be taken as a standard variety in its colour just as the comparatively old Henshaw Russell may be amongst the scarlets. Brilliant, rich scarlet, a bold grower and free bloomer, is another excellent red. Amongst the pinks one of the best is Pavona;

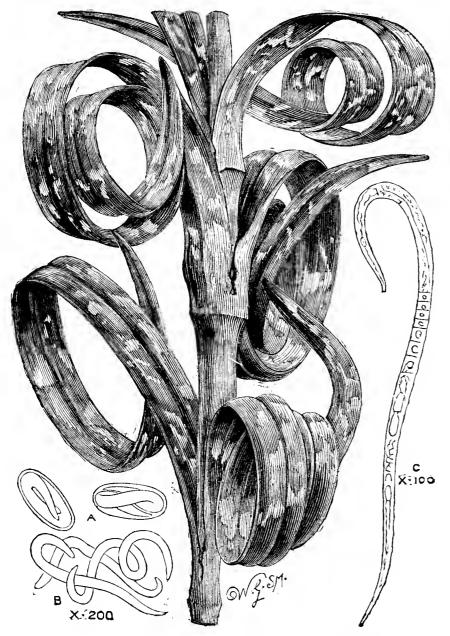


FIG. 5. - CARNATION ATTACKED BY EELWORMS.

and Una, rosy pink, is equally pleasing. Of the yellows a prominent position must be accorded to Duchess of Teck, an excellent sort in every way. The flowers are light in colour, and might be described as lemonhued. Another light yellow is Solferino, but this is flushed with pink. At the risk of making the list appear formidably long I add mention of another trio—Viscountess Cranbrook, salmon red, with white centre; Jennie Fell, deep crimson, a Camellia-flowered variety of exceptional charm, and Picotee.

The singles are quite as mcritorious as the doubles, perhaps as a whole they are even better. I commence with what is quite likely to become one of the most popular of all, and that is Champion, a variety in which flowers of a distinct and lovely golden bronze shade are associated with grand habit and foliage. Perfection, something in the same way, was good, but Champion is far better. Then there is a light bronze seedling with a faint Tea Rose odour; I am sorry to be unable to distinguish it by a name. When our friends get hold of a good thing why do they not name it at once? Angelina Scraggs would be better than nothing. What is wanted is something to distinguish it by. Pride of Bexley is a splendid type of white, and Sovereign of yellow. The former has large and perfectly round pure white flowers freely borne, and Sovereign, in addition to its excellent flowers, has grand foliage. Bexley White is another splendid variety, larger than Pride of Bexley, but less rounded. Lord Byron, scarlet with white centre; Zanda, a v 1y large rosy red; Alba Fimbriata, a white with round fringed flowers;

Black Knight, very dark velvety crimson, well rounded, and a free bloomer; Magneta, vermilion; Venus, rich dark crimson with white centre; Heroine, rich bronzy scarlet, well rounded and free; Nerissa, a glowing rose with immense flowers; Superba, a fine light red; and Moravia, a crimson with flowers of perfect form, are all worth growing. So is Sunset, a free and beautiful golden bronze. Other notabilities are Marginata, white with a broad crimson margin; Crimson Bedder, a most vigorous and free flowering dark red; Alba Marginata Fimbriata, white with broad carmine edge; and Goliath, a large bronzy buff with immense foliage.

It is perhaps a little injudicious to name so many, but after all there are many tastes to cater for. It is pleasing to be able to record that the strong-stemmed and erect-flowered type of plant is being maintained. Of the 200,000 plants out of doors it is yet too early to speak, but judging by last season there will be as big a blaze as if the Old Crook Log had caught fire by-and-by. For this, however, we must have a few lapses from the 120° in the sun reading, otherwise the season will be too dry to give them a fair chance.—W. P. W.

ROYAL HORTICULTURAL SOCIETY'S FOUR DAYS'

As regards the above subject, I, as a grower and exhibitor of fruit, entirely concur with the remarks of the correspondents, "A Fruit Grower and Exhibitor," and "A Midland Counties Fruit Grower" (page 9). A four-days show may be some advantage to the Royal Horticultural Society, but I think the Council should be reminded that it is a serious matter for exhibitors to absent themselves from home for nearly a week, and at the same time expose their employer's property to the parching heat and dust of the Agricultural Hall till it is completely ruined. During the past few weeks I have heard men well qualified to give an opinion say that unless the period of the Show is shortened many would-be exhibitors may go elsewhere, and this is the course which will be adopted by—F.R.H.S.

[Our correspondent is one of the best and most successful exhibitors.]

ROYAL BOTANIC SOCIETY'S EVENING FETE. JULY 5TH.

AN evening floral fête was held in the gardens of the Royal Botanic Society, Regent's Park, on Wednesday, July 5th. Fine weather prevailed, and the gardens were brilliantly illuminated. Prizes were offered for dinner table decorations, groups of plants, bouquets, and other floral arrangements, and in most classes the exhibits were very good. Several exhibits of plants and flowers, not for competition, came from various nurserymen. These included a grand collection of Roses from Messrs. W. Paul & Sons, and hardy flowers from Messrs. Barr & Sons and J. Cheal & Sons.

In the competitive classes Messrs. Osler & Co., 100, Oxford Street, W., were awarded the first prize for a dinner-table decoration, Mr. W. P. J. Youens, Tower Cottage, Dartford, Kent, being the other prizewinner. Miss M. V. Seale was first for a table decoration for dessert, the other prizes going to Messrs. Osler & Co., and Miss M. Gardner, Park House, St. John's Wood Park, N.W., respectively. The last-named exhibitor received a silver medal for her arrangement of a buffet. The class for the decoration of a supper table brought forward some admirable work, the exquisite use of Shirley Poppies gaining for Mr. J. R. Chard, Brunswick Nurseries, Stoke Newington, N., the first prize. Other successful competitors were Mrs. Howard White, and Mr. H. O. Garford, the Floral Depôt, Stoke Newington. Mrs. H. O. Garford was first for her arrangement of an epergne, while the second and third prizes were awarded to Miss Alice Perkins and Messrs. Osler respectively. The silver medal for flowers for personal adornment was awarded to Messrs. Perkins & Sons. For a bridal bouquet, Messrs. Harwood Bros., Balham Nurseries, Balham, were first; Messrs. Perkins & Sons, and Mr. J. Russell, Devonshire Nursery, Haverstock Hill, N.W., being second and third; and for a ballroom bouquet Messrs. Harwood Bros. were first, Mrs. H. O. Garford and Miss Minnie Barrett being second and third respectively.

Mr. H. O. Garford, Messsrs. Perkins & Sons, Coventry, and Mr. R. Potter, gardener to Sir Mark Collet, Sevenoaks, were awarded the prizes for a sideboard decoration in the order of their names; while in the use of hardy flowers for sideboard ornamentation the successful competitors were Mrs. M. Gardner and Mrs. E. Sperling of Southend. Mr. R. Scott, gardener to Miss Foster, The Holme, Regent's Park, was first for his decoration of a window; and for a group of plants in a recess Mr. W. Chalk, Langworth, Streatham Hill, following in both classes.

DISEASES OF CARNATIONS.

FEW, if any, garden plants have of late years suffered from disease to an equal extent with Carnations. The chief ailments are one caused by microscopic eelworms, and two caused by parasitic fungi. One of the latter, although widespread and virulent, has, as far as I know, never been described as British till a brief notice was published in the Journal of Horticulture on June 15th last, page 480. At any rate it is not given in any text books of the most recent date.

A few weeks ago a correspondent of the Journal of Horticulture sent examples of "Malmaison" Carnations infested with eelworms to a degree I had never seen before. The stems were swollen, and in several instances the leaves were spirally twisted as if writhing in agony.

Attacks of parasitic fungi commonly cause a similar twisting. In this district, Poppies, which are extremely common in the cornfields, are frequently attacked by a Peronospora (an ally of the Potato fungus), and this attack causes the flower stems to become twisted into inextricable knots with the flowers and seed vessels pointing downwards as frequently as upwards, or involved in the knots of the twisted stems.

An example of a Carnation stem, swollen in the middle and with leaves twisted with disease, is illustrated in fig. 5. The disease spots are white and semi-transparent; when held to the light the inner substance of the leaves is seen to have been eaten away. If a small portion of the leaf, taken from the neighbourhood of the disease spots, is placed under the microscope, eelworms young and old, and male and female, with a vast number of eggs, will be seen as illustrated at A, B, and C. In a diseased Carnation plant these minute animals exist apparently in uncountable numbers. The name of the eelworm is Tylenchus devastatrix, Kühn. The minute transparent eggs, with the young coiled up inside, are shown at A, and the young just emerged from the eggs at B, enlarged 200 diameters. An adult female example is shown enlarged to 100 diameters at C. The male differs slightly from the female, but for all practical horticultural purposes the illustration will answer for both sexes. In some eelworms the sexes differ greatly from each other in general form. I have grown Carnations from a single diseased plant for eight years in succession; every season the old plants have been burnt and new plants secured from layers apparently free from disease, yet every season the new Carnation plants have swarmed with eelworms. The plants become equally diseased in the open garden and greenhouse. This fact shows how necessary it is when plants once become infested to entirely destroy them, every fragment from a diseased plant seems to bear the eggs of the eelworm (or Nematode) in its tissues. The minute animals live and breed chiefly inside the leaves, and the transparent spots are caused by the tissues being eaten away. The worms are easily destroyed by caustic solutions, but as the creatures live within the stem and leaves it is almost impossible to get at them. The attack of eelworms or threadworms frequently comes from infested earth or water, and plants are at once attacked by Nematodes if grown in earth containing chopped up diseased material or if watered with water in which infested plants have been broken up and introduced. Tylenchus devastatrix is common in a living state in dung; the animal infests Clover and Grasses, and passes in a living state and uninjured through the intestines of sheep, oxen, horses, and other animals.

Mr. John J. Willis has experimented with success at Harpenden on infested Clover fields, but experiments made on acres of land seem hardly applicable to a limited number of Carnations in a flower garden. Mr. Willis, as reported by Miss E. A. Ormerod, found that sulphate of ammonia and sulphate of potash together at the rate of 4 cwt. per acre acted most effectually. Sulphate of iron at the rate of 2 cwt. per acre caused the attack of Tylenchus to cease, but half this amount did not entirely check the attack. Infested earth can be successfully treated with gas lime—see the leaflet by the late Dr. Aug. Voelcker on "Composition and Uses of Gas Lime," published by the Royal Agricultural Society of England. For other methods of treatment see the number of the Journal of Horticulture already quoted. This disease was first noticed in this country in the autumn of 1881, and an illustration and description was published in the "Gardeners' Chronicle" for December 3rd, 1881.

The disease caused by a parasite fungus named Helminthosporium echinulatum, B., has been known since 1870, when a description and small illustration was published in the "Gardeners' Chronicle" for March 19th, of that year. It was again illustrated in greater detail in the same journal for August 21st, 1886. A fragment of a Carnation leaf attacked by the Helminthosporium (a brown fungus mould), is illustrated natural size at D (fig. 6). It will be observed that the fungus grows on both sides of the leaf in a concentric fashion; a minute spot first appears, next a ring round that spot, then a larger ring, one outside the other, till in bad cases the rings become confluent and the foliage is soon utterly destroyed. The fungus in a fruiting state is superficial, but the mycelium, or spawn from which the fungus arises, is partially within the membranes of the leaf. The parasite, of course, lives by abstracting and living upon the vital juices of the host plant. The fungus itself as seen under the microscope and enlarged 300 diameters is shown at E. It bears a vast number of jointed spores; at first these spores are simple or without joints, but at length each spore becomes divided into from two to six parts, the spores are faintly brown in colour and covered with almost invisibly minute spines. At maturity the spores break to pieces at the joints, and every fragment is capable of reproducing the disease. These fragments are doubtlessly carried in the air in millions, and many probably hibernate in the open ground through the They certainly hibernate in greenhouses. Sometimes this Helminthosporium infests Sweet Williams, and a fungus not to be distinguished from the Carnation fungus frequently grows on Ornithogalum and perhaps other plants. The parasite is a close ally of the fungus which causes the worst form of Tomato disease. Hand-picking of diseased leaves has been recommended as a remedy. As the parasite lives partly within the leaf it is most difficult to get at, although spraying with a fungicide might stop its growth; the safer and more effectual Potato fungus solutions might also be tried. The almost unlimited power of spore production in the Helminthosporium makes its position almost unassailable.

The third parasite illustrated at F is as destructive as the other two. The fungus which causes the mischief is known as Uromyces

caryophyllinus, Schræt. It is illustrated natural size at F. I have known it and its effects for many years, but I think this is the first time it has been illustrated in this country. The fungus is an ally of the Hollyhock fungus and the red rust of corn. It grows wholly within the leaf, which it distorts, and it ultimately bursts the membrane of both sides for the emission of the spores. A small fragment of a Carnation leaf attacked by Uromyces is shown in section at G, enlarged 50 diameters to show the spore pustules rupturing the leaf membranes above and below. Two sets of spores are produced. The spores illustrated at H, enlarged 300 diameters, are called Uredo spores, these are orange in colour and covered with minute spines, they are produced in inconecivable numbers and quickly germinate upon Carnation leaves. The germtubes from the spores gain access to the interior of the leaves by the stomata and then quickly form new pustules. This process is repeated till in bad cases all the foliage is involved in disease. Towards the end of the flowering season resting spores are formed as illustrated at I, enlarged 300 diameters. These resting spores are somewhat darker in colour than the Uredo spores; they are furnished with a much thicker

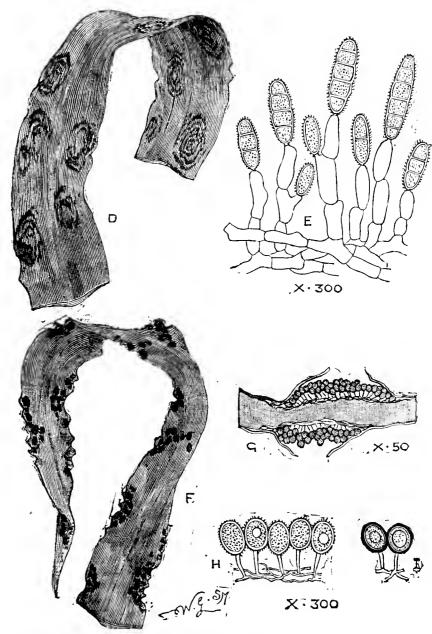


FIG. 6.—CARNATION FOLIAGE ATTACKED BY HELMINTHOSPORIUM (D)
AND UROMYCES (F).

membrane or skin, and are smooth. The resting spores hibernate through the winter in dead Carnation refuse, and germinate in this decaying material in or on the ground in the spring, at which time they make their attack on previously unaffected Carnations. In greenhouses the fungus grows continuously all through the winter by its Uredo spores; it however frequently produces resting spores in the same pustules with the Uredo spores. This latter fact shows how necessary it is to burn or deeply bury all disease-infected garden material. Uromyces caryophyllinus is not confined to the Carnation—Dianthus Caryophyllus, but occurs on D. superbus and D. prolifer.

As this fungus grows entirely within the plant attacked, it is obviously most difficult to reach either by sponging or spraying. It is reported that the ravages of the Potato fungus as well as of other fungi whose habit is to grow within the tissues of the host plant have been checked by spraying: if the reports are correct similar good results might follow the spraying of diseased Carnations. If diseased and dying plants cannot be saved, disease can be prevented from spreading by clean gardening, plenty of air in greenhouses, and the destruction of all tainted material. If a plant attacked by Uromyces is placed in a greenhouse the disease will at once spread with terrible rapidity to other plants in the house. Mr. Martin R. Smith informs me that this fungus seems powerless with him out of doors, and that varieties with exceptionally blue foliage resist its attacks. Mr. Smith says that

Condy's fluid kills the fungus, and that two applications with the syringe or sponge are generally successful. Permanganate of potassium in water, which is of the same nature with Condy's fluid, is a very cheap material, and has often been used with good effect as a remedy for plant diseases.

A few other fungi sometimes spread to Carnations from Lychnis and other genera of the Caryophyllaceæ, but the two here described are the chief depredators. Carnations too are frequently attacked by the larvæ of insects.—Worthington G. Smith, Dunstable.

SUNNINGDALE PARK.

THE village of Sunningdale is a charming place, the air being fresh and pure, not affected by the smokes of London, despite the fact that it is very little over twenty miles from the metropolis. On the occasion of a recent visit to the neighbourhood I was struck with the healthy green foliage of the trees, and this after such a long drought. I called at Sunningdale Park, the beautiful seat of Major Joicey, and asked for the permission to view the gardens. This request was readily accorded by the skilful and courteous gardener, Mr. T. J. Thorne.

Before going to the gardens we walked round the park, and here it was observed that many alterations were being carried out. Huge mounds had been gradually carted away to be deposited where it was thought the natural beauty of the place would be enhanced thereby. The improvements thus effected are most marked now, though they are as yet only in their infancy, and when the whole is finished there will be many splendid views through the trees. In front of the mansion a lake has been formed, and with the addition of a small waterfall it will be one of the most charming spots on the estate. Rhododendrons form an attractive feature, for thousands have been planted, and though at the time of my visit the best of the blooms were gone, some perfect trusses of beautifully coloured flowers were still to be seen. And how well the plants all looked! Many of them have only been planted for seven months, and the majority between one and two years; but even the most recently planted ones have made wonderful growth, and the young foliage presents a healthy green appearance. They are planted in a loamy soil with an admixture of peat, such as can be obtained from the woods on the estate, and farmyard manure, and they revel in it. What a magnificent display they will make a few years hence!

The principal drive to the mansion, lined on each side with hardy evergreen shrubs, including many of the best Rhododendrons, is splendidly lit with the electric light, as also is the house itself. When the shrubs were in flower it must have looked grand either in the day-time or at night, when the soft mellow light from the electric lamps was diffused around and over them. The engineer very kindly allowed me to look at the machinery and engines by which the place is lighted; and the cleanliness which pervaded the whole place was most noticeable. From here we journeyed to the lawns, which are extensive, and amongst the finest I have seen this season; when at the lower part a charming view of a corner of the mansion is afforded by breaks in the trees and

over mounds of green turf.

Equally at home in the fruit and kitchen gardens as in the park and pleasure grounds is Mr. Thome, for they are all splendidly kept. Perhaps the most striking feature in the fruit garden is the extraordinary number of Strawberries. Noble is planted in abundance, as also is John Ruskin, and both were carrying superb crops of their delicious fruits at the time of my visit. President and Dr. Hogg were producing abundance of fruit, which ripens when the two first named have long been over. Gooseberries, Raspbeiries, and Currants are bearing heavily. fair and Apples light, the fruit, owing to the long-continued drought, not having set well. In the houses, some new ranges of which have been erected recently, everything bears the stamp of health. Peaches are looking particularly well, there being an abundant supply of both ripe and unripe fiuits. Size does not appear to be a desideratum either with these or Grapes, a number of medium sized fruits and bunches being the object in view. Early Dagmar Peach is grown for early use, it being a good cropper and of very fine flavour. A number of Pines plunged in a bed of leaves in a house in which Crotons are grown look well. Many of the plants are carrying grand fruits, some of which were almost ripe while others were still in the green state. One of the finest fruits was on a plant of Charlotte Rothschild and another on the Queen. In the kitchen garden some rows of Exonian Pea are very prominent. The crop is a very heavy one and the pods of good size and remarkably well filled. In height Exonian grows from 3 to 4 feet, and is th€ best early Pea I have seen this season. Chelsea Gem is also largely grown, but

the one previously named is decidedly earlier.

The ranges of houses devoted to floriculture and the flower garden look bright and clean. In the latter Roses form the chief attraction, and are a source of never ending pleasure to all who love flowers. There are no formal-looking beds, they are not appreciated; everything is planted so that Nature may lend her aid in intensifying the charms of the plants. The houses, of which several have been recently erected, are splendidly built and well furnished with flowering and foliage plants. A brilliant scarlet Carnation, the flowers of which combine perfect form with grand substance, was very noticeable. It is a seedling of Mr. Thorne's raising, and has been named by him "Mrs. Joicey." Orchids, too, are a feature here, as mentioned in the Journal of Horticulture for June 22nd, page 495. When the houses it is proposed to build are finished, and the alterations in the park and gardens carried out, Sunningdale Park will be a grand estate.—W.

NATIONAL CARNATION AND PICOTEE SOCIETY.

(SOUTHERN SECTION.)

IF the Southern Show of the National Carnation Society is early this year it was by no means the failure that some easily frightened people anticipated. True, some growers were unable to poll their usual strength, Mr. Sydenham, for example; but most of the leading exhibitors staged extremely well, and the Show as a whole was an excellent one.

There were three stands of twenty-four Carnations, and after a good struggle between Messrs. Douglas (gardener to Mrs. Whitbourn) and Turner, the former was placed first. Both had very good stands. Mr. Douglas's flowers were as follows—Back row: Tim Bobbin (2), Charles Henwood (2), S. Adams, Lady Mary Currie, and two seedlings. Middle row: Miss Constance Grahame, Harmony, Agricola (2), Arthur Medhurst, and three seedlings. Front row: Mrs. Douglas, Edward Rowan (2), Miss Constance Grahame, Robert Lord, and three seedlings. Of Mr. Turner's smooth, fresh collection Charles Henwood, Harmony, Dr. Hogg, and Lord Lewisham were some of the best flowers. Mr. Hooper of Bath was third. Mr. Martin Rowan, 36, Manor Street, Clapham, won with twelve. His flowers were somewhat thin and flat, the varieties being Robert Houlgrave, George Melville, J. S. Hedderley, Alfred (2), J. D. Hextall, Joe Edwards, John Buxton, Gordon Lewis, Sportsman, Edward Rowan, and Rob Roy. Mr. A. R. Brown, Handsworth, Birmingham, was second—not far in the rear. His flowers were larger than those of Mr. Rowan, but one or two had fallen and weakened the stand. Mr. Chaundy, New Marston, Oxford, was third; Messrs. Thomson & Co. fourth; Mr. R. Sydenham, Birmingham, fifth; Mr. Chas. Phillips, 18, Hamilton Road, Reading, sixth; Mr. J. Walker, Thame, seventh; and Mr. Thomas Antiss, Brill, eighth. There were four stands of six, Mr. J. J. Keen, Southampton, being first with Squire Potts, James Douglas, Alisemond, C. H. Herbert, Robert Houlgrave, and John Keet. It was not a good stand, C. H. Herbert and Robert Houlgrave being anything but first rate. Mr. A. Greenfield, Sutton, was second; Mr. A. J. Sanders, gardener to Viscountess Chewton, third; and Mr. Nutt, Southampton, fourth.

There were three stands of twenty-four Picotees, Mr. Turner being first, Mr. Douglas second, and Mr. Hooper third. The Slough grower had a fairly good stand, the varieties being (back row) Lady Catherine Gordon, Esther (2), Favourite (2), Little Phil (2), and Brunette. (Middle. row) Sylvia, Mrs. Sam Beal (2), Brunette, Lady Ponsonby, Dr. Epps, Mrs. Tweedale, and Zerlina; (front row), Dr. Epps, John Archer, Madeline (2), Morna (2), Lady Holmesdale, and Mrs. Tweedale. Mr. Douglas had good blooms of Jessie, Ganymede, and Mrs. Sharp, but, as a whole, the flowers were a little thin. The first of the nine stands of twelve was that from Messrs. Thomson & Co., their flowers being very bright, clean, and fresh. The varieties were Mrs. Sharp, Little Phil, Brunette, Zerlina, Favourite, Amy Robsart, Campanini, John Smith, Dr. Huxley, J. Williams, and Mrs. Burnett. Mr. A. R. Brown was second with thin but clean flowers, Mr. Rowan third, Mr. Chaundy fourth, Mr. Phillips fifth, Mr. Sydenham sixth, Mr. Walker seventh, and Mr. Sanders eighth. There were seven stands of six, Mr. Jones winning with a beautiful box made up of Little Phil, Norman Carr, Clara Pearson, Mrs. Payne, Campanini, and Brunette. These were all good flowers, Little Phil being very fine. Mr. J. P. Sharp was second with somewhat rough flowers, Mr. Greenfield third, Mr. Ribbick fourth, Mr. Keen fifth, Mr. Jordan sixth, and Mr. J. Gilbert, gardener to the Rev. L. R. Flood,

seventh.

Yellow grounds were quite as great a feature as the whites. Mr. Chas. Blick, gardener to Martin R. Smith, Esq., Beckenham, had a splendid stand of twelve, eonsisting of Dorothy, Madame John Benary, Almira, Lohengrin, Annie Douglas, Mrs. R. Sydenham, Chrysolora, Countess of Jersey, Remembrance, Stadtrath Bail, Cowslip, and Optimus in beautiful order. Mr. Turner was second, also with a charming box, Annie Douglas, Almira, and Mrs. R. Sydenham being particularly noticeable. Mr. Douglas was third, Mr. Phillips fourth, Messrs. Thomson & Co. fifth, Mr. Chaundy sixth, and Mr. Anstiss seventh. There were thirteen stands of six, and they formed a lovely display. Mr. Jones won with Stadtrath Bail (a grand bloom), Lord Rendlesham, Victory, Almira, Mrs. Robt. Sydenham, and Atalanta, a splendid stand. Mr. Brown was second, Mr. Sydenham third, Mr. Chas. Harden fourth, Mr. Hooper and Mr. Nutt equal fifth, Mr. Keen sixth, and Mr. Henwood seventh.

The Selfs and Fancies were also a lovely display. Mr. Turner had a grand stand of twenty-four, the flowers being well filled and in beautiful colour. The back row blooms were Janira, Germania (2), King of Scarlets (2), and Romulus. Second row: Schlieben, Gladys, Terra Cotta, Mr. Murray, The Governor, and Stadtrath Bail. Third row: Mrs. Laing, Dorothy, Mrs. Fred. Romulus, Ruby, and Rose Unique. Front row: Gladys, Rose Unique, Mrs. Wilson, White Lady, Duchess of Sutherland, and Edith Wynne. Mr. Douglas was a good second, and Mr. Blick third, and Mr. Hooper fourth. Messrs. Thomson & Co. won with twelve, his varieties being Firefly, Attraction, King of Purples, Germania, F. Phillips, Mrs. Reynolds Hole, Mrs. Fred Gilbert, Celson's Santazza, and two seedlings. Mr. A. R. Brown was second with a very clean bright stand, Mr. Phillips third, Mr. Chundy fourth, Mr. Walker fifth, Mr. Rowan sixth, and Mr. Harden seventh. Mr. Harden won with Dodwell's 167, Victory, Favourite, Mdme. Van Houtte, Harmony, and Lady Mary Currie in the class for six Carnations and Pieotees; and of the seven stands of six Selfs and Fancies Mr. Jones won with Norman Carr, Almira, Stadtrath Bail, Lord Rendlesham, Germania and Gladys, all good flowers. Mr. J. F. Kew, Southend, was second with large

flowers, Mr. Jordan third, Mr. Henwood fourth, Mr. Nutt fifth, Mr.

Rebbeck sixth, and Mr. Spurling seventh.

The following were the awards for single blooms. Scarlet bizarres.-Mr. Rowan first and fifth with Robt. Houlgrave, Mr. Douglas second with a seedling, Mr. Sydenham third with Robt. Lord, and Messrs. Thomson & Co. fourth with C. H. Herbert. Crimson bizarres.—Mr. Sydenham first with Master Fred and fifth with Lord Salisbury, Mr. Douglas third with Tim Bobbin, Mr. Rowan third with Jessica, and Mr. Phillips fourth with John Harland. Pink and purple bizarres.—Mr. Douglas was first with Reliance, Mr. Greenfield second with W. Skirving, Mr. Rowan third and Mr. Brown fourth with the same variety, the latter fifth with Mrs. Barlow. Scarlet flake.—Messrs. Thomson & Co. first with J. P. Sharp, Mr. Rowan second and fourth with Sportsman, Mr. Phillips third with the same variety; and Mr. Brown fifth with Mr. Gordon. Purple flake.—Mr. Turner first with Charles Henwood, Mr. Rowan second with Gordon Lewis, Mr. Douglas third and fourth with Mrs. Douglas, Mr. Brown fifth with Billy Henderson. Rose flake.—Mr. Rowan first with Rob Roy, and fourth with Crista Galli, Mr. Chaundy second and third with Rob Roy, Mr. Brown fifth with Mr. Cooling. Heavy red edge Picotees.—Mr. Turner first with Morna, Mr. Brown second with Brunette, Mr. Phillips third and fourth with Morna, Mr. Douglas fifth with Ganymede. Light red edge.—Mr. Jones first with Mrs. Gorton and third with Thomas William, Mr. Rowan second with Mrs. Gorton, Messrs. Thomson & Co. fourth and Mr. Brown fifth with Thomas William, Mr. Rowan and Mr. Brown fifth with Thomas William Mr. Brown fifth with Thomas William. Heavy purple edge.— Mr. Keen first with Amy Robsart, Mr. Jones second with the same variety and fourth with Muriel, Mr. Rowan third with Muriel and fifth with Amy Robsart. Light purple edge.-Mr. Rowan first with Mary, Messrs. Thomson & Co. second with Edith, Mr. Brown third with Pride of Leyton, Mr. Douglas fourth with Ann Lord, Mr. Keen fifth with Pride of Leyton. Heavy rose edge.—Mr. Jones first with Campanini and third with Mrs. Payne, Mr. Turner second with Little Phil, Mr. Rowan fourth with Little Phil, and Messrs. Thomson & Co. fifth with Mrs. Burnett. Light rose edge.-Mr. Brown first and third with Mrs. Ricardo, Mr. Phillips second with Ethel and fourth with a seedling, Mr. Keen fifth with Ethel. Heavy scarlet edge.—Mr. Jones first with Mrs. Sharp, Messrs. Thomson & Co. second with the same variety, Mr. Keen fourth with Mrs. Sharp, and Mr. Douglas fifth with the same variety. There was no name with the third prize flower. Light scarlet edge.—Mr. Jones first with Favourite, Mr. Turner second, Mr. Brown third, and Mr. Keen fifth with the same variety, Mr. Douglas fourth with a seed-ling. Yellow grounds.—Mr. Jones first, Mr. Phillips third, and Mr. Douglas fourth with Mrs. Robt. Sydenham, Mr. Turner fifth with Countess of Jersey. The second prize bloom was also Mrs. R. Sydenham, but the name of the prizewinner was missing.

The border Carnations were much admired by all visitors. Mr. Martin Smith had a most beautiful collection not for competition, to which a silver Flora medal was adjudged. In the competition for nine varieties Mr. Douglas won, but his flowers were not named; Mr. Hooper was second; Mr. W. H. Divers, Ketton Hall Gardens, Stamford, third; and Mr. John Walker, Thame, fourth. Mr. Douglas was also victorious with six, Messrs. Walker, Thomson & Co., Divers, and Hooper taking the other prizes. Mr. Sage won the first of Mr. Martin Smith's prizes for twelve trusses, Mr. E. C. Goble the second, Mr. Douglas the third, Mr. Divers the fourth, and Mr. Barton the fifth. The prizes for buttonholes went to Messrs. Douglas, Thomson & Co., Walker, and Goble in the order of their names; for vases to Messrs. Douglas, Goble, and Thomson; for sprays to Messrs. Thomson, Walker, Goble, and Douglas. Messrs.

Douglas and Turner were first and second with pot plants.

Mr. T. S. Ware had a beautiful display of Carnations not for competition, and was awarded a silver Banksian medal.

HORTICULTURAL SHOWS.

DISS.—July 4th.

For five years in succession this small but vigorous Society has suffered from wet days on the date chosen for the Rose Show, but the weather was this year most propitious for the occasion; and, much as the country requires rain, everyone at Diss must have been glad that at last, just for once, "Flower Show" ceased to be synonymous with "Shower Flow." The Exhibition was held at Hall Hills, the residence of Mrs. Downton, and Roses of course were weak, as they are throughout

the country; but the Show on the whole was a good one.

For thirty-six (open) Mr. F. Cant was first, having good examples of Mrs. John Laing and The Bride. D. Prior & Son were second, including a specimen of Black Prince, which has been good this year. In the class for twenty-four (amateurs) a capital set-to took place for the Frere Memorial challenge cup between the old rivals, the Rectors of Harkstead and Sproughton. Rev. A. Foster-Melliar had a clear lead, and retained the cup for the third year in succession, Lord Macaulay, Mrs. John Laing, and Marie Baumann being among his best; but Rev. H. A. Berner's gardener was decidedly a good second, having a fine light coloured Horace Vernet and a beautiful John Bright. This bloom won the N.R.S. medal as the best H.P., but though lovely in colour it was badly divided, and a Le Havre in the same box would perhaps have better merited the distinction. Rev. F. Page Roberts was third, showing Comte Raimbaud well.

In the class for twelve Roses Mr. Berners was first, and Mr. Page Roberts second. With twelve Teas Mr. Foster-Melliar was first, showing Catherine Mermet and Marie Van Houtte well. In this box and in

his twenty-four were blooms which had been shown at the Crystal Palacc. Mr. Berners was second, showing a very clean Madame Hostc, which gained the medal as best Tea, and a fine Innocente Pirola. In the two local classes Mr. Hammond of Eye won, showing stands of considerable promise.

The herbaceous plant classes are fast becoming one of the features at Diss Show. It is very noticeable how the good example of Mr. Page Roberts, the Hon. Secretary, has caused these flowers to be taken up in the neighbourhood. Diss is but a small place, yet there were here four classes for thirty-six, twenty-four, eighteen, and twelve, and each of them was well filled by amateurs alone. Rev. Page Roberts, Mr. J. Tudor Frere, Mrs. Norris, Mr. J. C. Collins, and Rev. C. James were the principal winners, the latter obtaining the silver medal for excellence of cultivation. Neither Norwich nor Ipswich, shows of more than double the size, had such a grand or interesting display of herbaceous plants.

Vegetables were good, especially the collections shown for the prizes offered by Messrs. Sutton & Sons. Seven groups of plants were shown, the first prize going to Mr. F. Taylor, M.P. Six dinner tables were decorated by ladies in competition, Shirley Poppics and Grasses winning as they always will.

BROCKHAM.—JULY 4TH.

Rose growers will not easily forget the season of 1893. If anything can make a gardener morose it is a prolonged drought. The Brockham Rose Show was fixed for July 4th. It was seen long before that this was much too late. But shows cannot easily be shifted, and in this case a change was not possible. The twenty-ninth Show was held at Denbies, the seat of Lord and Lady Ashcombe, on July 4th, and it was the first appearance in that widely known and most beautiful place. The tent supplied by Messrs. Kendall of Dorking was pitched on the lawn near the house, close by the Beech Walk and surrounded by trees of exceeding beauty. Everything that could be done to help the Show had been done by Lord Ashcombe, and his courteous and most obliging gardener, Mr. Beesley.

It would not be possible, within the limit allowed for this article, to give a full account of the beauties of Denbies. When once you have reached the top of the hill on which the house stands, you forget the past and give yourself up to the full enjoyment of all that can be seen, which implies the grandest of Surrey scenery, and the most extensive views of the ranges of hills near and far, with the town of Dorking, picturesque, compact, and well to do, lying at your feet. To enjoy this thoroughly you should go to the roof of the house and look down upon it, as we, the Committee and the Judges, were invited to do by Lord Ashcombe who personally conducted us. And one of the first things you would notice would probably be the dozen or so lightning conductors of the approved type, one being attached to each chimney. It certainly is a very wide area, but seldom, if ever, would be seen such a pro-

vision against lightning.

On descending, an inspection of the greenhouses (one can walk under glass for more than 600 yards) and gardens was made. In the former all the plants looked the picture of health, and plants both new and old were in great profusion. Bignonia Tueri was very conspicuous, one plant blooming at the ridge of the high conservatory, another plant with hundreds of blooms rambling at great length within reach. Bignonia jasminoides was in very vigorous condition. Grevillea robusta grown as a creeper 20 feet high, was somewhat a curiosity; the Japan Medlar, Limes, Lemons, Tree Tomatoes (like an Egg Plant), Daturas, Canna Ehmani (grand flower), Eucryphia pinnatifolia (like a wild Rose), Erythrina crista-galli (called the Coral Tree) with a deep crimson lobster looking bloom (this was in the open under cover of the wall), Fuchsia fulgens and Salvia patens left out in the open all the winter, and great numbers of climbing Begonias, Fuchsias, with many other plants made these conservatories an horticultural treat.

In the outside garden mention only can be made of Torreya myristica (like a Yew), Abies pungens glauca (the gift of Mr. Appleby and planted in honour of Lord Ashcombe's promotion to the peerage), beds of Golden Thujas, Japanese Maples (Acers), Himalayan Rhododendrons (that had not stood the drought well), a fine weeping Lime Tree, a Himalayan Larch raised from seed given by Sir W. Hooker, Fern-leaved Beech, Sequoia, Abies grandis, Picea Lasiocarpa, P. Pindrow, and a fine Cryptomeria japonica, 40 high at least though planted in 1857, and a good specimen of Prunus Pissardi, and mention must also be made of the fact that over-ripe specimens of Beurré Gifford Pears were growing on the walls, although July had only just opened.

Entering the exhibition tent the visitor would be led to exclaim, "What a splendid show!" and so indeed it was. But an explanation is called for. The splendour was greatly due to no less than twelve large boxes of blooms cut from the Cheshunt Nurseries, and brought by Mr. G. Paul himself to help the Show, which, without these Roses, would have made a very poor comparison with former Brockham Rose Shows. Amongst his flowers were these: Mad. Pierre Cochet (an improved W. A. Richardson), Gustave Piganeau, Earl of Dufferin, Maric Magat, Waban, the new Tea (a sport of Catherine Mermet), T. B. Haywood, Dowager Duchess of Marlborough with a wonderful scent, a Cheshunt seedling, Duke of Wellington, Charles Gater, and Camille Bernardin and The Bride.

Mr. Appleby of the Boxhill Nurseries also greatly helped the Show by staging many decorative plants of Crotons, Dracænas, Palms, Gloxinias, and Ferns, and a box of very fresh Roses, in which Niphetos, Maréchal Niel, Mrs. J. Laing, Her Majesty, Earl of Dufferin, Etoile de Lyon, and A. K. Williams were conspicuous. The drought was account-

able for the comparatively poor show made by the exhibitors. Many of the sixty-four members had no Roses to cut, and some of the classes were not represented at all. Mr. Tate and Mr. Cuthell had it all their own way in the three first classes, as indeed they had last year as well. It is discouraging of course to the smaller exhibitors to see year by year this state of things, but it is a difficulty that committees seem to find it impossible to deal with.

In class 1, for twenty-four Roses, Mr. Tate was easily first, and the following Roses won for him the National Rose Society's gold medal. Xavier Olibo, Ernest Metz the best Rose in the Show; Madame G. Luizet, Rosieriste Jacobs, Charles Lamb, Her Majesty, Earl of Dufferin, Dr. Andry, La Rosiere, The Bride, Duchess of Bedford, Lady Mary Fitzwilliam, Ulrich Brunner, Anna Ollivier, Charles Lefebvre, Mrs. J. Laing, Horace Vernet, Maréchal Niel, Marie Baumann, Comtesse de Nadaillac, Beauty of Waltham, Maurice Bernardin, Francisca Kruger, and Alfred Colomb. Mr. Cuthcll took second prize (N.R.S. silver medal), with Paul Neyron, Anna Ollivier, Camille Bernardin, Susanne Marie Rodo-canachi, Xavier Olibo, Countess of Oxford, Merveille de Lyon, F. de Lesseps, Marie Finger, Beauty of Waltham, Duchesse de Morny, Etienne Levet, Comtesse de Serenye, Duke of Edinburgh, La France, E. Y. Teas, Ulrich Brunner, Mrs. J. Laing, Ed. Morren, Baroness Rothschild, Mdme. C. Joigncaux, Marie Van Houtte, Earl of Dufferin, and Lady Mary Fitzwilliam.

In Class 2, for twelve Teas, the Roses which won Mr. Tate the first prize (N.R.S. silver medal) were The Bride, Anna Ollivier, Marie Van Houtte, Hon. Ed. Gifford, Maréchal Niel, Souvenir de S. A. Prince, Francisca Kruger, Ernest Metz, Bouquet d'Or, Princess of Wales, Catherine Mermet, and Sunset. Mr. Cuthell took the bronze N.R.S. medal (second prize) with The Bride, Anna Ollivier, Marie Van Houtte, Hon. Ed. Gifford, Jules Finger, Maréchal Niel, Souvenir d'un Ami, Caroline Kuster, Perle de Jardin, Comtesse de Nadaillac, Madame Berard, and Madame Lambard.

For six triplets (class 3), Mr. Tate won first prize with Ulrich Brunner, Xavier Olibo, Mrs. J. Laing, M. Van Houtte, Etienne Levet, and Duchess of Bedford; while Mr. Cuthell took second rank with Ulrich Brunner, Comtesse d'Oxford, Jules Finger, Madame Victor Verdier, Baroness Rothschild, and Mad. G. Luizet. Now, good as these rosarians undoubtedly are, it is better, if possible, to see some variation in the record. A. 1, maiden; 2, cutback. B. 1, maiden; 2, cutback. C. 1, maiden; 2, cutback. Perhaps the Committee will be able to see their way to make some alteration in future.

For the twelves, class 4, Mrs. Perkins took first prize (N.R.S. gold medal), with a very nice box, consisting of Baroness Rothschild, Comtesse de Nadaillac, Sunset, Abel Carrière, Maréchal Niel, Madame Rady, The Bride, Mrs. J. Laing, Souvenir de Thérese Levet, Bouquet d'Or, Captain Christy, and Hon. Ed. Gifford. The Hon. D. Ryder took second prize with Duke of Teck, Paul Neyron, Madame Berard, Prince Camille de Rohan, François Duval, Reine du Midi, Madame M. Rady, Ferdinand de Lesseps, Abel Carrière, La France, Marie Baumann, and Reine Marie Henriette. There was no competition for the third prize, nor for class 5 (nine Teas), nor for class 6 (four triplets). In class 7 (six of any kind), Mrs. Hatch took first prize, the best of her blooms being Her Majesty. Mrs. Poland also had a fine bloom of the same Rose in the box which won for her the second prize.

For four Teas, class 8, Mrs. Hatch took first prize, and Miss D. A. Nesfield second prize. In the members' open class (9) for six of the same kind of Rose, Mrs. Perkins won the first prize with good blooms of Maréchal Niel, and Mr. Cuthell second prize with Gloire de Dijon. There were no competitors for the third prize. For six H.P.'s (same kind), Mrs. Poland with John Stuart Mill was first, and Mr. Cuthell with Camille Bernardin second.

The boxes of garden Roses (11) were perhaps the chief feature of the Show, for there were six competitors. The first prize was taken by Mr. Tate for a very beautifully arranged box, containing Lucida, Aimée Vibert, Fellenberg, Gloire de Polyantha, Safrano, Gloire de Rosomaine, Moschata Nivea, Cramoisie, Anna Maria Montravel, Clothilde Soupert, Homère, Crested Moss, Mrs. Bosanquet, Common China, Red Damask, Gloire de Dijon, Queen of Bedders, Boule d'Or, Souvenir de Malmaison. Mr. Cuthell's box, which took second prize, contained Bardon Job, Paul's Single White, Verdifolia, Pissardi, White Pet, Paquerette, Céline Forestier, Dr. Grill, and L'Ideal. For a smaller collection of garden Miss D. A. Nesfield took the first, Mrs. Perkins the second, and Sir Benjamin Brodie an extra third prize.

The dinner table decorations was represented by one entry only, which was Miss D. A. Nesfield. It was for unmarried ladies only. It was very well done, and consisted of a combination of centre and side green vases in wrought iron stands filled with Roses, Ferns, and flowers. The drawing-room decorations were more numerous, but not up to the usual mark. Miss D. A. Nesfield took first prize for a combination of yellow Eschscholtzia, Copper Beech, Grasses, and Ferns in a green glass vase in iron stand. Mrs. Benecke took the second prize for a basket, somewhat unevenly but tastefully arranged with Eucharis, Honeysuckle, Maize, Passiflora, Hollyhock, Gypsophila, and Ferns.

The buttonhole bouquets represented the old fashion (small size) and and the new (large size). The Judges were strong minded enough to give the first prize to Miss Blake for three very pretty small bouquets, and the second prize to Miss D. A. Nesfield for three extremely pretty but oversized new fashioned bouquets.

The best Rose in the Show was a very fine bloom of Ernest Metz, shown by Mr. Tate.—A. B. ALEXANDER.

HEREFORD.—JULY 5TH.

THE twenty-seventh anniversary of the West of England Rose Society, the oldest Rose Show in the kingdom, was held in the beautiful grounds of the Castle Green, as far as weather was concerned, under most favourable circumstances. A slight shower in the early morning gave an air of freshness, grateful both to the exhibits and exhibitors, many of whom we know have been disappointed and distressed this trying season. Last year, as many rosarians will sadly call to mind, the Hereford Rose Show was held—as at the National Rose Shows, Provincial Show at Chester two days later—in a continuous deluge of rain, which so interfered with the receipts that no praise too high can be given to the Hon. Secretary, Rev. F. R. Burnside, for his marvellous energy in not allowing the Exhibition to fall through, and in supplying a small, but as it fortunately turned out, a sufficiently attractive prize list, to gather together in Hereford the leading exhibitors of the season. May I stop, Mr. Editor, and ask here the oft put question, why Rose shows are not so popular as they might be, and theoretically ought to be, considering the unique position and popularity of our national flower? Many reasons there are and have been ventilated, perhaps all included in the great "indispensable" everywhere—" beer and skittles," which freely paraphrased practically means "none of your light refreshments: parachutes, tight and slack rope acrobatisms, &c., is what our tickets are taken for;" and undoubtedly this is the case. Have we not success at Shrewsbury, wet or fine? What further proof is wanted? Still, this is an opportunity your reporter does not like to miss in assigning another reason why the attendance at Rose shows is so poor, and Rose shows, as a consequence, so short-lived. He ventures to ask, Could not that stupendous lever of thought, word, and deed—the Public Press—do more?

Let any of your readers, for instance, take up his London daily of July 3rd. I had almost ventured to predict that the larger the circulation of that paper, the smaller, the more foggy and inaccurate the paragraph; and then, running his eye over the report of the National Rose Society's Exhibition at the Crystal l'alace, ask himself what pleasure or profit he had derived. It might be considered exacting perhaps to expect a strict technical report from any other than a gardening newspaper, but surely a more careful and detailed account might have been expected; while such gross inaccuracies as one of our leading champion Rose nurserymen, Mr. B. R. Cant, would, one would have thought of easy monosyllabic nomenclature, being advertised (for literally to tradesmen this is so), and this not once but twice, as "Caul." To use a slang phrase (it altogether seems so droll), really "takes the cake." I could mention in same report several similar inaccuracies, but "Ex uno disce omnes." Liberari meum animum. This surely is not the way to educate the public, or to encourage a most popular (aye, in

spite of seeming failure) but expensive industry.

Asking pardon for this long digression, your reporter must at once return to the magnificent tent, capable of holding the thousands of Rose boxes, which alas I were conspicuous only by their absence. To remedy this deficiency, the wily Hon. Sec. (Rev. F. R. Burnside) introduced a new departure (one quite fashionable among prandial bipeds), in breaking up the usual continuity of the tables into detached groups, thereby filling the entire space, without interfering with or giving extra

trouble to the Judges. As might have been expected, owing to the early and dry season, the northern exhibitors (all honour to them for so well filling the gap) carried off all the chief prizes in the three leading nurserymen's classes, the third prize not being competed for. In Messrs. Harkness & Co.'s seventy-two varicties, which took first prize, there was a conspicuous absence of Teas and Noisettes. Their blooms were wonderfully smooth, well coloured, and of fair size for the season, and had carried extremely well. They included the following varieties of H.P.'s—Gustave Piganeau (grand bloom but weakly habit), Madame E. Verdier, Général Jacqueminot (fine colour and shape), Marie Baumann, Emily Soupert, Duke of Fife, Duchesse de Morny, Countess of Oxford, Senateur Vaisse (splendid), La France, Dr. Andry, Mrs. Harkness (poor), Duke of Teck (radiant, as one might suppose), Marie Rady (superb), A. K. Williams, Suzanne Marie Rodocanachi (useful), Horace Vernet, Silver Queen, Comtesse de Ludre (after Mrs. C. Wood, very fine). Noisettes: Caroline Kuster, Charles Lefebvre, Countess of Rosebery, Reynolds Hole, Emily Hausburg, Jean Soupert, Madame Hausman, Mrs. John Laing (grand), Alfred Dumesnil, Alfred Colomb, Rosieriste Jacobs (fine), Comte de Blaccas (a globular too much alike Emilie Hausburg), Duke of Conseventy-two varieties, which took first prize, there was a conspicuous Blaccas (a globular too much alike Emilie Hausburg), Duke of Connaught, Fisher Holmes, Pride of Waltham, Harrison Weir (grand), Charles Darwin, Lady Helen Stewart, Constantine Petriakoff (superb), Auguste Rigotard, Earl of Dufferin (grand), Black Prince, Margaret Boudet, Duchess of Bedford (exquisite), Queen of Queens, John Saul, May Quennel (fine), Elie Morrel, Dr. Sewell, Merveille de Lyon, W. F. Bennett, Le Havre (good), Ulrich Brunner, François Michelon, Xavier Olibo, Capt. Christy, Dupuy Jamain, Viscountess Folkestone (grand), Madame E. Verdier, Heinrich Schultheis, Mons. E. Y. Teas, Duc de Montpensier, Duchess of Albany, Gloire de Margottin (fine), Mr. George Dickson, Sir Rowland Hill, Magna Charta (good), Avocat Duvivier, and Marie Verdier. The second prize was taken by the English Fruit and Rose Company, Limited, (Cranstons), who had fine blooms of Duke of Wellington, Tea Souvenir d'Elise, and Her Majesty. The thirty-six trebles fell to Messrs. Mack & Sons, Yorkshire, whose varieties included H.P. Charles Lefebyre, Merveille de Lyon, Rosieriste Jacobs, Mrs. John Laing (fine). Lefebvre, Merveille de Lyon, Rosieriste Jacobs, Mrs. John Laing (fine), Ulrich Brunner (magnificent), S. M. Rodocanachi (superb), Pride of Waltham, A. K. Williams, Baroness Rothschild, Dupuy Jamain, Princess Beatrice, Star of Waltham, Marquise Castellane, Duke of Teck, Marguerite

de St. Amand, Louis Corbie (Mr. Mack speaks very highly of this old Rose), Victo Hugo (good), Magna Charta, Alfred Colomb, Comtesse de Morny, Comte de Raimbaud (grand), La France, Duke of Wellington (good), Countess of Rosebery, Marie Baumann. Heinrich Schultheis, Sultan of Zanzibar (splendd colour). Madame Gabriel Luizet, Etienne Lavet Charles Darwin (good). Levet, Charles Darwin (good), E. Y. Teas (fine), and Sir Rowland Hill. The second prize was taken by the English Fruit and Rose Company, Limited (Cranstons), who had remarkably fine blooms of Général Jacqueminot, Abel Carriere, and Lady Sheffield.

The twenty-four trebles first prize also fell to Messrs. Harkness with grand blooms of H.P.'s Etienne Levet, Mrs. John Laing, Duchesse de Morny, Prince Arthur, Mdme. Isaac Pereirc (superb), Alfred Colomb (grand), Sir R. Hill, Elie Morel, Mons. E. Y. Teas (splendid), M. Boudet, Dupuy Jamain, Merveille de Lyon (grand), Duke of Wellington, Violette Bowyer, Mdme. Haussmann, La France, Maric Bauman, and Heinrich Schultheis. The second prize fell to the Fruit and Rose Company, Limited (Cranston). The third to Mr. C. Whiting White Crass Hereford

Whiting, White Cross, Hereford.

For twelve varieties trebles, Messrs. Mack & Sons, Yorkshire, were first, showing finely the following varieties:—H.P. Horace Vernet (splendid), La France, A. K. Williams, Mrs. John Laing, Victor Hugo (superb), Merveille de Lyon, Alfred Colomb, Mdme. S. Rodocanachi (very fine), Charles Lefebvre, Auguste Rigotard, Baroness Rothschild, Prince Arthur (grand). Second prize, Mr. H. Merryweather; third prize, Mr. Charles Whiting Mr. Charles Whiting.

In the amateur division first prize fell to Mr. Drew, Ledbury, thirtysix varieties, who also won one the N.R. Society's silver medal, among which may be specially noticed H.P. Dupuy Jamain (grand), S. M. Rodowhich may be specially noticed H.F. Dupuy Jamain (grand), S. M. Rodo-canachi, Charles Lefebvre, Merveille de Lyon, Ulrich Brunner, A. K. Williams (fine), Gustave Piganeau (superb), Beauty of Waltham, Mrs. J. Laing, Marie Baumann, Etienne Levet, Comte Raimbaud, Captain Christy, Countess of Oxford (splendid), Violette Bouyer, E. Y. Teas, Le Havre, François Michelon, Prince Arthur (good), Queen of Queens, Victor Hugo, Marie Verdier, Pierre Notting, and Heinrich Schultheis. No other competitor. In the amateur class restricted to Herefordshire the first prize (eighteen varieties), which included the N.R.S.'s gold medal, was taken by Mr. John Ough, with blooms very fresh and well set up, as follows:—H.P. Louis Van Houtte, Gustave Piganeau (grand), Her Majesty (not her year), Duke of Welllington, Merveille de Lyon, S. Rodocanachi, Comtesse de Serenye, Earl of Dufferin, A. K. Williams (fine), Countess of Oxford, Exposition de Brie (grand), Baroness Rothschild, Marie Baumann, Marchioness of Dufferin, Tea The Bride, H.P. Marie Rady (grand), Mrs. John Laing, and Alfred Colomb.

Teas and Noisettes were shown remarkably well considering the Messrs. Harkness & Sons continued their list of first prizes with an excellent stand of eighteen varieties open, which included Thérèse Levet (bright and not too dark), Marie Van Houtte, Souvenir d'un Ami, Catherine Mermet, Comtesse de Nadaillac (fine in size and colour), Madame Bravy, Etoile de Lyon, Innocente Pirola, Madame Hypolyte Jamain, Francisca Kruger (fine), Miss Caroline Kuster, Jean Ducher, Souvenir de S. A. Prince, Souvenir d'Elise (superb), Madame de Watteville, The Bride, Princess of Wales, and Madame Cusin. Second prize,

Messrs. Mack; third prize, Mr. H. Merryweather.
In the amateur class for Teas and Noisettes, first prize (given by Mr.

Frank Cant), Mr. Conway Jones.

The prizes for twelve blooms of any light Rose was carried off by Messrs. Harkness with grand blooms of Merveille de Lyon; second, English Fruit and Rose Company (Cranston); third, Messrs. Mack and Son. For twelve blooms of any sort of dark Rose, first prize, Messrs. Mack, with H.P. Marie Baumann; second, Messrs. Harkness; third, English Fruit and Rose Company (Cranston).

The class for herbaceous flowers was keenly contested, the number of varieties staged, and good taste shown in staging, being very noticeable. First prize, Mr. Davenport, Foxley; second prize, Mr. Watkins, Welcroft; third prize, Sir George Cornwall, Bart., Moccas Court. The table decorations were much admired and thus awarded. First, Miss Watkins; second, Mrs. Blashill; third, Miss Stanhope. Thanks are due to numerous friends, and especially to Mr. Charles Whiting, Whitecross Nurseries, for collections of stove and greenhouse plants to decorate the tents. One great feature in the Exhibition, and last, but not least, was the large and charming collections of Sweet Peas and Violas exhibited and arranged as to colour and general effect by Mr. Jones, manager to Messrs. Dobbie & Son, Rothesay. It is worthy of mention that one of the Violas (Violetta) was exquisitely sweet-scented. The Judges were the Rev. C. H. Bulmer, Mr. John Cranston, Mr. Harkness, and Mr. W. Drew.—THE HEREFORDSHIRE INCUMBENT.

IPSWICH.—JULY 5TH AND 6TH.

THE extremely few members of Ipswich Horticultural Society who are interested in Roses were naturally sorry that it was decided to hold a two-days Show, and that they could not therefore enjoy the countenance of the N.R.S.; but they were in a most hopeless minority, and were grateful for being allowed to show Roses at all, and that the first day at least did not clash with any other East Anglian show. The Show was held, as usual, in Christ Church Park, but the spot chosen seemed unnecessarily near to the uninhabited house, which gave a somewhat melancholy air to the surroundings. Competition was not strong in the

Rose classes, and the standard of merit was low.

In the class for thirty-six (open) Mr. F. Cant was first, having a very good stand, of which Mrs. John Laing was again his most noticeable bloom. Messrs. D. Prior & Sons were second, having a very

fine Horace Vernet and a neat bloom of Ella Gordon. Mr. Woods of Woodbridge was third. In the class for twelve trebles (open) the judging showed a very good example of deciding equal point merits by arrangement and general appearance. Messrs. Prior & Sons and F. Cant were absolutely equal in points, but the former's stand was so decidedly superior in arrangement, evenness, and general beauty as to be held quite worthy of the additional point necessary to a win. A fine triplet of Marechal Niel in the stand of Messrs. Prior contributed to this result. In twelve Teas (open) Messrs. Prior were first and F. Cant second, the exhibits being only fair.

In thirty-six Roses (amateurs), Rev. A. Foster-Melliar's was the only exhibit; the blooms were but moderate. In twenty-four Rev. H. A. Berners was first, and Mr. Orpen, of Colchester, second with a poor stand. In twelve, Mr. Parsons of Woodbridge won with a very promising stand, having Marie Van Houtte and Maréchal Niel in good condition. Mr. Berners was second, and Mr. Orpen third. In twelve Teas Mr. Berners was first, Mr. Orpen second, and Mr. Foster-Mollion thind. In the three firsts and thind the poor to the latest the description of the latest the description. Melliar third. In the first and third stands most of the blooms had already done duty at Diss. In six Roses of any sort Mr. Orpen was first with fine Maréchal Niels, Mr. Parsons second with Mrs. J. Laing, and Mr. Parsons third with Medama Cabriel Luizet. Mr. Berners third with Madame Gabriel Luizet.

The local classes were only fair. In three classes for bouquets and buttonholes Mrs. Orpen was, as usual, invincible, and indeed seems to have frightened away other competitors. In the decoration of wild flowers with Grasses Miss O. E. Jennings won easily, having the only

light arrangement. Table decorations call for no comment. In groups, Mr. J. H. Southgate, gardener to Mr. Whitfield King, was a very good first, as it was not easy to find fault with his exhibit. Mr. Jacobi, of Ipswich, showed herbaceous plants well. The weather was glorious, and it is to be hoped that the funds profited accordingly.

NORWICH .- JULY 6TH.

THE extremely flourishing Norfolk and Norwich Horticultural Society had the good fortune not only of a cloudless day, but also of having chosen last year the Royal wedding day as the date of their Show. There was one confiding amateur who journeyed to Norwich with thirty-six blooms, cut the same day as another thirty-six for Ipswich, in the full expectation that he would be unopposed at Norwich for the principal amateur prize of the eastern counties. The place chosen was "Mouseholes," the seat of J. Poyser, Esq., and the tents were pitched in a pretty hollow, but oh! such a hot spot. There was some shade at a distance from the Rose tent, and thither wended the confident one to find in possession a genuine Norfolk amateur, who seldom exhibits largely, with boxes upon boxes literally overflowing with fine Roses. When it is stated that this gentleman actually set up and exhibited of his superabundance on July 6th, 1893, an extra stand of thirty-six really fine samples of Baroness Rothschild, it may be imagined that the amateur first mentioned not only speedily lost all traces of his former self-confidence but began to wonder uneasily if he had ever been heard to say that there were no strong Rose amateurs in Norfolk proper.

In the class for forty-eight, open, Mr. B. R. Cant was first with fine large blooms, though somewhat rough and dirty. His best blooms were Her Majesty, and a small but charming example of Ethel Brownlow; Marchioness of Dufferin was dirty and bad, as it has generally been this year. Messrs. Burch of Peterborough were second with smaller, but cleaner and neater blooms. They had Horace Vernet very fine, but this specimen again was absolutely unshaded with a darker tint as usual. Messrs. Prior of Colchester were third with an inferior stand. In eighteen trebles, open, Mr. B. Cant was again first, and Messrs. Prior second. The latter's stand was rather crowded, but this must have been rather a near thing. Messrs. Prior third with a high coloured triplet of

Jean Ducher.

In thirty-six blooms (amateurs) Rev. A. L. Fellowes, of Beighton Rectory, was first, his blooms being large and heavy though rather overblown and not exhibited to the best advantage. His best bloom was Emilie Hausberg, which has been good this year; this gained the medal as the best amateur H.P. Baroness Rothschild was also good, and he had also originally two wonderful Teas, Anna Ollivicr and Marie Van Houtte, but these promptly succumbed under canvas. Rev. A. Foster-Mellier of Sproughton was a close second (three points), Thomas Mills (!) being perhaps his best. Miss Penrice of Witton was third. In twelve Rev. A. Fostertrebles (amateurs) Rev. A. Foster-Melliar was placed first, alternate triplets of H.P.'s and Teas having a good effect. Gustave Piganeau and Comtesse de Nadaillac were his best. Rev. A. L. Fellowes was second, showing nothing but H.P.'s placed in rows. In the class for twenty-four, Rev. A. L. Fellowes was again first, Mr. T. C. Blofeld second, and Rev. F. Page Roberts third.

In local classes, which were well filled and contested, the medal Tea was found in a badly shown Maréchal Niel in the six of Mrs. Amys Lyde. In the class for twelve Teas Rev. F. Page Roberts was first with very small blooms, but shown with his usual skill; Rev. A. Foster-Melliar second; and Rev. A. L. Fellowes third.

For twelve Roscs of a sort, Rev. A. L. Fellowcs left his rivals out of sight with La France and Comtesse de Nadaillac respectively. In six of a sort the samples were bad, and somebody was ashamed of his two winning stands. Colonel Rous exhibited as an extra twenty-four Maréchal Niels of fair quality, and the extraordinary stand of thirty-six Baroness Bethackilds shows by Box A. T. Fellows six Baroness Rothschilds, shown by Rev. A. L. Fellowes, was not honoured as it should have been with an extra prize. This honour was, however, awarded to a large exhibit of garden Roses and Polyanthus by the same gentleman.

Mr. John Green of Dereham had a pretty general stand, Reynolds Hole Carnation and a variegated Saxifrage being among the most noteworthy of his exhibits. Messrs. Daniels Bros. had also a large stand, Gloxinias and Begonias being conspicuous. Gloxinias were finely shown by H. Trevor, Esq., and the fruit was good. To genuine florists, however, perhaps the most notable exhibit was the seedling Picotees and Pinks shown by Rev. C. Fellowes of Shottesham. Twelve of each were shown, many of them unnamed, and a large proportion, of the Picotees especially, was considered by experts to be of very high merit.—W. R. RAILLEM.

BATH .-- JULY 6TH.

As a rule the Rose shows at Bath are both extensive and high-class, most of the leading rosarians in the country competing. This year there was, owing to the drought, a great falling off in the number of exhibits, but all things considered the reputation of the Society has not suffered. It is also most gratifying to note that for once their proverbial misfortune as regards the weather was changed, a "Royal" day being experienced, and the finances of the Society will be improved accordingly.

There were two competitors in the nurserymen's class for seventy-two single trusses of Roses, distinct, Messrs. Harkness & Son, Bedale, being first with a collection that would have been hard to beat, even in a more favourable season. Of these the best were Comtesse de Ludre, Duchesse de Morny, Susanne Marie Rodocanachi, Beauty of Waltham, Marie Baumann, Ulrich Brunner, Gustave Rousseau, Rosieriste Jacobs, Marie Rady, Madame Victor Verdier, A. K. Williams, Mrs. J. Laing, Countess of Oxford, Madame C. Wood, Fisher Holmes, Général Jacqueminot, Lady Mary Fitzwilliam, Edward Andry, Margaret Dickson, Prince Arthur, Margaret Bondet, Earl of Dufferin, Charles Lefebvre, Elise Morel, Xavier Olibo, Comte de Raimbaud, Exposition de Brie, Le Havre, Countess of Rosebery, Lord Macaulay, Alfred Colomb, Sir Rowland Hill, Crown Prince, Etienne Levet, Captain Christy, Reynolds Hole, Madame H. Jamain, Camille Bernardin, Magna Charta, Grand Mogul, La France, Merrie England, May Quennell, Mons. Noman, Madame V. Verdier, Madame Gabriel Luizet, Marquise de Castellane, Duke of Connaught, and Madame J. Perriere. Messrs. Cooling & Son, Bath, were a very creditable second, having good fresh blooms of Alfred Colomb, A. K. Williams, Merveille de Lyon, a seedling of the same character as the latter, but much fuller, Pierre Notting, George Baker, Harrison Weir, Duchess of Bedford, E. Y. Teas, Gustave Piganeau, Lord Bacon. Horace Vernet, and Dupuy Jamain.

Lord Bacon, Horace Vernct, and Dupuy Jamain.

Messrs. Harkness & Sons were also well first with thirty-six triplets, and which comprised fine fresh blooms of Etienne Levet, A. Colomb, A. K. Williams, Prince Arthur, Madame E. Verdier, Mrs. J. Laing, Madame Haussman, Comtesse de Ludre, Duke of Wellington, Countess of Rosebery, Dupuy Jamain, Gustave Piganeau, Reynolds Hole, Marie Baumann, and Exposition de Brie. Messrs. Cooling & Son were second, they also showing well. With eighteen triplets Mr. G. Mount, Canterbury, was first, such varieties as Mrs. J. Laing, Ulrich Brunner, Prince Arthur, Géneral Jacqueminot, Fisher Holmes, Abel Carriere, and Dupuy Jamain being the best in his stands. The second prize went to Mr. J. Mattock, Oxford, who had good blooms of Lady Sheffield, Madame J. Laing, C. Lefebvre, Mons. E. Y. Teas, and Pierre Notting. The first prize for thirty-six single trusses, distinct, was well won by Mr. Mount, this being one of the best exhibits in the Show. Very fresh and good were Général Jacqueminot, Mrs. J. Laing, Dupuy Jamain, A. K. Williams, Earl of Dufferin, Duke of Wellington, Marie Rady, C. Darwin, Countess of Rosebery, Fisher Holmes, Eugène Fürst, Madame Vietor Verdier, John Bright, Alfred Colomb, Marie Baumann, and Louis Van Houtte. Mr. J. Mattock was again second, his best being Earl of Dufferin, Mrs. J. Laing, Marie Baumann, Marie Rady, and Xavier Olibo.

Houtte. Mr. J. Mattock was again second, his best being Earl of Dufferin, Mrs. J. Laing, Marie Baumann, Maric Rady, and Xavier Olibo.

There was good competition in the class for eighteen Teas or Noisettes, Messrs. Harkness & Son winning first prize with a very superior stand, which comprised Cleopatra, to which was awarded a silver medal of N.R.S., Madame H. Jamain, Souvenir d'un Ami, Madame Hoste, Comte de Nadaillac, Souvenir de S. A. Prince, Ernest Metz, The Bride, Madame de Watteville, Souvenir d'Elise, Francisca Kruger, Caroline Kuster, Thérèse Levet, Hon. E. Gifford, Catherine Mermet, Innocente Pirola, and Madame Bravy. Mr. G. Mount was a creditable second, his best being Niphetos, The Bride, Souvenir d'un Ami, Souvenir d'Elise Vardon, and Maréchal Niel, the latter being thought by many fully deserving of the medal which went to the bloom of Cleopatra already noticed. Mr. J. Mattock was third.

Amateurs' classes were badly filled, Mr. S. P. Budd having matters very much to himself. This gentleman's exhibit of thirty-six varieties, single trusses, fully deserved the award of a first prize, being very considerably better than he expected to cut two days prior to the Show. The best were Charles Lefebvre, Sultan of Zanzibar, François Michelon, E. Y. Teas, Marie Van Houtte, Sir Garnet Wolseley, S. M. Rodocanachi, Horace Vernet, Ernest Metz, A. K. Williams, Madame Vietor Verdier, Le Havre, Reynolds Hole, Marie Baumann and Longfellow: With cighteen varieties, triplets, Mr. S. P. Budd was again first. For twenty-four single blooms, distinct, Mr. H. Hobbs, Bristol, was well first, his stand comprising good Auguste Rigotard, Horace Vernet, Mons. Bonsteten, Mrs. J. Laing, A. Colomb, Dr. Andre, Prince Arthur, Camille Bernardin, Captain Christy, and E. Y. Teas. Mr. J. Parker, Headington, was second, his most noteworthy blooms being Senateur Vaisse, Marie Baumann, Eclaire, and Horace Vernet. With twelve blooms Mr. J. Parker was first, Mr. T. Hobbs second, and Mr. R. Hull, Sutton Benger, third. The first prize for twelve triplets went to Mr. T. Hobbs. The best eighteen Teas was shown by Mr. S. P. Budd, among these being very creditable blooms. Mr. A. H. Gray, Bath, was second. With twelve varieties Mr. J. Parker was first. Mr. T. Hobbs

second. Mr. S. P. Budd was easily first with six triplets, Mr. J. Parker being second and Mr. A. H. Gray third.

Some of the open classes were very well filled, this being especially the case in that for twelve trusses of any Rose. Messrs. Harkness and Son had a grand stand of Mrs. J. Laing, a bloom among these being selected for the award of National Rose Society's silver medal for the best Hybrid Perpetual in the Show. Mr. J. Mattock was a good second with the same variety. Mr. J. Mount was first with any yellow Rose, having a good stand of Maréchal Niel, Mr. A. H. Gray was second. A fine stand of Gustave Piganeau gained Messrs. Harkness the premier award for the best crimson Rose, Mr. G. Mount being second with Fisher Holmes. Prizes were also offered for twelve distinct garden decorative Roses in bunches, and with these Messrs. G. Cooling & Son were well first, staging fine bunches of Aimie Vibert, Madame Bruant, Princess de Nassau, Madame Lambard, Fellemberg, York Rose, Cheshunt Scarlet, Single Perpetual White, Triomphe de Noisette, Madame Bravy, Pappilon, and Souvenir de la Malmaison. Local classes were not well filled, the most noteworthy exhibit in these being the stand of thirty-six varieties, single trusses, that gained Mr. A. H. Gray a gold medal.

The competition in the class for nine bouquets of Roses was close, Mr. J. Mattock being first, Messrs. G. Cooling & Son second, and Mr. J. Bradbury third, all showing well. Very good also were the exhibits of hardy herbaceous flowers in bunches. Mr. F. Hooper, Widcombe, was a good first, and Mr. A. A. Walters, Bath, second. With twenty-four bunches hardy annuals Mr. A. F. Newman, Bath, was well first, the second prize going to Mr. F. Hooper. Mr. R. B. Cater had a first prize for a pretty basket of Orchids, Mr. A. F. Newman being a creditable second in the same class.

Good prizes were offered for a group of miscellaneous plants arranged for effect on a space not exceeding 200 square feet. Mr. J. Cypher, Cheltenham, was well first for a very light and tasteful arrangement, Messrs. Cooling & Son being second, and Mr. T. J. Tate, gardener to W. Pumphrey, Esq., Bath, third. Mr. Cypher was also first for fine-foliaged plants. A fairly large tent was principally devoted to Tuberous Begonias, a fine display of these being made. The silver cup, value £5 5s., offered by the Rev. E. Lascelles, a famous local raiser of Begonias, for twelve plants was well won by Mr. J. B. Blackmore, Tiverton, who had grand plants; Mr. Blackmore also took the lead in several other classes, showing remarkably well in each instance. Other successful exhibitors were Mr. W. Bees, gardener to D. S. Carr, Esq., Tiverton; and Mr. E. Dagger, gardener to Mrs. Simms. Messrs. Blackmore and T. Wilkins, Blandford, were the most successful with cut blooms, the last named taking one of the special prizes offered by Mr. B. R. Davis, Begonia grower, Yeovil.

Non-competitors' exhibits comprised a grand display of Tuberous Begonias in a cut state by Mr. B. R. Davis, the varieties, both single and double, being very superior. Messrs. Cannell & Sons, Swanley, also showed Tuberous Begonias in fine style, their doubles being particularly good. Very attractive were the Sweet Peas and bedding Violas in bunches with a background of black velvet, Pansies and Marigolds brought from Scotland by Messrs. Dobbie & Co., Rothesay. Carnations were extensively and well shown by Mr. F. Hooper. Certificates of

merit were awarded to all these exhibits.

FARNINGHAM.—JULY 6TH.

THE fifteenth annual Show of the Farningham Rose and Horticultural Society was held on the above date. The Rose classes were not very well filled, doubtless owing to what was, considering the season, a late date, but possibly owing a little to the Royal wedding. However, the Exhibition as a whole was a good and attractive one. General Edwards is the Hon. Secretary and was able to show a good balance in his last financial statement, so that the Society may be considered to be on a firm footing.

Two competed in class 1, which was for thirty-six varieties, and Mr. Mount was placed first for an excellent stand, in which Comtesse de Nadaillac, Duke of Wellington, and Eugène Fürst, were the best of an even and well coloured collection. Colonel Pitt, Turkey Court, Maidstone, was second with a fair box, in which Marie Rady was far the best bloom. Le Havre was also very good. The remainder were a little uneven in merit, but the stand was a good one considering the season: The Colonel has shown consistently well this season. The same result was apparent in the class for eighteen Teas and Noisettes. Mr. Mount had a charming box, although Souvenir de S. A. Prince was terribly blown and weakened it considerably. The best flowers were Souvenir d'un Ami, Niphetos, Comtesse de Nadaillac, and Madame Cusin, but all were good with the exception of the one first named. Colonel Pitt's flowers were much smaller, but clean and fairly fresh.

In the amateurs' class for twenty-four Colonel Pitt won somewhat easily, although several of his flowers were very weak. A splendid Marie Rady, which was awarded a silver-gilt medal as the best H.P. in the Show, a fine Horace Vernet, and good examples of Ulrich Brunner and Madame Victor Verdier retrieved the position, and secured the award. Dr. Tucker, The Limes, Swanley Junction, was second with much smaller but fresh flowers; and R. L. Knight, Esq., Sittingbourne, was third. Dr. Tucker was victorious with twelve Teas. His flowers were very small, but otherwise they were good, Comtesse de Nadaillac, Niphetos, and Marie Van Houtte being charming blooms. Colonel Pitt had larger flowers, but one or two were well past their best, and lost points. The latter appeared to be the only exhibitor of six trebles, and received the second prize, his stand being somewhat weak. Mr. Gibson, gardener to T. F. Burnaby Atkins, Esq., was the only exhibitor of six of one

variety (light), and received a third prize for a moderate box of Niphetos.

In the third division the first prize for twelve blooms went to C. J. Grahame, Esq., Croydon, who had a fairly good stand, Fisher Holmes and Dr. Andry being the best flowers. Mr. Gibson was second, receiving a special bronze medal for A. K. Williams, and Mr. R. Edwards, The Gardens, Beechy Lees, Otford, was third. Mr. Grahame had a very neat stand of nine Teas, the flowers being clean and fresh, if small. The silver medal was awarded to his bloom of Comtesse de Nadaillac. Dr. Tucker was second. Mr. Barber, gardener to J. H. Dalton, Esq., The Oaks, Chislehurst, won with six; Mr. Couchman, gardener to A. Lanceley, Esq., Farningham, being second.

Pansies and cut flowers generally formed a bright display. Dr. Ashurst was first with twelve of the former, Mr. Gibson being second, and T. Denne, Esq., Wilmington, third. Mr. Gibson had the best box of cut flowers, and an excellent one it was, doing him great credit. Mr. Edwards was second; Mr. Dunster, gardener to the Rev. J. Williamson, third, and Mr. Barber fourth. Some very tastefully arranged vases, baskets, &c., were exhibited by Miss Solomon, Miss K. Smith, Miss Wood, Miss Hodsoll, Miss Rita Jameson, Miss Edwards, Miss F. Smith, Miss N. E. Solomon, Miss Emily Solomon, Miss Dalton, Miss K. Hodson, Miss Ashurst, Miss Sybil Edwards, Miss E. E. Smith, Miss Agnes Solomon, and Miss Maynard, all of whom received prizes.

Table plants were extremely well shown by Mr. Edwards, Mr. Gibson, and Mr. Potter, gardener to Sir Mark Collett, Bart., St. Clere, Kemsing, Sevenoaks, who were first, second, and third in the order of their names. Groups of plants were good, Mr. J. D. Abbott, gardener to Sir W. Hart Dyke, being first; Mr. T. Abbott, gardener to W. Moore, Esq., second; and Mr. Gibson third. The prizes for Ferns went to Mr. Barber and Mr. T. Abbott; and those for stove and greenhouse plants to Messrs. Gibson, Edwards, and Potter. Colonel Pitt took the lead with Grapes, his bunches being excellent both in the white and black classes. Messrs. Potter, Winnill, and Edwards received the minor prizes. Mr. Potter won with a Melon. There was an extensive and good display of vegetables. Mr. Edwards was first with twelve varieties, Mr. Winnill with nine, and Mr. Baldwin, gardener to J. C. Crossley, Esq., with six, the latter being for Messrs. Sutton's prizes. Mr. T. Abbott and Mr. Nicol were also prizewinners. Mr. T. Abbott had the best Cueumbers, and Mr. Baldwin the best Tomatoes. The first prize for a table went to Mr. J. D. Abbott.

Messrs. H. Cannell & Sons had an interesting collection of Caetaceous plants, together with some beautiful Begonias and Gloxinias. They also

had a large and fine mixed group of plants.

WOLVERHAMPTON.—JULY 11TH.

CONSIDERING the season there was a surprisingly good display of Roses at Wolverhampton on the above date. It is true several of the blooms were more or less faded, and more appeared to have been injured by wind and rain, still excellent collections were staged by northern growers. In the class for seventy-two olooms, distinct, the first and second prizes of £7 10s. and 5 guineas, given by the Mayor of the town, C. T. Mander, Esq., were won by Messrs. Harkness & Sons, Bedale, and R. Mack & Sons, Catterick Bridge, respectively, Messrs. Merryweather & Son, Southwell, being third.

With forty-eight blooms, distinct, Messrs. Mack & Son were first with a really fine collection, Messrs. Harkness and Merryweather showing well for the remaining prizes, which they won in the order of their names. In the thirty-six bloom class Messrs. Harkness & Sons won the premier position, Messrs. Merryweather being second, and Perkins and Son third in good competition. In the twenty-four bloom class the Bedale firm were again to the fore, second honours going to Southwell,

and third to Hereford—the English Fruit and Rose Company.

Messrs. Merryweather were the premier exhibitors of new Roses. In the class for twelve dark Roses Messrs. Mack & Son were first with Horace Vernet, Harkness & Sons second with Alfred Colomb, and D. & W. Croll, Dundee, third with Maurice Bernardin. A good class. The light bloom class brought out probably the finest stand ever seen of Merveille de Lyon. Mr. Pemberton, one of the Judges, remarked the stand contained "six silver medal blooms." It was certainly a splendid stand, and will not soon be forgotten. Messrs. Perkins & Son were second, and the Hereford Roses third, both stands Mrs. J. Laing. The winners in the open class with Teas were Messrs. Croll, Merryweather, and Townsend, but all the blooms were injured by the weather.

In the gardeners' and amateurs' class for thirty-six blooms the prizes were won by Messrs. Budd (Bath), Pemberton (Havering), and Robins (Wolverhampton) in the order named, with very good collections. Mr. Budd was first with twelve Teas, the best stand of these Roses in the

Show

A large general Exhibition was held at the same time, but cannot be further referred to this week. Rain fell in torrents at intervals on the opening day, and must have prejudiced the attendance of visitors

EARL'S COURT.—JULY 12TH.

DESPITE the heavy fall of rain on the preceding evening there was a fair display of Roses, Carnations, and other flowers at the Gardening and Forestry Exhibition at Earl's Court on Wednesday, July 12th. Fruit was also shown in grand condition, the Grapes being specially fine.

Carnations were very good, especially those shown by Mr. M. Rowan, Clapham, who was awarded the first prize for twenty-four blooms. The best of these were Rob Roy, George Melville, John Buxton, and W. Skirving. Mr. C. Turner, Royal Nurseries, Slough, was a close

second with a stand of bright flowers. The third prize went to Mr. J. Douglas, Great Gearies, Ilford. Mr. G. Chaundy, New Marston, Oxford, secured the leading award for twelve Carnations, showing fresh and brightly coloured flowers. The second prize in this class went to Mr. F. Hooper, Widcombe, Bath, for a stand of good blooms; Mr. A. J. Sanders, gardener to Viscountess Chewton, Bookham Lodge, Cobham, being third. There were only three competitors in each of the

Mr. C. Turner secured the premier honours in the class for twenty-four Picotees, showing grand flowers. The best were Mrs. S. Beal, John Archer, Morna, Madeline, Favourite, and Brunette. Mr. Douglas was second, and Mr. M. Rowan third. In both cases good flowers were staged. There were only three competitors in the class last mentioned. Of twelve Picotees there were four exhibitors, and the competition was somewhat keen. Mr. F. Hooper, however, gained the premier prize for a stand of fresh flowers. Mr. G. Chaundy was a good second, and Mr.

A. J. Sanders third.

There were nine exhibitors of twelve self and Fancy Carnations, and consequently the first prize, which went to Mr. J. Walker, Thame, was well won. The flowers were very good, especially Alfred Grey, Duchess of Portland, and Rose Unique. Mr. Rowan was a close second, Mr. G. Chaundy being third. Mr. J. Douglas won with twelve yellow ground Picotees, staging splendid flowers. Mr. C. Turner was second, and Mr. Chaundy third. Mr. T. Anstiss, Brill, gained a first-class certificate for Carnation Mrs. Anstiss, a grand apricot-coloured self. Mr. C. Turner was again first for twenty-four self and Fancy Carnations, Mr. J. Douglas being second, and Mr. A. Smith, Downley, High Wycombe, Bucks, third.

Mr. G. Wythes, gardener to Duke of Northumberland, Syon House, sent a collection of border Carnations, not for competition (silver medal). Messrs. G. Paul & Son, Cheshunt, also had some Carnations. A box of new dwarf Cannas were likewise sent by Messrs. Paul, to whom a silver medal was awarded for their various exhibits. Mr. J. Walker, Thame,

secured a silver medal for a collection of border Carnations.

Mr. Chas. Turner, Royal Nurseries, Slough, gained the first prize in the class for forty-eight distinct Roses, three trusses of each. The best were Prince Arthur, Maréchal Niel, Crimson Rambler, A. K. Williams, and Louis Van Houtte. The first prize and silver medal in the class for forty-eight Roses, distinct, single trusses, was awarded to Messrs. Paul & Son, Old Nurseries, Cheshunt, who staged A. K. Williams, Alfred Colomb, Ernest Metz, Madame Gabriel Luizet, La France, and Her Majesty in good form. In the class for twenty-four Roses distinct three trusses of each Messrs. In the class for twenty-four Roses, distinct, three trusses of each, Messrs. Prior & Son took the premier position, with Mr. Geo. Mount a close second. Mary Bennett, Jean Ducher, Queen of Queens, Lady Sheffield, Souvenir de la Malmaison, and Catherine Mermet were amongst Messrs. Prior's best. Messrs. D. Prior & Son gained the first prize for twentyfour distinct Roses. Horace Vernet, Ulrich Brunner, Anna Ollivier, and Chas. Lefebvre were amongst the best. Mr. G. Mount was a very close second. Messrs. D. Prior & Son, Colchester, were the only competitors in the class for twenty-four Teas or Noisettes, and the first was accorded to them. The stand included Madame Willermoz, Edith Giffard, Perle des Jardins, Madame Lambard, and Jean Ducher in grand form. Mr. G. Mount, Canterbury, was awarded the first prize for eighteen Tea or Noisette Roses, distinct, showing, amongst others, Hon. Edith Gifford, Catherine Mermet, Innocente Pirola in fine form. Messrs. Paul & Son were awarded the first prize and a silver medal for twentyfour bunches of garden Roses, staging a beautiful collection. Mr. A. Gibson, gardener to T. F. Burnaby Atkins, Esq., Halstead Place, Sevenoaks, was awarded an extra prize for a ereditable box of twelve bunches of garden Roses. Mr. Gibson was again first for twelve distinct Hybrid Perpetual Roses, Mr. Jas. Parker, Oakfield, Hitchin, being second, and Miss E. Bailey Denton, Orchard Court, Stevenage, third. Mr. Jas. Parker was awarded the first prize for twelve Tea or Noisette Roser in distinct varieties staged a good selection. Messrs. Gco. Jackman, Woking, staged a large collection of Roses not for competition (silver medal).

Mr. H. B. May, Dyson's Lane Nurseries, Upper Edmonton, staged a very fine magnificent group of foliage plants. Dracenas, Ferns, Crotons, Palms, Caladiums, and Isolepis gracilis were amongst the most prominent (gold medal). A collection of hardy plants was excellently arranged by Messrs. J. Cheal & Son, Crawley. This exhibit included Gaillardias in exceptionally good form, Violas, Perennial Phloxes, Sweet Peas, and Gladioli (silver-gilt medal). Messrs. Barr & Son staged a heautiful collection of herbaceous cut flowers. The same firm also beautiful collection of herbaceous cut flowers. The same firm also arranged a miniature rockery in a most effective manner (silver medal). Mr. H. G. Sage, gardener to the Earl of Dysart, Ham House, Richmond, staged a charming collection of herbaceous flowers (silver medal). Mr. J. Prewitt, Swiss Nursery, Hammersmith, and Mr. Wythes, gardener to the Duke of Northumberland, Syon House, Brentford, were awarded equal first prizes in the class for twelve bunches of stove and greenhouse flowers, Mr. Gibson being placed third. Mr. Chuck was awarded an extra prize for some Anthuriums. A certificate was awarded for tri-color Pelargonium Duchess of York shown by Mr. J. Prewitt.

The class for three bunches of black Grapes brought forth nine com-The class for three bunches of black Grapes brought forth nine competitors, but the leading prize was awarded to Mr. A. Maxim, gardener to Hon. Miss Shaw-Lefevre, Heckfield Place, Winchfield, who had some well coloured Black Hamburghs. Mr. T. Osman, Ottershaw Park, Chertsey, was a good second with neat bunches of the same variety. Mr. F. Jordan, gardener to Birkett Foster, Esq., The Hill, Witley, Surrey, being third. An extra prize was awarded to Mr. W. Shingler, Melton Constable East Derebam for three good bunches of Alamieles. Melton Constable, East Dereham, for three good bunches of Alnwick

Seedling. There were five competitors of white Grapes, and Mr. W. Lane, King's Ride, Ascot, was first, showing three neat bunches of Muscat of Alexandria. Mr. W. Tidy, Stanmore Hill, Great Stanmore, was second with Foster's Seedling; and Mr. T. Osman third with Mrs. Pearson.

Mr. F. Billings, gardener to R. W. Hanbury, Esq., M.P., Ilam Hall, Ashbourne. Derbyshire, was first with a single dish of Nectarines; Mr. J. Wallis, Keele Hall, Newcastle, Staffs, second; and Mr. A. Gibson, Halstead Place, Sevenoaks, third. Mr. Billings was also first for Pcaches, Mr. F. J. Debnam, Spring Grove Gardens, Isleworth, being second, and Mr. Wallis third. An extra prize went to Mr. A. H. Richwood, gardener to Dowager Lady Freake, Fulwell Park, for a dish of Peaches. Mr. W. Chuck, gardener to P. Thelhusson, Esq., Brodsworth Hall, Doncaster, was first with Strawberries. Mr. T. Elisha, Pelling Place, Old Windsor, was first with one Melon, showing a seedling, and Mr. E. Little, Milton Court, Dorking, was second, the third prize going to Mr. S. Mortimer, Rowledge, Farnham. Mr. E. Little was first for three Melons, showing Hero of Lockinge, Mr. Mortimer being second, and Mr. J. Portbury, Ripon House, Putney Heath, third. Mr. Mortimer was first for a dish of Cherries.

Heath, third. Mr. Mortimer was first for a dish of Cherries.

Mr. W. Jenks, gardener to W. M. Grant, Esq., Fairlawn, Cobham, staged a magnificent collection of Tomatoes not for competition (silver medal). Messrs. Thos. Rivers & Son, Sawbridgeworth, staged a grand collection of fruit, including Peaches, Nectarines, Cherries, and Plums (silver-gilt medal). Mr. A. Maxim, gardener to Hon. Miss Shaw Lefevre, Heckfield Place, Winchfield, showed two baskets of Black Hamburgh Grapes, packed and ready for sending to market (silver medal), as also did Mr. R. Grindrod, Whitfield Gardens, Hereford. Mr. Grindrod staged three bunches of Gros Maroc Grape in fine condition (silver medal). Mr. W. Shingler, Melton Constable, East Dereham, staged a bunch of new Grape, Lady Hastings, a Black Muscat with good berries, but a rather straggling bunch. Mr. T. Elisha sent a number of seedling Melons, dishes of Peaches, and some Peas and Cucumbers, for which a bronze medal was awarded. A first class certificate was awarded for a seedling Melon named Earl's Court, a red fleshed variety.



HARDY FRUIT GARDEN.

Peaches and Nectarines.— Treatment of Succession Shoots.— Secure loosely in the proper direction for training healthy successional shoots. Deal with the strongest first, leaving the weakest comparative latitude a little longer. As a rule it is not generally desirable to shorten these at all, especially if sufficient space is available for training; but very vigorous shoots that have attained to a length of over 15 inches may be topped to a lateral near that point if one has pushed, this forming a new leader, but weaker than the portion removed. Other laterals that may have been produced reduce to the first pair of leaves. Growths of medium strength which have originated from older wood than the fruiting shoots, and are better placed than the successionals retained, ought to be preserved, as by laying in a few of such, wherever space is or can be made available, the trees are kept more evenly furnished with fruitful wood.

Gooseberries.—Summer pruning ought to be completed without delay, pinching off the side shoots on the main stems at the fourth leaf where the spur system of pruning is adopted. After the fruit is gathered is the best time to thin out old branches for the purpose of affording more room to young growths which will eventually bear finer fruit. The young growth also must be thinned if at all thickly placed, and none of it shortened, but allowed to extend its full length under the influence of sun and air with the full exposure of every leaf. A combination of spur pruning and allowing a fair amount of young growths to remain yearly is a profitable system where young green fruit is plentifully required, as well as some needed of a larger size and fully ripened. The youngest wood will produce the former and the spurred shoots the latter. Some bushes may be treated entirely on the system of retaining young wood annually, provided the fruit-bearing shoots are cut out directly the crops are cleared, so that the growths retained may receive the benefit of sun and air in order to ripen fully to their extremities.

Red and White Currants.—The side shoots on main branches not yet summer pruned stop to five or six good leaves, in order that the lowest base buds may be properly fed and matured for furnishing the following season's crops. Full grown bushes must have the growths at the extremities of the main branches stopped the same as side shoots, but young bushes still extending their principal growths need these preserving until the winter pruning. In aged trees young strong shoots extending from the base may be encouraged for taking the place of worn-out branches or such as are producing a thicket of crowded spurs. The continued vitality and productiveness of old trees can, by gradually renewing their vigour in this manner, be maintained.

Black Currants.—No summer pruning in the sense of shortening young wood is necessary with this fruit. The encouragement of strong suckers from the base, or young vigorous wood from various parts of the

lower branches, is the best means of rendering the bushes fru ful, dispensing at the same time with worn-out branches as well as superfluous and ill-placed growths. Support crops of fruit on bushes in dry positions by watering freely and mulching, but avoid giving liquid manure where ripe fruit is hanging for late or exhibition purposes.

Raspberries. — Thin out new canes or suckers of Raspberries, allowing only four or five of the strongest to each stool. If planted in continuous rows the thinning out of the weakest canes should early be resorted to, so that when the new canes are tied in position there will be no crowding. If they extend higher than 5 feet stop them at that height. When the fruit is cleared cut the old canes down to the ground at once. Plenty of water and liquid manure with an additional mulch over the roots will benefit the plants.

Outdoor Vines.—Train the current year's wood as open as possible, exposing it and the foliage fully to sun and air, as upon this depends continued fruitfulness. The bearing shoots being stopped one or two joints beyond the bunches according as space is available, the subsequent laterals formed must be pinched to one leaf. Fruitless shoots, if any, stop to six or seven leaves. Tie in the fruiting shoots securely. Thin out the berries freely, going over the bunches a second time if necessary. Allow one bunch only to a shoot. Support the Vines well at the root during the swelling of the fruit, applying water and liquid manure.

the swelling of the fruit, applying water and liquid manure.

Outdoor Figs.—Retain no more of the current year's shoots than can be comfortably laid in without crowding, reserving each at full length. A few shoots, however, if too long to be retained entire, but for which space can be found if shortened to five or six leaves, may be stopped as indicated. Stop the extremities of shoots bearing Figs to the fourth leaf above the fruit. This serves to concentrate the vigour while still encouraging a proper circulation of the sap to feed the fruit.

Propagating Strawberries.—Rooting runners for early plants must now be attended to. The best are furnished from young fruiting plants, these, as a rule, being strong and vigorous. A few applications of water, and a mulching of manure over the roots of old plants, will assist materially in giving the runners a start, and increasing the size of the plantlets if at all backward owing to the dry season. A good method of rooting runners is securing them in small pots three parts filled with loam and manure, and upon 3 inch squares of turf previously well soaked in liquid manure. Whether pots or turves are used they should be sunk in the ground partly, if not wholly, so that they may not dry so quickly. Peg the runners in position with short wooden or iron pegs, though small stones laid on the runners nearly answer the same purpose. freely every day, and nip off the points of the runners beyond the pots or turves. Later runners may be rooted on small heaps of good, rich soil laid between the rows. Another method consists in securing a selection of the best runners on the ordinary soil between the plants, loosening it if necessary and maintaining it moist. In every case remove the weakest runners from the old plants, whereby those retained are not crowded and weakened. Beware of propagating from naturally barren plants as disappointment will follow. Such plants promptly discard before this characteristic is forgotten.

Trim away the surplus runners from all plants, and from those planted in the spring cut away the wires close to the plants as they show, propagating being seldom desirable from these. It is a better plan to induce as strong growth as possible with a view to obtaining fine crops of fruit the following year. Hoe down weeds in the driest weather. After rain strongly growing weeds may be pulled up, effecting this before the seed falls. Plan ations marked for destruction should not be allowed to be breeding beds for troublesome weeds where they remain to flower and ripen seed, which is quickly distributed unnoticed over adjoining ground. Destroy all such before they flower if the ground cannot be dug, and the weeds deeply buried at once.

Apples and Pears.—Complete the summer pruning, or the shortening of the breastwood, to from four to six good leaves. If these shoots are thickly placed, that is, several issuing close together from one spur, thin some out. The sun will reach down to the base of the shoots left better. Fruit may still be thinned with advantage to heavily cropped trees. Some of the Apples removed may be utilised for cooking.

FRUIT FORCING.

Peaches and Nectarines. - Early-forced Trees. --Trees which were started from early December to the new year will for some time have been cleared of their fruit, and having the wood on which the fruit was borne removed, if not extension, as soon as the fruit was gathered, those retained may be exposed to light and air. It is, of course, essential that the buds be properly formed and perfected, and the wood thoroughly matured, which is encouraged by clean culture and proper supplies of nourishment. The trees, therefore, must be syringed and cleansed of insects, if necessary, by the prompt application of an approved insecticide, and supplied with water, or in the case of weakly trees liquid manure at the roots. A light mulching will also tend to keep the roots at the surface, and prevent the premature ripening of the foliage. The buds in most cases will be sufficiently plumped, and the wood firm enough to allow the roof lights being removed. This should not further be delayed, unless the trees are unusually vigorous, when the lights may remain on a time longer or if lifting is to be done until that is performed. The removal of the roof lights is an old and commendable practice, ensuring complete rest for the trees, and the thorough moistening of the borders by the autumn rains.

Succession Houses.—Trees started in February have the fruit ripe, and in some cases cleared of their crops. As the fruits are removed cut out the shoots that have borne them, and thin the growths where they are so close that the foliage cannot have full exposure to light and air.

Cleanse the trees of dust by means of the syringc or engine. Red spider or other insect pests must be subdued by the prompt employment of an insecticide. Keep the borders thoroughly moist, feeding with liquid manure if the trees have carried heavy crops, are at all weakly, or do not plump the buds. Stop all laterals to one joint on vigorous trees, or allow a little lateral growth if the trees have the buds in an advanced state, this preventing premature ripening of the foliage. When the wood is matured and the buds well formed remove the roof lights. The exposure to dew and rain has an invigorating effect.

Trees Started in March.—The fruit of the second early and midseason varieties, which only are worth growing for supplies after May under forcing treatment, are taking the last swelling, and should have the leaves drawn aside and the fruit raised by means of laths across the wires of the trellis, so that the apex will be to the light. Inside and outside borders must be watered, and liquid manure supplied until the fruit commences to ripen. A light mulch of lumpy manure will lessen the need of supplies of water, but avoid heavy mulching. Ventilate early, or rather increase it, as a little air on all night is beneficial, and syringe by 7 A.M., ventilating freely through the day. When the sun loses power in the afternoon begin to reduce the air and so as to raise the temperature to 85° or 90°, with a syringing and damping of the surface. This, however, must be done with judgment, for when the sun is powerful and the house closed the water may be heated so as to scorch the leaves, which occurs in span-roofed houses running east and west. Water also hanging for any length of time on the fruit during the last swelling is liable to damage the skin, causing it to crack and imparting a musty flavour; therefore have the fruit dry before nightfall, and in dull weather syringe only in the morning or damp the floors and borders instead of wetting the trees. Cease syringing directly the fruit commences ripening, but damp surfaces, especially the borders, whenever they become dry, and ventilate rather freely.

Late Houses.—The fruit in these is quite three weeks earlier than usual and requires abundant ventilation to retard it. This necessitates frequent attention to damping and giving supplies of water at the roots. Syringe well in the morning and afternoon. Keep the shoots tied down as they advance, allowing no more than are necessary for next year's bearing, or for furnishing the trees, so that the foliage will have full exposure to light and air. Stop laterals to one leaf, retaining growth to attract the sap to the fruit. Gross shoots which push laterals from the leaf buds, cut back to where the buds remain intact, or if likely to disarrange the equalisation of the vigour of the tree, remove them altogether. Draw the leaves away from the fruit, affording as much light and sun as possible. This is important, for the higher the colour the better the flavour of the fruit.

Unheated Houses or Wall Cases.—These generally contain several varieties and have the fruit in various stages. Ours consist of the midseason and late varieties, the stoning being completed and now taking the last swelling. The trees are well supplied with liquid manure, it being run directly from the manure cart on the border by means of hose pipes. With plenty of nourishment at the roots and the foliage disposed so that it has light and air from all points, the fruit swells kindly and colours well. Keep the growths thinly disposed, every shoot given full exposure to sun and air. Syringe about 7 A.M.; admit a little air constantly, and increase the ventilation with the advancing temperature, having it full at 75°. Syringe again in the afternoon about 5 P.M. If red spider appear, subdue it by forcible syringing or the prompt application of an insecticide.

Figs.—Second Crop.—The fruit of planted-out trees started about the new year is in an advanced state, and this second crop must be thinned where too plentiful, reserving that at the base of the shoots, which swells and finishes better than at the points, where fruit must not be taken if a full first crop is desired another season. Avoid heavy second crops for a similar reason, for heavily taxed trees will not afford satisfactory early crops. Train the shoots thinly, allow plenty of space in the ties for the shoots to swell, and stop side shoots at about the fifth leaf, but only leave those for which there is room, and so as not to interfere with the extension or successional growths. Supply water copiously; if the surface is mulched with sweetened horse droppings the manuial elements will be washed into the soil each time water is applied and ammonia be given off, and the roots be attracted to and kept active at the surface. Trees in narrow borders may need water every day in hot weather, others once or twice a week according to the extent of the rooting area. Syringe twice a day forcibly to dislodge red spider. With proper feeding and attention to air moisture there will be little need for insecticides, but red spider must be kept in check, and scale removed with a brush and a soapy solution. Admit a little air constantly, increase it early, and close in good time with plenty of atmospheric moisture, then the fruit will swell to a good size, and a free circulation of rather dry air when ripening will insure Figs in perfection.

Fig Trees in Pots for Early Forcing.—It is important that the trees have plenty of light, are not crowded, and are well ventilated to solidify the growths. Syringe the trees twice a day in hot weather and occasionally only in dull, keeping the foliage perfectly free from insects. Afford liquid manure at roots, as well-fed and properly matured growths only produce really good first crops. Stopping to induce a neat habit is necessary in young plants, but it must not be practised later than this, or the young growths will not have time to mature and form embryonic Figs at the joints. Trees for early forcing must only bear light second crops, taking care to remove any fruit showing now or later, and keeping the points of the shoots well exposed to the light.



APIARIAN NOTES.

THE first week of July was the busiest of the whole season. On the 1st I took several hives and nuclei to the Heather for the purpose of getting a little Wild Thyme honey, and to secure pure fertilisation of some Punic queens, also to prepare the site for sixty hives. I have never seen Heather so early and so promising. With ten days or so fine weather during the next four weeks there will be a large yield of honey. The bees are all in the best condition for gathering.

PUNICS AND CROSSED SYRIANS.

Punics have done remarkably well in many places, and with myself. The hive referred to in the two last numbers of the Journal of Horticulture has given to its owner in a day or two more than a month after being hived 75 lbs. in supers and sections. The gross weight on the 7th, including surplus removed, was 140 lbs., tare 30 lbs., nett 110. The parent hive has yielded about 56 lbs., the nett of it being 100 lbs. The second swarm from it was lost. It would be worth the while of persons in quest of information and instructions on bees to visit Blantyre, where both Punic bees and practical bee-keepers with their weighty hives may be seen. My crossed Syrians are wonderful heavy. These and the Punics are the only unswarmed ones, but others of the same breeds have swarmed.

It is many years since I drew the attention of your readers to the fact that by caging a queen on top of a hive having a laying or virgin queen a swarm issued. I have several cases where I gave two Punic queen cells, thinking they might destroy one as they hatched out. Singular to say these queens were ripe for hatching on June 20th, and were still piping on July 7th. Three of them swarmed, but in every case went back to the parent hive. It is frequently advised to throw back an after-swarm on the parent hive after it has been off a few hours, and it will not swarm again. This, however, is erroneous advice, for so long as two queens exist in one hive they are liable to swarm at any moment, which may be prolonged for three weeks, as in the cases stated above, and that is the reason why we deposed one of the queens in the two-queens-in-one-hive system.

I have also had several cases of swarming where stray young queens entered other hives than their own. The foregoing are but a few of many similar cases which I have experienced. Some beekeepers argue that a fertilised queen sometimes takes an airing. I do not believe that, but in every case where queens were seen on the wing during any part of the year they were surplus queens from their own hive, or a neighbouring one; because queens are bred if required during every month of the year.

One important item I have omitted to mention is, that the supers and sections taken from the crossed Punic referred to were not supplied with foundation deeper than half an inch, only starters, or the yield might have been still greater.—A LANARKSHIRE BEEKEEPER.

SWARMING.

How does "A Lanarkshire Bee-keeper" account for bees swarming on a Sunday oftener than any other day in the week? I have two stock hives side by side, which sent out their first swarms on Sunday, June 18th; and as I have not had any swarms do the like before, I am at a loss to know whether I have acted rightly or not. The first swarm had just clustered on a Currant bush, when out came No. 2, and clusters with No. 1. Taking the branch and more than half of the cluster I placed them gently into a bar-frame hive, and supplied them with eight frames, two of them being filled with food and brood. The rest of the cluster was laying on the ground, which I thought, if properly hived, would possibly have a queen and settle; but it was soon to be seen the bees were not settled, as they came out and clustered under the landing board of the other newly hived swarm. There they hung for two days, and when, on the 20th, I picked up a dead queen in front of this hive they joined the other inmates, and all have worked peaceably together. I then filled up the hive—a thirteen framed one—and placed a 28 lb. section rack on the top. Is this right, or is it possible to do anything more? The stock hives are ten and eleven framed. I shall also be glad to know if any swarm will be of much use after this date. Any advice for the future working will be highly appreciated by-H. RICHARDSON, Barnsley.

[That bees swarm sometimes on a Sunday there is no doubt, but in my experience not more frequently than on any other day. Bees always make preparations from eight to ten days previous to

swarming, after which, in from six to ten days more, the afterswarms come, unless the first swarm has been delayed beyond its normal time through unfavourable weather. In such cases the after-swarm may come any time from one to eight or ten days after the prime swarm, which, under the above circumstances, may have a young queen, the old one invariably meeting an untimely end by her rival daughters or the bees themselves. One point of great moment to the bee-keeper as regards profit is to hasten the end of the plurality of queens after swarming has commenced—that is, by destroying all queen cells unless one about eight days after the first swarm. At the same time form a nucleus, or several nuclei, as surety against the loss of the queen of the old stock, and have in readiness queens to add to any swarmed hive shortly after the issue of the prime swarm. Sometimes the summer goes past while the queen remains a virgin, from the fact that somehow or other the bees permit a plurality of queens without attempting to swarm or to kill them. I have three such hives that have piped for no less than three weeks, whereas had the surplus ones been killed they might have nearly hatched by this time. The three cases mentioned had their queen cells duly excised and young Punic queens added, but second batches of these were so superior to the first that I introduced a second ripe queen cell to each, and they have piped ever since. When two or more swarms come at the same time, the bees-either through several queens or stranger bees, or both—will not settle, and it is better to allow the union, or catch both or more queens, and let them go back to their respective hives. Under the circumstances you acted wisely, and the best that could be done. The Heather and the Limes are the only two sources of honey now likely to be profitable.—A. L. B. K.]

TRADE CATALOGUES RECEIVED.

F. Cooper, Manners Street, Wellington.—Garden and Agricultural Seeds.

J. V. Van Zanten & Zonen, Hillegom, near Haarlem.—Dutch Bulbs.



*All correspondence should be directed either to "THE EDITOR" or to "THE PUBLISHER." Letters addressed to Dr. Hogg or members of the staff often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Bee subjects, and should never send more than two or three questions at once. All articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post, and we do not undertake to return rejected communications.

Vegetables for Exhibition (R. P.).—You should have sent the list for confirmation or suggested alterations. To publish a list that might differ more or less materially and yet not be substantially better would inevitably lead to confusion and be the reverse of helpful under the circumstances.

Tomato Fruits Diseased (H. F. Smith).—The truits are virulently attacked with Cladosporium Lycopersici, as illustrated in the Journal of Horticulture, March 19th, 1892, page 386. They are beyond remedy, and should be gathered and burned. Notes on the prevention of Tomato disease appear in the present and preceding issues.

Canker Insects (J. Hiam).—You appear to think, and indeed say, that you can find insects on cankered wood with your pocket lens that Mr. Abbey cannot find with the microscope. We have to say that if there had been insects on the specimen when he received it they would We have made close microscopic search for have been discovered. insects alleged by you to have caused canker in specimens submitted. The only insects were such as affect decayed wood, and they certainly were not the cause but the consequence of the canker. want to sec this pocket lens canker-causing insect magnified. It is like the sea serpent, a great deal talked about but not seen except by the favoured few-three individuals, we think, out of about thirty millions in the famous case. Please send a correct drawing of the creature, so that we may publish it, for convincing the other 29,999,997, or those of them who may be interested in the subject. We fear it will be useless sending more specimens unless you send the "pocket lens" with them, for they do not reveal themselves under our microscope, and it appears to be the same with Mr. Abbey's. Have a correct drawing prepared, and make yourself famous as a discoverer.

Tomato Disease (S. J. A.).—No mistake has been made as to the nature of the disease with which your Tomatoes are being overrun. The cladosporium does not affect the leaves before these are fully matured, but that does not alter the fact that "soft"—that is to say, rankly grown—stems and leaves 'are the most predisposed to attack. The disease is most virulent in a moist atmosphere, and in dull weather especially it is false economy to dispense with fire heat. One of the remedies that has been found useful is an extra strong heat, brought about principally by means of the hot-water pipes, accompanied by an atmosphere as dry as it can be kept for two or three days. "Market Grower" is fully capable of taking care of himself, and we wish you could grow Tomatoes as well as he does. You are evidently a believer in the doctrine "in a multitude of councillors is wisdom." May we add—and bewilderment?

Campanulate Foxglove (Dr. R.).—As we have before remarked, the terminal campanulate flowers in Foxgloves are abnormal and not uncommon. Abnormal floral forms also occur in other plants with



FIG. 7.—CAMPANULATE FOXGLOVE.

irregular monopetalous corollas, as in Linaria vulgaris var. Peloria, which was illustrated in the Journal of Horticulture for July 28th, 1892, page 85. In the Foxglove the corolla usually becomes enlarged and split into spreading segments, as shown in the specimen depicted in the accompanying illustration (fig. 7). We have seen many similar instances, but the precise cause of such changes has not been revealed.

Sub-Leaves from Midrib of Branching Broccoli (T. H. S.).—
The outgrowths from the midrib of the leaf are not uncommon in Brassicas, and may be due to the unusual drought, which has caused adventitious buds to form in the midrib where the veins radiate from it. One of the outgrowths is a miniature leaf, and from it proceeds a growth corresponding to the flowering branches of the head. The other has no leaf, but a distinct shoot about an inch long, with leaves from an eighth to a quarter of an inch in length, and there are buds in the centre not unlike those of flowers, into which they would probably develop if the weather continued dry. It is a great curiosity, and is no doubt due to the richness of the soil and the extraordinary weather. This has concentrated the vital forces on the midrib, forming it into a sort of stem, and buds have been formed and shoots produced therefrom as from the axils of the leaves. It generally occurs when the soil is rich and the plants vigorous.

Vines Unhealthy (B. A.).—Your letter, through not having been addressed to "The Editor," has remained unopened until there is no time left to give other than a brief reply. Lime water may be given with safety. Wireworms can be trapped with Carrots or Potatoes.

Grapes Scalded (R. A. L'E.).—We cannot name unripe Grapes. The berries sent are scalded, and the reply to "J. G." applies equally to your case. As your Grapes may be Muscats a light shade, such as a screen of herring nets or sprinkling the glass with limewash, may be advisable in extremely hot weather; and the hotter it is the greater the danger of a low night temperature, particularly if there is moisture in the house with the ventilators closed, or not opened soon enough in the

Grapes Scalded (J. G.). — The Grapes have been carefully examined. They are scalded more or less over every part, quite as much on the lower part of the bunch and under side of the berries as at the upper part of the bunch and top side of the berries. It is a bad, but not uncommon case. It shows that the night temperature has been low and the atmospheric moisture considerable, with the house closed. The sun acting upon such in the morning quickly heats and expands the moisture-laden air, and this, forced against cooler or less rapidly heated substances, as the upper surfaces of leaves, the berries of Grapes, cold walls, or water pipes, condenses, and this water being often 10° to 15°, and not infrequently 20° to 30° higher in temperature than the skin or cuticle of the berries, the parts most exposed, either to the sun or the surrounding atmosphere, have the epidermal tissues destroyed, and when evaporation takes place from such parts they shrink. If the Grapes are examined closely it will be noticed that the scalding has occurred before air has been admitted, and the discolouration and shrinking is only due to the evaporation which follows the ventilation. Had the ventilation commenced with the heating and expansion of the atmosphere by the sun, evaporation taking place from the berries instead of moisture being condensed upon them, and they had been warmed correspondingly with the surrounding air, it is certain scalding would not have occurred. is prevented by fire heat, so as to maintain a night temperature of 65° to 70°, and a little more by day artificially. This admits of air being given, and moisture does not condense on the berries. A temperature of 70° by artificial many and anough air to result. of 70° by artificial means and enough air to promote a circulation is a complete preventive of scald, but it may occur in Muscat of Alexandria on the upper part of the bunches when they are exposed to the direct rays of the sun, especially on bright weather succeeding a cold dull period, then a slight shade is necessary. As scalding is only likely to occur in Lady Downe's from a fortnight to three weeks before the colouring is well pronounced it is advisable to employ a little fire heat, so as to maintain a rather warm and somewhat dry atmosphere during that time, and until the berries are all assuming their ripening hue.

Constructing a Grape Room (H. B.).—As your wall is only 8 fect high the lean-to to allow for head room could only be narrow, but a width of 6 feet inside will allow of racks being placed against both walls. There is no objection to your using galvanised corrugated iron for the roof, with provision for ventilation, a few small openings sufficing. The straw will act as a non-conductor, and the walls should be lined with boards kept about an inch from the face. The floor may be formed of tiles or cement, the latter preferably, as it is needful to keep out rats. It will be necessary to provide pipes for heating so as to exclude frost and expel damp, fixing them as far from the racks as possible, say in the centre or path. A flow and return 2 inch pipe would be sufficient. Racks may be easily made by fixing uprights 3 inches by 2 inches against the sides at 3 feet apart, narrow surface outwards. At 18 inches from the floor line fix shelves between the uprights 3 inches by $1\frac{1}{2}$ inch, broad surface upwards, and the back edge 1 inch higher than the front, to which affix a $\frac{1}{2}$ inch square lath flush with the face on the upper surface, forming a ledge. At the same height above the first shelf fix another, and so on to within 18 inches of the top of the uprights. Proceed in a similar manner between the other uprights, forming shelves from the floor, 18 inches between, all on the same levels and heights. The shelves are for the bottles to rest on. At 9 inches above the level of each shelf fix a rail $2\frac{1}{2}$ inches by $1\frac{1}{2}$, narrow face outwards, kept 1 inch from the face of the uprights by a strip of wood corresponding with the face of the upright, and the thickness of the rail, and secure the rail to the upright with screws. The bottom side of the rail should be 9 inches above the top of the shelf. Then cut notches $1\frac{1}{2}$ inch wide and 1 inch deep on the inner edge of the rail for the neck of each bottle to rest in at 9 inches distance apart. Nothing more is required but the bottles. These are perhaps best ordinary pintand-a-half wine or spirit bottles of clear glass. Filled with water they can be stood on the shelves with the neck in the notches easily and safely.

The Caper Plant (M. D.).—Capparis spinosa, as we have before stated, from which the capers of commerce are obtained, grows abundantly in the south of Europe, along the shores and on the islands of the Mediterranean, and in Syria. It is generally found wild on walls and rocks; it is met with on the walls of Rome, Sienne, and Florence, and is extensively cultivated in the south of Europe, particularly between Marseilles and Toulon, and in many parts of Italy; but it is from Sicily that the greatest supply is brought. The flower buds form the capers so much used as a pickle and a sauce, but in some parts the fruit is also employed. In the early part of summer the plant begins fruit is also employed. In the early part of summer the plant begins to flower, and the flowers continue to appear successively till the beginning of winter. The young flower buds are picked every morning, and as they are gathered they are put into vinegar and salt; and this

operation continues for six months, as long as the plants are in a flowering state. When the season closes the buds are sorted according to their size and colour, the smallest and greenest being the best; these are again put into vinegar, and then packed up for sale and exportation. Capers are stimulant, antiscorbutic, and are much employed as a condiment, but the medicinal virtues of the plant reside in the root, which is slightly bitter, somewhat acrid and sour, and is diurctic.

Names of Fruits.—Notice.—Special attention is directed to the following decision, the object of which is to discourage the growth of inferior and promote the culture of superior varieties. In consequence of the large number of worthless Apples and Pears sent to this office to be named, it has been decided to name only specimens and varieties of approved merit, and to reject the inferior, which are not worth sending or growing. The names and addresses of senders of fruit to be named must in all cases be enclosed with the specimens, whether letters referring to the fruit are sent by post or not. The names are not necessarily required for publication, initials sufficing for that. Only six specimens can be named at once, and any beyond that number cannot be preserved. (W. S. P.).—The Apple is the Early Red Margaret or Juneating. The premature ripening and fruit-falling is probably the result of the drought.

Names of Plants.—We only undertake to name species of plants, not varieties that have originated from seed and termed florists' flowers. Flowering specimens are necessary of flowering plants, and Fern fronds should bear spores. Specimens should arrive in a fresh state in firm boxes. Slightly damp moss, soft green grass or leaves form the best packing, dry wool the worst. Not more than six specimens can be named at once, and the numbers should be visible without untying the ligatures, it being often difficult to separate them when the paper is damp. (1. S.).—Hoya stenophylla. (A. H.).—Lilium japonicum. (F. M.).—
Monstera deliciosa. (L. M.).—1, Luculia gratissima; 2, Maranta albo-lineata. (F. Johnson).—1, Lysimachia nummularia; 3, Astrantia minor; 4, Tradescantia virginica; 5, Centaura speciosa. The others mithered (C. L. S.). withered. (C. J. S.).—1, Altremeria aurantiaca; 2, Geranium pratense flore-pleno; 3, a Ceanothus, no flowers. (G. A.).—1, Cratægus crusgalli, variety; 2, Fraxinus heterophylla; 3, Crinum capense.

COVENT GARDEN MARKET .-- JULY 12TH.

No alteration. Supplies heavy with steady business doing.

FRUIT.

	UAL	11.	
Apples, half sieve, "Tasmanian, per ease "Nova Seotia, per barrel	6 0 12 0 0 0 0 0	Grapes per lb	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
•	VEGETA	BLES.	
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AVERAGE WHOLESALE PRICES .- CUT FLOWERS. Orchid Blooms in variety.

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	8.	d.	s.	d	1		d.	s.	
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Carnations, dozen bunches			8	0	bunches	3	0	6	
Cornflower, dozen bunehes.			3	0	Pinks, dozen bunches	2	0	6	
Eucharis, dozen		0	4	0	Primula (double) 12 sprays	0	9	1	
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PLANTS IN POTS

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Crassula, per dozen 12		24	0	Marguerite Daisy, dozen 6 0 12	0
Dracæna terminalis, dozen 18		42	Õ	Mignonette, per doz 4 0 6	0
" viridis, dozen 9		24	ŏ	Musk, per dozen 2 0 4	0
Ericas, various 12		24	ŏ	Myrtles, dozen 6 0 9	0
	ŏ	18	ŏ	Nasturtiums, per dozen 4 0 6	0
Evergreens, in var., dozen 6	ŏ	24	-	Palms, in var., cach 1 0 15	0
Ferns, in variety, dozen 4	-	18	ŏ		0
Ferns (small) per hundred 4		6	ŏ	Pelargoniums, per dozen. 6 0 12	0
Fieus elastica, caeh 1	6	7			0
Foliage plants, var., each. 2	_		ŏ	Petunia, per dozen 6 0 9	O
Fuchsia, per dozen 5	ŏ	9	ŏ	,, single, in boxes 1 6 3	0
I done in por done	ŏ	24	Õ	,,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Hydrangea, per dozen 12	U	# X	9	1	



VACANT FARMS.

MIXED farming generally, as was indicated last week, is without doubt advisable as a rule; the exceptions are dairy, fruit, vegetable, and corn farms. Let us glance briefly at each class of farm in view of hiring one of them—not that this is so simple a matter as it may seem to the uninitiated. The popular idea that there are plenty of vacant farms everywhere, and that every farm is re-let at a heavy reduction of rent, most certainly does not apply to really good dairy farms. Reference to the rent roll of an estate consisting entirely of grass farms shows that the rents range now at from 37s. to 60s. per acre. For a farm at the lower rent, which fell in last Lady Day, we had five applicants, and for another becoming vacant next April there are already four offers at the old rental of 40s. per acre. These farms are in the midlands, but even in Essex we have had no difficulty in obtaining a rent of 30s. per acre for fair pasture—a very different thing to much of the poor exhausted corn land of that county.

Turning to the rent roll of an East Anglian estate of corn farms we have a striking contrast to grass land rentals, those of the corn land ranging from 14s. per acre downwards to very little more than half that amount. It is only by making such ruinous reductions that tenants have been kept upon the land at all. On this particular estate there is the melancholy satisfaction that not one farm is vacant, while on neighbouring estates there are thousands of acres in hand. Nothing will induce the tenants to change or modify their practice; corn-growing or nothing appears to be a life maxim with them, and though the heavy rent reduction enables them to struggle on they have still to meet a large outlay for labour. Take for example one of the farms on this estate. Out of its total area of 850 acres there are not 30 acres in pasture, so that we may certainly estimate that there are 800 acres of it arable. Much of it is light land, but at best the outlay for tillage is a heavy matter. The staple produce is Barley and sheep, and we have no doubt the excellent flock of Suffolk sheep on this farm has stood the tenant in good stead under the depression. One point of practice worthy of all praise in East Anglian farming is the systematic sheep folding, which tends so materially to sustain soil fertility. We have striven in vain to induce our tenants in the midlands to adopt the practice on hill farms in the winter, to stimulate some of their poor pasture. But they are slaves to custom; not one of them has ever set a sheep fold, nor have they any hurdles suitable for the purpose.

Of their comparatively highly rented farms we can say that even under an easy-going system of management they answer, and there can be no doubt that dairy farms are profitable even when devoted sole'y to the production of milk for sale; they ought to be much more so under the manufacture of first-class butter and cheese. But we must not forget that at a milk farm pure and simple there is no dairy work; all the expense of a dairy plant or of butter and cheese making is avoided. Rich pasture, healthy cows, that before all things else are deep milkers, no matter what breed they may be, plenty of water and a refrigerator for cooling the milk, a sufficient stock of 17-gallon railway milk cans (which cost about £1 apiece), a station horse and cart or van, nearness to a railway station, with a milk market at not more than twenty or thirty miles' distance by rail. These are the few and simple conditions for the wou'd-be milk farmer to bear in mind. If to these he can add a few acres of arable land for roots, and such fodder crops as Vetches, Lucerne, Clover, Sainfoin, Rye Grass, mixed seeds, Green Maize, Cattle Cabbage, and Thousand-headed Kale, he will have every facility for a business which can be managed with a very moderate expenditure for labour. Outside some such radius as we have indicated it would be greatly to the advantage of the producer if milk could be diverted from the great centres of population to local butter or cheese factories, or under favourable conditions to the home productions of cheese and butter.

For cheese and butter making there must be a well ventilated, well drained dairy, so placed that no impure air comes near it from cattle yards, stables, piggeries, manure heap, or sewer, or taint will be imparted to the milk, cream, or curds, as the case may be. In it the milk is passed through the separator for butter, or is brought to a proper temperature to receive the rennet for cheese. Butter and cheese should both be made there, the cheese being taken thence to a room with shelves, ventilators, and heating apparatus; the butter to a cool store room on slates, with only wall brackets to receive them, and a central packing table or slate slab.

WORK ON THE HOME FARM.

If the annual insurance of crop and stock does not include corn or haystacks on outlying land, the prompt insurance of such stacks should always be done, as they are especially liable to accidents from the careless use of matches by vagrants. Once on fire there is little hope of saving them, as they may burn for some time before being seen, and when they are seen much time is usually lost before real efforts are made to extinguish the fire. On a property which came into our hands some time ago, the buildings of a certain homestead had been destroyed by fire and rebuilt. Among the new buildings were some neat looking stables of brickwork, but the common mistake had been made of leaving the inner walls exposed, with the equally common result of bricks and mortar being kicked to pieces by the horses. All brickwork in stables must be covered to a height of 5 feet with stout match board. ing, to prevent this vexatious destruction of property. This is entirely a matter for the owner or agent of the property to see to. In our experience we have not found tenants to trouble themselves about it.

Milch cows should be kept in by day during this sultry weather or they will be so worried by flies as to be constantly rushing about the pasture to their detriment and a serious falling off in the milk yield. Not only is it a humane thing to have commodious well ventilated hovels which can be closed for this purpose, but it is decidedly profit-With a good cut of Clover, Lucerne, or other green fodder going, the hovel or cowhouse racks are filled regularly twice during the day, so that the cows can quietly feed in comfort and then be turned out after the evening milking. Here, again, the few acres of arable land on a dairy farm tell in an acceptable supply of green fodder as an invaluable auxiliary to the permanent pasture, enabling the grazier to do the best thing for his own advantage in the better management of his stock.

Especial attention has been given to pig breeding so as to have a large number ready for the corn stubbles. This is an easy matter as young sows come into breeding so early, and it is certainly desirable to breed sows as well as store pigs while they are so dear. We have recently seen some enormous sows in the Midlands, and must needs repeat our warning against keeping such unwieldly animals.

METEOROLOGICAL OBSERVATIONS. CAMDEN SQUARE, LONDON. Lat. 51° 32′ 40″ N.; Long. 0° 8′ 0″ W.; Altitude, 111 feet

DATE.		i	9 A.M.						IN THE DAY.			
1893.	Barometer at 32°, and Sea Level.		Hygrometer.		Direc- tion of	Temp.	Shade Tem- perature.		Radiation Temperature		Rain.	
July.		Barc at 32 Sea	Dry.	Wet.		In Sun.	On Grass.					
Sunday Monday Tuesday Wednesday Thursday Friday Saturday	2 3 4 5 6 7 8	Inchs. 30·146 30·133 30·056 29·787 29·995 29·993 29·736	deg. 69.4 69.7 64.6 65.0 69.3 72.2 80.2	deg. 62.6 60.7 57.2 61.2 61.8 60.9 67.2	N.E. E. E. N.E. N.E. E.	deg. 64·1 64·9 65·1 65·0 63·9 65·0 66·3	deg. 83.6 83.2 76.7 76.7 85.7 90.7 88.4	deg. 58.4 58.9 55.0 54.3 54.6 54.1 63.2	deg. 116·9 125·7 121·9 112·0 120·4 128·2 130·3	deg. 55.8 57.4 52.1 54.5 51.7 48.4 56.4	0.456	
		29.978	70.1	61.7		64.9	83.6	56.9	122.2	53.8	0.636	

REMARKS.

2nd.—Hot, hazy, and oppressive; clouds at times in evening.
3rd.—Generally sunny, but a good deal of cirro-cumulus cloud.
4th.—Bright breezy day, cloudy at times in afternoon, overcast evening, and rain from 10 P.M.
5th.—Rain till ? A.M., overcast morning, spots of rain at noon, occasional gleams of

sun in afternoon, cloudless evening.

6th.—Hot, clear, and almost cloudless,

7th.—Sunny and hot, but calm and a little hazy.

8th.—Sunny and hot, but some breeze; heavy rain with lightning and thunder from

4.30 P.M. to 5.30 P.M., showers again at night.

A very hot week, hotter than any week in Jubilee year (1887), or than in any year back to 1882 at least.—G. J. SYMONS.



NOW that the rain has come and moistened the parched earth gardeners, farmers, and amateurs—indeed all who engage in the cultivation of the soil, will to a more or less considerable extent be relieved from the anxiety that in some cases was almost too heavy to be borne. Artificial watering has been indispensable in gardens over a long period in order to prevent the collapse of plants and crops; but notwithstanding all the labour devoted to it, and it has absorbed most of the time of many workers, anything like satisfactory growth and a full supply of seasonable produce could not be produced. The earth might be moistened for short periods, but the parchingly dry atmosphere was a great counteracting force and uncontrollable obstacle to the progress of vegetation.

Trying indeed the season has been even to persons engaged in gardens who have had a good water supply at hand; but to obtain and distribute it has been almost heart-breaking work to many an earnest man, and such men envied those with water "laid on" and hose to conduct it where required. With the home water supply practically exhausted and only limited quantities obtainable from a distance, then did the position become almost unendurable, and it has been a case of "all hands to the pumps" except those engaged in carting or carrying the precious fluid nearly all the hours of daylight, with, unfortunately, very little to cheer them for their labour. We may use water as we may, by hand distribution, the return is disappointingly small during a season of protracted drought; and only when the supply was full, and of the best character, with adequate mechanical means provided, could lawns be kept green and plants and crops in a flourishing state in the open air, during the exhausting period through which we have passed. Even when all that can be done is done—and we wish more could be accomplished in water storage—there is nothing like a supply direct from the clouds—the great restorer of languishing vegetation -"sweet refreshing rain."

This has come at last, and brought relief to thousands of workers on the land, also in time to be of incalculable benefit, but too late to save valuable crops that have been lost to the husbandman. The most energetic and best cultivators will make prompt efforts to obtain such compensation as they can in the form of subsidiary crops, and it is wonderful with what rapidity those sown or planted late, as referred to in another article, grow through the autumn months under the earth warmth, now so great, in combination with the moisture also, we hope, in most districts prevailing. But the rain, though it opens the land for working, and stimulates cultivators to make the best of it, may, if prolonged, summon into activity at least one enemy, the Potato disease; and all who wish to avert it by the dressings that have in many cases proved effectual will do well to act in time.

In the case of this and indeed all fungoid and insect enemies, nothing is so fatal as procrastination. Prompt action on the first and faintest symptoms of attack is potent in its influences. A waiting policy is always dangerous. Two insects are more easily destroyed than two thousand, and in the former case injury is averted, while in the latter it has been more or less disastrous. In dealing with fungoid attacks similar remarks apply, but with even greater force. Parasitic visitations can be checked and even destroyed in their infancy, but when deeply established in the

tissues of the host plants, no matter whether these are Potatoes, Tomatoes, Vines, or any others, they are practically ineradicable. In nine cases out of ten when well proved antidotes fail in accomplishing the desired purpose, it is not the fault of the articles, but of those who apply them, or who rather fail to do so until the time has passed for them to act with effect. Yet so much of perversity do we find in frail humanity that some persons who fail through their own inactivity are the first to decry the means as useless, and the most ready to accuse of incapacity those who have endeavoured to help them. This has always been so, as all men of long experience know, and so it is likely to be to the end, for each generation appears to bring in turn men of similar idiosyncracies to those who have gone before, but we would fain hope the peculiars will be fewer year by year.

After the rain, too, we may hope to hear less of under-glass difficulties—the scorching and scalding of Grapes, and the drying-up of Cucumbers and Melons, leaving the former bitter and the latter flavourless. Where the water supply is adequate, and not chilling in its coldness, such evils, with otherwise good management, are avertable. This statement, though hard to believe by the victims of such mishaps, is proved to demonstration by hundreds of cultivators who, by their skill, foresight, quick perception, and close attention fortify themselves against the contingencies, and have none of the troubles to deplore. Insufficiency of moisture, both in the atmosphere of plant and fruit houses, as well as in the soil in which Vines, Cucumbers, Melons, and various other plants, crops, and trees are grown, is one of the main causes of most of such evils as those indicated, and with which too many persons have to contend.

We have lived long enough to note that the greater the heat and more protracted the drought the greater the number of complaints we hear of Cucumbers and Melons failing to give satisfaction, and of Grapes shrinking instead of swelling to maturity. This ought not to be so. All those crops should be better in bright and hot than in dull and cold seasons, and they would be with full support and a well-managed system of ventilation and other cultural aids appropriate to the circumstances. The brighter and more continuous the sun the greater the quantity of water passes as vapour from the leaves of plants, and therefore the greater must be the supply for the roots to imbibe, with proportionate moisture in the atmosphere to counteract extreme transpiration. When the escape of moisture from the leaves of whatever may be grown is in excess of that supplied by the roots, collapse both of foliage and fruit must occur sooner or later. And with the weakening of the foliage in a too dry atmosphere come insects, for the conditions that are unfavourable to healthy growth are in almost the same proportion favourable to the increase of the foes of the gardener. With thorough health in plants, trees, and crops, the result of sound culture, and the prevention of checks and chills, there would be fewer difficulties to encounter, and less complaints to meet and explanations to make relative to the quality of the produce supplied.

Why are there so many inferior Cucumbers this year and ill-flavoured Melons staged at exhibitions? We have seen hundreds of both, and not one pair in ten of the former were anything like so fresh and tempting in appearance as are those grown by specialists in bulk for the market. In one case the plants have been comparatively starved and probably insect-infested, and in the other they have been well fed and kept clean. The half-exhausted plants may be expected to improve under moister surroundings, and it is hoped they will do so.

In respect of Melons we are well within the bounds of strict accuracy in saying that at some, if not most, exhibitions it has been difficult to find three fruits worthy of the prizes provided for them. The majority have been distinctly inferior and not a fcw positively "nasty," as many a judge knows too well. In some instances the result is, perhaps, attributable to the search for

No. 2338.—Vol. LXXXIX., OLD SERIES.

improvement by crossing, this ending in spoiling many fruits through inferiority of variety; but in most instances the shortcomings are due to the late exhausting weather and exhausted plants. The roots have failed to supply adequate nutriment, and the leaves failed to manufacture and secrete the requisite juices for the development of high-class fruit. Insects have, in too many cases, enjoyed what the plants needed, and when these abound well fed highly flavoured Melons or any other fruits are out of the question. Now that rain has come it is hoped that many insects will go. This will certainly be the case outside, and therefore suggests the way they may be banished from under glass, as they should be and must be if cultural success is to be attained.

The hot season has proclaimed with trumpet tongue the value of high culture—deep rich soil and cleanliness. From Land's End to John o' Groat's the crops tell the same significant story—land starvation and neglect leading to ruin; land enrichment and high management tending directly in the other direction, the crops holding out the longest and yielding the best. There is no exception to the advantages of sound culture, and as in the open air so under glass, the best work tells and the best men win, not at shows alone, for that is a comparatively small matter, but reputations at home by their industry and skill. We want more of such winners, in many fields especially, as well as in some gardens, alike in the interests of the producers and the increased prosperity of the country.

PREPARING FOR THE WINTER.

Owing to the abnormally dry weather experienced during the present season the work of planting vegetables in their winter quarters has been, in many instances, greatly delayed. Now, however, showers have become general all over the country the work should be completed as quickly as possible, otherwise the plants will have but a short season of growth. Those that were early planted have not made much progress this season, except in the very few instances in which they have been copiously supplied with water, or when a mulching of short manure or leaf soil has been given. The advantages to be derived by carrying out the latter practice with garden crops generally, has, this season, been strikingly demonstrated, and in all instances where the soil is light or shallow I strongly advised a mulching to be given now if possible, because the rapid and long continued evaporation has extracted a vast amount of fertility from the soil.

To make up for this deficiency a thorough soaking with liquid manure given to all established plants before the mulching is put on will be found extremely beneficial, but there should be no mistake as to what is meant by a "thorough soaking." Three gallons to a square yard may be considered as such, and be depended upon to moisten the soil down to the roots of the plants. The drainings from stables, piggeries, or the contents of other cesspools, will answer the purpose splendidly. Failing these natural fertilisers, a pound of superphosphate of lime with half a pound of nitrate of soda, mixed in twenty gallons of water, makes a good liquid manure, so does 2 lbs. of guano dissolved in thirty gallons of water, or a peck of soot placed in a muslin bag and steeped in the same quantity of water. A little timely attention given to these matters will speedily have a marked effect upon all crops, and by encouraging early growth the chances of suffering loss during severe winters is greatly lessened.

Turning to those crops which have yet to be planted, it is well to set out good breadths of the various kinds of Kales and Coleworts which have proved hardy during recent winters. Foremost among these may be mentioned Asparagus Kale, which has been quite a "sheet anchor" in numerous gardens during the spring months, at a time when the loss of Broccoli have been much felt. This fine Kale also possesses the rare quality of having a delicious flavour when cooked. At this late season, if the rows are 2 feet apart, the plants will not require to be more than 15 inches asunder in the rows, or if set between the early Potatoes now being taken up, the distance between the lines may be a trifle less to correspond with spaces between the Potatoes. When planted between late Potatoes I prefer to lay the haulms in the centre of alternate alleys, set the Kales (in those thus cleared) a foot apart, and as soon as the tubers have been lifted take up with a spade every other plant, and replant in the centre of the intermediate spaces. Late Dwarf Green Curled is another invaluable Kale suitable for planting largely at the present time; with us during

the last two seasons it has supplied tender greens up to the time that Cabbage could be cut in quantity. It requires about the same space as Asparagus Kale. Late Queen Broccoli ought now to be of the right size for planting. Taking a lesson from the experience of last season we are this year depending largely upon this variety and Leamington, though of course plants of the latter have already been planted. If the former are set out in rows 2 feet apart, a distance of 6 inches less between the plants will be found sufficient. Rosette Colewort and Little Pixie always prove exceedingly useful during the autumn months. We have now a good bed of these from sowings made early in June, and the plants will be set out shortly a foot apart in good rich soil. Plants resulting from sowings made late in June will also prove useful, but it will be a great advantage in their case to plant on a warm border.

Thus far I have dealt especially with those crops which are particularly adapted for late planting. Where, however, other varieties of Borecoles and Coleworts, which, during ordinary seasons are put out at a much earlier date, are not yet planted into their permanent position, the work may still be done with the prospect of securing a fair amount of success, though, as a matter of course, they will not make such strong growth unless we are favoured with an exceptionally warm autumn. Cottagers' Kale, Sprouting Broccoli, Chou de Burghley, Brussels Sprouts, and Couve Tronchuda are all good varieties to which the foregoing remarks apply.

Before lifting the plants the soil about the roots should be thoroughly moistened. If they have been previously pricked out they may then be lifted with good balls of earth, and will under such favourable circumstances experience but little check. When they have to be planted direct from the seed bed it is a good plan to dip the roots in a puddle made of clay sufficiently thick to adhere to them; this frequently wards off the attacks of grubs, which often make sad havoc with plants destitute of small fibrous roots. For the convenience of watering the plants should be set in drills, and a slight hollow left around the stem of each plant.—H. D.

STRAWBERRY FARMING.

To market gardeners and allotment holders who contemplate starting a Strawberry patch due consideration and care at the outset go far towards future success. Assuming that the land is suitable in aspect and in accordance with the remarks in my last contribution (page 5) we can pass on to the preparation of the bed for the plants. Now is a splendid time for beginning operations. The early Potatoes are coming off, and the land can be easily and effectually cleaned. This is of paramount importance when we remember that the plants are to stand for four or five years. The man who ensures a perfectly clean, deeply cultivated plot, with rich supplies of good farmyard manure well dug in, need have little fear.

The plants for the production of marketable fruit must be hardy, good croppers, producing berries of good size, shape, and flavour. There are at least three capital varieties, which answer in almost every particular to this description—viz., Sir Joseph Paxton, Laxton's Noble, and Dr. Hogg; and any grower could not go far wrong in selecting all or any of these. The two former are at present mostly grown in the Hampshire and Surrey fields, but I believe there is a grand future for the latter, for I saw a fortnight ago at a local show two dozen berries of the Dr. Hogg variety which weighed 1 lb. $10\frac{1}{4}$ ozs., and were of exquisite colour, shape, and flavour. If either of these varieties is chosen, plenty of space must be given for development, as all are very gross, and should not be closer than about 30 inches in the rank and 18-22 inches (I prefer 22) between the plants. After planting, little more than keeping down weeds and pinching off runners need be done; the latter is essential, in order to enable the young plants to get strong before the frosts set in.

The hoe must be kept at work throughout the spring. Many people pluck the first blooms so that the plants shall not fruit the first season, but this mode of procedure is not advisable. There may be a gain in constitutional strength, but under any conditions the plant will throw two or three new crowns in one season, and it is from these new crowns that we expect our fruit. In fact, the largest and best trusses of fruit always grow centrifugal. Besides, "a bird in the hand" is applicable here, and two medium crops with some immediate returns are preferable. As the young plants often give the earliest and finest fruit they therefore pay for a little bedding. Light straw, short rushes, coarse grass, in short anything which does not contain seeds, is suitable for the purpose, and should be well laid as soon as the Strawberries reach the size of marbles. If it can be spread soon after a good rain

so much the better. Growers usually run over their plots before bedding and cut off the remaining runners to throw strength into

Early fruit is gathered in punnets, and sells readily; but as soon as the glut comes it is picked into gallon baskets ($6\frac{1}{2}$ lbs.) and sent up to market without further disturbance. Punnets can be cheaply bought in the winter by the gross, and the gallon baskets are not expensive, 2s. 6d. or 3s. per dozen. The fruit will sell readily at the nearest town, but where the fields are of large size the produce is put on the rail to London, Glasgow, Edinburgh; in fact, some of the best prices have this year been obtained in the two latter towns. The sale is practically certain, but great judgment is required in placing the fruit. The grower must know his man.

Strawberry plants bear their maximum crop when three and four years old. After the fifth year they require lifting, as the fruit begins to get small. In setting out a piece of land it is therefore necessary to arrange the beds in stages, so that they come in and go out of cultivation one after the other. When the crop is off rake up the bedding, and if only a few runners are required trim the plants with a hook, clear out the rubbish, and set the hoe to work. Old worn-out plants should be grubbed up and burnt and the ground dug for Potatoes, thus affording an opportunity of again getting the land into condition by liberal cultivation and plentiful supplies of rich manure. — EDWARD H. SMITH, Warminster.

BACTERIAL DISEASE IN TOMATOES.

EACH week since the appearance in the Journal of Horticulture of my first note respecting the above I have looked eagerly for some further communications throwing more light upon the subject. appears, however, that none is forthcoming, and we must, for the present at least, be content with Mr. Abbey's far-from-consoling assurance that there is no known remedy for the disease.

A few days subsequently to the writing of my former note I paid a visit to a friend, who showed me several hundreds of Tomato plants that had succumbed to an attack of this disease, and although my losses have been trivial, I consider the matter of sufficient importance to warrant its being thoroughly investigated in hopes of eventually finding a cure, or better still, a preventive. That seems impossible without first discovering in what way the bacterial germs or spores are introduced. Mr. Abbey, in his exceedingly interesting communication, page 472, advises the avoidance of animal manures, with which advice I entirely concur. At the same time I wish to mention that in the house where the most stable manure was used this year I have not lost a plant, whilst last year, in the same house, when Thomson's and silicate manures were used and no animal manure, I lost, as nearly as I recollect, seven or eight plants.

Before reading Mr. Abbey's report I felt fully convinced that the disease was not infectious, for on only one occasion have I had two plants in close proximity to each other die, although I have occasionally left an infested plant until it was quite withered. Allow me to add, this is simply my experience, and not intended to reflect suspicion of a

doubt on Mr. Abbey's statement.

Turning to "J. F. D.'s" remarks on page 505, I wish to inform him that for eight years before coming to this place I had grown Tomatoes without being troubled with diseased plants or fruits, and probably felt quite as sceptical respecting their injurious effects as your correspondent appears to do. Subsequent experience has taught me to believe in and also to respect Tomato diseases, although of all they are subject to, I consider the one now under consideration the most to be dreaded.

As to procuring seed from one of the best houses in the trade, I agree with Mr. M'Dougall that the best results do not always follow even then. In my case the seeds, as before stated, were procured from a friend whose plants have never been troubled with bacterial disease, and only to a limited extent with any other. In conclusion I would like to ask Mr. Iggulden to give us his opinion on this subject, as I was informed a few days since that he is by no means a stranger to its effects, both on Tomatoes and Cucumbers.—C. LOCK, Bristol.



DENDROBIUM HOOKERIANUM.

WHEN well grown this is a beautiful Orchid, and it is surprising that one does not se; it more frequently in small as well as large collections. Some time since I saw several fine plants with growths quite 3 feet in length, and these bore many flowers. The latter, as a rule, measure from 3 to 4 inches in diameter, and

are of a deep rich yellow colour. The lip is velvety yellow, and there are two blotches of deep yellow in the throat. This noble Dendrobium is also, I believe, known as D. chrysotis, under which name it is sometimes figured. Perhaps an illustration of it would convey to your readers a better idea of this grand Orchid than will any description of mine.—ORCHIDIST.

[The accompanying engraving (fig. 8) depicts a bloom of Dendrobium Hookerianum.]

CIRRHOPETALUM BRIENIANUM.

This species was introduced from Borneo by Messrs. Linden, of L'Horticulture Internationale, Brussels, with whom it flowered in March, 1891, when it was sent to Kew for determination. A plant from the same source flowered with Mr. James O'Brien, of Harrowon-the-Hill, in the following October. It belongs, says the "Kew Bulletin," to the group having the dorsal sepal and petals ciliate or

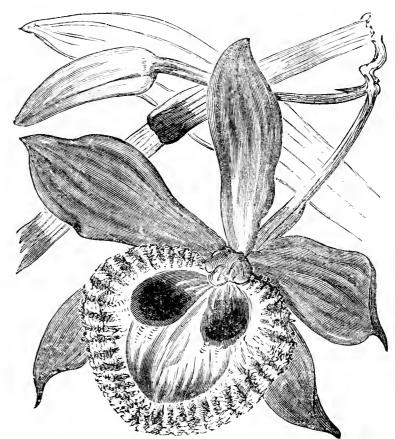


FIG. 8.—DENDROBIUM HOOKERIANUM.

appendaged, and is allied to C. Makoyanum. The lateral sepals are light straw-colour, except a small portion near the base, which, as well as the greater part of the dorsal sepal, petals and lip, is very dark dull maroon.

CŒLOGYNE BORNEENSIS.

According to the "Kew Bulletin" this species belongs to Lindley's small section Flexuose, and may be placed next to the Javan C. longifolia, Lindl., which has longer and narrower leaves, and the pseudo-bulb without a slender attenuated neck. It is a native of Borneo, whence it was introduced by Messrs. Linden, of L'Horticulture Internationale, Brussels, in whose collection it flowered last August. The flowers are whitish or light buff (this point remains doubtful owing to the flowers being somewhat withered), with red-brown reticulations on the side lobes of the lip, and some markings of similar colour on the front lobe.

STANHOPEA LOWI.

This handsome Stanhopea is allied to S. eburnea, Lindl., and S. Reichenbachiana, Roezl., differing from the former in its globose hypochil and differently coloured flowers, and from the latter (known only from description) in having the mesochil solid, not deeply channelled, as Reichenbach twice distinctly states in his description. The character is an essential one in the genus, other-

wise the distinctness of the present one might be doubted.

S. Lowi was introduced from New Granada by Messrs. Hugh Low & Co., of Clapton, and flowered in their collection last December. The sepals and petals are of a creamy buff shade, the latter with numerous minute brown spots on the disc. The lip is ivory white, the upper half of the hypochil with bands of dull marcon, formed of numerous suffused spots with some scattered dots between them. The column is pale green, with ivory-white wings. The flowers exhale a powerful, almost Narcissus-like fragrance.—("Kew Bulletin.")

CANKER IN FRUIT TREES.

BEFORE replying to the articles on this subject by Mr. Kruse, "A. D.," and Mr. Pendered in the issue of the Journal of Horticulture of June 22nd (pages 497 and 498), I desire to correct an error in my paper on "American Orcharding"—viz., the "36 bushels" in the first sentence of the seventh paragraph on page 437 should have been 24 bushels.

Mr. Kruse's able description of the soils of the ragstone range of hills in Kent is interesting and valuable. A brief digest of the conditions of soil and environment disfavouring or countenancing canker in Apple and Pear trees on the Kentish rag formation will be instructive

and useful.

1, On the lower slopes of the ragstone range of hills the rock (calcareous sandstone) is nearest the surface, therefore well drained; the ground is the richest from the rainwash or debris brought down from the higher parts of the range, and it is the lightest in colour, because it is nearest the rock, consequently contains more lime, and from the water percolating through it freely the iron has been eliminated or assimilated and taken up by the crops during an untold period of cultivation or carried off by the water passing through the soil. Under these conditions the Apple and Pear trees canker the least. This being 30, and if parasites are not the cause of the cankerous affections, why

do the trees canker at all?

2, At the top of the ragstone range of hills the subsoil is a red clay, water must pass through it slowly, or not at all, and this will, in a greater or lesser degree, irrigate the ground lower down, and enrich it with assimilible iron and other tree food; the soil is also redder and less rich than on the lower slopes—this through air and rain not entering it freely so as to liberate and render its stores of nutrition so quickly available as where the soil is more open. Thus the trees are placed at a disadvantage, not only in respect of soil, but of climate, for it must be colder at the top than at the bottom of the range. On this part of the hills the Apple trees canker the most, and "hardly any Pears will do well, the fruit of most varieties cracking so much as to be worthless, and the trees are unhealthy." Mr. Kruse, it will be observed, makes a distinction between the canker of the Apple trees and the cracking of the fruit and ill-health of the Pear trees, and this shows conclusively that the diseases are different. That of the Apple trees may or may not be due to fungi. I have never stated, as "A. D." alleges, that the cankerfungus (Nectria ditissima) was the sole cause of cankerous affections on Apple or Pear trees. The evil may and does result from several causes Apple or Pear trees. The evil may, and does result from several causes, and I have said and shown that trees may have many wounds without the fungus growing in them. But there is no question about the Pear trees; they or their fruit are troubled with scab-fungus (Cladosporium or Fusicladium dendriticum var. pyrinum), which attacks the young wood and produces the cankerous, scaly condition of the bark, so well seen in Louise Bonne of Jersey Pear in far too many cases, especially on the Quince stock, in cold localities and heavy or wet soils. Is not the canker in the Apple trees and the cracking of the fruit and ill health in the Pear trees as much, if not more, due to the unfavourableness of the environment than to the soil? The latter may be improved by drainage and cultivation, but who can alter the climate? Nevertheless, the climate may be much improved for tree growth by attending to the sanitation of the soil, or, in other words, the trees so benefited by drainage and soil improvement as to resist the parasites which await a

favourable opportunity to fasten and prey upon them.

3, Midway between the top and the bottom of the slope of the ragstone range of hills, "the soil is a rich brown loam in a very good condition, owing to the abundance of ragstone débris, is neither too heavy nor too light, and is well supplied with the principal elements of plant food. Experience shows that these are in a sufficiently available form. form, for all kinds of vegetables can be grown of splendid condition, and fruits of high quality are cultivated." Such is Mr. Kruse's description of the soil of the slope on which he operates. In this "rich brown loam in a very good condition," and in a favoured situation of a county that produces the best using Apples in the world, "some trees of almost every variety canker. With some varieties there is only a tree here and there, and other sorts canker so much that it is impossible to grow them except for a few years." Mr. Kruse's evidence is conclusive. It is not a question of soil so much as of environment and of the "survival of the fittest," for "the higher the ground the more the Apple trees canker."

But Mr. Kruse still adheres to the soil theory, and thinks he would be benefited in his culture by an "analysis of a good Apple soil in the Weald of Kent." I cannot help him in this matter, and think it would not benefit him much if I could. After a careful study of the soils of these islands, and guided by nearly half a century's experience, I am convinced that cultivators who pay the most attention to the natural adaptability of crops to the soil and position obtain the best results with the least expenditure of labour and manures. So with fruit trees. To secure healthy trees and profitable crops of fruit they must be suited alike to the soil and the location; and to avoid disease—canker or any other—we must select those varieties best able to resist and throw off the parasite producing it. This means finding out by experience or observation the varieties that succeed, and plant those only. This applies to all parts of the British islands, for there is not a spot in them applies to an parts of the British Islands, for there is not a spot in them up to 500 feet and more above the sea level that is not fitted for the production of some varieties of hardy fruits. With all duc deference to soil theorists and the ransacking of all parts of the world for manures, I am satisfied that cultivation and selection of kinds and varieties are far more important.

"A. D.," page 498, commences by sheltering under Mr. Tonks' mantle. I was under the impression that my views and those of Mr. Tonks and other earnest inquirers were identical—namely, that sound cultivation is the prime agent in securing healthy trees and profitable crops of fruit. It is as well to be disillusioned in this case. "A.D." says, "Canker is a product of starvation in respect of the particular variety affected, or in other words, it is a disease caused by the absence in the soil of the elements which are essential to the healthy maturation of the wood." This is a remarkable statement, and shows that he has nothing in common with Mr. Tonks, who did not advise different kinds of foods for various varieties of Apples, but a complete food for all the Apple family wherever situated, subject to variation according to the requirements of different soils as ascertained by analysis. "A. D." does not see this, but asks, "How is it that of two varieties of Apples or of Pears growing close together, . . . under absolutely the same conditions, yet one is healthy beyond all question, the other cankers badly, and hardly ever ripens annual growths?" He then answers, "The reason is obvious. One sort finds all that it needs in the soil, the other does not." How does "A. D." prove this? Where is the "obvious reason?" I see no description of the soil or an analysis, no specifying of the varieties, and "A. D." sees nothing but soil starvation to account for the difference. What about constitutional hardiness in different parieties? Here is a What about constitutional hardiness in different varieties? Here is a chance for "A. D." to tell us why the Calville Blanche Apple requires to be grown under glass in this country, and the Hunthouse thrives at elevations in North Yorkshire over 500 feet above the sea level. Will "A. D." oblige by naming the "predisposing cause," the reason for the difference in hardiness between two varieties of Apples, perhaps raised from two pips taken from the same core of the parent Apple, and why one has a better constitution than the other. Until an answer is given to this I must decline to accept "A. D.'s" preconceptions of predisposing causes; but at the same time he adduces evidence in support of my contention that the reason why all Apples and Pears do not suffer equally from earlier is more a question of constitutional hardiness and equally from canker is more a question of constitutional hardiness and adaptability to position than of soil. This is shown in the second para-

graph of his critique as follows:—

"Trees growing together side by side for forty years, Ribston, Alfriston, Wellington [Dumelow's Seedling], cankering badly; Waltham Abbey Seedling, Cockle's Pippin, and Beauty of Hants doing splendidly. All on Crab stocks, soil a deep and not very sweet clay. Again, of Pears, Alexandré Lambré, Thompson's, Nouveau Poiteau, and Williams' Bon Chrêtien do wonderfully well, planted twenty-two years on the Pear stock. Beurré Diel and Beurré d'Amanlis canker very badly, fruit split and spotted, comparatively worthless; others [what varieties?] fruit perfect, clean, and delicious." Then follows the question, "Why is the canker?" and "A. D.'s" answer is, "Because of predisposing causes." These "are deficiency of tree food, the lack of essentials to health; in other words, of the formation of perfectly sound ripened

Now let us recognise established facts. Ribston Pippin has its home in the rich, deep, porous soil of the great Vale of York, where it has a different climate to that over a "deep, and not very sweet clay." It cankers to death on hot sands. Alfriston deserves a better fate than a lingering death on a sour bottom; so also does Dumelow's Seedling, which, however, will not thrive in the warm soil of Sandy in Bedford-Waltham Abbey Seedling, Cockle's Pippin, and Beauty of Hants do well in all fairly good Apple soils, even as far north as the North Riding of Yorkshire in lightish soils. The soil theory, therefore, breaks down along the line, and the selection of varieties suited to different soils and localities marches on as it has done in all time to victory. As for the Pears, it is certain that they are similarly influenced by location, and the hardiness or otherwise of their inherent constitutions. Beurré Diel and Beurré d'Amanlis Pears had not the fruit cracked by soil influence, but by scab-fungus, and the susceptibility or otherwise thereto is more due to climate than to soil. In the north the trees are healthy and the fruit without speck or blemish, fruits of Beurré Diel often weighing 1 lb., and sometimes over 2 lbs. in weight.

Among other things "A. D." says, we get rid of the canker by taking the head of the tree clean off and replacing it by grafting with scions from a variety that thrives well on the soil. The head is not "replaced" but a new one provided of a variety suited to the climate, for the roots are in the same soil as before. Sir Walter Raleigh said "bcheading is a cure for all discases," and it is often the best for Apple trees afflicted with canker. But it is not Mr. Tonks' plan, for he cured his cankered trees, not one variety in particular, but all, with the same generous regimen. I have not the least doubt that Mr. Tonks cured his trees of what he considered to be canker, and I am equally certain that those trees had not canker-fungus (Nectria ditissima) growing in them, for the parasite, once seated in a shoot, sooner or later if not destroyed, compasses its destruction. Lift fruit trees and improve the soil by all means, apply manures and attend to all the cultural requirements, but rest assured that none of these will avail against canker or gum caused by fungi, for the diseased limbs will remain so unless the parasite is destroyed or removed by incision or amputation.

Trees injured by frost, as described by "A. D.," clenches my argument. They did "splendidly for many years" before the frost played havoc with them. Yes, the spores of the canker-fungus took possession of the wounds. He will not allege, I hope, that the frost would permanently affect the constituent elements of the soil. What then becomes of his soil theory? The soil had clearly nothing to do with the consequences in that case

quences in that case.

I could say much more in reply to "A. D.," but I am encroaching,

and must refer briefly to Mr. Pendered's communication, on page 498. He says, "I first thought the canker was caused by an insect" (so does Mr. Hiam and Mr. Harrison Weir), "and then by a fungus, but I came to the conclusion the insects and fungus were due to the disease, and not the disease to them." No reasons are given for this conclusion. This does not alter the facts. "Canker may differ on various soils and in different localities." Just so, it is a question of varieties suited to different soils and localities—a mere matter of selection. Then follows a very accurate description of canker in the second paragraph as caused by fungus, beating my best endeavours, and he goes on to say, "As a remedy I cut off all the worst cankered branches, and cleaned the remainder." "The result was a success." Just so, the fungus was got rid of to a certain extent, but not entirely, for "it comes again after a time." Had Mr. Pendered cut away all the cankered parts in the first instance, it is perfectly clear he would not have been troubled with canker afterwards, unless the fungus had appeared again in fresh wounds.

Mr. Pendered cures canker in Gooseberry and Currant bushes by letting it have its run upon them, and when they are no longer profitable roots them out and plants young trees. There is no canker in Gooseberry or Currant bushes caused by fungus. It mainly arises from larval attacks and damage in other ways, the Nectria found on these bushes being always on the dead wood or bark, and not in the living tissues. The canker, so-called, in the Laurel is really gum, due to a fungus (Coryneum Beijerincki), and is the same as that causing gumming in Cherry trees. There is no cure but incision or amputation. Old Laurel bushes cut off to the ground or near, no matter how large and badly smitten they may be, will push strong healthy shoots from the base and form fine bushes in less time than the best rooted and most carefully planted and tended young shrubs. It does not matter what the soil may be, provided it is such as Laurels will grow in, nor whether the locality be high or low, if it is not unfitted for their growth.—G. Abbey.

WASPS AND THEIR DESTRUCTION.

A CORRESPONDENT, "J. R. G." (page 28), writing on the destruction of wasps, pronounces gas tar the "most efficacious remedy his gardener has tried." It is the cheapest and most complete destroyer of wasps' nests that I have found, after experience with every method recommended in the Journal of Horticulture last week. Hundreds of nests have been "settled" by pouring a quantity into the entrances through the spout of an old watering can. It is the work of half a minute, and not in a solitary instance has the plan failed, whether a sod was pressed over the nest entrances or not. It is easy to cover them, and this is generally done, though scores have been left open for purposes of experiment, and always with the same result—nest destroyed. A neighbouring gardener, who has used gas tar for more than twenty years, never thinks of covering the nest entrance after the doctoring. In both these cases gas tar is made on the premises, and therefore costs nothing.—NORTH LINCOLN.

THERE are more wasps' nests this season than I ever remember seeing or hearing of before. To make matters worse, all are unusually strong at this early date, and the fruit is being attacked even before it is ripe. Taking or destroying a few score nests does not seem of much avail; at any rate, I see no great falling off in their numbers. Grapes, ripe and ripening, were soon found out, and before we were able to apply the right remedy it was scarcely safe to go near some of the bunches; and what is the remedy, will be the question to which many readers will be glad to have a reply. For several seasons past I have tried Davis' wasp killer, as a destroyer of wasps and a preventive of their attacks, with never-failing success, and once more it has done good service. A few drops of this poisonous syrup applied, with the aid of a pointed stick, to berries or other fruit that has been started on by wasps soon attracts the latter, with the result that those eating it are killed, and the rest are apparently frightened away. I would not be without so effective a remedy on any account. Gas tar for nests to which it can be applied, and Davis' wasp killer for the rest, are my remedies, and they never fail.—W. IGGULDEN.

MR. E. BROADY on page 14 asks for information from others respecting the effects of cyanide of potassium on wasps and the larvæ in the nests. I have used it with deadly effect in some cases, and have known it comparatively harmless in others. There are many things to take into consideration—weather, state of the ground when used, cracks, position of nests, and species of wasps. We have three species of ground wasps—Vespa vulgaris, V. germanica, and V. rufa, and three building above ground, all having their peculiarities. I have known the three species of ground wasps' nests within a yard of each other on a favourite bank.

Vespa rufa, which never grows into a large colony, so far as I have seen, usually, if not invariably, builds very near the surface, often so close that the paper covering may be seen without removing the soil; these would be easily destroyed with cyanide of potassium.

V. vulgaris, on the other hand, often traverse long tunnels, even a yard or two in moles' runs, and in consequence the cyanide of potassium would have very little effect on the colony, except the few at the

V. germanica, the largest and most destructive species, often have their nests deeper in the ground, and more frequently than the others build in open fields, and are consequently more accessible for using cyanide of potassium.

Wasps are very numerous this season, and the nests unusually strong in numbers for this time of year. I took a nest in the Easter week.—
J. HIAM.



ROSES AND THE VICTORIA FUND.

At the suggestion of the Directors of the Gardening and Forestry Exhibition a committee of ladies organised a Rose sale at the Earl's Court Exhibition on Saturday evening last in aid of the "Victoria" Fund. A number of stalls were arranged in the centre of the building around the band of the Hon. Artillery Company, and after eight o'clock a scene of busy excitement ensued. Although the idea was hastily developed upwards of £40 was realised. Among those who rendered valuable assistance were the Misses Milner, Mrs. and the Misses Dodson, and Mrs. Harry Turner.

ROSES AND ROSARIANS.

I AM very much indebted to "A Jubilee Rose Grower" for the interest he takes in my horticultural welfare. I perceive that the communication he has addressed to your columns has chiefly been inspired by my visit to Waltham. It may interest him to learn that I have just received a gratifying letter from one of the greatest of English rosarians, in which, with reference to that article, he says—"I have read with much pleasure your 'Visit to Waltham.' It is a production of very high literary merit, an oasis in the desert of horticultural literature, and marvellously accurate as to details." I could quote, if I had occasion to do so, from another distinguished horticulturist and successful author to a precisely similar effect. I hope you will permit me to say that my knowledge of modern Roses, such as Margaret Dickson, Mrs. Paul, Salamander, White Lady, Gustave Regis, Souvenir de S. A. Prince, Mrs. John Laing, Crimson Rambler, and Duchess of Fife, has been derived, not from the catalogue, but from practical experience, for though not an exhibitor at shows, I may claim to be a successful cultivator of Roses. In some instances I have written to their raisers regarding their parentage, which for the sake of perfect accuracy in description I was entitled to do. In my unconventional estimates of the value of these I have been independent and entirely conscientious. The characteristics which I have attributed to such Roses as those of the late Mr. Bennett, the Messrs. Dickson, Mr. William Paul, Mr. Cant, Mr. Cranston, and Mr. George Paul, are those with which I have become familiarised through the medium of careful and assiduous cultivation. Your correspondent has alluded to the National Rose Society. I have the greatest respect for that Association, whose President is my intimate personal friend. I think it would be a gain if anonymous contributions had a place elsewhere.—DAVID R. WILLIAMSON.

Your correspondent, "A Jubilee Rose Grower" (page 28), is, it seems to me, unduly severe on the articles on Roses written by the Rev. David Williamson. The latter has at least the courage of his opinions, as he signs his name to his articles, which your correspondent, "A Jubilee Rose Grower," does not. Moreover, Mr. Williamson's writings are enjoyable from the fact that they come fresh from the observations of a true lover of plants and flowers, who is keenly alive to all that is beautiful in Nature, if not educated (?) in all the technicalities and rules of the comparatively small number of Rose growers who are also exhibitors. Mr. Williamson draws direct from the garden that which too many of our writers on gardening gather from previous authors, from the frequenters of exhibition tents and committee rooms. It is amusing to find "A Jubilec Rose Glower," while questioning Mr. Williamson's accuracy, set up the N.R.S.'s new catalogue as an official guide. No Rose grower of taste, unless an exhibitor, would be influenced in his selection of Roses for his garden by this "official guide." It leaves out many of the best Roses for garden and house decoration, and recommends others that no one but an exhibitor would care to grow. But then it may be said the so-called National Rose Society is only an exhibitors' Society.—Audil Alteram Partem.

NATIONAL ROSE SOCIETY. PROVINCIAL SHOW AT WORKSOP.—JULY 13TH.

HISTORY seemed bent on repeating itself in one important and unpleasant particular in connection with the provincial Show of the National Rose Society at Worksop, and that was in providing a thoroughly wet and miserable day. Those who had the misfortune to taste the pleasures of the Chester Exhibition last year will remember the great downpour. But the worst did not come to the worst on Thursday last. After heavy showers in the morning the weather settled somewhat, and though dull was not so threatening as to prevent people coming out. The gratifying result was that in the afternoon the Show was crowded, and as the Exhibition of the Worksop Horticultural Society (referred to in another page) was held in conjunction with the Rose display, the visitors had value for their money.

The general opinion appeared to be that so far as the open and trade classes were concerned it was going to be a case of Harkness first and the rest nowhere, but in the amateurs' section there was a feeling of absolute uncertainty. A few bolder than the rest ventured a hesitating prediction or two, but they managed to hedge it round with so many qualifications that they were sure to be right whatever happened. The result was a complete surprise so far as the Jubilee class was concerned, an outsider in Mr. Whitton of Bedale coming in well ahead of the usual leaders, Mr. Lindsell in particular failing to get a prize. Somehow or other Mr. Pemberton also failed to display his customary interest in the welfare of the trophy. Another instance of the climatic see-saw, it will be said. Very likely; but for all that, 'twas a glorious victory. That both trade and amateurs' trophies should go to Bedale is, of course, a coincidence largely influenced by the season. Messrs. Harkness were not victorious without a struggle, for in the Jubilee and several other classes Messrs. Dickson & Son of Newtownards gave them a hard fight. In the former there was no doubt about the verdict, but in the class for thirty-six trebles many appeared to think that a mistake had been made, and that the Irish growers ought to have been placed first. The blooms were pointed up, however, and Messrs. Harkness & Son's flowers found by the Judges to be two points ahead; too close to be comfortable, no doubt. It was generally agreed that considering everything the Jubilee flowers made a marvellous display. The Palace winners had a really magnificent stand. How tenderly Mr. Harkness nursed it when he found there was no one to oppose him with seventy-two, and what a number of fine blooms he found he could dispense with in the latter! Mr. Merryweather, Mr. Mount, Messrs. Mack & Son all showed extremely well, as in the amateurs' section did Messrs. Whitton, Hutchinson, Machin, Mawley, Grahame, and Pemberton.

It can hardly be said that the Show was a completely satisfactory one—what "National" could be without the Cants, Mr. Prince, Mr. Burnside, Mr. Foster-Melliar, Mr. Berners, or Mr. Hill Gray? to mention only a few of those whose enforced absence was mourned—but it was a surprisingly good one considering the season. Let us hope that next year the crestfallen heroes will not be compelled, nolens volens, to leave the fray to others, but will once more show themselves worthy of places amongst the bravest and best. Mr. Mawley, Mr. D'Ombrain, Mr. Machin and others worked hard to get the Show ready for the Judges in good time, and were more successful than has sometimes been the case in the past. All honour to them.

The first of the nurserymen's classes was that in which the Jubilee trophy and £2 10s. constituted the first prize for thirty-six blooms. The Crystal Palace winners, Messrs. Harkness & Sons, were generally expected to repeat their southern victory, and they did so with a really superb stand, the flowers being large, richly coloured, perfectly fresh and clean. The varieties were as follows:—Back row: Mdme. E. Verdier (a grand flower), Mrs. Jowett (splendidly coloured), François Michelon, Camille Bernardin, S. M. Rodocanachi (very brilliant), Comte Raimbaud, Ulrich Brunner, Mrs. J. Laing, Earl Dufferin, Duchesse de Morny, Marie Rady, and Marie Baumann. Middle row: A. K. Williams, Maréchal Niel, Alfred Colomb, Madame H. Jamain, Horace Vernet (a splendid flower), Pierre Notting, Duchess of Bedford (very fine), Fisher Holmes, Hon. Edith Gifford, Prince Arthur (a grand flower), Comtesse de Nadaillac, and Chas. Lefebvre. Front row: Dupuy Jamain (splendid), Duke of Fife, La France, Reynolds Hole, J. S. Mill, Harrison Weir, Madame Haussmann, E. Y. Teas, Duke of Wellington, Countess of Rosebery (a beautiful flower, full of colour), Gustave Piganeau, and Exposition de Brie. Messrs. A. Dicksons & Sons, Newtownards, had a very fine stand, and one that deserved a better fate than the second prize in such a season; but they were well beaten by the Bedale growers for all that. They had some splendid flowers, particularly Général Jacqueminot, Mrs. John Laing, Chas. Lefebvre (although a little tarnished), Camille Bernardin, Catherine Mermet, Countess of Rosebery, Madame Eugène Verdier, Benoit Comte, President Willermoz, and Madame Hoste. Messrs. Mack & Son, Catterick, were a most creditable third, their blooms being smaller than the others, but very fresh and clean.

Absence of competition in the seventy-two class enabled Messrs. Harkness & Sons to concentrate their strength on the Jubilee class, and if the large stand was made to suffer somewhat in order to reinforce the quarter in which danger lay, it was not by any means weak, and comprised some very fine blooms, which, under the circumstances, it may be well to name, instead of going through the whole stand, and including the mediocrities in so doing. The best flower was a grand Horace Vernet, which the Bedale growers have shown very finely this year, and they were fortunate in having a still better one for the forty-eight. Mrs. John Laing was also beautifully shown, although a little marked by the weather. The same remarks apply to Fisher Holmes. Dupuy Jamain was a large and well coloured bloom, and so was Ulrich Brunner. Comtesse de Ludre was very rich, and Madame C. Crapelet, Général Jacqueminot, Prince Arthur, and Gustave Piganeau were also worthy of commendation, albeit the last named had its outer petals tarnished. First prize was awarded.

There was a close struggle between Messrs. Harkness and Dickson with thirty-six trebles, the Bedale growers eventually securing the award, but not by many points. Both were splendid stands. Messrs. Dickson had the cleanest flowers and the most variety, but Messrs. Harkness had the heaviest blooms. The latter were represented by Gustave Piganeau, Prince Arthur, Alfred Colomb, E. Y. Teas, Etienne Levet, Fisher Holmes, Comtesse de Serenye, Exposition de Brie, Dupuy

Jamain, Harrison Weir, Rosieriste Jacobs, S. M. Rodocanachi, Horace Vernet, Général Jacqueminot, Duchesse de Morny, A. K. Williams, H. Schultheis, Chas. Darwin, Pierre Notting, Reynolds Hole, La France, Duke of Connaught, Mrs. Harkness, Chas. Lefebvre, Pride of Waltham, Marie Baumann, Countess of Rosebery, Louis Van Houtte, Madame Haussmann, Marchioness of Dufferin, May Quennell, Dr. Sewell, Earl Dufferin, Marie Verdier, Mrs. John Laing, and Duchess of Bedford.

Mr. H. Merryweather, Southwell, won with thirty-six single trusses, and he had a very even, well-coloured collection, in which Duke of Albany, Mrs. J. Laing, Victor Hugo, Camille Bernardin, and Gustave Piganeau were particularly good. Messrs. Mack & Son were second with a very fair stand, Mr. Frettingham third, and Mr. Mount was awarded an extra prize. The best of three good stands of eighteen trebles came from Messrs. Mack & Son, whose Marie Baumann, Victor Hugo, Prince Arthur, and Général Jacqueminot were very good indeed. Mr. Merryweather was an excellent second, and Mr. Mount third.

The Jubilee trophy for amateurs brought several splendid stands, and the class was a noteworthy one considering the season. The premier award went out of the usual hands, falling to Mr. Whitton of Bedale. He well merited his victory, his flowers being in perfect condition. The varieties represented were—back row: Emilie Hausburg, Duchess of Bedford (a lovely flower), Mdme. Montet, Prince Arthur, François Michelon (weak), Comte Raimbaud, Marie Verdier, and Dupuy Jamain. Middle row: Ulrich Brunner, Rubens, A. K. Williams (a grand flower), Catherine Mermet, Dr. Andry, Innocente Pirola, E. Y. Teas, and S. M. Rodocanachi. Front row: Comtesse de Nadaillac, Camille Bernardin, Mrs. Laing, Alfred Colomb, Madame G. Luizet, Horace Vernet, Etienne Levet, and Victor Hugo. Mr. W. Hutchinson, Kirby Moorside, was second with a delightful collection, the only fault of which was that the flowers were rather light. Mr. H. V. Machin, Gateford Manor, Worksop, was third with a very good stand. The Palace winner, Mr. Lindsell, was altogether out of it.

There was also excellent competition with thirty-six single trusses, the Rev. J. H. Pemberton winning the piece of plate with somewhat small but clean blooms, the best being Mrs. John Laing, A. K. Williams, Horace Vernet, Comte Raimbaud, and J. S. Mill. Mr. W. Drew, Ledbury, was second with The Bride, Mrs. J. Laing, A. K. Williams, and a lovely Madame Hoste as his best flowers. Mr. Lindsell was third. Mr. Machin was the only exhibitor of twelve trebles, and was rightly awarded the first prize.

Division D was open to growers of less than 2000 plants. There were two classes, one for eighteen single trusses and one for twelve. Three competed with eighteen, and the first prize went to Mr. Whitton, the best blooms in a moderate stand being Prince Arthur, Duchess of Bedford, A. K. Williams, Catherine Mermet, and Alfred Colomb. Mr. Hutchinson followed with fair flowers, Duchess of Bedford being one of the best; and Mr. W. Boyes, Derby, was third. Mr. E. Mawley, Berkhamsted, was first with twelve, his flowers being small but extremely neat; Mrs. John Laing and Marquise de Castellane were perhaps the best. There was no other competitor.

In division E, for growers of less than 1000 plants, there were classes for twelve and nine. The former found Mr. C. J. Grahame of Croydon to the fore, his blooms being small, but the majority clean and fresh. Suzanne Marie Rodocanachi was a good bloom, although a little wanting in tone. Mr. Mallender, gardener to Miss Mellish, Hodsock Priory, Worksop, was second. In the other class there was only one stand, that of the Rev. F. H. Gall, Hitchin, and he was charitably awarded the first prize. Division F, in which there was a class for six single trusses, did not fill.

The local division brought out some very fair flowers. It covered a radius of thirty miles from Worksop Cattle Market, and consequently admitted Mr. Boyes, who defeated his solitary opponent, Miss Mellish, by a few points only, his flowers being much undersized. The best flower in either stand was Miss Mellish's Madame Eugène Verdier. Mrs. Jebb, Firbeck Hall, was the only one to stage a twelve stand, and was given the first prize; while in that for six Mr. H. Stewart of Carlton scored a bloodless victory. Competition was better with six Teas, Miss Jebb winning from three opponents with a very good stand indeed, her flowers being fresh and perfectly clean. The Hon. Edith Gifford and Marie Van Houtte were two of the best. Mr. Stewart was second with fresh flowers, and Miss Mellish third.

The extra classes for amateurs comprised one for six new Roses, one for six of any H.P. for exhibitors in divisions C and D, a similar one for those in divisions E, F, and G, and one for eighteen bunches of garden Roses. In the first the Rev. J. H. Pemberton was the only exhibitor, and was placed first for Gustave Piganeau, Caroline Testout, Duchess of Fife, Madame Delville, Marchioness of Dufferin, and Frances Bloxham. In the second Mr. Lindsell won with a moderate stand of Mrs. J. Laing, Mr. Whitton being second with Prince Arthur, and Dr. Budd third with Alfred Colomb. In the third Mr. Grahame won with La France, and Miss Mellish was second. In the fourth there were three excellent stands, much the best being that of Mr. Machin, who had Rugosa rubra, Mignonette, L'Idéale (beautiful), Paquerette, Gloire de Dijon, The Pet, W. A. Richardson, Damascena, Monthly, Anna Maria de Montravel, Red Pet, Salet, Rêve d'Or, Gloire des Polyanthes, Rugosa alba, and Perle d'Or in delightful condition. Mr. Pemberton was an excellent second, and Miss Mellish third.

Teas and Noisettes were not up to high water mark as a whole, but many were good. Mr. Merryweather scored in the only open class, which was for twelve trebles, and with one or two exceptions he had a

very good stand, for although the flowers were small they were in perfect condition. Mr. Mount was an excellent second. Messrs. Dickson & Sons won with eighteen in the trade class for that number, Messrs. Harkness & Son following. Both had good stands, but the Irish growers were well in front, their Marie Van Houtte, Madame Hoste, Madame de Watteville, and Francisca Krüger being beautiful blooms. Mr. Merryweather was first with twelve, again showing extremely well, his flowers being exceptionally fresh and clean. Ernest Metz was a splendid example. A capital box from Mr. Mount secured the second prize, and the third went to Messrs. D. & W. Croll, Dundee.

In the first division for amateurs, no specified number of plants, Dr. Budd of Bath won with a very beautiful box, the blooms displaying no exceptional size, but being extremely fresh and clean. Mr. Machin was a most creditable second. Dr. Budd was also first with six trebles, having another charming box, and Mr. Machin was the only other exhibitor. Mr. Mawley was first in the 500-plant section for nine blooms, Messrs. Grahame and Pemberton following. Mr. Mawley's was a box in his best style. Mr. Whittle of Leicester won with a neat stand in the 200-plant class for six; Mr. Whitton second, and Miss Mellish third. Mr. Machin won with nine of one variety, and Mr. Grahame with six, Mr. Mawley being second in the latter class, and Mr. Whittle

New Roses were splendidly shown by Messrs. Dickson, who won with Duke of Fife, Caroline Testout, Jeannie Dickson, Marchioness of Londonderry, Madame Delville, Salamander, Gustave Piganeau, Margaret Dickson, Le Flecheur (?), Marchioness of Dufferin, Kaiserin, Augusta Victoria, and Waban. Mr. Merryweather was second, and Messrs. Paul and Son third. For twelve of any yellow, Mr. Mount was first with a fair box of Maréchal Niel, and Messrs. Croll second with Marie Van Houtte. Messrs. Dickson won with La France in excellent order in the light pink class, Messrs. Harkness & Son being second with a bright box of Mrs. Laing, and Mr. Mount third with the same variety. Messrs. Mack & Son had the best twelve crimsons, winning with a splendid box of Horace Vernet. Messrs. Harkness were second with A. K. Williams, and Messrs. Dickson & Son third with Alfred Colomb. There appeared to be only two stands of dark velvety crimsons, and neither was good. Mr. Frettingham was placed second for Louis Van Houtte, and Mr. Mount third for Fisher Holmes. Messrs. Paul & Son had a pleasing stand of singles, and were awarded the first prize.

The premier Tea in the amateurs' class was a splendid Madame Hoste in Mr. Drew's second prize stand of thirty-six, and the premier H.P., a grand Mrs. J. Laing, included in Mr. Pemberton's first prize stand in the same class. The premier trade H.P. was Messrs. Harkness & Sons' magnificent Horace Vernet in the Jubilee thirty-six, and the premier Tea, a splendid Madame Hoste, in Messrs. Dickson's second prize box.

[As an ardent rosarian and one who has worked so assiduously in connection with the provincial show of the National Rose Society, we have much pleasure in publishing the portrait of Mr. H. V. Machin of Gateford, Worksop.]

ULVERSTON ROSE SHOW.—JUNE 10TH.

THE North Lonsdale Rose Society, which is affiliated with the National Rose Society, held its tenth annual Exhibition on the above date, and great public interest was manifested in it. Prizes to the value of £50 were offered, together with four bronze medals of the N.R.S. and a silver medal for Pansies. The Show was held three weeks earlier than last year, and would have suited many local amateurs had it taken place still earlier.

The nurserymen made an extensive display. Mr. B. R. Cant of Colchester was absent this year, the new comers being Messrs. R. B. Mack and Sons, Catterick, Yorkshire, and Mr. W. Frettingham, Beeston, Notts. They were not equal to the Irish representatives, Messrs. Alex. Dickson and Sons, the Royal Nurseries, Newtonards, who carried off all the first prizes in all the nine classes. Their exhibits were greatly admired, especially the new seedling Marchioness of Downshire, which was awarded the gold medal at the Crystal Palace. Messrs. Harkness, Bedale, took two second and a third prize; Messrs. R. B. Mack & Sons four seconds, also the prize for the best Rose in the Show with Horace Vernet.

In the amateurs' section J. H. Midgley Esq., J.P., Grange-over-Sands, took the leading prizes and gained the bronze medals for the best light H.P. bloom with Merveille de Lyon, and Souvenir d'Elise Vardon for the best Tea or Noisette. Mr. Midgley, however, withdrew his claim to the latter in favour of H. V. Machin, Esq., Vice-President of the N.R.S., another successful exhibitor. Mrs. Wm. Boulton, Ulverston, won the bronze medal in the dark H.P. class with Ulrich Brunner. The other classes were all well filled, and the Pansies were charming. The nurserymen judged the amateur section, and vice versâ. Altogether it was a grand show considering the season.—R. P. R.

[The "Herefordshire Incumbent" writes:—"In your otherwise wonderfully correct report of our Hereford Rose Show, considering my corrections and loose writing, I see the word 'would' is put for 'word,' in connection with Mr. Cant's name, and the word 'Noisettes' before the name of Caroline Kuster in the seventy-two list is obviously out of place. The reading should have been, 'Caroline Kuster (Noisette),' the H.P.'s then following in sequence." Mr. A. Whitton of Bedale also writes:—"In your report of Hereford Rose Show (page 38), the stand credited to Mr. Drew contained the twenty-four Roses with which I won first prize, also the medal for the best H.P., Pierre Notting. I was also winner of the twelve trebles and six Teas."]

A DESTRUCTIVE HAILSTORM.

The hailstorm mentioned in the Journal of July 13th (page 33) was only felt in a slight degree in this neighbourhood (Kirkbean), but from the local newspapers of July 12th it appears to have increased in severity in its progress in a northerly direction, and to have attained its greatest force in the parish of Kirkmahoe, a few miles north of Dumfries and near Amisfield. In the town of Dumfries a great deal of damage was done to glass, and, as was to be expected, nurseries and private gardens have suffered considerably. Mr. Jas. Service, Maxwelltown, had over 360 sheets of glass broken, Messrs. T. Kennedy and Co. over 150, and Messrs. Fotheringham & Co. a considerable number. Private establishments, such as that of ex-provost Lennox at Edenbank, where there were nearly 100 sheets broken, also received much damage in this way. The damage to fruit, flowers, and vegetables has also been very serious, as may be seen by this quotation from a local newspaper:—"Fruit trees were stripped to a large extent, and still greater loss was inflicted by the ice cutting holes in the Apples, Pears, and Plums which remained on the branches. They are thus practically destroyed, as they will rot on the tree. Vegetables were riddled as if with shot, and flowers in large numbers were broken and ruined for the season."

Great destruction has also been caused to farm crops, and young ducks and pheasants were killed by the hailstones. The account given



FIG. 9.—MR. H. V. MACHIN.

of the damage done at Carfield in Kirkmahoe, the residence of Dr. Williamson, is very dismal reading, but the following extracts will give an idea of the severity of the storm:—"One hundred and ten large squares of glass in the conservatories were broken. Some of these were one-eighth of an inch rough plate, and were further protected by a canvas blind." "The fruit crop is literally and entirely destroyed. Scarcely a single Apple, Pear, Green Gage, or Plum can be found, of those still on the trees, which is not chipped beyond hope of ripening. Leaves of Cabbage, greens, and Cauliflower are reduced to shreds; thick stalks of Rhubarb are split and twisted; Vegetable Marrows are completely wasted; whole rows of Peas and Beans are levelled, and the pods cut with hailstones." In the same parish one hailstone of circular shape, and not of exceptional size, is said to have measured 2 inches and a tenth in diameter. Such storms are of rare occurrence in this usually temperate district, and it is well that the area of its force was comparatively limited.—S. Arnott.

CARNATIONS AT PUTNEY HILL.

Amongst the best border Carnations I have seen this season are those at Red Brae, Putney Hill, S.W., the residence of Dr. W. S. Wyman. The plants, which are growing on a border facing due south, have made splendid growth, and an abundance of healthy layers with a profusion of flowers are the rewards they give for the generous treatment and concentrated attention they must have received both from the Doctor and his able gardener, Mr. Wheeler. The plants had not been disbudded to the extent to which the practice is carried by some growers, two objects being kept in view—good quality of blooms combined with large numbers. The flowers were of excellent form and substance, and this despite the fact that all the crown blooms and those immediately beneath them had been gathered. I was agreeably surprised to find such grand plants after the many small weakly ones which are so plentiful this season.

I will name a few of the best of those which were in bloom at my recent visit. First must be mentioned the well known Picotee Red Brae. This is a beautiful flower of fine shape; the petals are broad, and

the calyx very rarely splits, a point of the utmost importance in a garden such as this, where ringing is not practised. The ground colour is pure white and the edge a clear rosy purple, forming a charming combination. One of the best of the scarlets is unquestionably Lord Byron, the blooms of which are of exceptional size and of a rich striking The shape, too, is everything one could desire. James Cragg is a very beautiful fancy variety, having broad shapely petals, the colour of which is a dull white profusely spotted and flaked dark crimson. Constance is one of the best whites in the whole collection, the substantial blooms being of the purest white. Bely Cottle is a magnificant stantial blooms being of the purest white. Raby Castle is a magnificent flower with, so far as I can see, only one fault—it is inclined to burst its calyx, a serious drawback to such a bloom. The colour is a lively rose pink, and the flowers are very much fringed. The fine Rose Celestial is here in grand condition, blooming profusely and making strong healthy looking growth. Germania, perhaps the best of the yellows, is doing its grower every credit, as also is the popular Mary Morris. Ossian is a fine white flower, having fringed petals of much breadth and substance. Napoleon III. is an excellent variety, with brilliant scarlet flowers borne in the utmost profusion; not quite so bright in colour as the foregoing, but still bright, and of equal substance is The Coroner. Amongst other varieties noticed in the collection were Mrs. Reynolds Hole, Lord H. Pomeroy, Mrs. Fawcett, Mrs. Tegner, Alice Ayres, and three grand rows of the Old Crimson Clove, without which, no matter how choice the varieties, no collection could be termed complete.

Another excellent feature of this suburban garden is a charming little rockery, upon which nothing was more showy at the time of my visit than the Iceland Poppies. Some good Thymes were unfortunately just passed their best, as I should much have liked to have seen them; perhaps on the occasion of a future visit I shall be more fortunate.—



EVENTS OF THE WEEK.—As notified in another paragraph the Committees of the Royal Horticultural Society will meet at the Drill Hall, James Street, S.W., on Tuesday, July 25th. A special show of Carnations, Picotees, and other flowers will be held at the Gardening and Forestry Exhibition, Earl's Court, on July 26th and 27th. The Midland Carnation and Picotee Society will hold an exhibition in the Botanical Gardens, Edgbaston, on Saturday, July 22nd, instead of August 5th, as stated in the schedule.

- THE WEATHER IN LONDON.—The current week opened wet, rain falling heavily on Sunday morning. In the evening it cleared, and, with the exception of a slight shower, Monday proved fine but rather windy, as also did Tuesday. On Wednesday morning it was raining, and at the time of going to press it is dull and cloudy.
- —— ROYAL HORTICULTURAL SOCIETY.—The next meeting of the Royal Horticultural Society will take place on Tuesday, July 25th, at the Drill Hall, James Street, Victoria Street, Westminster. The Fruit, Floral, and Orchid Committees will assemble at twelve o'clock, as usual, and at 3 P.M. a paper on "Alpine Houses and Plants" will be read by Mr. H. Selfe Leonard.
- THE GARDENERS' ROYAL BENEVOLENT INSTITUTION.—We are informed that at the recent Bath Rose Show a large tent was set apart by the Management Committee for the use of members and friends of the above Institution, who were invited at five o'clock to hear an address from Mr. H. J. Veitch. R. B. Cater, Esq., presided, being supported by Mr. Ingram (Secretary of the Gardeners' Royal Benevolent Institution), Mr. William A. Garaway, Mr. B. R. F. Pearson, Mr. W. W. Jeffrey, and others. Mr. Veitch made a forcible appeal in support of the funds of this excellent Institution.
- HEDGES FOR SHADY PLACES.—It is often desirable to have hedges along lines where large trees are already growing. Among the best shrubs for this purpose, says "Meehan's Monthly," are the various varieties of Privet. They stand dry ground better than almost anything else. It is not so much the shade which injures the hedges in these situations as it is the drying of the ground by the roots of the trees. When we imagine the enormous amount of moisture transpiring from thousands of leaves of trees, we can readily see how dry the ground must be which has to supply this moisture. But those who have practical experience understand this without even a thought of the philosophy involved.

- THE REV. H. H. D'OMBRAIN.—We desire to record our deep sympathy—which will be shared by a host of friends—with Mr. D'Ombrain on the great loss he has sustained by the death of his beloved elder daughter. We know that her life was a noble and brave one, for it was consecrated to the good of those who needed succour—sufferers in institutions of which she was the devoted head. Mr. D'Ombrain's absence from many Rose shows, as well as from our columns of late, under the familiar nom de plume of "D., Deal," has been imposed by the illness of his daughter, which, to his great sorrow, terminated fatally. We shall hope to soon have something from his pen again.
- NATIONAL CARNATION SHOW.—Mr. M. Rowan writes:— In your enumeration (page 36) of the blooms shown in my stand at Chiswick, Alfred "S.B." is set down for "2." There were three scarlet bizarres shown—viz., Robert Houlgrave, Alfred, and Fred, and in appending the names to the flowers at the last moment I, in my hurry, wrote for the third one Alfred instead of Fred. The error was obvious enough, and the bloom was correctly named when shown in my twenty-four the next day at Earl's Court.
- EARLY RIVERS NECTARINE.—During a hurried visit to Sawbridgeworth a few days since, I noticed a fine crop of this new Nectarine just ripe on trees in pots. These were much in advance of Lord Napier grown in the same house, and better coloured. I counted twenty-six fruit on a tree in an 11-inch pot, all of which were fit for exhibition, which shows that it is a good cropper, and I consider it likely to become as great a favourite eventually as any of the varieties now before the public.—W. H. DIVERS, Ketton Hall Gardens, Stamford.
- —— Show at the Agricultural Hall.—As we have before announced, the Royal Horticultural Society will hold, from August 29th to September 1st, 1893, at the Royal Agricultural Hall, London, what the officials expect will prove to be "the grandest show of fruit, flowers, and vegetables ever held in this country." The amount of money offered in prizes exceeds £400, and this, it is considered, will attract nurserymen, gardeners, and lovers of fruit and flowers. Special awards are offered for heating apparatus, greenhouses, appliances, and other sundries, and in this division space is already being largely taken up. This section is under the direction of the managers of the Royal Agricultural Hall Company. Those desiring to secure space should make immediate written application for the same.
- EXETER GARDENERS' SOCIETY'S ANNUAL OUTING. The members of the Exeter Gardeners' Society held their annual outing on Wednesday, July 12th, combining, as usual, instruction with pleasure. The trip was to Sidmouth, making stoppages on the way at Streatham Hall, Exeter, Killerton Park, and Escott. At Streatham Hall the party was met by Mr. Franklin, head gardener to Mrs. R. B. West, who conducted them through. At Killerton the members were met by Mr. Garland, and under his guidance spent two hours in strolling through Sir Thomas Acland's grand old park. The pleasure grounds are very extensive and the walks charmingly arranged. The trees and shrubs are some of the finest in the West of England. At Escot, Sir John Kennaway accorded all a hearty welcome, inviting them to wander at will over the grounds and see all there was to be seen. Accompanied by Mr. Underdown, the head gardener, a hurried inspection was made of the gardens, the wilderness, and other parts of the park. Sidmouth was not reached until nearly half-past five, and an adjournment was made for dinner, after which the party returned to Exeter.
- FRUIT CULTURE AT WIGHTWICK MANOR, WOLVER-HAMPTON. - A Wolverhampton correspondent, Mr. T. B. Dobbs, writes:- "Mr. G. A. Bishop has proved the great advantage of a knowledge in chemistry applied to fruit culture, and the efficacy of well selected manures, by the production of three successive crops of fruit in pots, including Cherries, Plums, and Pears. There are several dozen trees in a line down the centre of an orchard house, every branch, from base to apex, being heavily laden with fruit according to the samples forwarded. These trees are only grown temporarily till the permanent Peach trees in the back and Nectarine trees in the front are sufficiently established, and will be removed this year. To get a combination of Pcaches, Plums, and an equally heavy crop of Cherries of all the best dessert varieties in the same house shows one of the highest forms of the cultivation of fruit, bearing in mind that the Péach and Nectarine trees are heavily cropped with fine fruit for the second time." [The samples of Plums are splendid-large clusters of fruit of the first size, and the foliage of the best possible description, the whole undoubtedly representing high-class culture.]

- GARDENING APPOINTMENTS.—Mr. W. C. Davis, for upwards of four years Mr. Clayton's foreman at Grimston Park, Tadcaster, has been appointed head gardener to Sir Andrew Fairbairn, Bart., Askham Hall, York. Mr. Richard Moore, the Gardens, Llanwern Park, has been engaged by Wm. Henderson, Esq., as gardener, at Berkley House, Frome, Somerset.
- COLEUS DISTINCTION.—Two beds of this distinct Coleus are now to be seen in grand condition at Messrs. Veitch's, Chelsea Nursery. The rich, dark, substantial foliage produces a very striking effect, it being next to impossible to walk through the nursery without giving it more than a passing glance.—H: W:
- PROPAGATING THE WISTARIA.—It is not generally known, remarks an American contemporary, that the Wistaria grows from root cuttings. Layering, however, is a very good method where there is room for it. The trailing shoots root by being buried in the ground a little, but better if a slit is first made in the shoot.
- WAKEFIELD PAXTON SOCIETY.—At the meeting of the above Society on Saturday evening Mr. W. E. Corden, who is well known as an amateur hybridiser, read a practical and interesting paper on "The Pelargonium." There was a collection of fine plants and cut blooms, and these were sold on behalf of the Royal Gardeners' Orphan Fund.
- THE WEATHER IN SCOTLAND .- At a meeting of the Edinburgh Botanic Society on July 13th, the Curator (Mr. R. Lindsay) observed that the past month was remarkable for the excessive heat and dryness which prevailed. The continued want of rain having lasted throughout nearly the whole of spring the marvel was that its effects had not been more serious on vegetation. A heavy fall of rain took place on the 23rd of the month, after which all danger from drought was at an end. The lowest reading of the thermometer during June was 40°, which was registered on the 2nd. On the night of the 16th the thermometer did not fall below 62°; the lowest day temperature was 50° on the 23rd, and the highest (89°) on the 18th of the month. Hardy herbaceous plants flowered freely, but went quickly past owing to the drought. The early flowering kinds had ripened from seeds abundantly. On the rock garden fewer plants came into flower last month than for any June during the last eleven years, the largest number having blossomed this year in May. In all 294 species and varieties came into flower last month.
- JAPANESE GARDENING. In a highly tasteful number of "The Studio" for July appears an interesting article upon the gardens of Japan by Mr. Charles Holme. The writer seeks to impress his readers with the fact of the intense admiration for Nature possessed by the Japanese. Their gardening is intensely artificial in the sense that they try laboriously to reproduce in miniature real, and in many cases ideal landscapes, differing in this respect from the Chinese, who stock their gardens with vegetation distorted into the shape of junks, pagodas, and other bizarre objects. He says, "Foreign plants, with the exception, perhaps, of a few characteristic ones from China, are not favoured by the Japanese; for they do not look upon their gardens as places to collect and display a variety of botanical specimens as in a nursery or arboretum; their idea is that the garden shall appear as a picture, complete in itself, each thing being in harmony with the rest, and forming, as it were, a part of a whole. The gardener in Japan is a sort of landscape painter, who uses actual trees, rocks, and water, instead of canvas, paints, and brushes. The picture he may form may be in imitation of some natural, well-known scene in his own country, or in China; just as though, if an Englishman, he might strive to reproduce the beauties of the Strid in Bolton Woods, or the Fairy Glen at Bettws-y-Coed. But often he takes for himself a theme of an abstract nature and eudeavours in his arrangements to express a sentiment, as of 'retirement,' 'meditation,' 'long life,' or 'fidelity.' In the majority of cases simplicity is aimed at rather than redundancy, as lavish display and vulgarity are synonymous in the Japanese mind." The perfect Japanese garden would seem to be one in which there is a waterfall, hills and glens, lakes and islands; stone lanterns incrusted with lichen, moss and leaves, shaped like a hat, a milestone, or a temple, and containing small oil lamps; a stone washing basin; bridges; curiously winding pathways of steppingstones, and summer-houses. In the absence of sufficient space, this multum in parro style will, one must suppose, somewhat resemble that of the Chelsea pensioner or the Broxbourne amateur. "The Studio" is a truly high art magazine, but we trust that it is not trying to imbue our æstheticised Englishwomen with a craze for Japanese gardening, otherwise unfortunate husbands who cannot extend their limbs in the drawing-room on account of the knick-knacks, gew-gaws, and bric-abrac, will soon find such relief equally impossible out of doors.

- WE are informed that Mr. M. CUTHBERTSON of the Public Park Nursery, Rothesay, was awarded a silver medal for 125 bunches of hardy flowers at the Royal Caledonian Horticultural Society. Also at Paisley, two days after, Mr. Cuthbertson had the same honour conferred for a similar exhibit.
- FUCHSIAS AND BEGONIAS.—One of the most attractive houses at Messrs. Veitch's at the present time is that containing some excellent Begonias, Zonal and Ivy-leaf Pelargoniums, and Carnations on the stages, with Fuchsias of various types trained up the roof. On entering the house one is met with a truly gorgeous display of colours which cannot fail to attract attention and admiration from all who see it —H. W.
- THE WEATHER IN JUNE.—June was a dry month, but not so bad as the preceding, as we had three good showers. The wind was in a northerly direction twenty-one days. We had sixteen bright days, three of which were clear. Barometer varied considerably. Highest reading 30.44, at 9 A.M. on 18th; lowest 29.35, at 9 A.M. on 23rd. Total rainfall 1 inch, which fell on nine days, the greatest daily fall being 0.31, on 22nd. Highest shade temperature 87°, on the 19th; lowest 36°, on 1st; lowest on grass 26°, on the 11th. Mean daily maximum, 71.90°; mean daily minimum, 48.43°. Mean temperature of the month, 60.13°. The garden spring ran 20 gallons per minute on the 30th.—W. H. DIVERS, Ketton Hall Gardens, Stamford.
- THE annual banquet of the Worshipful Company of GARDENERS was held at the Hôtel Métropole on the evening of the 12th inst. The Master, the Rev. W. Wilks, assisted by the Upper Warden, Mr. Beaumont Shepheard, received the guests, who numbered about eighty, half of whom were ladies. After the usual loyal toasts had been given by the Master, Sir Trevor Lawrence proposed that of "The Ladies" in glowing language. He commented on the pleasing innovation betokened by their presence, and hinted that considering man owed to woman his exclusion from the finest garden ever knownto wit, the Garden of Eden-man was very forgiving. Colonel Dampier Palmer, M.P., responded, and incidentally remarked that it was usual to select a bachelor in preference to a married man for this purpose, because on the principle followed in the House of Commons, he spoke from imagination rather than from knowledge. Consequently the Master could have discharged the function better than himself. Mr. Harrison Weir then proposed the toast of the evening, "The Worshipful Company of Gardeners." He dwelt, among much else, on the pleasure received in perusing the old authorities on English horticulture, on the connection between the plant world and decorative art, on flowers as a medium for expressing amatory sentiment, and the modern craving after excitement as shown in the cultivation of the unrestful Orchid. The Master, the Rev. W. Wilks, whose name was coupled with the toast, replied stating that the Company dated its origin from the reign of James I., that it was doing good work in the promotion of horticultural education, and viewed gratefully the generous donation of scholarships for this purpose by Sir Trevor Lawrence and Baron Schröder. Other toasts were honoured, and the proceedings of the evening agreeably diversified by both instrumental and vocal music.

REVIEWS OF BOOKS.

The Garden's Story. By George H. Ellwanger. London: William Heinemann.

From Mr. Heinemann there has come to hand an English edition of this very agreeable book. It is somewhat in the nature of an édition de luxe, prettily bound in light green, and well suited for display within the boudoir or the drawing-room. Not the least interesting portion of the volume is the introduction by the Rev. C. Wolley Dod, a careful perusal of which is indispensable to the understanding of the following pages. Indeed so interesting is it that we venture to reproduce a considerable part of it here, feeling quite sure that the terse and picturesque summary of the contrasts between the Old England and the New will excite a relish for the body of the work.

The scene of the book is the neighbourhood of Rochester, in the State of New York. It is situated on the southern shore of Lake Ontario, about sixty miles due east from the Falls of Niagara, and separated by less than that distance from the Dominion of Canada across the lake; a line of 150 miles may be drawn to Toronto. Canadian territory extends some hundred miles to the south of the latitude of Rochester, so that what we read in this story may be applied to a considerable part of British America. Our friends in that region have to deal with hardy plants under different conditions from those which prevail in our insular climate. Theirs is always a real winter, and the ground is not fully thawed until our spring flowers have been flowering in driblets for about two months. Hence it happens that spring flowers across the Atlantic come in a heap, and though there may be for a day or two a relapse into winter the early flowers there have a

wonderful power of resisting frost: indeed, we may sometimes see in our own flower beds Trilliums, Tiarellas, Uvularias holding up their heads without flinching on the coldest day that the end of a British April can bring, when every Daffodil is doing obeisance with its face on the ground. So the gay burst of spring, which is too often a mere poetical fiction with us, is a reality in North-America, though it may come late. The hot summer which soon follows brings many things which remind us of descriptions of tropical countries. Humming birds hover about the flowers in the sun, the Honeysuckles at dusk are crowded with the great Sphink Carolina, and fire flies blaze all night. The great heat favours the maturation of some plants, which rarely complete their cycle of growth out of doors in our short and doubtful snmmer, though from the same cause drought is more destructive there to the beauty of the garden. The Alpine plants, natives of high elevations in mountains of Europe and Asia, though the long and regular winter would favour their cultivation in the lowlands near Rochester, seem for the most part incapable of enduring that dry beat.

elevations in mountains of Europe and Asia, though the long and regular winter would favour their cultivation in the lowlands near Rochester, seem for the most part incapable of enduring that dry beat.

The colloquial names of flowers, many of them perhaps new to the reader, with which the story abounds, need not be explained here, because they are accompanied at least once in the book by the botanical Latin name, and a very complete Index enables us to refer with ease to the page where the name occurs. Hence such names as Partridge Vine—it may be noticed by the way that nearly all trailing plants are called Vines in America—Spring Beauty, Butterfly Weed, call for no comment. But the popular names of birds introduced without the addition of their scientific synonyms may puzzle those who know nothing of American ornithology, and who may like to learn what are the familiar feathered friends or enemies of the gardener on the shores of Lake Ontario. One bird seems to be the same everywhere in its wicked propensities, the cosmopolitan "English" sparrow (why "English," more than Russian, or French, or Turk, or Prussian?); but our friends insisted on having it sent over to them in spite of our warning, and though they repent of their bad bargain, and call the bird a little wretch—

"O factum male! O miselle passer!"

they must keep it now, and we heartily wish they would take the rest too. Many other birds are introduced, such as wrens, nuthatches, swallows, and martins, crows, orioles, and plovers, which though distinct in detail from their Old World representatives, are sufficiently near to make the allusions to them consistent with our experience; but in one or two cases it is not so; for instance, the first English settlers gave the name of Robin to a migratory kind of thrush (Turdus migratorius) with a red breast, a songster, but not a winter resident near Rochester, and therefore hardly suggestive, except in name, of the half domesticated little frequenter of our sheds and window ledges which sings to us all winter, and seems rarely to venture beyond the limits of its native shrubbery. Another ambiguous name is Blackbird, given in the North-Eastern States to the red-winged starling (Agelæus phæniceus), a gregarious and migratory bird, very destructive to grain crops, and breeding amongst the reed of marshes, having but little in common with our "ouzel cock," so black of hue, which warbles, eats, and dwells in our evergreens and orchards.

About other birds introduced, it may be acceptable information to some who do not know it already, that the chickadee is a titmouse, the bobolink or rice bird a migratory large bunting with a plumage of black, white, and yellow. The hair-bird is the hairy woodpecker, which, like our native green woodpecker or "rain-bird," is noisy before rain. The pee-wees (or peewits) are flycatchers, and the cat-bird—so called from the likeness of its note to the mewing of a kitten—is a dark-colouned thrush. The grackle or crowblackbird is an omnivorous and gregarious noisy depredator, something between a jackdaw and a starling. Such names as blue-bird—a bird about the size of our robin—and yellow-bird, a kind of goldfinch, while suggestive of tropical feathering, sufficiently explain themselves. To compare the garden birds of two countries, one ought to have resided in both; but, after consulting those who know, I conclude that in the matter of song the balance is in favour of the old country, while the Northern States of the New World have more gay plumage to admire in spring and summer.

The main portion of the book consists of fifteen chapters, each bearing a poetical or seasonable title, and couched in the form of a running monologue or soliloquy upon the panorama of natural incidents unfolded during one year. Early spring is dealt with under the title of "The Garden in Anticipation." We are introduced to later spring in the chapter entitled "When Daffodils Begin to Peer," while such headings as "Warm-Weather Wisdom," "Midsummer Flowers and Midsummer Voices," "Flowers and Fruits of Autumn," and "The Last Monk'shood Spire," suggest the inevitable progression of the seasons. It is from every point of view a most refined and desirable publication—a worthy successor to the works of White and Jeffries—and eminently suitable as a gift-book between naturalists and lovers of horticulture.

British Fungus Flora. By GEORGE MASSEE. London: George Bell and Sons.

We have to acknowledge the receipt of the above text book. The work is in two volumes, and is a model of excellence in respect of the clearness of its type and solidity of its binding. In a short preface Mr. Massee indicates to us the vast strides which have been made in the diagnosis and differentiation of fungus species during the last twenty years, these having almost doubled so as now to number nearly 5000. In the present work, however, Mr. Massee confines himself chiefly to the description of the Basidiomycetes and the Ascomycetes, leaving the Moulds and Mildews for those who choose to make a closer examination of the subject in his other work entitled "The Evolution of Plant Life: Lower Forms." The meaning of this is that the fungi dealt with and depicted in the pages of the book which we are noticing are those having a visible stem, or at least a visible pileus, such as we are accustomed to see in the common Mushroom, and many of which strike the eye of even ordinary observers as they adhere to the branches, trunk, collar, or the

roots of trees, or to posts or fences, or as they appear upon dunghills, rubbish heaps, and about swamps and plantations.

To the universalist, the revelation of the enormous vista to be opened up by mycological investigation is somewhat staggering, and must excite something like a feeling of despair at the brevity of life. If art was long and life was short in the days of Horace, what will be the relative importance of a life even like that of the late M. Chevreuil, in the face of the ultimate revelations of telescopy and microscopy? Perfect happiness will then only be enjoyed by the absorbed specialist, and men of science will spend a lifetime in the contemplation of a spot in the heavens invisible to the naked eye, or of the mould which gathers upon a particular kind of strawberry jam. One thing is certain, however, that the pleasure of a subject increases proportionately to the mental concentration with which it is pursued, and the consideration of fungiduring a perusal of Mr. Massee's book is pleasant even to a mind hitherto occupied with the more visible and striking beauties of phanerogamous plants. One fact impresses the reader, and that is the interdependence of organic life and the further revelations foreshadowed by science of the sequences which prevail upon our planet. It is in the highest degree interesting to read of the affinity certain parasitic fungi show for particular trees and particular situations, and induces the mind to expect and hope for an ultimate solution of the puzzle of creation. Whether this ever arrives or not, such investigation is at least a more profitable mental manifestation than the old-fashioned way of regarding each disjointed fact as an accident or a miracle. It is permissible even to look forward to a time when the unravelling of scientific problems may become of as absorbing interest to young persons of the future as charades and guessing contests are to those of the present day. "The British Fungus Flora" is the result of an exhaustive comparison of the best known authorities upon the subject, and it may be confidently recommended as a work of study and reference to those interested in mycology.

A NEW LILIUM.

At the Exhibition held in the Gardens of the Royal Horticultural Society at Chiswick on July 11th, considerable attention was centred on a new Lilium exhibited by Messrs. J. Veitch & Sons, Royal Exotic Nursery, Chelsea, and Messrs. Wallace & Co., Colchester. The first mentioned firm exhibited it under the name of L. Ukeyuri, and the latter showed it provisionally as L. Alexandræ. A first-class certificate was awarded in each case; but in the latter instance subject to the Lilium being correctly named by Mr. Baker of Kew, who, so far as we can at present ascertain, considers it, on a cursory examination, to be a garden hybrid. Messrs. Veitch, on the other hand, as already hinted, exhibited it as a species from Japan, and according to the rules of the Royal Horticultural Society, which give precedence to those who enter an analogous exhibit first, we illustrate it (fig. 10) as L. Ukeyuri.

From a decorative point of view it is a grand Lilium, and one that will doubtless become as popular as L. auratum. It is a dwarf grower, being less than 18 inches in height, and some of the plants exhibited bore three flowers. The blooms, as will be seen by referring to the illustration, are very large, pure white, and of great substance. It is unquestionably one of the finest and most beautiful Liliums yet introduced.

GRIMSTON PARK, TADCASTER.

In many respects Grimston Park may claim a high place amongst the stateliest of the "homes of England." A noble mansion is associated with splendid grounds and a magnificently timbered park. The flower garden merges almost imperceptibly into the woodland, sharing in some measure its cool, reposeful aspect. If the Italian style, so conspicuous in the house and its immediate surroundings, should fail to prove satisfying—and consider it artificial, there is ample compensation in the bright pictures, painted by Nature's own prodigal hand, which abound in the immediate vicinity. The mansion was not built for Mr. John Fielden, who died recently, but for Lord Howden, and the architect was Decimus Burton, while the garden and grounds were laid out by Nesfield. How the work of the twin artists compares it would require the architectural knowledge, the deep artistic sympathy, and the literary skill of a Hardy to explain. But if the higher plane to which the accomplished author of "A Laodicean" would raise such a description is denied to a gardening writer he can at least make some acknowledgment of the many good features of Nesfield's work. The formalities peculiar to the Italian style of the flower garden melt away along the winding walks which lead to the wilder portions of the grounds, and in the broad belts of Conifers and forest trees, the shrub-covered banks, the cool recesses, the Fern-clothed undergrowth, and the profusion of wild and naturalised flowers, there is a store of interest and pleasure which grows the more closely it is examined.

In the garden proper statuary and flowers dispute attention. The beds are numerous and attractively filled, and at the right of the house is a beautifully furnished Rose garden. The latter is backed by a belt of Oaks, Sycamores, Copper Beeches, and other trees. The last-named are magnificent specimens, and in the evening glow their leaves are tinged with Coleus-like hues unique and pleasing to the eye. Valuable

marbles gleam amongst stately Conifers. The boar in the Borghese garden at Bologna is represented by a stone of great value, and from it the eye wanders to one of the finest specimens of Thujopsis dolabrata north of the Trent, 20 feet high or more, and admirably proportioned. Or, again, an almost priceless Figure of Europa divides attention with a noble Lawson's Cypress 40 feet high and a grand tree of Thujopsis

grounds disclose many objects of interest when pursued. Thousands of Narcissi are established in the grass, and in the spring they add their own peculiar charm. Huge bushes of the Mock Orange diffuse their powerful fragrance. One of Philadelphus grandiflorus 15 feet high and 10 feet through was a wonderful sight, being completely wreathed in flowers. A picturesque effect is added by the lofty Scotch



FIG. 10.—LILIUM UKEYURI.

borealis with an altitude of about 30 feet. There is no limestone in this portion of the grounds, and Rhododendrons as well as Conifers thrive well. Laurels are as luxuriant as at Swanmore, and there must be two or three acres of them in different parts of the estate; rotundifolia and caucasica do best.

The winding walks which lead to the undressed portion of the

Firs, with their heavy mantles of Ivy, supplemented in some instances by clustering masses of wild Roses, the pink blossoms of which break from the cool Ivy slopes in myriads. One of the most beautiful spots in the grounds, or, indeed, in any garden in the country, is the Emperor's walk, so called from the lines of busts of some of the most famous and infamous of the old Roman and other potentates on each side of it. The

marbles are magnificent pieces of work, and doubtless their value is great, especially the figure of the great Napoleon, a costly and superb piece of work in Carrara marble, but a gardener's eye is quite likely to wander from them to the grand Conifers, ornamental trees and lofty timber in their vicinity. The forest trees at the back are noble timber in their vicinity. The forest trees at the back are noble examples—and amongst the Conifers in front of them I would particularly mention Abies orientalis 25 to 30 feet high, A. Kutrow, an Indian species about 20 feet, Picea Pinsapo, and P. Cembra, both about 20 feet, together with Cryptomeria japonica 30 to 40 feet, and Cupressus Lawsoniana about 30 feet, all of which are extremely handsome specimens.

The grounds at the other end of the house are little less attractive, rich as they are in fine forest trees and Conifers. Corsican Pines are amongst the most remarkable. In reaching there what is known as the Church Walk is traversed, and the first portion of this is flanked by a border of hardy plants, with a long wall covered with summer Roses at the back. The latter were smothered in flowers, clustering in thick masses right on to the top of the wall. The herbaceous plants consisted of broad clumps, most of them a yard across or more, such bold and brilliant flowers as Pæonies, Hemerocallis flava, Spiræa plumosa, Inula glandulosa, Delphiniums, Geraniums, Centaureas, Potentillas, and Campanulas of many sorts being represented by huge masses. not be much interest in such a border as this, consisting of more or less common plants, to hardy plant specialists, but its effect is undeniable.

A somewhat brief reference must be made to the ornamental department under glass, which is in every way as well managed as the gardens and grounds. The conservatory was under revision, but a remarkably fine pair of Rhapis flabelliformis, 10 feet high and 7 to 8 feet through, were noticeable; also a lofty Seaforthia elegans, 30 feet high, in flower, and some immense Camellias. Later the structure, which is a very spacious and lofty one, will be embellished by the noble spikes of Campanula pyramidalis and other plants, now rapidly advancing, and in autumn it will be gay with Chrysanthemums. There is a feature about the plant houses at Grimston which is well worth copying. No bare space is permitted at the sides of the paths and beneath the stages, but all is attractively covered with such graceful plants as Fittonias, Panicum variegatum, Tradescantias, Cyperus alternifolius, Selaginellas, Panicum variegatum, Tradescantias, Cyperus alternitolius, Selaginellas, and a variety of Ferns. How great an improvement this is upon the ordinary plan can only be realised by seeing Mr. Clayton's work. The houses are, so to say, finished. One of the most beautiful of the structures is that in which an attempt is being made to combine a cool Orchid house with a fernery. The Ferns are not grown in pots on a stage, but cover banks and nooks in a natural and graceful manner, besides clothing the back wall, in association with Selaginellas, in a cool garment of greenery. No special attempt is made to produce specimen garment of greenery. No special attempt is made to produce specimen plants, but a few giants are noticeable, amongst them being a Davallia Mooreana about 9 feet across. Orchids are extremely well managed. There are from 300 to 400 Calanthes in a healthy and forward condition, besides a good assortment of Cattleyas, Cypripediums, Pleiones, Thunias, and others. It would be impossible to refer individually to all the stove and greenhouse plants which are represented, but throughout there is evidence of good culture and exceptional taste. At the front of one of the houses, on a warm border at the foot of the wall, and facing south, I noticed a grand mass of Guernsey Lilies. They are thoroughly established and bloom most profusely, in fact a score of flowers may be cut at a time instead of the ones and twos which are obtainable from the usual handful of plants in pots under glass.

Some surprising results have been recorded amongst fruit and vegetables; for instance, Potatoes were lifted from a south border without protection on the 26th of May, which is a striking proof of the earliness of the season considering the northern locality. Strawberries (Noble) were gathered at the same time. The Apple crop is somewhat disappointing, for there was a marvellous show of bloom, Lord Suffield, Irish Peach and Yorkshire Greening being about the only three to carry a really satisfactory burden of fruit. A dwarf, spreading, open type of tree is favoured. The famous Sherburn Winesour Plum (for which as much as a guinea has been paid for a stone of fruit from the limestone) is bearing well. A south wall furnished with Peaches, Nectarines and Plums is worth noticing. Condor proves to be one of the most useful of the Peaches, ripening three weeks before the other varieties. Apricots are loaded with fruit, and St. Ambroise is the most trustworthy variety. It is an excellent sort, cropping well, displaying no desire to die off, and being of good quality, though hardly equal to Moor Park. The Peaches and Nectarines under glass are in splendid condition, Bellegarde, Grosse Mignonne, A Bec, Early Albert, and Prince of Wales being a few of the elect. The Vines are equally good. Mr. Fielden favoured the Frontignans, and these, as well as the more popular varieties, are carrying admirable One house of Frankenthal, bearing the usual complement of about 200 bunches, is particularly striking. The kitchen garden is extensive and well cropped. Grand Brussels Sprouts are secured by planting them 2 feet apart between rows of early Potatoes 3 feet asunder, the soil being tilled around the sprouts after their associates are cleared A dressing of wood ashes and night soil encourages splendid crops of Onions, 1 ton and 70 lbs. having been taken off about 270 square yards of ground last year, and the present year's quarter is equally promising. There is, in fact, the impress of good work in every department at Grimston, and in the present notes many things have been lightly touched on which merit special notice, but even with the season of Rose shows practically over space is not too abundant.

Without a doubt Grimston Park may be ranked amongst the leading places of the land, and Mr. Clayton as one of the foremost British gardeners.—W. P. W.



BARLY FLOWERING CHRYSANTHEMUMS.

THOSE who grow the early Chrysanthemums can scarcely be other than satisfied with the way in which the plants are flowering this year. Those which I grow on borders are covered with bloom, Early Blush being particularly good. This is a grand old early flowering variety, and one that should be extensively grown: It is a favourite in many suburban gardens in the north of London. The yellow and white varieties are, however, more attractive, and of these a good selection might be made.—SUBURBAN.

NATIONAL CHRYSANTHEMUM SOCIETY'S ANNUAL OUTING.

FOLLOWING a thoroughly wet day it was generally thought, when the morning of the 17th inst. opened dull and cloudy, that the annual picnic and outing of the members of the National Chrysanthemum Society would be somewhat a failure. Fate, however, ruled otherwise, and as the black clouds rolled by the sun shone brilliantly on the "Mum" growers and their friends who had burdened themselves, wisely, perhaps, if too well, with umbrellas, macintoshes and other safeguards against rain. The outing was a decided success from a numerical point of view, and the officials of the N.C.S. must feel gratified with the result. Thanks to the energies of Mr. R. Dean, the Secretary, the arrangements were carried out in a most efficient manner, and all who availed themselves of this opportunity for a pleasant run in the country

spent a most enjoyable day.

As previously announced in these pages, Wycombe Abbey, High Wycombe, Bucks, the beautiful seat of the Right Hon. Lord Carrington, was the place selected for this year's picnic, and the parties were conveyed thither by the Great Western Railway on Monday last. A long programme had been arranged, and among other things was a cricket match between members of the N.C.S. and the Aylesbury Floral and Horticultural Society. This started at eleven o'clock, so to enable the players to be on the ground promptly a party accompanied by Mr. Dean left Paddington Station at 8.20 A.M., the other section following at 11 A.M. On previous years the party has usually numbered about eighty, but on this occasion there were at least 150. Arriving at their destination the visitors explored the grounds, gardens, and watched the cricket match, which proved a most exciting if not particularly brilliant game. Those of our readers who are cricketers will be interested to know that the N.C.S. team was beaten by seven wickets. In the first innings neither side scored very heavily, but the bowling of Mr. Agate, the well-known Havant Chrysanthemum grower, deserves more than a passing reference. Playing for the N.C.S. team this bowler, who obviously is as much at home in the cricket field as among his Chrysanthemums, took no less than six wickets at the cost of one run—no mean feat. Some of the opposing team also distinguished themselves in the field.

An excellent dinner was served in the large Hall adjoining the Abbey by Mr. F. W. Miles, and this was presided over by Mr. Dean. Justice having been done to this by the excursionists, the loyal toasts were proposed and drunk, following which came the toast of "The Health of Lord Carrington." This was briefly proposed by Mr. R. Ballantine, and Mr. Miles, the head gardener at Wycombe Abbey, responded. Mr. Dean gave the "Aylesbury Floral and Horticultural Society" coupled with the name of Mr. Fowler the Contain of the Society," coupled with the name of Mr. Fowler, the Captain of the Aylerbury cricket team, who responded. An adjournment was then made, the cricketers to resume their match, and the rest of the party to wander over the grounds and neighbourhood. Many went to Hughenden Manor, the residence of the late Earl of Beaconsfield, which is about two miles distant, but here disappointment—the only blot in the day's programme—awaited them. After exploring the pretty church at Hugh-enden, which, by the way, is of great historical interest, some of the party proceeded to the Manor House with the object of seeing the Here, however, they were met by the present proprietor, who informed them that, owing to his not having received an intimation of their visit, he was unable to allow them to view the grounds, which apparently are rich in Conifers. Returning to High Wycombe, a visit was made to the chair-making factory of Mr. W. Birch, who kindly conducted the party over the premises and explained the details connected with his extensive business. This was one of the most interesting features in the day's programme, and those who failed to see the factory missed a treat. Seats of every conceivable kind are made here in thousands, and complete "antique" chairs are turned out in hundreds by the aid of modern machinery!

During the afternoon, too, an exploration of the gardens and grounds of the Abbey was made. The pleasure grounds and park are of an undulating and picturesque character, and, moreover, well wooded. The common Beech seems to thrive remarkably well on the dry chalky slopes, and on the lawn there are two exceedingly fine specimens of the Copper Beech. Some large trees of Platanus orientalis also attract attention on entering the grounds, and the same may be said of the Elms, which are very fine. Bedding is not extensively done, but the Abbey is partially

covered with various climbing plants, including Ampelopsis, Ivy, Roses, and the Grape Vine. An old orangery near the house is of exceptional interest, although Nature holds the sway on this beautiful place, but few attempts at artificial decoration being noticeable. In the gardens Vines, Peaches, and Cherries are evidently well cared for under glass, and fruit is extensively grown in the open air. Vegetables, too, form a feature, and it would appear that flowers for cutting are required in bulk. Carnations are extensively grown, as also are other plants that give an abundance of blossom. At 6 P.M. visitors partook of tea in the hall, and at 8 P.M. most of them assembled at the railway station on the homeward journey, evidently tired but satisfied with their day's outing.

HORTICULTURAL SHOWS.

WOLVERHAMPTON.—JULY 11TH, 12TH, 13TH.

THE character of the Roses exhibited on the occasion of the great floral fête held in this busy Midland town was indicated last week, and the names of the successful competitors in the chief classes recorded. There was, however, a great and meritorious display in other sectionsspecimen plants, groups, flowers, fruit, and vegetables, to which reference must be made without any pretence to giving a detailed report and full list of prizewinners. This would be too exacting on space during a period of pressure, while a great deal of the matter would possess local interest only. It is true the Wolverhampton Shows are local, but it is equally true they are much more than this, for the more important classes are open to all comers; and so great have been the successes during past seasons, that in the course of five years the floral fête has won for itself an honourable position among the great provincial gatherings of the kingdom. This is due mainly to a generous, yet well-considered policy adopted by a Committee of large views and business capacity, whose services are recognised by the municipal authorities as well as by the inhabitants of the town and surrounding district. The Mayor of Wolverhampton (T. C. Mander, Esq.) is President of the Society, and takes an active interest in its prosperity. In response to his invitation the town was decorated from end to end, and everything was joyous—till the rain came down.

The rain! It was not a drizzling that fell at wide intervals, but exactly the reverse, for the rain almost came down in sheets, and only the best of tents could have afforded shelter from the downpour. The canvas was, however, good, and a large extent was necessary for accommodating the exhibits. Five marquees, each apparently 150 feet long or more, and 40 or 50 feet wide, were well filled in every case. But what of the officials? They must not be pictured with doleful countenances. "The rain would do good, the Treasurer was well fortified, the weather would clear and the crowds come before the three fête days were over.' That appeared to be predominating theme, and a more cheerful body of officials were never seen under the watery circumstances, but they had their equal at Woodbridge in Suffolk three days later; of that, however, more anon, and we will now take a glance at some of the Wolverhamp-

ton exhibits. Specimen Plants and Groups.—Of these there was a wonderfully fine display, as there ought, considering that close upon £80 were offered in the two classes. The first was for sixteen stove and greenhouse plants, not less than eight in bloom. When it is said that Mr. Cypher put forth his full strength it will be conceded there was something to see. He won the £20 prize with a grand collection. His chief flowering plants were Erica Parmentieriana rosea, a huge fleecy mass; Kalosanthes coccinea, a glowing semi-globe; Allamanda nobilis and Statice profusa like a huge bouquet. The foliage plants were also noteworthy for size and excellence. The second prizewinner, Mr. Finch, gardener to J. Marriott, Esq., Coventry, was a powerful antagonist, and well won the £15 with, among others, a symmetrical and densely flowered example of Erica impressa, a large Aphelexis and still larger Ixora, with a neat Allamanda grandiflora, fine Palms, and a splendid specimen of Croton Morti. Mr. Dyer, gardener to Mrs. Marigold, Edgbaston, won the remaining prize of £10 with a highly creditable assortment. Messrs. Cypher and Finch were the respective winners in the class for six flowering plants with fine examples. In foliage plants the first-named exhibitor was prominent, his Croton angustifolius, 8 feet in diameter, resembling a fountain of gold. In the class for six exotic Ferns, Mr. R. Sharpe, gardener to J. Lovatt, Esq., Bushbury, was the premier exhibitor with large and admirably grown plants, Mr. Dyer following—a strong second. Among the six Orchids with which Mr. J. Palmer, gardener to Wm. Bown, Esq., Birmingham, won the chief prize, was a remarkable plant of Epidendrum prismatocarpum with twenty-seven vigorous spikes and hundreds of sparkling flowers. This plant was in consideration for the medal offered for the gardener's or amateur's exhibit that displayed the best culture in the Show, but Mr. Finch's great and good contribution of specimens overwhelmed it. Mr. Palmer also had Cattleya Sanderiana in admirable condition.

Groups.—Prizes of £15, £10, £5, and £3 were offered in the open class for plants arranged for effect in space not exceeding 450 square feet. There were five competitors, whose collections were arranged down the centre of a large tent, and produced in the aggregate a picturesque display. Mr. Cypher was the premier exhibitor with a somewhat diamond shaped arrangement. The ground was covered with Adiantum cuneatum, forming a level surface, in which was lightly dotted small Palms, Crotons, and Orchids. The four corner points of the diamond each contained larger Palms and Orchids, and in the centre was a bold free mound of Hydrangea paniculata in a groundwork of Ferns, surmounted by a graceful specimen of Phænix rupicola. It was a charming arrangement without the least suspicion of crowding, every plant showing itself fully, and all good. The second prize was well won by Mr. Francis Denning, Moseley, Birmingham, with a somewhat similar shaped group, but with more points—no improvement. Libonias were effectively disposed with Palms, Liliums, Crotons, Caladiums, and Statices amongst Ferns. A good group but rather crowded. Mr. W. H. Dyer was third with a richly coloured group of well grown plants, but rather too many of them. The fourth prize was won by Mr. J. Wright, nurseryman, Wolverhampton, who also employed too many plants.

Prizes of £6, £4, and £3 were also offered for groups not to exceed 400 square feet, open to gardeners in Staffordshire, Worcestershire, Warwickshire, and Shropshire. Mr. W. A. Powell, gardener to G. H. Kenrick, Esq., Edgbaston, was the premier exhibitor with a circular arrangement of well-grown plants-Liliums, Palms, and ornamental foliaged kinds, brightened with Libonias and Clerodendron fallax, margined with Isolepis. Mr. S. Horton, gardener to W. Fowler, Esq., Sedgley, was second, Francoas being effectively associated with Crotons, Orchids, Bouvardias, and Ferns. The remaining prize was won by Mr. Dyer.

Fruit.—The display of this was not remarkable for extent, while the quality of several dishes left much to be desired, still there were creditable examples of culture in the chief prizewinning collections.

With a collection of ten varieties, including black and white Grapes, Mr. Gilman, gardener to the Earl of Shrewsbury, Ingestrie Hall, took the lead with a good Pine, excellent Black Hamburgh and good Foster's Seedling Grapes, a fine Mclon, with excellent dishes of Pcaches, Nectarines, Figs, and Waterloo Strawberries. Mr. Bannerman, gardener to Lord Bagot, was a rather close second, with excellent produce; and

Mr. John Bailey third. In the class for four bunches of Grapes, distinct, Mr. J. Wilkes, gardener to Mrs. Meakin, won first honours with Madresfield Court, Black Hamburgh, Foster's Seedling, and Muscat of Alexandria, not large, but all ripe and good. Mr. Sidney Brammill, gardener to W. H. F. Mayhurst, Esq., was second with larger but less ripe bunches of Alicante, Foster's Seedling, Gros Maroc, and Muscat of Alexandria; Mr. Bannerman third with Foster's Scedling, Alnwick Seedling, Duke of Buccleuch, and Black Hamburgh, neat bunches, good berries, ripe, but rubbed. With two bunches of white Grapes Mr. C. Froud, Coventry, won first with good Muscats, Mr. Brammill second with fine Foster's Seedlings, and Mr. Bannerman third with small bunches but clean and good berries of Duke of Buccleuch. In the corresponding class for black Grapes Mr. Froud was first with Black Hamburgh, and Mr. Brammill second with Alicante. In the local class for six dishes of fruit the prizes were won by Messrs. Brammill and Bannerman, both staging excellent collections. Mr. F. W. Plant, Bilston, staged most creditable Black Hamburgh Grapes, not for competition, grown on banks formed by the exceptations from coal mines, and perhaps some banks formed by the excavations from coal mines, and perhaps something else. They deserved a mark of high commendation. The best Peaches and Nectarines were staged by Mr. Waite, gardener to Col. the Hon. W. P. Talbot, Glenhurst, Esher, who also took the lion's share of prizes for vegetables offered by Messrs. Suttons, Webbs, and Carters, closely followed by Mr. T. Wilkins, gardener to Lady Guest, Inwood House, Blandford. The collections were excellent.

Cut Flowers.—In the open classes only two stands of twenty-four varieties of hardy herbaceous flowers were staged. First, Messrs. Townsend & Sons, Worcester; second Mr. G. Newell, gardener, Birming-Mr. Alderman Dickinson, Chairman of the Baths and Parks Committee, offered a two-guinea prize for twenty-four varieties of hardy flowers most suitable for park decoration, but there was only one exhibit made by Messrs. Townsend & Sons, and these were chiefly annuals, and some of not a very decorative character. The idea is a good one, but it will be well in the future to make the schedulc more definite. Mr. Paul Lutz, of Wolverhampton, offered as a first prize a handsome gold medal for the best display of Pansies and Violas, and Messrs. Dobbie & Co., Rothesay, won it with a superb display well staged. The Viola sprays, a large number, were especially attractive amongst the newer kinds. In addition, and as a part of Messrs. Dobbie's display, there was a good display of the choicest Sweet Peas, some superb African and striped French Marigolds, Pelargoniums, Carnations, and herbaceous flowers, to all of which a handsome silver medal was awarded. The second prize for collection of Pansies and Violas was awarded to Messrs. Paul & Co.; third to Mr. Campbell, both well-known Scottish florists. Messrs. Perkins & Sons won the prizes for

Miscellaneous Exhibits .- These were extremely numerous, and in many instances of excellent quality. Messrs. Smith & Co., Worcester, had a display of herbaceous and other blooms; Messrs. Birkenhead, had a display of herbaceous and other blooms; Messrs. Birkenhead, Sale, Manchester, their usual fine display of choice Ferns; Mr. J. H. White, nurseryman, Worcester, a bright effective display of cut herbaceous blooms, Carnations, and Begonias; Mr. C. F. Thurstans, Wolverhampton, fine Carnation and Picotee blooms; Messrs. Edwards & Sons, Sherwood, Nottingham, a pretty display of Edwardsian pottery and Ferns; Messrs. Webb & Sons, vegetables; Mr. Bason, Wolverhampton, his famous Mushroom spawn; Messrs. Hewitt & Co., Solihull, Birmingham, a fine display of Begonia, Carnation, and herbaceous blooms; Messrs. Thomson & Co., Sparkhill, Birmingham, some good border Carnations and other flowers; and Messrs. Dobbs & Co., Wolverhampton, and Mr. R. Lowe, Wolverhampton, also had honorary exhibits.

Garden accessories were in evidence outside the tents, and medals

Garden accessories were in evidence outside the tents, and medals were awarded to Messrs. Wright & Holmes, Birmingham, for excellent greenhouses and garden frames and their improved glazing; to Messrs. Bayliss & Inmann, Birmingham, for artistically designed and constructed garden arbours, &c.; to Mr. G. H. Brotherton, Wolverhampton, for garden furniture; to Mr. Jabez Attwood, Stourbridge, for improved hot-water apparatus for amateur greenhouses, and to Messrs. W. Cook and Co., Wolverhampton, for their patent double-action force foot pump, an excellent and easily worked garden hose distributor.

On the third day of the Exhibition special prizes were offered for garden Roses, the object of the Committee being to encourage the cultivation of the older-fashioned garden Roses, and at this Show last year these were brought out in good style, many very old garden favourites being seen. But this year our old kinds had been prematurely driven into and out of flower, and scarcely any were left for exhibition, so H.P.'s and Teas and what older Roses were left in flower had to be fallen back upon. Messrs. Perkins & Sons won first prizes, and Messrs. Townsend & Sons seconds. Mr. Coombs, gardener at Himley, was first for a basket of such Roses.

As a result of the successes of the annual floral fêtes, the public park in which they were held has benefited by sundry erections, and recently an offer of £1000 was made by the Show Committee to the Town Council for the erection of a conservatory in the park, with an undertaking to maintain it. This was not accepted, on the ground that the amount would be more acceptable if applied to the acquirement of an additional park in another locality, where such appears to be needed. The Show Committee, however, prefer to take their stand on the principle that where the money was earned there it should be expended. Undoubtedly the erection of a sensible and commodious structure would be an acquisition, as at Leicester and other places, including some of the London parks; and in every instance, so far as we know, where displays of Chrysanthemums have been provided under glass in the autumn they have given unbounded satisfaction. These park Chrysanthemum shows are visited by thousands, and the public interest in them increases yearly. It is possible the offer in question will be reconsidered, and we may expect the end of it will be that both a new park will be obtained and a new feature of interest added to the fine existing enclosure. This would be a happy issue of which the authors would have every reason to be proud in achieving. As evidence of the success of the Wolver-hampton Shows as rehabilitated largely on the initiative of Mr. W. A. Green, an ardent amateur florist and trusted town official, it may be stated that the takings in 1889 amounted to £907, in 1890 to £986, in 1891 to £1275, in 1892 (wet days) to £1152. On the present occasion the rain led to a reduction of £175 the first day, the receipts being £100 7s. 6d. On the second day they were £322 5s., and on the third £589 9s. 6d., the greatest amount ever taken in one day at these shows. On the last day there were 35,000 visitors.

BOSTON.—JULY 12TH.

THE "port of Lincolnshire" was en fête on the 12th of July, the annual horse, dog, cat, bird, rabbit, Rose and horticultural Show taking place on that date. One large tent sufficed for the gardening portion of the Show, contiguous to which was that devoted to the canines, and it was to a mournful accompaniment of howls in all manner of keys that our representative pursued his work. He thought of giving the dogs a look up afterwards, but a stony stare from a sad-eyed bull dog induced him to alter his mind and he contented himself with admiring Spratts' fine stand of biscuits, &c., outside. The plants were not a very grand display, but cut flowers, fruit, and vegetables were very fair, while the few Roses staged were excellent.

Taking the fruit first, the first prize for black Grapes was awarded to Mr. A. Black, who had large and heavy bunches, but unfortunately they were rubbed, and their appearance thus marred. The variety appeared to be Gros Maroc. Mr. A. Jarnell was second with Black Hamburgh, small, but splendidly coloured; and J. Oldred, Esq., third. Whites were not nearly so good, the first prize bunch (that of Mr. A. Lighton) being uneven, and Mr. Black's second prize one unripe. There were some splendid dishes of Gooseberries, such as are not often seen in the south. Mr. W. Nightscales was first, the Rev. T. Staffurth second, and Mr. Jarnell third. It is getting late for Strawberries, and only two moderate dishes were shown, Mr. Vinters being first, and Mr. M. Crowden second. Currants were excellent, especially the blacks. Mr. King and Mr. Staffurth both had splendid dishes, the former winning. The third prize went to Mr. W. Greenfield. Mr. Staffurth won with whites, and Mr. Nightscales with reds, a second award going to Mr. Greenfield. Raspberries were rather poor, and so were Cherries, Mr. King winning with the former, Mr. Staffurth second. Only a second prize was awarded for Cherries, this going to Mr. Crowden. Mr. Black had the best dish of Peaches, Mr. Dolby following, and the latter won with Nectarines.

The vegetable exhibits were good on the whole. Tomatoes were grandly represented, there being twelve dishes in all, most of them excellent in quality. Mr. King won with a very fine dish of the Perfection type, Mr. Lighton second, and Mr. Vinters third. The best of a fair lot of Peas came from Mr. Nightscales, Messrs. Crowden and Greenfield following. French Beans were of about equal quality, the prizes going to Messrs. Crowden, Nightscales and Staffurth. Broad Beans were very good, Messrs. Nightscales, Staffurth and Jarnell being first, second, and third in the order of their names. A splendid pair of Cauliflowers came from Mr. Dolby, who won from Messrs. Nightscales and Crowden, and Cucumbers were equally well shown by Mr. Greenfield, who defeated Messrs. Crowden and Nightscales. Cabbages as shown by Messrs. Dolby (first), King (second), and W. Mumford (third) were all very good, but neither Lettuce nor Endive was quite up to the mark. Mr. Crowden took

a second prize for both. Mr. Dolby had excellent Carrots and won easily from Messrs. Mumford and Crowden. Capital Turnips came from Mr. Roe, who easily defeated Messrs. Mumford and Jarnell. He also showed Onions extremely well, the second and third prizes for these going to Messrs. Staffurth and Mumford. Mr. Roe had a somewhat thin pot of Parsley, but the quality was better than that of Messrs. Mumford and Staffurth, who followed him in the order of their names. Mr. Staffurth was the only exhibitor of Rhubarb, and was placed first for grand sticks. Mr. Dolby won with Kidney Potatoes and Mr. Nightscales with rounds, the minor awards going to Messrs. Staffurth, Jarnell, and Crowden.

In another section Messrs. Craven and Lockwood divided most of the first prizes for fruit between them, and also showed very prominently in the vegetable classes, other prizes going to Dr. Ashdown, Mr. A. Tapster, and Mr. Vines. The latter had some excellent Potatoes. In classes for collections of vegetables, Messrs. Dolby and Tapster secured first prizes, the minor ones going to Messrs. Jarnell, Craven, and Ashdown.

Cut flowers were somewhat numerous. Mr. J. Illman, Lincoln, had the best bouquet and also the best one of Roses, Mr. Dolby following in each class. The latter won with garden flowers, and was also first in other classes, but Mr. Illman defeated him with buttonbeles and also with twelve stove and greenhouse flowers, the Lincoln exhibitor having some fine clusters. With hardy flowers Mr. W. Clegg was first and Mr. Dolby second. Pansies were rather poor, neither Mr. Clegg nor Miss Porter, who were first and second respectively, having particularly good blooms. The Rose classes showed a must unusual state of affairs, there being only two exhibitors, Messrs. G. & W. H. Burch and Mr. Clegg. The Peterborough growers were placed first for forty-eight, second for twenty-four, and second for twelve trebles, having no opposition in each case. Their forty-eight stand was a very fine one, and the twenty-four deserved first prize considering the season. Mr. Clegg was first in another class for twelve.

Plants were only moderate. Mr. Oldred appeared to be the only exhibitor of Selaginellas, and was placed first for healthy plants. Mr. Dolby was the only exhibitor of Petunias, Fuchsias, and Begonias. The latter were the best, and the first prize was given to them; but he had to put up with second for the others. The best group came from Mr. Oldred. It was well arranged, but somewhat wanting in flowers, the foliage work having been a little overdone. Mr. Dolby was second with a group exhibiting precisely the same fault as the other. Mr. Night-scales was third. Mr. Dolby won with a hanging basket, and the first prize for foliage plants went to Mr. A. O. Scrivener, whose plants were small but healthy. Mr. Dolby was second, and Mr. Nightscales third. Mr. Dolby won with Coleus, having large plants just a little wanting in colour; and for Ferns the prizes went to Messrs. Oldred, Dolby, and Black in the order of their names.

WOODBRIDGE.—JULY 13TH.

A LOCAL reporter, skilled in the art of observation and description, "wrote up to" the annual Exhibition, which is an event of the year, in the "East Anglian Daily Times" as follows:—"The annual show of the Woodbridge Horticultural Society, which claims and deserves the name of a grand musical and floral fête, was held on Thursday last under somewhat unfavourable conditions. It is a traditional coincidence, not out of harmony with the different character of the two enterprises, that Ipswich Flower Show is always spoiled by rain, and the neighbouring event always brightened by sunshine. With the present exceptional season, however, there was a change of luck. Rain fell in torrents just as the charming Abbey Grounds opened upon this year's Exhibition at Woodbridge, and the weather was dull and threatening throughout the day. The scene lost something of its bright and pleasure-inspiring aspect in consequence, but it takes something more than a few showers to subdue the energy of the promoters, or the public spirit of the inhabitants, and in all essential respects the old prestige of the town was habitants, and in all essential respects the old prestige of the town was splendidly sustained. The streets were decorated, general holiday was observed, and there was an exceedingly large attendance of visitors from all parts of the neighbouring district. The entrance to the Show was by a path beneath the spreading Beeches in front of Capt. R. J. Carthew's mansion—whose kindness on these occasions merits warm acknowledgment—and the splendid site provided on the sloping meadows beyond was laid out in much the same style as in previous years. Four large marquees were erected for the staging of the various exhibits; a handsome bandstand was "o'er-canopied" with festoons, and illuminated at night by fairy lights; and the natural surroundings, with the square tower of St. Mary's Church rising above the trees, formed a lovely setting to the animated scene. Judges from a distance were much impressed with the beauty of the grounds. The prize schedule comprised nearly 200 classes, and, generally speaking, the Show was a long way ahead of the Ipswich and East of England Exhibition, and why it should be so was a question much discussed by visitors from the county town. Does the inferiority arise from want of money, lack of good management, or what? The fact remains, whatever may be the cause, and the Woodbridge folk have good reason to feel gratified with the comparison.

The Woodbridge Shows are popular for several reasons. 1, The Society has been long established, and its Jubilee Exhibition is not far distant. 2, It is managed by a body of business men who take great interest in the shows and work together harmoniously. 3, The town, of between 4000 and 5000 inhabitants, is breezy and clean, and not too far from Ipswich (about seven miles by rail) to render the journey a task. 4, The Exhibition grounds are picturesque, and in themselves a force of attraction. 5, The local gentry, tradesmen, and apparently the inhabitants

generally take an interest in the event. 6, The best garden produce obtainable is displayed, and the best music provided—no roundabouts or mountebankism, but a pure "floral and musical" fête, with nothing whatever to offend, but wholesome pleasure is great objective; and (7) the people appreciate all that is done for their delectation, and attend the Shows, "rain or shine." It was nearly all rain on this last occasion, and it seemed proper to endeavour to sympathise with Mr. John Andrews, the indefatigable Honorary Secretary, on the prospective failure; but sympathy was wasted. "Oh! never mind," he coolly replied, "we usually have it fine, and you will see the people will come if it does rain." It rained in torrents, and two of the Judges at least will not forget it (for they had to reach London before getting dried), yet soon after the Show was open the tents were filled with visitors, and a stream of people entered the grounds—as fine an assemblage as one could hope to see. Well done, Woodbridge!

The Rose tent was perhaps the great centre of attraction, for therein was the contest for the 25-guinea cup with stands of twenty-four blooms. Not as a competitor in the class but as an adjudicator, a rosarian was espied, who wears the familiar initials "W. R. R." Good humour was stamped on his countenance, and to the gentle suggestion that he would "take a note of the Roses" came a response "Yes, short." Not that he wanted anything; he simply meant his account would be a short one,

and here it is, quite long enough for the time of year.

The competition in the professional classes was good, one of the brothers Harkness holding his own well against the full strength of Coichester, while at the same time the other brother was winning the Jubilee cup at Worksop against the rest of Great Britain and Ircland. It was a considerable feat, but Roses are grown in such quantities by the leading members of the trade, that it is probable, without detracting from the merits of the performance, that any one of them at his best, with all the others out of form, might have done it.

For the Woodbridge challenge cup, value 25 guineas, Messrs. Harkness was placed first, the best bloom being an exceptionally fine specimen of Duke of Wellington, Horace Vernet, Reynolds Hole, and Earl of Dufferin being also very fine. The stand was sadly marred by three light-coloured blooms put in for the sake of change of colour, La France being especially poor. Mr. Frank Cant was second, not far behind, having Black Prince very fine, and the Duke of Connaught good. Mr. B. R. Cant

hird.

In forty-eights Messrs. Harkness were again first, Horace Vernet and Reynolds Hole being again conspicuous. Mr. B. Cant second, and Mr. Frank Cant third. In twelve Teas Messrs. Prior were first, Mr. B. Cant coming as a very close second indeed, and Mr. F. Cant third. In twelve trebles Messrs. Harkness were again to the front, Horace Vernet being once more the pick of the collection. Mr. B. Cant second, and Mr. F. Cant third. It transpired, however, that the schedule, which was somewhat eccentric, specified twelve trebles of H.P.'s, and as Mr. B. Cant had a fine triplet of Maréchal Niel inadvertently inserted, a substantial extra prize was liberally awarded to them by the Executive, and Messrs. Prior became third.

A silver medal was to be awarded to the best Rose in the professional classes, but as the cup class was strangely debarred there was some trouble about this, and the award eventually went to the best shaped flower, a very light coloured specimen of Comtesse d'Oxford in Mr. B. Cant's forty-eight. Each of Messrs. Harkness' stands was disfigured by sorry specimens of Comtesse de Serenye, introduced apparently for

the sake of light colour.

In the amateur classes the competition was as weak as it was good in the trade division. It was as difficult to avoid winning a prize as it sometimes is, and should be, to get one. A certain gentleman, having no opponent, won a third prize for six H.P.'s of a sort with five indifferent blooms; there was a stem and a few scattered petals on the moss to show where there had presumably been another specimen, but nothing more. In the principal class (18), Rev. A. Foster-Melliar had no opponent, a good bloom of Mrs. John Laing winning him also the medal for the best Rose in the large amateur classes. For twelve Teas, the same gentleman and Mr. Orpen renewed their Crystal Palace contest with the same result, the Sproughton Teas being much larger, though not quite so well shown. Mr. Orpen, however, secured two medals, both with Maréchal Niels: one for the best Rose in the smaller amateur classes, and one, which was a sure win for him to start with, as he had no opponent, for the best Rose grown by an Essex amateur.

The schedule, though not altogether satisfactory, was evidently designed with the utmost goodwill for the encouragement of small growers, there being classes for those growing less than 1000 and less than 500 plants local classes for districts of different radius, and classes for four, two, and even single specimens. It was disheartening to see only one exhibit in a class, and even some classes perfectly empty; but what could be expected in such a season? Thus ends the Roses, and there is very little space left for the rest. This may be filled by the Ipswich chronicler, as we have internal evidence that it was whispered to him by one of the Judges who officiated in the classes referred to.

Second in order of arrangement was the marquee in which fruit and first-class vegetables were displayed. Lord Suffield was as successful here as were the north country exhibitors with Roses and perennials. His lordship's collection of eight varieties of fruit, so well grown by Mr. Allan, the able gardener, would have taken a leading position at any show in England, so fine was the quality of them all. Two new varieties of Strawberries were here particularly noticeable. One of them, named Lord Suffield, is particularly dark coloured, and, unlike some others of that hue, is also of delicious

flavour. The other, Gunton Park, very bright, firm, and good. Both sorts received special certificates because of their novelty and excellence, and will probably take a position as standard Strawberries. Throughout the fruit was excellent. Grapes were generally good, although some small and loose bunches were seen. Mclons looked a great deal better than they were, for there was quite a remarkable absence of flavour. The Judges, after tasting every variety, had great difficulty in finding four good enough for the prizes, and the smallest Melon of the lot was eventually selected as the best. Cherries were splendidly shown in all classes. Lord Suffield's Black, Tartarian and White Hearts were marvellous specimens, and the Morellos could hardly be beaten anywhere. Peaches and Nectarines were not extensively shown, and the first prize dishes were unmistakeably first; there was a great falling off in the rest. Red, White, and Black Currants made an astonishing show, such as is rarely seen. Messrs. Daniels Bros. of Norwich had a capital stand here, not for competition, of Gloxinias, Pelargoniums, Carnations, and new varieties of Potatoes and Peas. The vegetables were staged around the sides, and were also in harmony with

the general standard of excellence.

A third tent was devoted to cottagers' exhibits, and this must be passed by—for want of space, not because the exhibits were unworthy of notice. Last of all, but not least, came the grand section for pot plants and groups arranged for effect. An old moral was here pointed by the Judges. The first prize was given, not to the more imposing groups, but to that (Lord Rendlesham's) which was most freely and artistically arranged, without packing and overcrowding. That every plant should show its own beauty without using one to hide the defects of another, is the principle on which a decision was arrived at. In the centre of Lord Rendlesham's display was a plant of the graceful Humea elegans, and the group was made up of Carnations, Tuberoses, Orchids (for which the Rendlesham Hall gardens are famed), and bright scarlet Anthuriums, together with splendid pots of Dracena, Caladiums, and Crotons. Some of the others had too many Crotons, but the second and third were simply spoiled by overcrowding. The most remarkable feature of the Show here, however, was supplied by the Tuberous Begonias. A new class was formed for groups of Begonias and Maidenhair Ferns in pots (6 feet by 3 feet), and this association of bright colour with delicate foliage had a surpassingly lovely effect. Woodbridge people must be careful to develop an idea which they have had the honour of originating. The Begonias in pots in the classes were highly creditable to the whole of the cultivators. Baskets of pot plants were effective. Exotic and hardy Ferns (first prizes for both going to the Duke of Hamilton) were noticeably good, and the larger specimen plants—Pandanus, Acalypha, Asparagus plumosus, Allamanda, foliage Begonias, and so forth—completed a grand general grouping.

Woodbridge is a very pleasant town with fertile land surrounding it, and this well tilled. The noble church, with the magnificent Seckford Charity, however, constitute the pride of the place. The latter was founded by Thomas Seckford in the reign of Queen Elizabeth, and supported by a small estate in Clerkenwell, then let for a little more than £100 a year. It now comprises several streets, and yields a great revenue. The homes for decayed tradesmen and their widows have a frontage of 337 feet. The inmates have two rooms and a garden, the aged couples enjoying about £30 a year and single inmates £20, with clothing, medical attendance, and everything necessary to their comfort. A pleasure ground and broad terrace walk 560 feet long in front of the buildings is free to all and the public. The site is unique and picturesque. On remarking to the occupant of one of the dwellings, a hale old man, yet bent with years, that he had an outlook as grand as the Prince of Wales has, he replied, with great emphasis, "Yes, sir; and I am as happy as the Prince is too." It is truly a splendid charity, and as well worthy of a note as the flower Show is in the salubrious Suffolk town.

CHERTSEY, WALTON, AND WEYBRIDGE.-JULY 13TH.

The twenty-eighth annual summer Exhibition of this Society was held this year on July 13th in the grounds of Oatlands Lodge, belonging to C. Swinfen Eady, Esq., in every way a charming site for such a purpose. The place is rich in historic points, having been once the residence of the first Duke of York. In the grounds there is a magnificent grotto, said to have cost £40,000 in building. The grounds are beautifully timbered, some very fine Beeches and Lebanon Cedars are to be seen. The Exhibition, although showing a slight falling off in large specimen plants, was a really good general one. The exhibits were numerous, and altogether of commendable quality. The groups arranged for effect had a tent to themselves. Mr. Rawlings, the energetic Secretary, as usual, had all the arrangements complete by the specified time.

Substantial special prizes were offered for the group of plants. There were five competed in the class for a group to be arranged in a half circle 14 feet by 7 feet. Mr. G. J. Cook, gardener to J. S. Sassoon, Esq., J.P., Ashley Park, Walton, was a good first with a remarkably fine arrangement of suitable plants. Well grown and coloured Crotons were effectively disposed above a base of Maidenhair Fern, intermixed with such decorative plants as Francoa ramosa, Cocos Weddelliana, Pancratium fragrans, and Gloxinias. Mr. G. Carpenter, gardener to Major Collis Brown, Broad Oaks, Byfleet, was a good second, a trifle heavier in the arrangement. Mr. H. Jacques, gardener to Miss Kenny, The Almness, Chertsey, third. Four charming groups were arranged in the class for those less in size than the former. Mr. Hopkins, gardener to Mrs. Wodderspoon, Walton-on-Thames, was first. The arrangement of suitable plants was all that could be desired. Mr. Millican, gardener to

H. Cobbett, Esq., Ongar Hill, Addlestone, a good second. Lilium auratum and longiflorum were especially effective here. Mr. Cook staged the best six foliage plants, also the finest exotic Ferns; well grown specimens. Mr. Hopkins took the premier award for a specimen flowering plant, a profusely bloomed Bougainvillea glabra, Mr. Jacques following with Clerodendron Balfourianum. Mr. Millican had choice varieties and well grown specimens in the class for British Ferns, which are usually well shown here. Mr. Cheeseman, gardener to W. Riddall, Esq., Rydens Road, Walton, won in the class for Fuchsias with four specimens freely flowered and not too formally trained. Tuberous Begonias are always a feature at this Exhibition. Those staged on this occasion were no exception, being not only freely grown but grandly flowered, Mr. W. Stedman, gardener to Miss Verity, Moorcroft, Wcybridge, carrying off premier honours. A class was provided for dwarf Lobelias in pots, and a good display they made, being compact and freely flowered. Mr. Pagram, gardener to A. F. Hobhouse, Esq., The Whim, Weybridge, was first. Mr. Stedman staged the best Gloxinias, well grown and freely flowered.

Cut flowers were numerously staged, making a bright display; space, however, forbids more than a passing reference to one or two classes. Mr. Will Taylor, Osborn Nursery, West Hampton, took the premier award in the class for twenty-four distinct bloom Roses, with fresh well-formed flowers, if not large. Mr. T. Osman, Ottershaw Park, Chertsey, staged the best stand of miscellaneous flowers. Mr. Pagram won with herbaceous flowers in a spirited competition. Zonal Pelargoniums, both single and double varieties, were well represented by several exhibitors.

Fruit, though not numerous, was good in quality. For the best collection of six varieties there were four competitors. Mr. J. Swann, gardener to Murray Smith, Esq., Brockley Lodge, Weybridge, won the premier honour with well-finished Black Hamburgh and Foster's Seedling Grapes (extra fine), Princess of Wales Peaches, Hero of Lockinge Melon, and Apricots. Mr. Osman was second. Mr. Swann secured the leading position in the classes for both black and white Grapes, two bunches of each, with really fine examples of Black Hamburgh and Foster's Seedling, Mr. Osman following in the former class, and Mr. C. Gardner, gardener to R. H. Turner, Esq., Rydens Road, Walton, in the last named class. With Princess of Wales Mr. Swann secured leading award in the class for a single dish of Peaches, Mr. Carpenter securing a similar distinction for Nectarines. Mr. Protheroe, gardener to Miss Green, Oakwood, Weybridge, had a really good Melon (Premier) in the class for that fruit.

Messrs. J. Laing & Sons, Forest Hill, staged an interesting group of plants not for competition, in which figured some very fine double Tuberous Begonias. Mr. G. Jackman, Woking, had eight dozen Roses, also not for competition.

PEOPLE'S PALACE.—JULY 13TH, 14TH, 15TH.

A FLOWER and Rose Show was held at the People's Palace, Mile End Road, E., on July 13th and the two following days, primarily for the purpose of encouraging horticulture in the east of London. The Exhibition was opened by Lady Rothschild, who was supported by, amongst others, the Hon. L. Rothschild, Sir Frederick Young, K.C.M.G., Spencer Charrington, Esq., M.P., F. Wootton Isaacson, Esq., M.P., T. Dyer Edwards, Esq., Harry S. Samuel, Esq., Frederick Charrington, L.C.C., Nathaniel L. Cohen, Esq., S. B. Boulton, Esq., and C. A. Murton, Esq. The opening ceremony was of a formal character, and various speeches were made. Mr. Cohen, in the course of some remarks, observed that the governors of the People's Palace were looking forward to the time when it would be possible to form a horticultural society and hold exhibitions of a more pretentious nature in the building. Mcssrs. Harold Boulton, Ernest Flower, and C. E. Osborne are the Hon. Secretaries, and by these gentlemen the arrangements were admirably conducted.

A large and effective group of plants came from the Royal Gardens,

Frogmore, and these being sent by Her Majesty the Queen attracted much attention. They comprised Palms, Liliums, Caladiums, Balsams, Campanulas, Crotons, and Ferns. The Duke of Fife also sent some Crotons, Dracænas, and Pandanus, with bunches of cut flowers, including Iceland Poppics, Sweet Peas, Carnations, and Liliums. Lord Rothschild (gardener, Mr. Reynolds) also had a group of plants, amongst which Ferns, Crotons, Dracænas, and Coleus were conspicuous. The group was edged with Panicum variegatum, which gave the whole a finished appearance. From the same source came a magnificent basket of Water Lilies.

The Countess of Brownlow sent some bunches of hardy cut flowers, principally Alströmerias and Phloxes. Lord Hothfield and the Duke of Wellington also sent some Sweet Peas and Carnations, and R. G. Hargreaves, Ezq., some Pelargoniums, Allamandas, Stocks, and Carnations. Messrs. H. Cannell & Sons, Swanley, had some double Begonia blooms set up in bunches with Maidenhair Fern. The same firm also sent a small collection of Cacti in pots, and J. C. Tasker, Esq., Middleton Hall, Brentwood, had three boxes of cut Roses and some Cannas, the latter being especially good. Colin Romaine, Esq., likewise sent four boxes of Roses, which were admired, and the same may be said of the plants arranged by H. G. Hubbuck, Esq. Some Carnations and Grapes came from Richard Ovey, Esq.

from Richard Ovey, Esq.

Messrs. W. Cutbush & Sons, Highgatc, sent a large collection of miscellaneous plants all charmingly arranged. Amongst these were Palms, Liliums, Vallota purpurea, Dracænas, Oranges, and Crotons. Messrs. W. Paul & Sons, Waltham Cross, also sent a collection of plants and hardy flowers. A group of stove and greenhouse plants came from N. L. Cohen, Esq., and Mrs. J. Butcher, St. Swithen Lane, E.C., had

some beautiful bouquets. Leonard Noble, Esq., sent plants and cut flowers, and S. B. Boulton, Esq., a large collection of stove and greenhouse plants and cut flowers. Ludwig Monde, Esq., had a group of Fuchsias, Palms, Coleuses, and other plants, and J. L. Firbank, Esq., some good Carnations in pots. T. Dixon Galpin, Esq., had plants in pots, and the Duke of Norfolk some cut flowers. E. N. Buxton, Esq., sent a group of stove and greenhouse plants. Mr. J. Douglas, Great Gearies, Ilford, had some Fancy and Show Carnations, as also had Mr. C. Turner, Royal Nurseries, Slough. H. H. Marks, Esq., sent a small group of plants and some baskets of flowers. Mr. E. A. Holmes, Frampton Park Nurseries, Hackney, staged a group of plants, and Mr. J. R. Chard, Stoke Newington, had some table decorations. Messrs. J. Cheal & Sons, Crawley, sent a collection of hardy flowers, and Lady Henry Somerset some cut Roses. A group of plants was also sent from the Royal Botanic Gardens, Regent's Park. Prizes were awarded for miscellaneous exhibits staged by amateurs.

WORKSOP.—JULY 13TH.

It is not at all unlikely that the British public, or such portion of it as attended the floral display at Worksop on Thursday last, got somewhat confused over the Worksop Rose and Horticultural Society's Show of the National Rose Society, held in conjunction with each other as they were; indeed, it was clear from the remarks of many that they did not grasp the distinction between the two. That, however, was not of any great consequence so long as they were satisfied with the dual display, and of that there need be little doubt. A certain reporter, however, experienced a slight shock when on going to deal with one show he found two awaiting his attention. The fulness with which the "National" had to be treated precluded a lengthy account of the local Exhibition, but some features of it were too good to be passed over in silence, notably the fruit from Osberton and Clumber, which spoke volumes for the skill of Messrs. Wood and Slade. The former's Grapes were magnificent. The groups, too, were much in advance of what we have in the south, particularly Mr. Webb's.

Taking the plants first, Mr. Slade, gardener to the Duke of Newcastle, Clumber, won with table material; Mr. Wood, gardener to F. Foljambe, Esq., Osberton, second, both having clean and healthy plants. Mr. Slade was also first for Begonias, Mr. Morris, Worksop, following. The Clumber gardener had some beautiful Gloxinias and defeated Mr. Morris very casily, also showing Lilium auratum extremely well. Mr. Wood won with stove and greenhouse flowers, his Anthuriums being very fine; Mr. Slade was second. Fuchsias were rather poor, and Petunias hardly call for comment, Mr. Stewart of Carlton winning with them. The groups were extremely attractive, the first prize one, arranged by Mr. A. Webb, Kelham, Newark, displaying marked originality of treatment, the sloping bank arrangement so dear to southern exhibitors being departed from in favour of a parallelogram with four small corner mounds and a large central one, the groundwork being formed of moss and Selaginella. There was abundance of healthy flowering and foliage plants tastefully arranged in the groups. Mr. Horton, gardener to the Duke of Portland, Welbeck, was second, also with a charming arrangement, but it was too light, Grasses, Palms, and slender Crotons being too liberally employed. It is praiseworthy to avoid overloading a group with flowers, but Mr. Horton had gone to the other extreme. Mr. Slade was third, his group also having too much foliage, but it was heavier than the other. The plants composing it were healthy and clean. Messrs. Fisher, Son, & Sibray had a beautiful miscellaneous group not for competition.

Cut flowers were largely composed of children's bouquets and similar exhibits, but herbaceous flowers were extremely well shown by Mr. Mallender, gardener to Mrs. Mellish, Hodsock Priory, who had Galega officinalis, Lilium Thunbergianum sanguineum, and L. excelsum very good. W. H. Mason, Esq., Retford, was second, and Mrs. Alderson, Workson, third.

Worksop, third.

Mr. J. H. Wilson had some charming Sweet Peas and Carnations. The latter were extremely good, embracing his yellow ground fancy Mrs. Wilson, and many standard sorts. Messrs. J. R. Pearson & Sons, Chilwell, exhibited their beautiful dark velvety crimson Gloxinia The Beacon, and some attractive floral decorations. One bouquet of Mrs. Reynolds Hole Carnation and bronzy Croton leaves was unique and pleasing to a degree. Messrs. E. D. Shuttleworth & Co. had one of the most effective displays in the Show, consisting of some very fine Roses and hardy flowers, also a collection of healthy foliage plants. The Shireoaks Market Garden Co. had a splendid display of Stocks, the plants being admirably grown, and the strain first rate.

Fruit was exceptionally fine. Mr. Wood had some grand produce in the class for a collection, his Grapes, both black and white, being magnificent, while his Pine, Cherries, and Melon were very good. Mr. Slade was second with fair Grapes, excellent Peaches, good Cherries, and a capital Melon. Mr. Webb was third, his Peaches, Nectarines, and Figs being very good indeed. Mr. Slade won with black Grapes, having finely coloured clusters. Mr. Wood was second, and Mr. Rose, Kirklington Hall, third. Mr. Wood had splendid white Grapes, defeating Messrs. Slade and Preston easily. Mr. Wood won in two other Grape classes, and the character of his bunches showed him to be a grower far above the average. He was first for a Melon, and Mr. Slade second. The latter beat him with Peaches, but was defeated in turn with Nectarines. Mr. Allen, gardener to T. Huntsman, Esq., was first for Strawberries, and Mr. Mallender second, while for Cherries Mr. Slade won, and Mr. Mallender was again second. Hardy fruit was abundant and good. Mr. Joseph Stanley won with Raspberries, and Mr. F. Clark

with both light and dark Gooseberries; minor prizes going to Messrs. J. Hurst, R. Lee, T. Clifton, and A. Ryalls. The awards for Currants went to Messrs. F. Clark, J. Stanley, T. Clifton, J. Darby, and R. Bram-

The cottagers also showed hardy fruit well.

There was an extensive display of vegetables. Mr. Slade was first with a collection, his Cauliflowers, Potatoes, and Onions being excellent. Mr. W. H. Mason was second, and Mr. J. Allen third. The former had very good Peas and Beans. The Shireoaks Market Gardens Co. had a fine dish of Hackwood Park Tomatoes, and were placed first, Mr. Slade being second. The winners also had some very fine Tomatoes not for competition. Mr. J. Doughty was first with Broad Beans and Mr. Stubbings with French, while Mr. Howard was victorious with Cucumbers. Excellent Cabbages and Lettuces were shown by Mr. M. Wood of Rayton, and Mr. Garside was to the fore with Peas. First prizes for Potatoes went to Messrs. Garside and H. Hewitt.

WOOD GREEN .—JULY 15TH.

THE annual Exhibition of the Wood Green and District Horticultural Society was held in the grounds attached to the Town Hall, Wood Green, on Saturday, July 15th. There was a good display of plants and cut flowers from private gardens as well as nurseries. Fruit and vegetables were also fairly well represented in the respective classes, and the same may be said of bouquets and floral decorations. A "Rose Queen" procession and sports were held during the afternoon, and the arrangements were carried out in an efficient manner by Mr. Horace Bates, the

Hon. Secretary.

Some well-known metropolitan nurserymen made a good display of flowers and plants. Mr. T. S. Ware, Tottenham, sent a large collection of hardy flowers, amongst which Gaillardias, Phloxes, Delphiniums, Coreopsis, and Poppies were noticeable. Messrs. G. Paul & Son, The Old Nurseries, Cheshunt, also sent a large number of hardy flowers, comprising two good boxes of Carnations, bright and fresh in appearance. Messrs. R. and G. Cuthbert, Southgate, had a charming group of miscellaneous plants, including Dracænas, Liliums, Ferns, and Begonias. Messrs. H. Low and Co., Bush Hill Park, Enfield, sent some cut Roses; and Mr. W. Bowers, The Vineries, Wood Green, had a group of Tomatoes in pots. The plants were heavily laden with fruit. Messrs. Whellock and Whellock, Wood Green, sent a large number of Roses and Carnations. Messrs. W. Cutbush & Sons, Highgate, exhibited a large group of miscellaneous plants and a stand of Mushroom spawn. Messrs. W. L. Lewis and Co., Southgate, sent a group of Orchids, chiefly Cattleyas and Odontoglossums. These were tastefully arranged with Ferns and other plants.

Groups of plants in the competitive classes were fairly good, the best in a special class coming from Mr. S. Card, gardener to W. Hollingsworth, Esq., Wood Green. Mr. W. Wilson, gardener to — Sydney, Esq., Bowes Park, was second, and Mr. J. Armstrong third. Mr. D. Slater, gardener to F. O. Field, Esq., East Finchley, was awarded an extra prize for a group of plants. Mr. F. Page, Wood Green, was first for a group of Ferns, Mr. F. V. Marment, Bowes Park, being second. Specimen plants were very good, the best being staged by Mr. W. Wilson, Bowes Park, and Mr. S. Card.

Considering the season and late date Roses were finely shown by

Considering the season and late date Roses were finely shown by Mr. G. W. Cook, New Southgate. This gentleman, an amateur grower, won several first prizes. Mr. J. Armstrong, gardener to John Allen, Esq., Southgate, likewise secured a first prize for twelve cut Roses. Mr. E. R. Smith, Muswell Hill, and Mr. E. H. Gould, Bowes Park, were also among the premier prizewinners for Roses. Mr. W. Rumsey, Joyning's Nursery, Waltham Cross, sent half a dozen boxes of beautiful Roses, the flowers being fresh and bright.

ASCOT AND DISTRICT HORTICULTURAL SOCIETY.

By kind permission of the trustees of the Ascot Grand Stand a Cottagers' and Industrial Show was held on the 13th and 14th inst., in connection with the above Society. The following nurserymen exhibited, not for competition: - Messrs, Sutton & Sons of Reading, a fine collection of Gloxinias, with Stocks, Carnations, and hardy annuals. Messrs. J. Laing & Sons, Forest Hill, sent two boxes of Begonias, containing single and double blooms. Messrs. W. Cutbush & Son a good display of Carnations and Pinks, also hardy herbaceous flowers. Mrs. Phippen of Reading, a very attractive group of decorative plants, floral crosses, and a bouquet of Carnations, which was much admired. Messrs. J. Standish and Co. filled the end of the Rotunda with Palms, Acers, &c. Mrs. S. F. Ponton of Wokingham had Cucumbers and Tomatoes. Attractive groups of plants were sent by local gentlemen. The one arranged by Mr. Thorne, gardener to Major Joicey, of Sunningdale Park, was highly admired, as was a fine bank of Begonias from Sir William Farmer (gardener, Mr. Hataway). E. Hamilton, Esq., The Charters (gardener, Mr. Cole) and Mr. Lane, King's Ride, furnished the centre of the tables with good Crotons, Caladiums, and other plants. The cottagers' exhibits were of very good quality, but not so numerous as in other years. Prizes were also given for well kept gardens. The Committee have plenty of funds and a charming place to hold a show. In a neighbourhood containing good gardens it is a pity they do not offer prizes for amateurs at summer shows.—A VISITOR.

TRADE CATALOGUES RECEIVED.

George Bunyard & Co., The Old Nurseries, Maidstone.—Roses, Bulbs, and Strawberries.

J. Laing & Sons, Forest Hill, S.E .- General Plant Catalogue. Ant. Roozen & Son, Overveen, Haarlem, Holland.—Dutch and Cape

Bulbs.

CARNATION AND PICOTEE UNION.

THE annual Exhibition held in connection with the Carnation and Picotee Union took place on Tuesday last in the gardens of Mr. E. S. Dodwell, Stanley Road, Oxford. As might have been expected the northern growers were to the fore, their blooms being just at the summit of their beauty, while those of the more southern men have been over for two and in many cases three weeks. Taken as a whole the Exhibition was an unqualified success, the flowers being of perfect form and substance, if slightly lacking the size it is now customary to see amongst them. High praise must be accorded to Mr. Dodwell and the Committee for the admirable manner in which the Show was conducted. The occasion of this Exhibition bringing together so many friends was considered a fitting one for presenting to Mr. and Mrs. Dodwell on the happy attainment of their golden wedding, a silver tea and coffee service and salver, which had been subscribed for by over 200 of the veteran florist's friends. With the above was also given a testimonial which had been signed for by the numerous subscribers.

The following is a copy of the testimonial presented to Mr. and Mrs. Dodwell:—" Very many friends throughout the kingdom as well as abroad desire upon the occurrence of the fiftieth anniversary of your wedding day to offer you their warm congratulations on this memorable and happy occasion, and to add their earnest hope that, surrounded by those you love and who so dearly love you, much length of days may yet be granted to you. They gladly avail themselves of this opportunity to give expression to the feelings of respect and admiration with which they have long watched Mr. Dodwell's floricuitural work, and to record their sense of his unvarying kindness and courtesy among his fellow florists. They wish, then, as a mark of their regard, and of the gratification they feel that you have been permitted to reach this crowning point of your wedded life, to beg your acceptance of the accompanying tea and coffee service and salver—the produce of many subscriptions purposely limited in amount—assuring you that it is a souvenir of widely felt loving regard, and equally assured that you will find in that feeling the chief value of this gift."

The Rev. Mr. Collier made an excellent speech in making the presentation. Mr. Dodwell expressed thanks and gratitude on behalf of himself and Mrs. Dodwell to their friends for this unanimous proof of their real regard. Many speeches were made by friends at the luncheon, after which the presentation took place. The following ladies and gentlemen were present, amongst others, to assist Mr. Alderman Buckell in the chair-The Rev. C. P. Brickwell, Rev. Mr. Scott, Rev. Mr. Collier, Rev. Mr. Gibbs, Mr. and Mrs. E. S. Dodwell, Mr. Alfred, Mr. Arthur, and Mr. Fred Dodwell, and other members of the family. Dr. Guinness and Messrs. Ranger Johnson, T. E. Henwood, Chas. Phillips, Arthur Brown, Robt. Sydenham, Wm. Bacon, Wm. Harding, J. S. Hedderley, J. Whitham, Tom Lord, J. Wynne Ffoulkes, C. H. Herbert, Thos. Anstiss, and Mr. and Mrs. J. Hill. The company numbered over one hundred in all. Let us hope that on the occasion of Mr. and Mrs. Dodwell's diamond wedding such a meeting of friends may again take place. Mr. Dodwell has worked hard in the interests of horticulture generally, and has thus gained many personal friends and the high approbation of many gentlemen who have never yet met him. We append the names of the principal prizewinners, also those of the varieties exhibited in the leading stands.

In the class for twelve flake or bizarre Carnations, in distinct varieties, Mr. Tom Lord, Todmorden, was an excellent first, staging blooms of Bruce Findlay, Master Fred, Duke of York, Gordon Lewis, Thaddeus, Admiral Curzon, two seedlings, George, Sportsman, J. D. Hextall, and Robert Houlgrave in magnificent condition. Mr. J. Whitham was a very close second; Mr. Robert Sydenham a creditable third; Messrs. Thomson & Co. fourth; Mr. Geo. Chaundy fifth; Mr. A. K. Brown sixth; and Mr. W. Read, gardener to Mr. E. S. Dodwell, who in ordinary seasons is usually found much nearer the top of the tree, seventh. Mr. J. Edwards took the premier position in the class for six flakes and bizarres, dissimilar, exhibiting fine blooms of Master Fred, two seedlings, Teddy, Sportsman, and Guardsman. Mr. E. Shaw was a good second; Mr. J. S. Hedderley third; Mr. C. Phillips fourth; Mr. A. Medhurst fifth; Mr. Wm. Bacon sixth; and Thos. Anstiss seventh.

For twelve white ground Picotees, in distinct varieties, Messrs. Thomson & Co. were first, showing in finc form Mrs. Sharp, Amelia, Nellie, Dr. Epps, Mrs. Chancellor, Thomas William, Little Phil, Zerlina, Campanini, Mrs. Payne, Lady Louisa, and Mrs. Gorton. The flowers in this stand were, with scarcely an exception, fresh and bright. The second prize was awarded to Mr. Robt. Sydenham for a fine stand, Mr. J. Whitham being third, Mr. Tom Lord fourth, Mr. A. R. Brown fifth, Mr. J. Edwards sixth, Mr. E. Shaw seventh, and Mr. Chas. Phillips cighth. Mr. A. W. Jones staged some beautiful blooms in the class for six white ground Picotce Carnations. The stand included Mrs. Payne, Nellie, Favourite, Thos. William, Brunette, and Campernini. Mr. J. B. Sharp was second, Mr. J. S. Hedderley third, Mr. Wm. Bacon fourth, Mr. Medhurst fifth, and Mr. Anstiss sixth. The competition was keen in this class, the flowers being remarkable for their perfect colouration and form.

For twelve Carnations, either selfs, fancies, or yellow grounds, in distinct varieties, Mr. Robert Sydenham was deservedly awarded the first prize. The exhibit included Romulus, Tournament, A. W. Jones, Gladys, Stadtrath Bail, Dodwell's 167, Germania, Janira, Victory, Mrs. Robert Sydenham, Mrs. Jameson, and Brockhaus. The second place was taken by Messrs. Thomson & Co. with a fine exhibit, Mr. George Chaundy being third, Mr. A. R. Brown fourth, Mr. W. Read, gardener to Mr. Dodwell, fifth; Mr. J. Walker, Thame, sixth; Mr. Thos. Anstiss

seventh, and Mr. C. Phillips eighth.

For six Carnations, either selfs, fancies, or yellow grounds, dissimilar, Mr. W. Spencer was accorded the premier position, staging beautiful flowers of Mrs. Robert Sydenham, Schlieben, Theodore, Madame Van Houtte, Stadtrath Bail, and Vandyck. Mr. Chas. Harden was a very good second; Mr. J. S. Hedderley, third; Mr. E. Shaw, fourth; Mr. N. Medhurst, fifth; Mr. Chas. Henwood, sixth; Mr. J. Edwards, seventh; and Mr. Wm. Bacon, ninth. Mr. W. Read was placed first in the class for six blooms of the Kilmory yellow ground seedlings in not less than three dissimilar varieties. This stand included perfect examples of Tournament, Queen of Hearts, Nora, Tournament, Sport, Nosula, and Nancy. Mr. A. Medhurst was second; Mr. Geo. Chaundy, third; Mr. Thos. Anstiss, fourth; and Mr. Wm. Bacon, fifth.

Mr. A. W. Jones was accorded the first place in the class for six yellow ground blooms, any raiser's variety, with Stadtrath Bail, Almira, Counters of Jersey, Germania, Mrs. Robt. Sydenham, and Atalanta. The second prize was awarded to Messrs. Thomson & Co., Mr. Wm. Reid being third, Mr. Chas. Phillips fourth, Mr. Chas. Harden fifth, Mr. T. E. Henwood sixth, Mr. A. R. Brown seventh, Mr. J. S. Hedderley eighth,

Mr. J. P. Sharp ninth.

The premier blooms in the Exhibition were Master Fred, a scarlet bizarre exhibited by Mr. Tom Lord; Germania, yellow self from Mr. A. W. Jones; Dodwell's 1528 fancy Carnation, shown by Mr. Wm. Read; white ground Picotee Little Phil, staged by Mr. J. Whitham, and yellow ground Picotee Mrs. Robt. Sydenham, exhibited by Mr.

Spencer.

Certificates were awarded for the following blooms:—Arline, pink and purple bizarre, magnificent flowers; Thaddeus, crimson bizarre of great merit; Bruce Findlay, a pink and purple bizarre of superb form; Duke of York, a beautiful scarlet bizarre, all of which were staged by Mr. Tom Lord; Feron, a fine purple flake, exhibited by Mr. J. Whitham; and Mrs. Anstiss, a rich apricot-coloured self of great substance and good form, shown by Mr. Anstiss. It being very late when our reporter reached Oxford, it was found impossible to get a full list of the prizes, as some of the blooms had been removed.



FRUIT FORCING.

Vines. — Earliest House. — Thoroughly ripened wood and well nourished properly developed buds are of primary importance in securing a crop of Grapes the following season. The wood is generally well ripened in the early houses, for the Vines as a rule are not overvigorous, and the dry atmosphere maintained during the ripening of the Grapes tends to mature the foliage, buds, and wood. This is sometimes fatal to the principal leaves, or those corresponding to the pruning buds by encouraging red spider, and the consequence is the Vines go to rest early and start into growth in September, when they should be completely at rest. When the Vines lose the lower leaves on the bearing shoots growth should be encouraged from the laterals, alike to stimulate root action, appropriate the sap, and prevent premature resting. Where the Vines retain the foliage to the base of the bearing shoots—termed laterals—it will be necessary to maintain a dry atmosphere to thoroughly ripen the wood, but it will not be needful to employ artificial heat. Ventilate fully, keeping all laterals and late growths stopped, and aim at complete rest by having the border cool and moderately dry. inside borders may require watering, but avoid making the soil very Outside borders may need covering with dry straw or bracken in order to throw off heavy rains, for a too moist condition of the soil tends to late growth. Where the Vines are in an unsatisfactory condition prepare for lifting at an early date, getting fresh loam and clean drainage handy, so that the work can be quickly performed when started. It is desirable to lift the roots and lay them in fresh soil near the surface whilst there is foliage on the Vines, but the leaves corresponding to the pruning buds must be maturing, and the lateral growths will favour speedy root action. Work of this character ought not to be delayed beyond August in the case of Vines that are to be started early in December, which will need pruning by the middle of September or a little later.

Vines for Early Forcing.—When it is contemplated to start Vines early that have hitherto not been so subjected, it will be necessary as soon as the crop is off to thoroughly cleanse them by syringing or the application of an insecticide. If there is any doubt about the maturity of the wood and the plumpness of the buds it will be desirable to employ fire heat in the daytime to maintain a temperature of 70° to 75° with moderate ventilation, and turn the heat off at night to allow the pipes to cool. This, with a thorough circulation of air, will soon cause the wood to harden and the buds to plump, inducing rest. When the Vines have the wood ripe and the buds plump they will only require full ventilation day and night.

Vines in Pots for Very Early Forcing.—When these are to be started early in November to afford ripe Grapes during March or

April the wood should now be thoroughly ripened and the buds plumped. If not the house may be kept rather warmer by day, say 70° to 75° artificially and 80° to 85° with sun heat, closing early so as to raise the temperature to 90° or 95°, and throw the ventilators open at night. Afford water or liquid manure in sufficient quantity to prevent flagging, and expose the foliage to all the light possible. Laterals must be kept well in check, leaving no more than are absolutely essential to appropriate any excess of sap and so prevent the principal buds being started. When the wood is brown and hard and the buds are prominent the Vines should be removed to a situation outdoors, standing the pots on slates or boards in front of a south wall or fence. Secure the canes to avoid damage from wind, and only give water to prevent the foliage falling prematurely. In wet weather the pots may be laid on their sides or some waterproof material be employed over them. When the main leaves turn yellow commence reducing the laterals, and prune when the leaves are all off, the laterals being cut off close and the canes shortened to the length required. This done place them in any cool, airy, dry place Keep moderately dry at the roots, and until required for forcing. exclude frost.

Successional Vines Freed of their Crops. — If there be any red spider thoroughly cleanse the Vines by means of water from a syringe or engine, and repeat occasionally. Mealy bug and scale should be combatted with petroleum. It is easiest applied in emulsion form, but this coats the glass with soapy matter, which is not easy to get off once it hardens. There is no objection to pure petroleum and water, the thing is to keep it well mixed whilst it is being applied. This may be done by one person syringing into the watering-can, whilst another applies it to the Vines forcibly so as to well coat every part of them and house with the mixture—a wineglassful of petroleum to 4 gallons of This repeated two or three times at intervals of a few days is an effectual remedy. Keep the laterals within reasonable limits. If the Vines are vigorous, and the wood not ripening well, keep the house rather dry, and ventilate fully at night, but turn on the heat by day, and ventilate moderately. This will tend to the maturity of the wood and buds. Vigorous Vines must not be stopped too closely or the principal buds may be started into growth by an excess of sap, and they may be kept without water until the foliage becomes a little limp. Vines, on the other hand, that are enfeebled by continued cropping should be encouraged to make growth by applying liquid manure to the border. Ventilate the house freely day and night, for it is mainly a question of evaporation in securing thoroughly ripened wood.

Grapes Ripening.—Whilst colouring most Grapes swell considerably, and there must not be any deficiency of moisture in the border. Give, therefore, a good supply of water or liquid manure, especially the latter, where the Vines are heavily cropped, for though it may not materially influence the Grapes it will contribute to the general health of the Vines, and by giving them plenty of time the crop may finish satisfactorily. Hastening heavily burdened Vines and a deficiency of nourishment is almost sure to culminate in defective colour in the Grapes. A good rest at night in a temperature of 60° to 65° with air is a great help to Vines taxed to the utmost by a heavy crop. Allow the laterals to extend if possible. A moderate amount of air moisture is essential to the health of the Vines, sprinkling the floor in the morning and afternoon in bright weather, or occasionally, and no ill effects will follow, provided a circulation of rather warm air is secured This is absolutely essential to avoid spot in Muscat of Alexandria and some other tender skinned Grapes, therefore admit air constantly enough with a gentle warmth in the hot-water pipes to insure a circulation and prevent the deposition of moiscure on the berries.

Melons.—Stopping and Removing Growths.—When the fruit is swelled to the size of an egg, the laterals shou!d be kept pinched to one leaf, and if this results in too much foliage, so that the main leaves are crowded or shaded, thinning must be resorted to. This should be done a little at a time, for removing a large quantity of foliage at once gives a check to the fruit swelling. Instead of distant manipulation, the plants should be gone over once a week at least, and in the case of vigorous plants twice, for stopping and the removal of superfluous shoots, never allowing the principal leaves to be crowded, but fully exposed to light and air.

Watering.—Never allow the plants to lack moisture at the roots, for when water is withheld until the foliage flags a check has been given, and the effect is seen in their feeble aftergrowth, from which they seldom recover and often collapse, or the crop ripens prematurely and is poor in flavour. The great point is not to allow flagging, and yet not to give water until the soil is becoming so dry as to be insufficiently moist for the support of the plants, when a thorough supply should be given. Plants swelling their fruits will need water or liquid manure at least once a week. When setting and ripening it will suffice to just keep the foliage from flagging, and if watering becomes necessary it should be given to those in frames without wetting the foliage more than can be helped. A poor growth is not good either for setting or the ripening of the fruit, but a drier condition of the soil is desirable at those times than when the fruit is swelling.

Syringing the Plants.—When the flowers are advanced for expansion withhold water from the foliage, also when the fruit is ripening, as this is the chief cause of the fruit cracking. At the time of setting and ripening in frames and pits the atmosphere can hardly be kept too dry; in houses moisture must not be entirely withheld at those periods, but surfaces should be damped in the morning and afternoon in bright weather. When the fruit is swelling syringe well at closing time, and if morning syringing is practised it should be done early.

Plants in frames should be sprinkled at closing time during the swelling of the fruit, but on fine days only, being careful to keep the water

from the neck or collar of the plants.

Ventilating.—During the setting and ripening of the fruit admit air freely, leaving a little on constantly to prevent the deposition of moisture on the blossoms or fruits through the night. Give more ventilation early in the morning of bright days, always when the temperature has advanced to 75°, and gradually increase it with the advancing heat, keeping through the day at 80° to 90°, and closing sufficiently early to rise to 90°, 95° or 100°, and before nightfall admit a chink of air at the top of the house or the back of the frame. This is particularly necessary in closely fitting and glazed structures, in badly constructed houses night ventilation may be dispensed with.

Temperature.—Resource will only need to be had to fire heat in houses and to linings for frames in dull cold periods, then a little artificial heat is desirable to maintain a buoyant atmosphere when the blossoms are setting and the fruit is ripening, otherwise the temperature will be ruled at this season by external influences. A night temperature of 65° and 70° to 75° by day must be given to plants in houses.

THE FLOWER GARDEN.

Carnations.—If not already done a mulching of old Mushroom-bed manure or leaf soil should be given Carnations after very lightly loosening the surface, and giving a good watering. This will serve to prolong the display considerably. The Margaret Carnations, if raised moderately early and duly planted out, will flower strongly in August or September, though not if they are topped; give these also the benefit of a mulch.

Propagating Carnations.—If the smaller side shoots are slipped off now these will strike quite as readily as Pinks in a frame or handlights placed at the foot of a north wall or fence. In warm moist localities bottom heat may be dispensed with, but a very slight hotbed is of good assistance. Pack enough material inside the frames to raise about 4 inches of loamy gritty soil well up to the light, and face over with sharp sand. Little or no trimming is required by short slips, but longer cuttings or any upwards of 4 inches in length should be shortened, not however, by cutting with a knife, the better plan being to pull them cleanly apart at a joint. Fix them firmly in the soil, give a gentle watering, and keep close and shaded from what bright sunshine reaches the frame till rooted.

Saving Pink Seed.—Seed if ripe may be either stored till next spring, or else be sown at once. When quite new yet properly ripened it germinates quickly either on a well prepared border or in boxes set in a cool shady position. If not sown very thickly neat little plants will be formed before the winter arrives, those in boxes being kept in cool frames. Mrs. Sinkins, and varieties raised from that robust popular form, come quite true from seed, and young plants partaking somewhat of a perpetual flowering character are more likely to flower the same season they are planted out than are the more delicate varieties.

Mollyhocks.—Red spider can be destroyed by mixing a handful of flowers of sulphur into a paste and then mix it with two gallons of clear water, and with a syringe thoroughly wet both the under and upper surface of the leaves. Black fly is also unusually prevalent on Hollyhocks, and this may be got rid of by means of tobacco powder or strong snuff, puffing this well over the under side of the leaves. No side shoots should be allowed to grow on any of the plants. They ought to be kept well supplied with moisture at the roots, and be given a mulching of short manure. If leaf buds are found at the axils of the leaves of any side shoots removed, the latter may be cut into short lengths, placed singly in small pots, and rooted in a gentle but not very moist heat. All that develop into plants should be shifted into larger pots before they become much root-bound.

Dahlias.—Old stools push up very many more shoots than should be left to grow, much better results following upon the practice of confining the plants to a single stem, or at the most two stems. These being kept properly secured to a strong stake, will branch strongly and produce either a few extra fine blooms for exhibition purposes, or an abundance of ordinary good flowers. If the former are desired about four stakes should be placed to each plant, and some of the best placed branches be fastened to these, the rest being cut away or better still early pinched out. Dahlias require abundance of moisture at the roots, a good mulch of strawy litter further serving to keep the ground cool and moist.

Gladioli. — Stakes should be placed to these before the spikes become heavy, frequent syringings and waterings also being necessary if fine spikes and large flowers are desired. In order to have the spikes for exhibition with the flowers well together and all facing one way they ought to be enclosed in a V-shaped trough, made by nailing two long thin pieces of board about 4 inches wide to a strong stake. With the aid of these troughs it will also be an easy matter to shade the lower flowers with newspaper, with a view to keep them fresh and of good colour to match the upper flowers.

PLANT HOUSES.

Epacris.—Give these full sunshine and abundance of air, so that their wood will become thoroughly ripened, which is necessary to insure abundance of flowers. Also give a sufficient supply of water at their roots, or the lower foliage will soon turn yellow and fall. On the other hand do not allow the soil to become saturated by heavy rains. Old lights that can be placed over them when necessary is all the protection they need. Erica hyemalis may have the same treatment.

Ralosanthes.—Plants that have flowered should be cut close back and be placed in a frame until they break into growth, after which keep perfectly cool and wintered on a shelf in the greenhouse. Young shoots may be inserted singly or four or five together in 5-inch pots, and if put in gentle warmth the cuttings root quickly. If they are to flower the following season they ought to be hardened when rooted, and either placed outside or on a shelf in the greenhouse. The growths should be well ripened, the object is to prevent them starting again into growth. If they make fresh growth while being rooted flowers need not be looked for until the plants have enjoyed one clear season's growth. Where an increase of stock is needed the stems may be cut into lengths, for these root quickly and break freely into growth.

French and Fancy Pelargoniums.—Cuttings that are rooted for early flowering should be placed into small pots at once and stood in frames until they start into growth. The points of the plants ought to be removed if not done when the cuttings were inserted. Cuttings for the main stock of young plants for another year should be inserted at once. They will root with freedom if put in sandy soil outside. We find this the easiest and most certain method of propagating these plants. Do not insert mere flower stems, older portions of the plant root freely and make much better plants. Plants that have been ripening on the walks for a few weeks may be cut close back and placed in a frame until they break into growth. Keep the frame moderately close and syringe the plants twice daily until they commence to grow, when the old soil may be shaken from their roots, and repot. Keep close for a time until root action has commenced, when the plants should be grown perfectly eool.

Zonal Pelargoniums.—Plants that are growing outside and are intended for autumn and winter flowering should have the flower trusses removed as they appear and any shoots stopped that are taking the lead. If the pots are well filled with roots give weak stimulants every time they need water, or artificial manure may be given to the surface of the soil at intervals of a fortnight. The plants should be fully exposed to the sun, and firm sturdy growth must be encouraged. Plants that have been flowering inside and have grown leggy may be cut back. If started in frames and grown under glass these will make excellent flowering plants during the winter. The cuttings from these plants may be inserted in boxes, or in borders outside, and when rooted placed into small pots. These will flower in 5-inch pots during the early spring months. Cuttings that are rooted may be placed into 3-inch pots, and if stood outside when established will flower profusely under glass during the declining months of the year. The points of these plants may be removed, and then they should be allowed to grow on without further pinching.

Solanums.—Plants that have set a good crop of berries should be watered freely. If once they are allowed to become dry the foliage will turn yellow and the beauty of the plants will be destroyed. Soot water assists them wonderfully and imparts to the foliage a fine dark hue. These plants may be plunged outside in ashes. The syringe should be used freely to been the foliage free from red spider.

used freely to keep the foliage free from red spider.



APIARIAN NOTES.

AT THE MOORS.

As much information regarding the management of bees is gleaned at the moors, I will, according to my custom in previous years, record what comes under my observation. Owing to the continued heat and dry weather there is the most profuse bloom on the Heather that I have ever witnessed.

On July 1st I took one prime swarm, an old Punic stock not rid of its surplus queens, and a number of nuclei. Owing to some oversight or an accident on the way, there was a small opening in one of the boxes sufficient for bees to escape, but wherever we were they returned to the box, even when moving along. When discovered of course I stopped the hole, shutting out two bees. The day was fine and warm, and on my return, three hours afterwards, the escaped bees met me at the place they were shut out, accompanying me to the station, a distance of one and a half mile. Had I travelled the other way the bees would I have no doubt found their hive. The moment the old stock was opened, although it had previously swarmed and been divided into eight, it threw off another swarm, and I have reasons for believing it was not The prime swarm was a strong one, and only a the last one. week old. Although subjected to rough treatment in the conveyance, no combs were broken. Some of the Punic surplus queens entered this hive, and in eight days after it was set down it swarmed at a distance of two miles, and was hived in a tool-box upon the railway. In the course of a week the nuclei filled their boxes with combs, and the prime swarm increased in weight 20 lbs., while all the queens were fertilised, and every available cell filled with eggs and larvæ a few days after.

On July 11th we started in the morning with sixty hives,

and owing to the rough roads I expected the whole of them would be spoiled, but not a bee was lost, nor a comb broken, after a journey of fifty miles by road and rail. Six men managed the whole, and in two hours after their arrival at the station, which is two miles from their destination, the work was completed. Taking the number and other things connected with them into consideration it will be easily seen there is no other hive extant that could be set down with similar safety and expedition. If there were any reliance in the advice to give timeous room to prevent swarming, and the returning of after swarms for the same purpose, it would be a boon to bee-keepers. Three hives, with a plurality of queens piping for four weeks, swarmed a day after they were set down. Notes from the moors will be continued next week.—A Lanarkshire Bee-keeper.



• All correspondence should be directed either to "THE EDITOR" or to "THE PUBLISHER." Letters addressed to Dr. Hogg or members of the staff often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Bee subjects, and should never send more than two or three questions at once. All articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post, and we do not undertake to return rejected communications.

Verses (Castanea).—We are unable to inform you in what book the verses you send are to be found, and we have not space for their insertion in our columns.

Biennials and Perennials from Seed (Reader).—You may sow at once in light soil in the open ground, any or all kinds of which seed is offered in catalogues, but there should not be a day's unnecessary delay. Your letter only arriving as our pages were being made up for press we cannot possibly do more than give this brief reply to your question.

Showing Annuals (Constant Reader).—When prizes are offered for three annuals schedules usually say they must be distinct kinds. In that case there must be no more than three, and the Sweet Scabious may be one of them in one colour. Neither a Dahlia nor a Gladiolus would be admissible in such a class for they are not annuals. Annuals are plants which are raised from seed, flower, and die, root and branch, the same season.

Criticism (S. J. A.).—By all means exercise your critical intelligence to any extent so long as it affords you pleasure. We do not intend to discuss the unending theme of market prices, nor to alter them to meet diverse individual views. The measures we have recommended will prevent, do prevent, and have prevented, the Tomato disease. We have grown Tomatoes for thirty years, and never once failed in having good crops from clean plants, and we do not expect to fail in the future.

sowing Begonia Seed (Begonia).—Probably the best plan would be to sow the seeds very thinly in boxes or large pans, so that the seedlings would have room to grow undisturbed as long as they could be kept growing, and winter the tubers in the soil in which they grew until they showed signs of growth in the spring. Under proper management they would make good flowering plants next year. Certainly transfer the pollen of the fringed single variety as you propose. You may not, however, succeed in your object the first year of the seedlings flowering.

Crinum capense (G. A.).—This plant is hardy in sheltered positions, and we have never seen such large floriferous clamps as in the deep rich soil of a south border, the plants mulched and watered in the summer, and the ground thickly covered with leaves in winter to prevent injury by frost. The bulbs are usually safe when planted 6 or 8 inches deep and have a little surface protection. The plants do not always succeed in dry conservatories, in which they are often some distance from the glass, and considerably shaded. With healthy root action in sweet loamy soil, and abundance of light and air, the leaves are not yellow, but green. The plants enjoy root moisture in summer, but not stagnant soil, and a sunny position. In the autumn the water supply may be reduced and the plants exposed to all the sun possible for ripening the growth and storing nutrient matter in the bulbs. They succeed admirably in cool frames during the period of growth, or in light greenhouses, with plenty of air. The soil should be kept dryish,

not dust dry, in the winter. The root action of your plant may be defective, and the position it occupies not quite suitable.

Petræa volubilis (Young Gardener). — The history of Petræa volubilis is brief but interesting in some degree. It was first discovered by Houston at Vera Cruz, but has also been found at Martinique and elsewhere. On the authority of Alton's "Hortus Kewensis" it seems that seeds were first sent to the Chelsea Botanic Garden before 1733, but from these Miller states only two plants were raised, flowers not being produced until 1802, when a specimen bloomed in Mr. Woodford's collection at Vauxhall. From this a coloured plate was prepared for the "Botanical Magazine" (plate 628), but the variety there shown is distinct from that you mention, the corolla lobes being larger, the calyx lobes more narrow, and the colour a uniform purplish-lilac. Houston named the plant in honour of Lord Robert James Petre, who, it has been said, was "the worthiest of men, whose death was the greatest loss that botany or gardening ever felt in this island." A very large collection of plants was formed by this nobleman, large stoves and conservatories being erected for the tropical species, while the outdoor collection was also extremely large, the total number of individuals being said to be about 219,925. The culture of the plant is easy. Given an ordinary stove temperature, a good compost of turfy loam and peat, with a small proportion of well decayed manure, and little difficulty will be experienced in both growing and flowering the plant, providing it be kept clear of insects, mealy bug being its especial enemy. Supply water liberally when growth is advancing, syringing freely to keep the foliage fresh and clean. It can be increased by layers, but the best way is to graft young shoots upon pieces of the root in April or May, when if treated like other root cuttings, placed in heat and shaded, young vigorous plants can usually be readily obtained.

Gros Colman Grapes (Youngster).—The Grapes are a credit to you; but since you say you have "never seen larger and would like to do so," we show you a good sample as grown by Mr. J. Goodacre, of

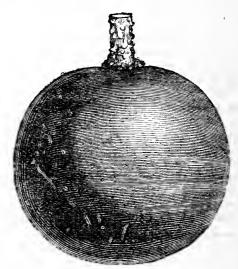


FIG. 11.—GROS COLMAN GRAPE.

Elvaston. The berry depicted in the engraving, fig. 11 was taken from a bunch that weighed 7 lbs., but contained only sixty-eight berries. Keep on striving, and you will excel as a Grape grower.

Ivy on Trees (A. D. W.).—There is no question but that Ivy is injurious to trees against which it grows, as is evidenced by the diminished vigour of the trees as compared with those that are not mantled with Ivy; but there is no disputing the fact that when trees have been long and so much covered with it as to be very much enfeebled thereby, that the removal of the Ivy acts prejudicially by exposing the long-protected bark to the direct influence of the atmosphere. Ivy ought never to be allowed to grow on trees that are intended for profit, but should be cut or removed before it has made much headway. Trees covered with Ivy in a young state will never make profitable timber, and aged trees are better felled when covered with it, unless it be desired to retain them as ornaments.

Muscat of Alexandria Vine Leaves Vellow (B. A.).—The leaf has the peculiar appearance incidental to scorching in this variety. It is probably caused by excessive evaporation from foliage subjected to a close and moist atmosphere during the night and early part of the day. Admit a little air at night if the house is closely glazed, and in all cases increase or give ventilation in the morning by the time the sun acts upon the house, so as to dissipate the moisture and allow the evaporation from the leaves to go on correspondingly with the increasing temperature. As for the wireworms, they are best trapped. Pieces of turf about 4 inches square inserted in the border about 1 foot apart are good traps, the turf being fresh—that is, with live grass and roots, placing them a little below the surface, so that they may remain moist and right side upwards. The wireworms feed on the roots, and by withdrawing the turf occasionally the pests may be caught. Carrots cut into 2-inch lengths and buried about an inch below the surface are also good. A pointed stick may be thrust into each bait, so as to form a handle, and by it the bait can be readily withdrawn at short intervals and examined. The wireworms will be found feeding on the Carrot, and may soon be cleared away. Lime water will not do any harm to the Vines nor to the wireworms. The best plan is to catch and kill them.



S we in the old country are interested in the work and ways A horticultural of our kinsmen on the "other side," so do our transatlantic friends and fellow workers seek to become acquainted with the plans, methods, and intentions of cultivators in the mother land. Those who had the privilege of attending the luncheon at the Trentham Show last week will not soon forget the splendid welcome given by some 200 Englishmen to the American Consul; neither will they forget his earnest, eloquent, responsive speech. The Consul, though a new comer, had been quick to perceive the love for gardens existing among the inhabitants of this country. He recognised the great advantages of this to a community, and expressed his full sympathy with all that had been done and was being done to foster the taste in flowers and improve the cultivation of the land around the dwellings of the people. The example of the mother nation, to whom his people looked with pride, in making home plots bright as well as useful would not be lost on the daughter land. He had communicated his impressions and views to his authorities, and told them that wherever a patch of ground could be found near a cottage door a Pansy smiled. Flowers grew because they were loved, and it was gladdening to see the produce of the gardens of England. Such in brief and substance was the speech of Mr. Warner.

It is well to see ourselves as others see us, and take courageto press on in work that is good for the worker, beneficial to the community, and which may exert a wholesome influence far beyond the confines of our shores. It is well also to note that Britain as a nation is not, as pessimists would imply, behind all the world in everything, but can even win encomiums from representatives of what is admittedly one of the most enterprising nations of the earth. The Great Republic of the West, in whose marvellous progress we take just pride, has taught us many things besides the value of Tomatoes, and it is well if we can teach something in return of a tendency to add to the comforts and pleasures of domestic life. The enterprise of its people has taught us something commercially-namely, that the produce of one country is good for another, and that by skill in production and methods of presentation each may share in meeting the wants of the other to the benefit of both. That both have been benefited by the interchange of commodities is indubitable, though we do not vet work on equal terms.

With all our faults and failings the Old World remains more liberal than the New in tariff arrangements. The disadvantages on this side rest with producers, while on the other they press heavily on consumers. The "greatest good to the greatest number" is the keystone of the policy of Britain, but the "most wealth to the fewest persons" would appear to be the predominating factor in moulding the customs and framing the laws of greater and newer countries. Yet one has become accustomed to the methods of the other, and all may work in friendly rivalry. The latter, after all, is the important point, for friendly rivalry is the great lever of trade development; friction, through mistrust, ever impeding commercial progress. We will send to other lands whatever we can place in their markets in better form at current prices than they can supply: and we will also strive to excel in such products as our land affords for the needs of our own people. It is a case of

turning to the best possible account the natural resources and local peculiarities everywhere, and sending the products everywhere else, where they will command the attention of purchasers. Possibly we have not done all we could and ought in this direction, and our competitions have become our educators. May we profit by the lesson.

The foregoing is a prelude. Though the pleasant experience at Trentham would entitle the day to be regarded as "Anglo-American," another day is more particularly in mind, not less pleasant to those who spent a little time together in seeking to impress on an American mind that we have something worth seeing a little different from the scenery in the States, as well as examples of cultivation that we consider well representative of British horticulture both as viewed in its useful and ornamental aspect. An American florist of repute is visiting the Old Country, from which he took his departure forty years ago, and has won fame and fortune in the land of his adoption. In sturdy build and steady speech Mr. Palmer of Buffalo, New York State, might be taken as a typical Englishman, but his mind and lingual characteristics are distinctly American. He believes in dollars, and can "guess" as well as any native-born New Yorker. But he is not ultra-prejudiced, and can recognise what is good wherever he may see it, and when he does see something of particular merit he appears as if instinctively to appraise its "worth" He is great, among other things, in Carnations and Roses, blooms of which he grows extensively and profitably for sale. "Yes, sir," he will say, "we can beat you in these-growing them under glass in winter; but you can beat us in" (and who could anticipate the conclusion of his sentence) "in crooked country lanes and hedges."

Mr. Palmer has doubtless seen a great deal more in England than he did last Saturday; but he saw what he wanted in what are left of Carnations at Slough, as well as Roses in pots being grown for specimens, also Turner's new Crimson Rambler, which has caused somewhat of a sensation, growing alike in pots and in the open ground in the nursery. As to Carnations, it may be interesting to know what Americans think of varieties and methods of showing them. The paper collar style is to them an abomination, and they will not look at a flower twice that is not supported by a stem strong enough to hold it boldly, firmly, upright. In America the flowers are shown on stems a foot or so long in clear decided colours, and as large as they can be produced by cultivation and disbudding, these being the kinds that bring in the dollars. They are raised early in the year, planted out, generously treated, topped once or twice, carefully lifted in September, and planted on benches in large light houses for affording blooms through the winter and spring, one only on each stem, and as many stems as practicable without overcrowding. After blooming, the plants are thrown away, young stock alone being relied on for producing the coveted blooms. "Malmaisons" are not yet grown to any great extent in America, but when it becomes known that they are among the favourite flowers with our aristocrats and millionaires they may perhaps "take" among the Democrats and Republicans, who appear to have a sneaking fondness for exalted personages, and it is pretty well known that strenuous endeavours were made to obtain the presence of Royalty at Chicago.

Returning to Carnations. The bold-stemmed, free-growing border varieties, Mrs. Apsley Smith and Queen of the Bedders, attracted the Buffalo florist. The former is the brightest of flame scarlets in the collection, and the robust plants had passed through the winter unscathed. It is most effective in a glowing mass, also valuable for affording a wealth of flowers for cutting, and their size would be increased by disbudding. Queen of the Bedders is similarly bold, hardy, and free, with large, smooth, salmon-pink blooms, and altogether a first-class border Carnation. King of Scarlets comes within American "claims" in character, and two or three of the yellow ground Picotees found favour with

the specialist—notably, Countess of Jersey, a fine variety; Annie Douglas, very large; and Mrs. Sydenham, rich in ground colour, and chastely margined with reddish-pink. Iver White was considered the best of the early white Carnations.

In America Roses are produced much in the same way as Carrations. Vigorous young plants grown in beds of soil 4 or 5 inches thick on benches, flowered once then thrown away. Plants 8 feet high in pots of Maréchal Niel and others, including the new Crimson Rambler interested the visitor at Slough, and he recognised the excellence of the work in producing them, as he did the specimens in pots for producing forty or fifty fine blooms next year; and it may interest growers of Roses in pots to know that Mr. Turner finds that the best time for repotting the plants is soon after they have bloomed, keeping them under glass for a few weeks and duly syringed, then removing them to the open air. That is not the plan adopted by the majority, though it is the practice of the most successful growers. A line about the new Rambler in the open ground. The growth is marvellous, and the adaptability of this distinct Rose for pillars, arches, walls, hedges, or any other space that requires covering with wreaths of semidouble crimson flowers can no longer be doubted. It is probably destined to find its way into most gardens in most countries. The Manetti stock suits it to perfection.

Now we start for the picturesque and ancient arboricultural scene afforded by the historical Burnham Beeches. Passing East Burnham Park, the country residence of Mr. H. J. Veitch, where much was evidently being done in beautifying the grounds, and in which a new gardener's house was observed—good, we may be sure —we twist and turn down the embowered lanes in which we "whip" even the U.S.A., and soon find ourselves in the forest. It is, with a little open common land, 374 acres in extent, the property of the Corporation of London, free for the citizens and for all whencesoever they may come. Mr. Forbes, the Ranger, says in his concise "Guide," "the trees are among the existing remnants of the ancient forests that once covered the greater part of Britain, and Burnham Beeches will bear comparison for hoary antiquity and sylvan beauty with any forest scenery in Europe." No doubt he is right. By whom or when the trees were last pollarded no one knows, but it is centuries ago. The result of it is that each gigantic trunk, with its grotesque contortions, supports a number of branches of tree-like dimensions, and though several of the trunks are mere hollow shells, and the half of some wasted away in the lapse of centuries, the young growths are as healthy and the leafage as fresh and green as on many youthful trees. These relics of past ages have their local names founded on structural Thus the "Elephant" and the "Camel," from peculiarities. fancied and not far fetched resemblances to those animals, while Gray's tree commemorates the name of the famous poet whose remains rest at Stoke Pogis near by. There are numbers of these trees, but the "Queen," standing alone on the margin in solitary majesty, is the monarch of them all, strong, sound, and healthy, with still a long future before her, typical let us hope of the life of our noble Queen, whose magnificent home is in view beyond the trees. But we must pass on, though not before recording the American's notions. Have you, Mr. Buffalo, any such Beeches "No, sir, we have not, and I guess if some of our people had them they would think they were not worth much, and pretty soon turn some of the wood into fuel. Mind, I don't say I should, but some of the boys would not be long before they did some clearing.'

"Dropmore" was the word given to the coachman, and in twenty minutes we were shaking hands with Mr. C. Herrin, the able and courteous gardener there. Fair is the scene from this mansion of the Fortescues, with the towers of Windsor in the distance. Richly is the country wooded all around, the blue Surrey hills rising above the trees, forming a splendid background to a real English landscape. Quaintly interesting is the long terrace in front of ancient glass structures and unique apiaries.

Pleasurable it is to see the beds of old English flowers, with brighter masses of exotics to enliven the scene, and the stately woolly-headed Thistle, Carduus eriophorus, in bold contrasting effect in the borders. Blue Chinese vases and pedestals collected by the late Lord Grenville are a feature, and stand all weathers in an avenue between and among the flowers. Cool are the glades of noble trees, and then in openings in the wood beyond are the famous Conifers, splendid in stature, health, and contour -monuments of the late Mr. Phillip Frost, who planted them. The noble Douglas Fir, 120 feet high, the glory of the fine old place; while others, such as the gigantic Araucaria, graceful Abies Albertiana, weeping A. Morinda, and massive Pinus insignis, with several more falling little short in beauty. As their dimensions were recently given in the Journal of Horticulture (page 312, April 20th, 1893) it is not necessary to repeat them. A glance through the Peach houses containing splendid fruit, and with an expression of surprise that Mr. Herrin had kept things so fresh with no rain to speak of, and a nearly exhausted water supply, we took a hasty departure. And what do you think of this, Mr. American? "Well, it's very good and very fine, but your gentry keep the wood growing till it's worth nothing, and I guess our people would have some of it out sooner - before it was spoiled." This in reference to the old plantation trees through which we passed via Cliveden en route for Windsor. Looking over the wall our friend guessed Cliveden was bought by one of his people. "The richest man in America, worth £40,000,000, Mr. Astor." He supposed "our man" had to sell it because he wanted money, but was promptly told "No" by an ardent Englishman from Germany, as "the Duke of Westminster could buy Mr. Astor out and out, and then have plenty to spare!" What sturdy Britons our naturalised citizens become! A native would scarcely have made the correction in that form.

Windsor, or rather Frogmore, for we entered on the Datchet side, was reached under a slanting sun, just the time to run through the houses comfortably and see the home park in fullest beauty, with the shadows of the trees reaching far across the grass, and golden streaks of sunlight playing between them. It was calm, cool, and restful, a perfect evening after a somewhat fatiguing day, yet a day as the law-made loyal Britain said at its close, "long to be remembered." The district around Windsor has borne the brunt of the drought. Large Elm trees on the way appeared as if roasted, and hedges were sere and brown. The rainfall at Frogmore was 1.70 inch between the 4th of March and 4th of July, surely the driest experience yet recorded.

"Look out for red spider" was the silent thought as we entered the Peach ranges. Healthier, cleaner, greener foliage was not to be seen, and Walburton Admirable Peaches weighed 1 lb. each and more. Most of the trees were cleared of fruit. The demand has been unusually great and met, with abundance to follow on the outside walls. Not a sign of red spider to be seen on the trees inside or out. House after house cleared of Grapes, but a good supply still left for later use. Young Vines, two years planted, bearing heavily, and last year's planted Muscats carrying two fine bunches each at the base of splendid long, strong, and short-jointed extension canes — two from each Vine. Earliest Vines nearly ready for pruning; second house maturing fast, but shaded. "Shaded," does someone exclaim? Yes, shaded. Mr. Thomas does not work by rule of thumb, but according to circumstances, and wishes to keep the foliage working a little longer than it would under brilliant sun. He would shade Melons rather than have injured and consequently ineffective leaves. Speaking of Melons reminds of a house of the new Frogmore Seedling (recently certificated), the plants swelling a full fine crop. The variety is evidently as free as it is good, but, like all Melons, to develop fullest quality there must be no premature collapse by exhaustion.

We climb up and look down into the Pine pits. Splendid are the plants in sturdiness and colour with fruits of Smooth Cayennes twelve pips deep. One smaller fruit is ripening, produced by a rootless sucker inserted only ten months ago. Is not this going to beat the record? We pass by lines of Tomatoes. "Ah, yes!" remarks the American, "we can grow and sell them at half a dollar a bushel, and you can't beat that, I guess." No, our price is about 6d. a pound, rather than 6d. a peck. A house—a long case of cordon Pears—will be a feature of interest in a year or two, and useful withal, as the best of fruit will be a practical certainty. We have a glance, just a glance, in the plant houses, and note the same health and cleanliness that prevail in the fruit department. Nepenthes were luxuriating, the not often seen N. lanata thriving and pitchering well. Everything is grown for castle and palace, and the choicest and best plants have to go on great occasions. The long conservatory was gay with many flowers, including one that would not be thought "valuable" enough by many a parvenu. It is a Godetia, the seed of which Her Majesty brought from the Continent; the flowers crimson with white rays—a really effective variety, and notwithstanding its simplicity, perhaps because of it, found favour with the Queen.

We could only look at, not through, the kitchen garden of fifty acres, for we have yet to see the terrace, and arrive just in time to view from the battlements of the majestic castle the sun sinking behind the distant hills. We look down on the dizzy depths, peering between the tree tops into the grassy dells and beautiful slopes below. We walk round the horseshoe shaped terrace, and admire the beautiful enclosure in which flowers, ornamental shrubs, and statuary combine to produce an altogether charming effect on the smooth emerald turf. The long walk, or avenue of magnificent Elms, stretches far away, its dignity not being lessened in the first faint suffusion of twilight, and we pass through the precincts into the town.

Now, Mr. Palmer, we have shown you the best we can of what we think great and good in park and garden scenery, and of English garden culture in its broadest aspect by a master in the art. Are you satisfied? "Yes, perfectly; it is fine all through and good all over; the under man has to admit himself beaten, and you are at the top this time anyhow. But don't forget to call on me in Buffalo when you are passing."

Thus ended our Anglo-American day. Our friend will not forget it when in his far-away home, while those who formed his escort will long remember with pleasure his genial company and naive comments. We all join in a hearty vote of thanks to Mr. Harry Turner for his good guidance, and the indulgent reader will, mayhap, not object to this narration during holiday time.



CYPRIPEDIUM × WINNIANUM.

This charming hybrid is the result of a cross between C. Druryi and C. villosum, the former being the pollen parent. A plant of it was exhibited by Messrs. J. Veitch & Sons at a meeting of the Royal Horticultural Society on February 14th of this year, and the Orchid Committee deemed it worthy of an award of merit. The bloom is a harmony in brown. The petals are deep brown on the upper part, lighter below, with a broad central stripe. They are rather blunt and incurving, as shown in the illustration (fig. 12). The lip is light brown, and the dorsal sepal purplish brown, edged with lemon, and margined with white.

PHALÆNOPSIS TETRASPIS.

ALTHOUGH introduced into English gardens from the Andaman Islands by Major-General Berkeley twelve years ago, and described at that time by Reichenbach from a plant flowered by the late Mr. John Day as "a very free-flowering species, bearing a rich panicle of ivory-white flowers in the way of P. violacea, delightfully fragrant," this Phalænopsis is, says a writer in a recent

number of the "Garden and Forest," rarely heard of amongst cultivators. There were several plants of it in flower at Kew a short time ago. Each flower was 1½ inch across, with broad, fleshy, pure white sepals and petals, and a narrow, hairy labellum blotched with yellow. According to General Berkeley this species grows on Mangrove and other trees in muddy swamps at the extreme end of the creeks where the water is fresh, and where the plants hang from the branches a few feet above the water, growing with extraordinary luxuriance.

PLEIONES.

THESE charming little Orchids are invaluable where cut flowers are required. Considering they are so easy to grow it is surprising we do not see more of them. Anyone possessing a warm greenhouse or stove need not be afraid of disappointment. The pseudobulbs after flowering should be allowed to rest a short time, but

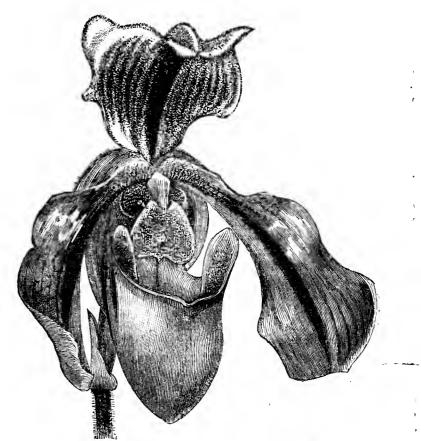


FIG. 12.—CYPRIPEDIUM × WINNIANUM.

never be quite dry. When the young growths are about 1½ inch long the pseudo-bulbs should be taken out of the pot and separated, carefully removing all the old compost from them, cutting the old roots to within about an inch of the pseudo-bulb; the portion left serves to keep them firm in the pot. They must be carefully washed to clear away any traces of scale, to which pest they are very subject, and which is very troublesome if allowed to run on the young leaves.

The compost I use, and better results cannot be desired, is good fibrous peat and chopped sphagnum with a liberal proportion of nodules of dried cowdung and charcoal, and a good sprinkling of sharp sand mixed well together. Six-inch pots half filled with potsherds are employed. The pseudo-bulbs, five or six according to the number of young growths, are potted firmly, raised above the rim of the pot. Afterwards place them in a temperature of about 50°, and keep them damp but not wet until the new roots have reached the sides of the pot, then an increase of heat will be advantageous. We are always careful not to wet the leaves, or they will soon become spotted and will decay prematurely. As growth advances the pots are occasionally plunged in weak liquid manure up to the pseudo-bulbs. Continue this about twice a week until they have swelled; they will then require less water, and may be placed in a cooler part of the house. In due course the leaves will ripen and fall, and the flower buds appear.—Specialist.

SPRAYING VERSUS INSECT PESTS AND FUNGOID DISEASES.

THE question is no longer "Shall I spray?" but "When and how shall I do it?" Such is the heading of a leading article of a paper received recently from America. Agriculturists and horticulturists are now fully realising that they must fight hard against the ravages of insect pests and fungoid diseases if they wish to ensure a remunerative crop in field, garden, or orchard

Fruit trees, Vines, Tomatoes, Potatoes, and Onio: are alike

attacked by these pests, and the results obtained on the experimental stations in the States and also in England, prove without doubt that at present the only way of dealing successfully with these natural enemies of the plants in question is by spraying. Poisonous solutions must at all times be dealt with cautiously and by reliable men. Such mixtures to be effective must also be properly made, or a failure exposes the whole thing to ridicule. It is my intention to speak of the easiest and safest method of preparing the Bordeaux mixture so greatly used for Vines, fruit trees, Tomatoes, and Potatoes. This mixture should now be applied by all gardeners in the country as a test upon the Potatoes. In a week or two the disease will be rampant, the weather is now suitable for its propagation, and we must give the first dressing before the fungus commences its raids. The experimental plots in this district have all been sprayed, and we are now hard at work upon the cottagers' allotments and the plots in fields and village gardens. By the time we have been round once I anticipate 15 to 20 acres will have received treatment.

The mixture is very easily made in large quantities, but small brewings require greater care and consideration. I will, however, deal with each case. We want a solution of copper sulphate (blue vitriol), some freshly slaked lime, and a supply of water. The mixing apparatus consists of two wooden buckets and a tub holding from 10 to 20 gallons. Take 2 lbs. of copper sulphate, dissolve it in a bucket containing a gallon of hot water, stirring it well until the copper is dissolved. Slake about 1 lb. of fresh quicklime in the second bucket, and when slaked add about another gallon of water and stir the whole until the water is quite milky. Place 8 gallons of cold water in the tub, and when the contents of the first bucket are cold mix the whole 10 gallons in the tub, stirring vigorously with a stick, and the solution is ready for use. This is sufficient to spray 10 perches, and the cost does not exceed 1s. 3d. The mixture is much more easily made when large areas are to be dressed. Suspend a sack containing 40 to 50 lbs. or more of copper sulphate in a tub in which there are 20 to 40 gallons of cold water. The copper dissolves, and we can soon obtain a solution of 25 to 30 per cent. of copper. Having a 25 per cent. solution, about 3 gallons of this will make 40 gallons of the bouille.

this will make 40 gallons of the bouille.

After mixing the copper and water, slake about 2 lbs. of lime and add as before, stirring during the whole process. The lime is added simply to neutralise the acidity of the sulphate, and less than the above quantities may be used; but if it is not of good quality and slakes badly, the time to cease adding milk of lime is detected by dropping in one or two drops of a solution of ferrocyanide of potassium. This poisonous solution gives a deep brown colour if the copper is not neutralised, but remains unaltered in colour if there is sufficient lime. A good spraying machine is Vermorel's Eclair, and this before long will come into general use for spraying. It can be used with advantage for fruit trees and vegetables, but in this country it is as yet little understood, and even the time to use it is unknown to many practical men. Since writing the above I have found a plot of Schoolmaster Potatoes badly diseased. The plot is low-lying, shaded by Apple trees, and Mangolds were grown on it last year. In other parts of the garden Schoolmasters are as yet untouched.—EDWARD H. SMITH, Warminster.

(To be continued.)

PARSLEY FOR WINTER AND SPRING.

THERE are few gardens, either large or small, in which this indispensable herb is over-plentiful during severe winters, but there are many in which the supply has not been equal to the demand, and it is on record that "market men" who have made a "lucky hit" with it during such seasons have reaped a richer reward than any other crop is capable of realising. At other times, when mild winters have been experienced, this self-same herb has been a drug in the market. Whatever weather is likely to come it is wise to be prepared for the worst. The produce of sowings made in early spring and during May will keep up a constant supply till very severe weather is experienced, and on no account should the winter supply be drawn upon until that from other sources is quite exhausted. Much may be done to economise by attending to this point, for there is generally too great an inclination to pick from sheltered positions as soon as a few degrees of frost are experienced. Although the leaves may be frozen stiff and look uninviting, if placed in cold water and gradually thawed they will serve for all purposes, and, moreover, be a distinct gain.

Moreover, be a distinct gain.

No matter how exposed a position Parsley is grown in, it is seldom much disfigured by frost unless it is continuous. Then is the time to draw upon the supply which has been prepared for use during severe weather and throughout the early spring months. A good sowing should be made as soon as possible to provide this supply. If space at the foot of a south wall is available the ground should be prepared by forking in a little old hotbed manure, or leaf soil and wood ashes if the land is heavy. A shallow drill ought then to be drawn a few inches from the wall, in which the seed should be sown thinly.—D. W.



THE N.R.S. CATALOGUE.

"AUDI ALTERAM PARTEM," in your last issue, referring to the National Rose Society's new catalogue of exhibition and garden Roses, says that "no Rose grower of taste, unless an exhibitor, would be influenced in his selection of Roses for his garden by this 'official guide.' It leaves out many of the best Roses for garden and house decoration, and recommends others that no one but an exhibitor would

care to grow."

Now, this strikes me as a very sweeping, and at the same time misleading statement. In the first place I know dozens of non-exhibiting rosarians who have warmly welcomed the appearance of this new catalogue, and who regard it as a trustworthy guide, philosopher, and friend, in the selection of Roses for their gardens. It certainly contains a list of exhibition Roses, a small proportion of which cannot be recommended to amateurs generally; but on the other hand, half the catalogue in question is devoted entirely to the description of varieties suitable for garden decoration and general cultivation, Roses which would be quite out of place in any collection grown exclusively for exhibition purposes. In fact, the catalogue recently issued by the Society was not in the first instance intended for cxhibitors at all, but for its non-exhibiting members. Your correspondent appears to be of opinion that the National Rose Society "is only an exhibitors' society," whereas more than two-thirds of its members have probably never exhibited a Rose in their lives. It may also surprise him to hear that the entire cost of the new edition has been defrayed by exhibitors, and that it has been issued by the Society more especially for the benefit of their non-exhibiting brethren.

The new edition, which is bound in cloth and illustrated, contains descriptions of nearly 300 selected Roses, many of which are as yet to be found in very few trade catalogues. If any of your readers would like to judge for themselves as to the value of our new catalogue, I can only say that I shall be happy to supply them with a copy at the small cost of fourteen stamps.—Edward Mawley, Rosebank, Berkhamsted,

Herts.

Roses and Rosarians.

It is very strange to see the contemptuous way in which lovers of Roses who are not exhibitors speak of those who are. Anyone may accuse anyone else of want of taste if their likings do not coincide, and such accusations against exhibitors are common enough in newspapers with a column or so devoted to gardening, though one does not expect to find them in the Journal, and I do not remember ever seeing an exhibitor hit back by condemning the lovers of garden Roses for want of taste. But to go farther and accuse exhibitors of ignorance, as "Audi Alteram Partem" seems to do by saying it is "amusing, on a question of accuracy, to find the new N.R.S. Catalogue set up as an official guide," is "rayther too rich," as Sam Weller would have said. Some items in that catalogue may be open to criticism (I hope to make some humble ones myself before long) but it is prepared by men who are without question the highest authorities on the Rose in all its branches, most of whom make it the special study of their lives. Surely, in any other branch of art, science or manufacture, the "amusement" would come in when such a compilation was denounced as untrustworthy by an outsider, without any proofs and merely upon his ipse divit. Whether it is "amusing" or not to find, after the statements of "Audi, &c." ("it leaves out many of the best Roses for garden and house decoration, and recommends others that no one but an exhibitor would care to grow. But then it may be said that the so-called National Rose Society is only an exhibitor's Society") that the catalogue in question contains eleven pages of exhibition Roses and twelve of garden Roses of every description and species, must be left to the readers of the Journal to decide.

It was plain to anyone acquainted with the catalogue that the mention of it as an official guide in the letter of "A Jubilee Rose Grower" referred to the statement as to the raisers and dates of the different Roses catalogued, which is the result of thorough investigation by the best au horities, and may be relied on as impartial. Other points in the letter of "Audi, &c.," might possibly be found "amusing" by an irreverent peruser, but I leave him and Rev. D. Williamson in the able hands of "A Jubilee Rose Grower," with each word of whose letter I heartily agree. I trust, however, that "an oäsis in the desert" of the Rose column of the Journal may still be found occasionally from the pen of Mr. Williamson, whose writings have caused real amusement to others besides myself.—W. R. RAILLEM.

Your fluent correspondent, Mr. Williamson, should not attribute motives to persons who may venture to differ from him in a respectful manner on a point of form. I had not his visit to Waltham the least in mind when I sent the short note to which he refers on page 51 last week. I had noticed, as have others, his tendency to direct public attention to his personal friendships and distinguished associations, and

to appear to make these even more prominent than the legitimate subjects of his communications. That is the Society paper style. Some persons enjoy public familiarities, others do not. It is not long since I had the pleasure of a handshake with the genial President of the National Rose Society, and I have had many such pleasures over a long series of years, but I should shrink from publicly proclaiming anything like "intimate personal friendship" on the ground of such acquaintance. The same remarks apply to Mr. William Paul. I hold both these gentlemen, and notabilities of the Rose world, in great respect; but why should I tell it from the housetops to a circle of readers who care nothing about my connections? I could not do it except under the shelter of a nom de plume, and that is not doing it at all in the sense to which the reference applies.

A word about these terrible noms de plume and the heinousness of "anonymity." Permit me to say I think there is a great deal of cant written on this subject. All the best leading articles in the world are unacknowledged by the writers of them. Would Mr. Williamson or his supporter denounce a Times leader that praised them or their work because the writer, whom we will call John Smith, did not append his name to it? Does your correspondent first alluded to (I try to avoid introducing his name needlessly) object to the letter of "Audi Alteram Partem," and think it should have had a place "elsewhere," because the writer prefers to withhold his name? the same writer, be it noted, applauding the "courage" of the gentleman he defends, but whose example he does not follow.

Again, let me ask why did the courageous writer, who is so fond of introducing names, withhold the particular name of the great rosarian who praised an article so highly for its "literary mcrit and marvellous accuracy?" It seems even Mr. Williamson can suppress a name when it answers his purpose, though, considering his proclivities, he might be supposed to be the last man to do so.

I am sorry he has introduced this subject, but having done so the rejoinder is imperative. Please let it be understood that I do not wish for your correspondent to disclose the names of either of his two admirers whom he conceals. He is quite justified in doing so, and there are plenty of names without them. Critics should do all they can to be consistent, and writers on Roses or anything else treat the subjects fairly on their merits and not make them vehicles for scattering compliments in prodigal profusion on friends and acquaintances; or, may I add, for speaking scornfully of the work of others, as for example the N.R.S. catalogue. Give credit where credit is due for good work well done by all means, but do not overdo it, or in the estimation of many it will degenerate into mere laudation of no value to anyone. Mr. Williamson evidently has the pen of a ready writer and is apparently sympathetic. Let him steel himself against his tendency to flatter individuals, and let his pen be guided more by his head, less by his heart, and he will shine the more in horticultural journalism. I may not live to see, yet I suspect the time will come when he will acknowledge that someone has done him a service in this discussion, though at the present moment he cannot be expected to admit that his friend is—A Jubilee Rose-Grower.

N.R.S. Worksop Show.

LET me first congratulate your representative on the admirable report he has written on this Show, and also on the very keen discrimination he has generally given evidence of in that report. Although I do not agree with every item of his account, yet I do with the greater part of it, as being far above the average in appreciation of merit in Roses.

My reason for writing this letter is in consequence of his remarks on the thirty-six trebles of the large trade growers. He says, "Both were splendid stands. Messrs. Dickson had the cleanest flowers and the most variety, but Messrs. Harkness had the heaviest blooms." Of course he may mean variety of colour by "most variety," but there must be and only be thirty-six varieties in this class, so that the expression "most variety" hardly correctly applies; but when he goes on further to state that Messrs. Harkness had the heaviest blooms as contrasted with the freshness of those of Messrs. Dickson he brings me to the subject of this letter.

There has been grave dissatisfaction on many occasions this year, and I have myself, although fairly successful at all the shows I sent flowers to, been a sufferer by this very method of judging Roses by weight as opposed to freshness. It is an utterly incorrect system, and one which I regret to say the professional element of the N.R.S. are more prone to give attention to than amateurs, although some of the N.R.S. amateur authorities sin also. It is time that attention should be drawn to this question, and that some discussion took place in some leading horticultural paper. I dislike judging with people who ignore the Rose "in the most perfect phase of its possible beauty" (N.R.S. definition of a good Rose), and surely freshness is an absolute necessity for this desideratum, and not mere size. See also N.R.S. rules for points—"Where flowers are of equal merit judges shall consider arrangement, freshness," &c.; and this, I state, some judges ignore! I am not averse to saying in public that although my vote may be outweighed by the majority (when there are three), I always have and shall give preference to the exhibits that are staged fresh to those that are merely large, this being the true reading of our rules, and the method that should be carried out at shows under N.R.S. rules. I would like to emphasise the fact, however, that all Messrs. Harkness' flowers were fresh, and that consequently in the instance which has called forth these remarks the question of freshness versus size did not apply. Both

boxes were beautiful, and throughout their exhibits at Worksop the same may be said of Messrs. Harkness' and Messrs. Dicksons' flowers.—Charles J. Grahame, Croydon.

THE FRAGRANCE OF ROSES.

It was the immortal Shakespeare who said, in the most romantic of all his dramas—"Romco and Juliet"—"A Rosc by any other name would smell as sweet." Nevertheless, it cannot be denied that certain names of Roses, such, for example, as La France and Marie Baumann, are suggestive of fragrance, while others are not. And doubtless the want of fragrance in a flower, however imposing in appearance, is a serious limitation, almost as regrettable as the lack of moral sweetness in a beautiful woman. Some Roses indeed are so very impressive, so commanding in their size and substance and splendour of complexion, that we almost forget their utter ignorance of odour in the contemplation of their almost imperial majesty, and among these we may reckon Baroness Rothschild ("who would be white if she were not always blushing, as if in the consciousness of her beauty," says the Dean of Rochester), the White Baroness, and Merveille de Lyon. The two beautiful Roses last named are closely affiliated to the first, and, unless in colour, partake of the parental qualities and characteristics, a fact which may be learned by any rosarian without reference to the catalogues, by comparing their nature and manner of development.

In my own garden, where for the sake of their colour not less than their fragrance, the fairest flowers are partially shaded from the oft-times too exacting sun, Roses are arranged according to their parentage; an interesting experiment, and a valuable one also, as I have already learned from experience, for the study of their attributes. There White Lady, which I have frequently eulogised for its exquisite perfume, finds itself in close proximity to Lady Mary Fitzwilliam; while Margaret Dickson, the most superb and majestic of ivory-white Roses, is not far distant from Merveille de Lyon, though considerably nearer to the prolific Lady Mary, from whom her fragrance is derived. On the same principle, Augustine Guinoisseau, one of the most fragrant of modern Roses, blooms sweetly beside the silvery pink La France. The colour of the former is white, delicately and most gracefully suffused with rose. It is a very abundant bloomer, and its pendulous habit is a valuable characteristic, constantly giving it the appearance of being much fuller and more perfect than it is. Though I do not profess to be a great authority on Rose cultivation, I do not hesitate to recommend this "almost white La France" to those of my readers to whom it is a stranger by reason of the qualities to which I have referred.

Among Teas and Noisettes two of the most attractive are L'Ideale and Souvenir de S. A. Princc. Mrs. Paul, a gold medallist of the National Rose Society, and probably the finest of modern Bourbons, has a most delicious fragrance, much resembling that of the old Monthly Rose; it is also remarkable for form and substance, and is altogether a distinct and splendid acquisition. Among other comparatively recent productions which I find irresistibly fascinating by reason of their sweetness of odour and aspect are Mr. Paul's Corinna and Salamander, Mr. Cant's Prince Arthur, the beautiful Aberdonian Duchess of Fife, Lady Ethel Brownlow, Mr. Cranston's Crimson Bedder, and the late Mr. Bennet's Mrs. John Laing. There is unquestionably at present a strong and growing aversion to inodorous Roses, and I doubt not that ere long a Rose without fragrance will be accounted an anomaly.—DAVID R. WILLIAMSON.

OLD ROSES AT KIRKCONNELL, DUMFRIES, N.B.

THERE are many interesting plants in Mrs. Maxwell-Witham's garden at Kirkconnell, and on a recent visit there I noticed the beauty of the great bushes of the old Roses which have been in the garden for many years. They are mostly in great masses, which have been for long unmutilated and allowed ample room. It is in masses such as these that the old Roses are seen to most advantage, and one is led to wonder if our newer flowers such as Her Majesty will ever lend themselves to such grand effects as are produced by the older sorts.

The old Maiden's Blush—a mass of bloom—is about 6 fect high. One known as Carmine Rose grows about 8 feet. A white one called St. Margaret's Rose, which always flowers about June 10th (St. Margaret's Day), is very fine. Swiss Boy is also very pretty. One which is said to be exceedingly rare is known as "Kirkconnell Favourite," and one bush was measured 5 feet high and 16 feet through—a mass of beautiful pink flowers. The York and Lancaster is also growing luxuriantly. The Scotch Roses—yellow, marbled, blush, white, and dark pink—also form magnificent clumps, which are very beautiful in their season. Rose Celeste and Maiden's Blush are great favourites, the former being deliciously fragrant. The little Cinnamon Rose, growing in a hedge, is also much esteemed for its fragrance. A beautiful white spicy-scented Rose called "Plum Cake" is also in the garden, while the white Provence Rose also does well. The front of the house is covered with a fine tree of Dundee Rambler, planted nearly sixty years ago, which covers the house with a mass of beautiful flowers. Some rare single Roses are grown outside the garden, and the old Crimson Velvet Rose flourishes, while the Ayrshire Roses climb luxuriantly in suitable positions.

Roses of the most recent introduction, such as the beautiful Gustave Piganeau are likewis: appreciated at Kirkconnell, but after all these great masses of garden Roses from their beauty and associations must always remain a feature of the greatest interest in such fine old gardens as this.—S. Arnott.



CHRYSANTHEMUM PROSPECTS.

SEVERAL well-known trade and amateur growers are of the opinion that the present spell of moist, rainy weather will, after the long drought, start the plants into rapid growth, and thus delay bud formation, by which, instead of the season being an early one, it is more likely, in their opinion, to be rather late. It would be interesting to know how far this view is held by cultivators at large.

A JAPANESE CHRYSANTHEMUM SHOW.

To those who have no idea of what a Chrysanthemum show is like in its native country, it may be useful to point out that in a collection of pictures by Mr. Alfred Parsons, now on view at the rooms of the Fine Art Society, 148, New Bond Street, there is a charming little piece of water colour drawing (No. 90) entitled "A Chrysanthemum Show, Yokohama. November." A covered building of bamboo with a wide opening in the middle of the roof through which a delicious fine sky is observable, has a bank of large-flowered Chrysanthemums on each side securely sheltered from the sun and wind. The flowers are big, massive, and of all colours, and the plants appear to be sunk in the ground, as no pots are visible. They are railed off, and a large open space is left for the public to walk about in. Ten or a dozen Japanese in native costume are enjoying the show, which is depicted so well by Mr. Parsons. The colours of the blooms are mostly white, yellow, purple, and crimson. The picture is bright and clear, and such an exhibit at any of our shows would meet with a very favourable reception.

CHRYSANTHEMUMS IN NEW ZEALAND.

The flowers staged at the recent meeting of the N.C.S. at the Aquarium were in some respects less interesting than those sent over by Mr. Earland, which were shown last September. On that occasion the varieties were stated to be seedlings raised from Colonial saved seed, and were all named by the raiser. The four blooms sent from Sydney were fairly well grown, but unfortunately no information was forthcoming as to whether they were true Australian seedlings or only oldestablished varieties. From correspondence read by the Secretary and by the Foreign Secretary, it appears that there had been for some time previous to the holding of the New Zealand shows a great deal of wet weather, and as the Colonial growers do not resort to protection of any sort the exhibition suffered somewhat severely. The weather in Australia has also been unfavourable for the popular flower.—P.

NATIONAL CHRYSANTHEMUM SOCIETY.

A SPECIAL meeting of the General Committee and the Floral Committee was held at the Royal Aquarium, Westminster, on Friday last, the principal item on the agenda paper being the consideration of some Australian-grown Chrysanthemums, which had been frozen in blocks of ice, and sent to the Society for adjudication. Mr. R. Ballantine occupied the chair. After reading the notice convening the meeting, mention was made of the death of the late Mr. E. Saunderson, for many years President of the Society. The Chairman announced that the funeral was attended by himself, the Secretary, and several other members, and that a wreath was sent in the name of the N.C.S.

The Secretary read a letter from the Auckland (N.Z.) Chrysanthemum Society concerning their recent Show, at which many novelties had been staged, the chief of which were W. Tricker, Viviand Morel, Miss Anna Hartzhorn, E. G. Hill, Gloire du Rocher, Eynsford White,

and Lilian B. Bird.

Mr. Harman Payne read some interesting correspondence from New Zealand relating to the frozen blooms sent out by the N.C.S., which had been exhibited at the Wellington and Christchurch Societies, and were to be sent to other places in the Colony. Large numbers of visitors had paid for admission to see the English flowers, and it was confidently felt that the experiment would result in a large increase of growers in New Zealand. The incurves were particularly admired, and

nothing so perfect had ever been seen there before.

Mr. Dean announced that the blooms then on the table were grown by a Mr. R. Forsyth of Sydney. This gentleman was a prominent exhibitor at the Sydney Show, and a successful prizewinner. It was to be regretted that the names of the blooms had not been communicated, because in the frozen state, which caused some degree of discolouration, they could not be identified with any certainty. One of the blooms was a large incurved Japanese of the Lady Lawrence type, the colour being a dirty white. Another was of the build of Bouquet Fait, of a decidedly brownish tinge, but of good size and substance. The third was a very flat, broad-petalled, incurved Japanese flower of light bronze, and the fourth bloom was an incurved with very close regularly disposed petals, and of a deep bronze or cinnamon yellow. A liver medal was awarded for the exhibit.

Mr. Jukes thought that although the sending of such exhibits was interesting they had but little educational advantages, and could only be regarded as curiosities. He thought the Society, now that they had

a fair idea of the way the Chrysanthemum was grown in the Antipodes, should be on their guard against encouraging too many exhibits of this sort, as it caused considerable expense for carriage and cold storage.

Mr. Cannell received a vote of thanks for staging some seedling Begonias, one, a deep double crimson, attracting much attention.

Several questions submitted by affiliated societies were disposed of, and it is a gratifying proof of the usefulness of the scheme for affiliation to find that disputes are so readily settled by the ruling of the parent Society.

FLOWERS AT READING.

A visit to the nurseries and trial grounds of Messrs. Sutton & Sons the other day revealed the fact that Reading has, in common with other places, suffered from drought. Annuals are dwarfer in growth than usual, but in most instances the plants are flowering profusely, and in some cases seeding prematurely. No rain, we were informed, had fallen practically for four months, and were it not for the strenuous attempts to counteract the effects of a prolonged drought, the results could not be other than disastrous. Judicious management, combined with good cultivation, such as has been recommended in these pages, curtailed the evil effects, however, to a great extent, and it is anticipated that there will be an excellent seed harvest, notwithstanding the deficiency of rain during the carly stages of growth. Much might be seen at Reading, there being always something of interest to note, and much could be recorded. Space, though, is limited, and we must confine our remarks for the present to the flowers that are now the most attractive at this world-famed establishment. Cleanliness and brightness pervade the whole premises, and smartness in attention to details relative to the production of the best possible seeds is most noticeable.

As is well known, every flower worthy of note, and that it is possible to grow from seed, receive attention at the extensive nurseries, and in the trial grounds of Messrs. Sutton, but none more so perhaps than Tuberous Begonias. These now form a special feature, and they are well worth a visit. It may be possible to see larger and more unwieldly blooms, but it is questionable whether from a decorative point of view more useful plants are forthcoming from any source. For neatness of habit combined with vigour and gracefulness we have never seen better plants, and the same may be said in regard to the flowers. These are not ungainly in size, as is too frequently the case, but large enough to display their beauty and symmetry. Of colours there is a great variety, and the shades of blossoms on plants produced from a packet of seed of the Reading Beauty strain are really surprising. Plants from seed sown six months ago are now a sight worth seeing, being from 12 to 15 inches in height and covered with blooms. One cannot help noticing the diversified habits of the plants; and although all present that healthiness and equilibrium that denotes careful fertilisation and judicious management, some are erect, with the flowers on stout stalks, standing well above the foliage, others are semi-erect, and not a few are of a drooping nature, possessing the gracefulness of a Fuchsia, and suitable for hanging baskets. For trade purposes the plants of the above-mentioned strain are arranged in sections under glass, and it may be interesting to note that the firm makes a speciality of offering seeds of the various colours separately. Numerous colours, from pure white to a deep crimson and the richest yellow with delicate tints of pink are also included in Sutton's prize strain; and the plants are also dwarf in habit with a robust constitution. No attempt is made to compile a long list of named varieties, the principal object kept in view being to grow seeds that can be relied upon to produce compact plants which will yield an abundance of flowers of an equal size and exquisite colouring. A new single white of exceptional merit, however, has recently been raised, and this is known as Queen of Whites. It is a beautiful variety, one of the best in cultivation, and always attracts attention. The plant is of good habit, and the flowers are pure white, large, and of great substance. In Reading Gem we have an interesting break from the ordinary type of Begonias. The flowers are of perfect form, and have white centres, which merge into a charming pink shade, the margin of the petals being a glowing carmine. It is one of the prettiest Begonias we have seen. a glowing carmine. It is one of the prettiest Begonias we have seen, and it will doubtless become a popular variety. Those who require blooms of a rich orange scarlet shade should make their acquaintance with Prince of Orange, whilst for producing bright orange coloured flowers Meteor will be found a most useful variety. The last-named kind has handsome dark foliage marked with light veins, which enhances its appearance considerably.

What has been said in regard to the single Begonias applies with equal force to the double varieties. The compactness of the plants and diversity of colouring in the flowers are equally noticeable in this section. Sutton's Double Mixed comprises blooms of the most superb forms and varied colours. Among them may be found flowers representing Camellias, Hollyhocks, Dahlias, Carnations and Roses, and in innumerable shades of yellow, rose, carmine, scarlet, and crimson, quite equal to, and in some cases surpassing, many named varieties. The Double White is a magnificent variety with pure white blossoms of superb form and substance produced well above a mass of sturdy robust foliage. Indeed, both single and double forms are unique; but to fully realise the quality of the strain the plants must be seen, and once seen they will be grown.

A new departure in Begonia culture has been made at Reading, and the result is that we now have a useful class of fibrous-rooted plants of the B. semperflorens section. These can be raised from seed as easily as the tuberous varieties, the plants usually flowering freely within a period of five or six months. From seed sown in January some plants a foot in height and loaded with flowers are to be observed here, but to ensure spring and early summer blooming a sowing may be made in August, and the seedlings grown steadily during the winter. A selection of these is being made, and the result is of a most satisfactory nature. Crimson Gem is one of the best, and quite an acquisition, the flowers being of a bright crimson shade. For bedding purposes as well as pot culture these Begonias are exceedingly useful, and in the open air the foliage assumes a bronzy metallic hue, which enhances their appearance. At the Gardens of the Royal Horticultural Society last year these Begonias were bedded out, and certificates awarded for several varieties; whilst at Reading this year they are most effective in the open air. Duchess of York is a new variety with rosy pink flowers, as also is Floral Gem. Snowflake is a charming white, and Duchess of Edinburgh is a beautiful form, with large white blossoms suffused with pink. It may be noted with advantage that these Begonias are robust, yet dwarf and well proportioned in habit, and will bloom long after the tuberous varieties are over; indeed if properly managed they will flower nearly all the year. The individual flowers, too, are twice as large as those of the ordinary semperflorens type, and are produced in great abundance. There is undoubtedly a future in store for these beautiful plants.

Achimenes also form a special feature at Reading, and several houses are devoted to their culture. For years experiments have been made and improvements effected by careful and patient fertilisation, and now the plants are perfect in habit, robust, and profuse in flowering. A great diversity of colours has also been obtained. Sutton's Blue is a good representative of one type, the flowers being of an intense shade. Rosy Queen is a splendid variety, especially attractive under artificial light. Splendens is a magnificent scarlet, a decided improvement on Dazzler. Harry Williams is a distinct variety and rather late in flowering, which renders it all the more valuable; and in Admiration we have a beautiful rosy purple flower. The whites are also specially good, the same applying to other varieties. Gloxinias raised from seed sown a few months ago are making a grand show, the plants being vigorous, carrying splendid foliage and flowers of great size and substance. The spotted kinds are charmingly coloured, and by a series of crosses an improvement in the habit of the plants has been effected, the foliage being more robust than was formerly the case. Of named varieties such as Her Majesty, Duke of York, Sutton's Scarlet and Purple are too well known to need a lengthy reference here, these having been exhibited at many leading exhibitions recently. A yellow Torenia deserves special mention, and the sight of a number of plants of Cyperus alternifolius raised from seed would interest many horticulturists.

Regarding the flowers in the open air the Asters first claim attention. Here we find a strain of the finest quality, and comprising flowers of the most charming colours. Many of the plants, however, will be at their best in about three weeks, but those who require an early flowering variety should grow Harbinger. This is a splendid Aster, growing 18 inches in height, and producing an enormous number of pure white flowers about a month before any other. The blooms of the variety Comet in various shades much resemble Japanese Chrysanthemums, and are general favourites for cutting, whilst for garden decoration Sutton's Bedding, Snowball, and Fire King are deserving of mention. The new dwarf Cannas raised from seeds sown this spring are blooming profusely in the open air, and for producing a grand effect in the flower garden these plants are indispensable. They should be grown in every garden. Carnations are particularly good, although, generally speaking, the season has been extraordinarily short, and it is satisfactory to observe that whilst layers and established plants have, owing to the prolonged drought, failed, the seedlings are flowering abundantly. The plants are vigorous in growth, forming dense tufts, and bear hundreds of richly coloured double flowers. The same may be said of the Picotees, which make a charming show. Stocks are everything that could be desired, showing a remarkable per-centage of double flowers, as also do the Petunias, which are wonderfully fine. A large breadth of seedling Hollyhocks afford ample evidence that considerable attention has been paid to the selection of Sutton's prize strain. The plants are dwarfer than is usual, being about 4 feet in height, doubtless owing to the dry weather, but the flowers are as double and as fine as those of the best named varieties. It is surprising how beautiful these Hollyhocks are when treated as annuals. Bedding Lobelias from seed are compact in habit and profuse in flowering, a vast improvement on the straggling seedlings of bygone days. The blue, white, and pink varieties are equally good, forming a strain which should be found in every garden. A specialty is also made of the trailing Lobelias in various colours, these being eminently adapted for vases and hanging baskets.

At the trial grounds the huge beds of annuals produce a brilliant display of colour. It is impossible to enumerate all the plants worthy of notice, but special mention may be made of a few exceptionally fine varieties. In this category we may place Crimson King Virginian Stock, a decided improvement on the type, and an excellent edging plant or for growing in beds. The double white Clarkias are extremely useful, and among Nasturtiums Aurora deserves special notice. This is a most beautiful flower of a primrose shade suffused with pink and carmine. Cloth of Gold, a yellow-leaved variety, is effective in a mass, and would make an excellent bedding plant. Of Calendulas Orange King is a grand double variety, and the French Marigold Miniature Spotted is very showy. Godetias in variety form pleasing masses of colour, Ladybird being a very dwarf form with white flowers spotted crimson. Apple Blossom is an exceedingly pretty Godetia with dense heads of white and pink flowers, and a dwarf form of Lady Albemarle is espe-

cially good. The last named variety is well adapted for bedding, the same remark applying to a selection of Duchess of Albany which has large pure white flowers. The Lupins appear to be flowering well this year, the various colours, comprising different shade of blue, lilac, white and yellow being most effective. Portulacas also form a pleasing feature, as likewise do the Poppies of numerous kinds. Great care is taken to keep the popular Shirley Poppy rich and varied in colouring, all "rogues" being promptly removed. Numerous other annuals, including the beautiful Nemesia Strumosa Suttoni, also receive attention; every possible effort to produce seed of the very best quality being made, and thus the reputation of the firm for excellence is fully maintained.—C.



THE WEATHER IN LONDON.—During the past week the weather has been changeable in the metropolis. Sunday opened fine but gusty. and rain fell heavily during the evening. Monday was showery and Tuesday proved fine, but it rained slightly on Wednesday morning. At the time of going to press it is fine.

ROYAL HORTICULTURAL SOCIETY'S GARDENS.—In the Gardens of the Royal Horticultural Society at Chiswick a very large collection of herbaceous Phloxes is now in full flower, and contains many beautiful varieties. Tuberous and hybrid Begonias grown in beds in the open are now coming into bloom. Violas, of which there is a very large collection, have done remarkably well, and are still laden with flowers. A house devoted to Fuchsias now presents a charming appearance. Cannas grown under glass form an interesting feature, and are doing well and very attractive. The Grapes in the conservatory and other houses are bearing, as usual, heavy crops of good fruit. Tomatoes are grown extensively, and commencing to ripen outdoors. All the best varieties are grown, and afford a good opportunity for observation to those interested in their culture.

DR. COOKE.—According to the "Kew Bulletin" Dr. Cooke, the well-known authority in mycology, has retired at the age of sixty-five from the public service. Dr. Cooke came to Kew when the collections, of which he has charge, were transferred from the Indian Museum to that establishment in 1880. It is gratifying to note that in recognition of his services the Secretary of State for India has made a small addition to Dr. Cooke's pension. Dr. Cooke has been succeeded at the Kew Herbarium by Mr. G. Massee, whose work on "British Fungt Flora" was reviewed in our last issue.

— FLORAL DESIGNS AT SHREWSBURY.—In consequence of the very early season for Carnations, and the certainty that there could be but little competition at Shrewsbury Show, August 23rd and 24th, the Committee have determined to withdraw the liberal prizes offered for collections, and instead to give £5 and a gold medal for the best display of floral arrangements in a space 10 feet by 4 feet, with second and third prizes added. The various objects to be exhibited in this class are left to the discretion of the exhibitor.

— AN EXHIBITION OF NARCISSI IN BIRMINGHAM.—The Council of the Birmingham Botanical Society has decided to hold an Exhibition of Narcissi in their Gardens at Edgbaston on Wednesday and Thursday, April 18th and 19th, 1894. An Exhibition was arranged to be held in April last, but the early season caused the Narcissi generally to be out of flower before the date fixed for the Exhibition, so that a good representative Exhibition did not take place; but it gave the Council every encouragement to hold another Exhibition next April.

— A FINE GLOXINIA.—"A. J. N." writes—"At the monthly meeting of the Chichester and District Gardeners' Mutual Improvement Society, June 26th, an extraordinary Gloxinia of Messrs. Sutton's strain was exhibited by Mr. W. Aylward, gardener to G. Woodbridge, Esq., Chichester. A first-class cultural certificate was awarded for the same. The plant was raised from seed two years ago, and carried fifty-four fully expanded flowers, which were of a good average size, and there were several buds to open. It was grown in a 7-inch pot, and was 32 inches in diameter. The leaves were from 9 to 14 inches long, and averaged 7 inches wide, and were of a bright and healthy colour. I saw in the conservatory of the gardens managed by Mr. W. Aylwa-d several Gloxinias similar to the one mentioned."

- —— DISTRICT SUPERINTENDENT OF LONDON PARKS.—We are informed that Mr. John Knight has been appointed District Superintendent of Parks and Open Spaces, north of the Thames, under the auspices of the London County Council.
- HORTICULTURE IN FRANCE has been recognised by the appointment of M. De la Devansaye as a Chevalier of the Legion of Honour. M. De la Devansaye, we understand, has been President of the Horticultural Society of Angiers for twenty years.
- LINCOLN'S INN GARDENS.—The gardens of Lincoln's Inn will, by permission of the benchers, be thrown open for the benefit of the poor children inhabiting the surrounding neighbourhoods. On and after August 14th, until September 15th, the gardens will be open from 5 o'clock until dusk.
- WATER EXCURSION.—A party of about ninety persons, chiefly employés at the Royal Nurseries, Slough, and friends, had a very pleasant trip up the Thames last week. The party embarked about nine o'clock in the steam launch "Emperor," and the beautiful river bank scenery was greatly enjoyed.
- NEW ZEALAND APPLES IN LONDON.—Shippers of Apples from Auckland are, says a New Zealand paper to hand, in receipt of returns for fruit shipped to London. Although the prices realised have not in every case been satisfactory, a large amount of useful information has been gleaned as to the future prospects of the trade, which goes to show that there is money in the trade when it is carried out on the best lines.
- SEFTON PARK GARDENERS' ASSOCIATION. Under the patronage of the Lord Mayor and of the ex-Mayor, Mr. J. de Bels Adam, the members of the Sefton Park, Wavertree, and District Amateur Gardeners' Association will hold their annual flower Show on Saturday, August 12th, and Monday, August 14th, in the enclosed grounds of the old Fern Lawn Tennis Club, Smithdown Road, opposite the Sefton Park entrance. Arrangements have been made for exhibits in fifty-three classes, with three prizes for each class.
- —— LAMBETH FLOWER SHOW. The annual Lambeth Flower Show was held in Lambeth Palace Grounds recently. In spite of the dryness of the season during the last few months a large number of flowers were exhibited, and they all gave evidence of knowledge, care, and attention. The flowers displayed in marquees were not the only attraction. During the day a programme of athletic sports was carried through, there was an old English fair, and at night a display of fireworks. Canon Pelham presided at the distribution of prizes by Mrs. Stanley, who was accompanied by Mr. H. M. Stanley, the African explorer.
- Market Apples.—In the deep sandy soil at Ham Common Mr. Walker, who has a number of remarkably fine Apple trees from four to six years planted, has very largely reduced his stock of Lord Suffield, and is replacing it with Lord Grosvenor, which is found to be more robust and on the whole a more reliable cropper. Then, too, such a popular variety as Warner's King does not do well on the sand, and is being replaced by Bismarck. However, the six favourite kitchen varieties here are Lord Grosvenor, Grenadier, Stirling Castle, Peter the Great, Prince Albert, and New Hawthornden. This is also for all ordinary purposes a selection hard to beat as bush trees. Of dessert varieties for market purposes Gladstone, Worcester Pearmain, Yellow Ingestrie, and Cox's Orange Pippin are in high favour; so also is Duchess of Oldenburg, a really good market Apple.—A. D.
- FLOWERS AT EASTBOURNE.—The recent rains have had a most beneficial effect at Eastbourne, as elsewhere, and the flower beds on the Grand Parade are now arrayed in all their glory. They present a brilliant yet harmonious mass of bloom, and daily visitors may be seen admiring them. Eastbournians, says a Sussex paper, are proud of their gardens on the Front, and with good reason, for they are certainly an additional attraction to an already picturesque promenade. Mr. Smith, the Corporation's head gardener, invariably manages to produce some novel device in laying out the beds. Examples of his skill in this respect may be found opposite Victoria Place and Wilmington Square. The latter exhibits the sentiment of loyalty and congratulation so appropriate to the present season. On scrolls of red in yellow letters are the following words:—" Eastbourne's best wishes for our sailor Prince, G.F.E.A.," "Deus est qui regit omnia," "Long life and happiness to their Royal Highnesses the Duke and Duchess of York." In the centre is a representation of the Royal Standard, 7 feet square, and at the eastern end a crown.

- ENGLISH GARDENERS FOR INDIA.—An Indian paper states that the Government of India have under consideration a scheme by which European gardeners for gardens in the various provinces will be regularly supplied from Kew, and will be retained on conditions more satisfactory than at present.
- LADY GARDENERS.—A daily contemporary is responsible for the following statement:—"Lady Carlisle is training an entire staff of women gardeners, who she hopes will keep the grounds of her Yorkshire home in as perfect a condition as their male predecessors have done." If there is any truth in this assertion it is surely the latest development of the craze for lady gardeners.
- Australian Fruit.—During the past year or so fruit from the irrigation colonies in Australia has been noticeable on our markets. Canned Peaches and Apricots are exhibited by Messrs. Chaffey Brothers at the Earl's Court Exhibition, at the Imperial Institute, and the Crystal Palace. It is stated that a consignment of 4000 cases of Oranges and Lemons from Australia will shortly arrive.
- —— BUDDLEIA GLOBOSA IN KIRKCUDBRIGHTSHIRE.—Mr. S. Arnott writes:—This fine shrub was lately in full flower in Mrs. Maxwell-Witham's garden at Kirkconnell. A plant grown on a south wall receives a little protection in winter, some Spruce branches being placed over it; but one on a south border has for the last four years had no protection, and is in no way injured. I should like to know how far north this Buddleia is found to be hardy.—S. ARNOTT.
- Mangroves and Their Effect on the Coast Line.—In his interesting report to the Colonial Office on the scientific results of the Anglo-French Delimitation Commission which he accompanied to Sierra Leone, Mr. Scott Elliot states that the effect of the Mangroves in creating alluvial soil could be very clearly seen at Mahela and in the Samu country generally. Mangrove trees seem in fact, he says, to have been designed by Nature to change any bay or indentation of the coast line into fertile soil.
- —— DEATH OF MR. J. PITHERS.—Chrysanthemum growers will hear with great regret of the death of Mr. J. Pithers, which took place at Chilwell early yesterday (Wednesday) morning. He had been head grower to Messrs. J. R. Pearson & Sons for the past few years, and only those who have had an opportunity of seeing their magnificent collection in November can realise the full excellence of his work for the great midland firm. His capacity as a Chrysanthemum grower had been previously proved, for he was a well-known exhibitor and prizewinner when practising in the south of London years ago. Mr. Pithers had an exceptional knowledge of the Autumn Queen and energetically supplemented the efforts of his employers to keep their collection up to date in every respect.
- Hook Cottage Garden Society.—Representing the Surrey County Council Technical Education Committee, Mr. A. Dean, in conjunction with Mr. Weddell and Mr. Cox, Secretary to the local Society, visited the parish allotments on Thursday afternoon and awarded prizes for the best. There are a large number on land which belonged to the late Mr. Blake, the rental being 1s. per rod. Naturally, the "Surrey Comet" asserts, Mr. Blake's death has caused some anxiety as to the future occupation of the land as allotments. Several cottage gardens were also visited and prizes awarded. In the evening, under the presidency of Mr. W. B. Clode, an address on "Gardening in Relation to Allotments and Cottages" was delivered by Mr. Dean at the schools to a considerable audience, which was listened to with the greatest interest.
- HORTICULTURAL EDUCATION.—At the post-prandial proceedings in connection with the annual outing of the Devon and Exeter Gardeners' Association some excellent suggestions were thrown out by the Chairman, Mr. Hope, and others, whereby the value of the Society as an educational institution would be enhanced, and the interests of an important industry be promoted. One of the suggestions, remarks an Exeter evening paper, was that the younger members should take an increased interest in the practical work of the Society, and thus fit themselves the better to meet the growing competition with the English markets which was everywhere manifest. It is doubtless a great slight upon farmers and gardeners that they should allow millions of Apples to be sent from the other side of the globe, when they could be produced at home with perfect ease, and sold at prices which would be thoroughly remunerative. This, of course, is but a very small phase of the foreign competition question, and is a subject which might properly occupy the attention of everyone interested in horticulture.

THE "KEW BULLETIN."—Copies of the "Kew Bulletin" for April and May, also for June, are to hand, and these contain much useful information. In the number for the first two months there is an interesting account of "Botanical Enterprize in 1796," which is well worth perusal. Instructive articles on the "Chinese white wax" and "Manila aloe fibre," with miscellaneous notes are also included in that number. The issue for June is equally interesting, and in addition to various articles contains many miscellaneous notes from which we extract the half-dozen that follow this paragraph.

—— MALAYAN PLANTS.—Dr. G. King, F.R.S., has sent from Calcutta a collection of between two and three hundred new or rare Malayan plants, and a set of 270 specimens of the late Father Scortechini's Perak Ferns. These Ferns were worked out by Colonel Beddome, and published in the "Journal of Botany," in 1887. Mr. Charles Curtis, Assistant Superintendent, Forest Department, Penang, who is an excellent collector, has also forwarded a further set of 220 species of Malayan plants.

—— PLANTS FROM JAPAN.—Through Dr. Kingo Miyabe, Kew has received from the Agricultural College of Sapporo, Japan, the first part of a set of the plants of the Island of Yeso. It contains 237 pieces, and includes the orders Ranunculaceæ to Rosaceæ. And through Professor Matsumura Jinzo, Director of the Botanic Garden, Imperial University, Tokio, the Herbarium has been enriched by a collection of some 1350 species, including many not previously represented at Kew. This collection is valuable, apart from its numerical extent, inasmuch as it contains authentic specimens of novelties published by Professor M. Jinzo himself.

— MEXICAN PLANTS.—Kew has purchased a set of Mr. C. G. Pringle's Mexican Plants, collected in 1892, and also the first three centuries of Mr. L. D. Reed's Virginian plants. Both of these gentlemen are excellent collectors, and Mr. Pringle's Mexican plants include novelties from the apparently inexhaustible Mexican flora. Dr. A. Engler, the Director of the Berlin Botanic Garden, has presented a parcel of about 100 species of Brazilian Melastomaceæ, many of them authenticated types of new species.

—— Bulbs from Asia Minor.—Mr. E. Whittall, a merchant of Smyrna, and an ardent lover of plants, has considerably enriched the Kew collection of bulbous plants. He is collecting systematically, and the results promise to be very successful. Already several new things contributed to the herbarium have come to light, amongst them Galanthus Icarisiæ, Tulipa concinnea, and Fritillaria Whittallii.

—— NEW LILIACEÆ FROM TROPICAL AFRICA.—In Engler's "Jahrbucher," vol. xv., pp. 467-479, is a paper by Dr. Engler and Mr. J. G. Baker on the new Liliaceæ discovered by recent German collectors in Tropical Africa. It includes an lphigenia, a bulbine with flat leaves, an Anthericum of the sub-genus Phalangium, five species of Chlorophytum, one Eriospermum, an Aloe, four Albucæ, one Urginea, two Drimiæ, five Scillæ of the sub-genus Ledebouria, and six new Dracænæ, one of which is figured. This latter, which is named D. Braunii after its discoverer, has been brought from the Cameroons to the Berlin Botanic Garden, where it flowered in August, 1891. It has very short flowering stems, with only a single pair of leaves, overtopped by the much longer leafy sterile stems. The new Aloe (A. venenosa, Engler) was found by Dr. Pogge on the Kaissai, one of the feeders of the Congo in the very centre of the continent, and is used as an arrow poison.

- ACIDANTHERA ÆQUINOCTIALIS, Baker .- Through Mr. Scott Elliott, Kew has received full specimens, with corms for cultivation, of this plant collected on the top of Sugar-loaf Mountain, Sierra Leone, where Mr. Scott Elliot found it on his recent expedition as botanist to the Anglo-French Delimitation Commission. It was only known previously by a sketch of the inflorescence and flowers made by Dean Herbert, now in the Lindley Library, a copy of which was made several years ago by Mrs. Thiselton Dycr for the Kew collection of drawings. The corm is large and globose, with tunics of parallel fibres. The plant reaches a height of 4 fect, and the stem bears a large number of strongly veined ensiform leaves, the lowest of which is 1½ foot long, and nearly an inch broad. The tube of the perianth is 5 or 6 inches long, the longest that is known in the whole order Irideæ. The species much resembles the Abyssinian A. unicolor and A. bicolor of Hochstetter, but is much larger in size. The locality where the plant was seen by Mr. Scott Elliot is 3000 feet above sea-level. The whole collection brought home contains altogether 1500 species.

—— MARK SMITH, LIMITED.—Just as we are preparing for press a request reaches us to announce the amalgamation of the firms of Messrs. Mark Smith & Co., Louth, and the Horticultural and Agricultural Chemical Company, Glasgow. The above will be the title of the weed killing company in future, with the head quarters at Louth, Lincolnshire.

JUBILEE OF THE ROTHAMSTED EXPERIMENTS. - The arrangements are now completed for the celebration of the Jubilee of the Rothamsted agricultural experiments at the Laboratory, Harpenden Common, on Saturday, the 29th inst., at 3 P.M., under the presidency of Mr. Herbert Gardner, M.P., President of the Board of Agriculture. The proceedings, we learn from Nature, will commence with the dedication by Mr. Gardner of a granite memorial, erected in front of the Rothamsted Laboratory, to commemorate the occasion. Addresses of congratulation will then be presented to Sir John Lawes and Dr. Gilbert on behalf of the subscribers to the Rothamsted Jubilee Fund and various learned societies, including the Royal, Royal Agricultural, Chemical, Linnean, and other leading scientific institutions. Sir John Lawes will also be presented with his portrait, which has been painted by Mr. Hubert Herkomer, R.A., for the subscribers to the Jubilee Fund. Afterwards there will be a reception at Rothamsted by Lady Lawes. The Rothamsted Laboratory, where the ceremony will take place, adjoins Harpenden Common, and is distant about half a mile from the Harpenden station of the Midland Railway Company.

ROYAL HORTICULTURAL SOCIETY.

JULY 25TH.

THE holiday season had set its mark on the meeting on the above date, the exhibits showing a considerable falling off in numbers and the attendance being very small. However, there was a fair show of flowers and fruit and a good sprinkling of Orchids.

FRUIT COMMITTEE.—Present: T. Francis Rivers, Esq. (in the chair); the Rev. W. Wilks, Messrs. G. Bunyard, J. Cheal, William Warren, H. J. Pearson, A. Dean, G. Woodward, W. H. Divers, G. Wythes, G. Reynolds, F. Q. Lane, H. Balderson, and J. Smith.

Fruit made an attractive display. Messrs. G. Bunyard & Co., Maidstone, Kent, sent a large collection of Apples and Pears, comprising some thirty dishes. The Apples were clean, of a good size, and well coloured, especially Red Juneating, Duchess of Oldenburg, Gladstone, Beauty of Bath, Red Astrachan, Lady Sudeley, and Quarrenden. Other varieties especially good were Stirling Castle, Early Transparent, Grenadier, Sugarloaf, Peter the Great, and Gold Medal. Some fruits of Pear The Beacon were fine and well coloured. The same firm staged fruits of the yellow and red Mirabelle Plums and some Apricots. A silver Knightian medal was recommended.

Messrs. T. Rivers & Sons, Sawbridgeworth, sent a grand collection of Apples, Apricots, Cherries, Nectarines, Plums, and Pears grown in a cool orchard house; Ribston Pippin Apples were very fine and well coloured, and Louise Bonne of Jersey, and Souvenir du Congrès Pears looked delicious. Lord Napier and Dryden Nectarines were exceedingly good, being richly coloured, and the same may be said of Monarch and Late and Early Transparent Gage Plums. The Cherries were Bigarreau Noir de Gueben, Emperor Francis, and Géant d'Hedelfinger; the Apricots being Grosse Pêche and Mexico (silver Knightian medal). Mr. W. H. Divers, gardener to J. S. Hopwood, Esq., Ketton Hall, Stamford, sent a box of remarkably fine Dagmar and Crimson Galande Peaches and Lord Napier Nectarines. The Peaches were exceedingly good and reflected credit on the grower (cultural commendation). Mr. O. Thomas, Royal Gardens, Windsor, staged a grand Smooth Cayenne Pinc, cut from "a rootless sucker planted on September 15th, 1892." The fruit weighed 5 lbs. 12 ozs. (cultural commendation). Mr. Thomas also sent a bunch of white Grapes for naming, and four baskets of Apricots, comprising Moorpark, Frogmore, Shipley's, and Powell's Late.

Mr. Woodward, Barham Court Gardens, Maidstone, staged fruits of Alexander Peach grown on an east wall, and some fine Lord Napier Nectarines gathered from a standard tree in an unheated house (cultural commendation). A dish of 1892 Apples came from Col. E. Smith, Threescombe House, Stroud (gardener, Mr. E. Jackson), but the fruit was small and uninviting compared with those of this year, sent by Mr. Bunyard. Mr. T. W. Rich sent fruits of a seedling culinary Apple, said to be very early. They were medium-sized and well coloured on one side, but no award was made. A. H. Smee, Esq., The Grange, Wallington (gardener, Mr. G. W. Cummins), had a dish of a fine early Apple, the name of which was not determined; and Lord Foley, Ruxley Lodge, Esher (gardener, Mr. Miller), some well grown fruits of Royal George, Noblesse, Grosse Mignonne, and Alexander Peaches (cultural commendation). Mr. Laxton, Bedford, showed coloured plates of his new Strawberry Royal Sovereign.

Mr. G. Wythes, gardener to the Duke of Northumberland, Syon House, Brentford, staged seventeen fruits of Beauty of Syon Melon, six boxes of Apricots, and four boxes of Morello Cherries (silver Banksian medal). Mr. J. Smith, Mentmore Gardens, Leighton Buzzard, had half a dozen dishes of Apricots, including fine fruits of Moorpark and Hemskirk (vote of thanks). Nine dishes of Apricots were also sent from the Society's Garden at Chiswick, the best fruits being Shipley's Early,

Kaisha, Moorpark, and Turkey. Seedling Melons were sent by Mr. F. Lee, Lynford Hall, Norfolk, and Mr. J. Rodbourne, Haling Park Gardens, Croydon. An award of merit was adjudged for Melon Lee's Perfection, which is a good flavoured white-fleshed variety. Messrs. Cooper, Denison & Walkden, 7, Bride Street, E.C., sent some "Handy" fruit baskets. These are made of tough Manilla paper, and with the wire handles attached are convenient for small fruits (commended).

A large collection of Tomatoes, comprising thirty-four dishes, came from the Society's Gardens at Chiswick. The best red varieties were Perfection, Long-keeper, Chemin, Seedling Macgregor, Horsford's Prelude, and the yellow varieties were well represented by Peach Yellow, Blenheim Orange, Golden Queen, Golden Gem, and Golden Nugget. Mr. J. May, gardener to S. G. Lutwyche, Esq., Oakfield, Eden Park, Beckenham, sent a box of splendidly grown fruits of Perfection Tomato (cultural commendation). Mr. G. M'Dougall, Ravenna Cottage, Stirling, sent some fruits of a fine seedling Tomato named Ravenna, for which a rate of Abraham and a seedling Tomato named Ravenna, which a vote of thanks was accorded.

FLORAL COMMITTEE. — W. Marshall, Esq. (in the chair); Rev. H. H. D'Ombrain, Messrs. C. T. Druery, H. B. May, H. Herbst, David W. Thomson, R. Dean, G. Stevens, C. F. Bause, C. J. Salter, H. Cannell, J. D. Pawle, W. Bennett Pöe, C. E. Shea, C. E. Pearson, T. Baines, O. Thomas, T. W. Girdlestone, and G. Gordon.

Maggra F. D. Shuttleweeth & Go. Albert Nurspring Packborn Prospect

Messrs. E. D. Shuttleworth & Co., Albert Nurseries, Peckham Rye, sent a collection of plants, among which Crotons Hawkeri, Lady Zetland, Earl of Derby, Queen Victoria, Princess of Waldeck; Ferns, Caladiums, Dracænas, Liliums, and Hydrangeas were most conspicuous (silver Banksian medal). Messrs. J. Laing & Sons, Forest Hill, staged a group of miscellaneous plants. Amongst these were Palms, Tuberous Begonias, Caladiums, and the pretty Saxifraga sarmentosa tricolor superba (silver Flora medal). An award of merit was adjudged for Caladium Le Nain Rouge, which is described below. Mrs. Darwin, The Grove, Huntingdon Road, Cambridge, sent a Tuberous Begonia named Mrs. Bourne, which attracted attention. An award of merit was adjudged tor this variety, which is described elsewhere.

Messrs. H. Cannell & Sons sent a very beautiful collection of double

tuberous Begonias interspersed with Ferns, the plants having been raised from seed in February. The invaluable Octavie formed a line at the from seed in February. The invaluable Octavie formed a line at the back. The varieties displayed great quality in respect to size and colour (a silver Banksian medal was recommended). Messrs. J. Veitch and Sons sent Retinospora squarrosa sulphurea, Cupressus Lawsoniana versicolor, four Gladioli × Lemoinei varieties, a charming basket of single dwarf French Marigolds, the beautiful pale yellow Rhododcndron Sylvia, Lantana Drap d'Or, Carnation Celia, and Didymocarpus lacunosa (botanical certificate). H. E. Domaille, Esq., La Colombelle, Guernsey, sent a Carnation named La Villette, a yellow ground Fancy. Mr. P. McArthur, Maida Vale, had a small collection of Ferns, foliage plants, and Orchids (bronze Banksian medal). Mr. F. Ræmer, Quedlinburg, Germany, had the variegated Hop Humulus japonica variegatus. Carnations came from 1. de Bunsen, Esq., Mrs. Wickham, and Mr. F. Bull, Colchester. The latter received an award of merit for Esmeralda.

(See below)

Mr. H. Eckford, Wem, Salop, sent a fine collection of Sweet Peas, for which a silver Banksian medal was recommended. These were fresh and highly coloured, the best being Novelty, Firefly, Senator, Mrs. Gladstone, Lady Penzance, Emily Eckford (fine blue), Eliza Eckford, and The Belle. Awards of merit were adjudged the two last named which are described elsewhere. Messrs. G. Paul & Sons, The Old Nurseries, Cheshunt, sent a collection of hardy flowers, a dark flowered Clematis of the Viticella type named "Kermesana," and a beautiful Campanula Mariesi, for which a first-class certificate was awarded. This is described elsewhere. Mr. W. H. Divers, Ketton Hall, Stamford, sent a splendid collection of cut Carnations, tastefully arranged in bunches on moss with their own foliage. Bunches of Ketton Rose were much admired in this contribution. Other good varieties were Duchess of Portland, Winter Cheer, Mead's Crimson, and Rose of Rutland (bronze Banksian medal). Mr. Anthony Waterer secured a first-class certificate for Spiræa Anthony Waterer, which is mentioned elsewhere.

ORCHID COMMITTEE.—Present: H. J. Veitch, Esq. (in the chair); Dr. Masters, Messrs. J. O'Bricn, H. Ballantine, T. W. Bond, T. Statter, E. Hill, H. M. Pollett, and A. H. Smee.

The Orchids were not very numerous, but there were a few for the specialists to find pleasure in. Messrs. Sander & Co. had a small but very pleasing group flanked by the new foliage plant Strobilanthes Dyerianus. The Orchids included Cypripedium Massaiana (superciliare × Rothschildianum), the first hybrid yet flowered from the latter; C. Fausianum (Dauthieri × calophyllum superbum), C. hybridum Youngianum, Zygopetalum (Promenæa) xanthina, Mormodes pardinum, Aërides Sanderiana. Cattleya Gaskelliana. C. granulosa, and Dendrobium Aërides Sanderiana, Cattleya Gaskelliana, C. granulosa, and Dendrobium transparens (silver Banksian medal). Messrs. Pitcher & Manda sent a pale form of Sobralia macrantha named Princess May. The sepals and petals were nearly white, the lip a faint blush, and the throat lemontinted. They also had Cypripedium Edwardi, which is described below. Messrs. B. S. Williams & Son had a group of considerable beauty, fringed and interspersed with Ferns. It included Platychinis filiforme, Anguloa Ruckeri sanguinea, Cypripedium robusticum, C. Swanianum, C. superbum Demidoff's variety, Paphinia cristata grandis, and Pescatorea Dayana. A silver Banksian medal was recommended.

T. Statter, Esq., Stand Hall, Manchester, sent several interesting plants, such as Lælia elegans superbiens, L. prasiata, Cattleya Rex, C. crispa superba (see below), Vanda lamalata, Cattleya Rex Stand Hall variety (cultural commendation), and Lælia Amesiana. Mr. H. Denison, gardener to T. A. Gledstanes, Esq., Manor House, Gunnersbury, received a cultural commendation for Cattleya superba splendens. Mr. Billington, gardener to W. R. Lee, Esq., Audenshaw, Manchester, sent Cattleya Gaskelliana Audenshaw variety (a fine form). Mr. Salter, gardener to T. B. Haywood, Esq., Woodhatch Lodge, Reigate, contributed Miltonia vexillaria Daisy Haywood, which received a first-class certificate and is described below. H. Tate, jun., Esq., Allerton, Liverpool, had Cypripedium Tryonianum (Harrisianum x superbiens, Demidoff's variety), and Cattleya Hardyana, Tate's variety (see below). Messrs. W. L. Lewis & Co. were represented by Cattleya Dowiana variety Lewisiana, and C. gigas Turnbulliana.

CERTIFICATES AND AWARDS OF MERIT.

Begonia Mrs. Bourne (Mrs. Darwin).—This is a curious break in Tuberous Begonias. It is a vigorous growing variety with yellow flowers, the petals of which have crimped edges, the sepals being

partially transformed into leaves (award of merit).

Caladium Le Nain Rouge (J. Laing & Sons).—A dwarf-growing variety with small red leaves flushed with green. For decorative

purposes it will be very useful (award of merit).

Campanula Mariesi (G. Paul & Son).—This is a charming Campanula of a dwarf habit of growth. A pan of it was shown, and the plants were from 3 to 6 inches in height. The flowers are about 3 inches in diameter, and of a brilliant blue shade (first-class) certificate).

Cattleya Hardyana, Tate's variety (H. Tate, jun., Esq.).—A very fine form, of great size, and rich in colour, the lip being particularly prominent. The colour is rich maroon crimson with yellow side lobes

(award of merit).

Carnation Esmeralda (Mr. F. Bull).—A yellow ground with slate-coloured flakes, very distinct (award of merit).

Cupressus macroearpa lutea (Dicksons, Limited).—A very beautiful variety, the foliage being of a very distinct lurid yellowish green colour

(first-class certificate).

Cypripedium Edwardi (Pitcher & Manda).—A cross between C. Farrieanum and C. Veitchi. The petals are the chief feature of the flower; they are blunt and drooping, with greenish-white lines of chocolate dots and fringed with hairs of the same colour; dorsal sepal greenish white with chocolate lines and flushed with rose towards the edge (award of merit).

Lælia erispa superba (T. Statter, Esq.).—A very fine form, a most profuse bloomer, judging by the specimens, and with large flowers. Sepals and petals pure white, lip rich purple (first-class certificate).

Melon. Lee's Perfection (F. Lee, Esq.)—This is a large, handsome white flesh, fruit sweet and juicy and of good flavour (award of merit).

Miltonia vexillaria Daisy Haywood (T. B. Haywood, Esq.).—A magnificent variety, flowers of great size and pure white, save for the central patch of yellow (first-class certificate).

Spiræa Anthony Waterer (Anthony Waterer).—This is a dwarf-growing form of S. Bumalda, and the heads of bloom are deep crimson

(first-class certificate).

Sweet Pea Eliza Eckford.—A beautiful and distinct variety, with white flowers tinted and flushed pink (award of merit).

Sweet Pea The Belle (H. Eckford).—A charming variety, with blush flowers heavily flushed with rosy pink (award of merit).

ALPINE HOUSES AND PLANTS.

AT the Drill Hall on Tuesday afternoon Mr. H. Selfe Leonard read an admirable essay on the above subject, Mr. Geo. Paul occupying the chair. The attendance was not very large, but it was evident that all were deeply interested in what was said by the essayist, who, it need

scarcely be said, dealt with his subject in a masterly manner.

Mr. Selfe Leonard, at the opening, pointed out that in his paper only true Alpine plants would be referred to, and not such as had been popularly called so, through their dwarf-growing habit and adaptability for planting in rock gardens, but having no right whatever to the name, which was only truly applicable to such plants as really grow on moun. tains in the temperate regions. From many years' personal and close study of Alpine plants the essayist had found that some artificial protection was essential to real success, such protection to be supplementary to the rock garden. It was not frost which was to be feared, for this, in the essayist's opinion, was practically harmless to the very large majority of such plants which were grown in this country; it was the cold rains of the autumn and the cutting winds of the spring months which played such havoc amongst the more tender plants under notice.

To demonstrate this reference was made to the well known Alpine species of Primulas, first-rate collections of which were, he said, far too seldom seen. For protecting these plants many contrivances were called to the aid of growers, but that contrivances were called to the aid of growers, but that most generally used was the ordinary garden light which, though excellent in its way, had one serious disadvantage, for while keeping the tops of the plants dry it allowed them in rainy weather to become sodden at the roots, through the water constantly dripping off the sides and front. Frames were also largely used, but these were very difficult to adequately ventilate, a point of the utmost importance when the protection of Alpine plants was under consideration. A house specially constructed for the purpose was recommended. In erecting such houses the primary consideration was to provide an abundance of fresh air. The houses which he had found to give the most satisfaction were built with wooden sides and ends, almost flat entirely removeable roofs, with a stage running down each side under which were shutters which, except

in very foggy weather, were kept always open. The houses were low and the stages built up fairly close to the glass, as the plants were not adapted for placing on low stages at a distance from the roof. Such houses were built north and south and shaded by means of a wash being

put on the glass with the aid of a brush.

Shade was necessary for some plants—as, for example, the Ramondias, which, when found growing in their native habitats, were always shaded. As a further shading, and when the lights were, as was frequently the case, entirely removed, he had canvas made to stretch the length of the house, and this he had found very necessary during such intensely hot weather as had been experienced during the past months. The inside arrangements of such houses was purely a matter of taste, some preferring to have the plants placed in a bed on the stages, and others, of whom he was one, rather leaning towards keeping them in pots, as the plants were more easily replaced when their beauty was on the wane; and besides, the soil which was known to be most suited to a

are depicted in the engraving, and these attracted some attention. The bloom is medium-sized, white, covered with bright crimson spots. The leaves are deep green, and about 3 inches in length.

In reference to your article on a "New Lilium" in your issue of the 20th, kindly allow us to state that we believe that our exhibit was entered before that of Messrs. J. Veitch & Sons, and that the first-class certificate was awarded to each, no distinction being made as stated in your article. The naming of the Lilium was left to Mr. Baker. We have written to the Royal Horticultural Society to confirm our views, the matter being considered at their meeting. We consider you should have illustrated the Lily as L. Alexandræ, which name has now been confirmed by Mr. Baker. We are afraid that we shall not be

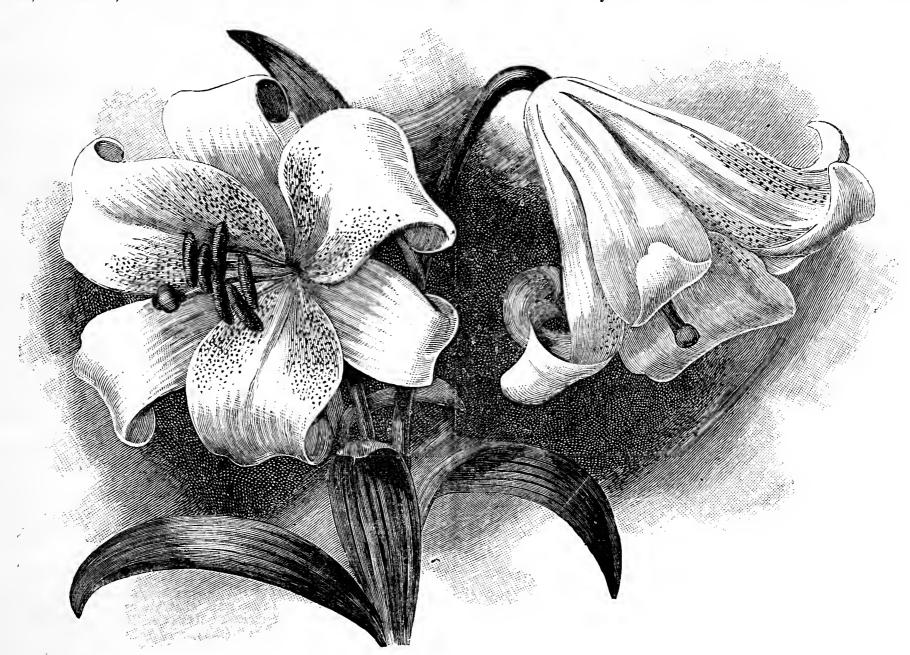


Fig. 13.—LILIUM LOWI.

plant could be much more readily accorded. Under the stages a rockery could be formed, and such, when tastefully and skilfully arranged,

undoubtedly much enhanced the beauty of the house.

In erecting the house in the rock garden the existing formation should receive consideration in order that the house might be placed in such a position as not to become at any time unsightly, but rather be an interesting and an additional charm. In ventilating houses of Alpine plants near towns and where fogs were at all prevalent it was, said the essayist, advisable that all the air admitted should be filtered through wire gauze, which prevented much smoke and soot from finding a resting place on the occupants of the house.

After a short discussion a hearty vote of thanks was accorded to Mr. Leonard for his paper, and the meeting closed.

NEW LILIUMS.

A PLANT of Lilium Lowi, which is shown in the illustration (fig. 13), was exhibited by Messrs. Hugh Low & Co., Clapton, at the Exhibition held on July 11th in the Gardens of the Royal Horticultural Society, Chiswick. It is a very distinct and pretty Lily, and a first-class certificate was awarded for it. The plant staged was about 3 feet in height, and growing in a 5-inch pot. It bore two flowers such as

able to forward you the letter from the R.H.S. in time for this week's issue, but trust you will put the matter right.—Wallace & Co.

[We stated that "a first-class certificate was awarded in each case." Our artist sketched the flower of Messrs. Veitch's plant, and we naturally associated the name under which it was exhibited with the illustration. We also indicated that the correct name had still to be determined. Mr. Baker now gives it as Lilium japonicum var. Alexandræ.]

BACTERIAL DISEASE IN TOMATOES.

MR. LOCK (page 49) has been rightly informed. I am far from being a stranger to the disease, if disease it is, to which he alludes, but have so wholesome a dread of the staying towers of Mr. G. Abbey that I would rather not cross swords with him just yet. When I have thoroughly convinced myself, and am therefore in a position to convince others, that Mr. Abbey has mistaken effect for cause, then, and not till then, do I intend to enter fully into the subject. To all appearances there is no necessity for either Mr. Lock or other wholesale growers to alarm themselves as to the work of any known bacteria among either Tomatoes or Cucumbers.

If my advice is taken, Mr. Lock, and others who are equally

interested, will not again invite a failure in one way in their attempts to stear clear of another. Poverty of soil and insufficiency of moisture have much to answer for this season. Why does Mr. Lock agree that animal manure should be avoided, when, according to his own showing, a use of it has been attended with the best of results? I am of opinion that we have been too sparing of solid manure, especially this year, chemical or special manures being but poor reeds to lean upon in tropical weather.—W. IGGULDEN.

SCARLET RUNNER BEANS NOT SETTING.

I SHALL be glad to know the cause of Scarlet Runner Beans not setting. I have never known them behave in the way they are now doing. I called on my next neighbour (a market grower) to inquire about his, and I found them just like my own. He tells me the complaint is pretty general in this neighbourhood. I am well aware that Beans fail to set if they are dry at the root, but in my case and also that of my neighbour they have not been so. I was not a little surprised to find that they did not respond to the waterings, as I have always been able to procure Beans with the aid of the water-pot in dry weather. I am even more surprised now, as for the past fortnight we have had copious rain. I observe that humble bees are scarce hereabout this season, and that the blossoms of Beans are not pierced by them as is usual. Is the proboscis of the humble bee necessary to effect the "pollination" of Beans as is the case with some Clovers? Hive bees do not work at Scarlet Runners much. Information will be very acceptable.—T. S., Bristol.

[We shall be glad to hear what correspondents have to say on the subject.]

SILENE PENDULA.

The great beauty and effectiveness of this well-known plant when employed in masses for spring bedding is invariably commented upon by all who sec it in full flower. There is, however, one objection frequently advanced against its general use for the above purpose—viz., the comparatively late period at which it flowers, this in many cases preventing the planting of the summer occupants of the beds filled with the Silene at the usual time. There is a great amount of truth in this objection, but it is one which may to some extent be overcome by sowing the seed early, and planting the young plants in their permanent quarters some time during the following October. The usual time recommended for sowing is early in August. This answers fairly well should the weather during the following two months prove favourable for promoting rapid growth, and if early autumn frosts are not prevalent; but under conditions the reverse of these the plants do not become strong and well rooted in time for early planting. This operation is in consequence delayed till late in the autumn or early in the spring, the result in either case being that their flowering period is unnecessarily delayed. In order to avoid this undesirable state of affairs seed should be sown at once in a sunny position.

I generally sow thinly in drills 9 inches apart. When the plants are large enough to handle they are pricked in beds, allowing 4 inches of space between each plant, and should the weather prove dry they are kept well watered till established. The only after-treatment necessary to secure good plants by October is to eradicate all weeds in a young state, and occasionally stir the surface of the soil with a small hoe. Well-rooted plants with good balls of earth attached are thus obtained, which, having been grown sturdily from the first, are able to withstand the frost of severe winters, and with the advent of warm spring weather start at once into growth, and begin to flower as early as the climatic conditions of each locality and season render

possible.—H. DUNKIN.

CHATSWORTH.

Whether Chatsworth under the Chester régime differs much or little from the Chatsworth of Speed and Thomas must be left for decision to those whose visits are not, like my own, limited to the first figure of the numerical system, but who have seen it under its various chiefs. Probably so vast a place, of which the working arrangements must necessarily be in the hands of permanent departmental foremen, changes little year by year, but as to that I can say nothing. My reference to the great Cavendish demesne must be limited to a few impressions made while its famous gardens rest under the charge of Mr. Chester, and as a result of a road journey thither in the midst of the terrific heat of late June in the present year of grace. To refer to it at all seems to be repeating an oft-told tale, but "other times, other manners," other minds, other thoughts, and perchance some fresh ground may be broken as the result of a pleasant summer ramble through some of the loveliest scenery in England—from smoky Sheffield to beautiful Baslow and Edensor.

It was my misfortune to arrive at Chatsworth a few minutes after some friends had taken the head gardener under their protecting wings and carried him away. I had had a foretaste of this sort of thing in Sheffield the day before, when I struggled through the sweltering heat up to Rough Bank in search of Ben Simonite, found that he had moved farther afield up Attercliffe way; sought him there, and at length discovered his garden only to learn that the worthy old florist was out in the town somewhere. A second edition of this within a few hours was too much, but there was no help for it. I was too late. But fortune

did not altogether desert me. The plant foreman, Mr. G. Ridout, came to the rescue, and proved to be a capable and entertaining guide. He has been at Chatsworth more years than some young ladies would own to having existed, loves it well, and knows its every feature and charm. Herewith, at the outset, I gratefully acknowledge his able and patient guidance.

IN THE BOSOM OF THE HILLS.

There are many approaches to Chatsworth, but it is difficult to imagine one more beautiful than that from Sheffield, which takes the traveller by Fox Houses and Froggatt Edge to Baslow and the Derwent Valley. The road goes upward for many tedious and dusty miles from the cutlery metropolis, winding gradually into cloudland, and then there comes the turning point—the point where the peaks tower up around and look on the green depths far below. The road winds round the side of the hills, downward now, downward for mile after mile through the bosom of the hills, with the grim rocks above and the smiling valley beneath. The former hang sheer over the road in some places, but there are no waters to loosen their hold or masses of snow to bring them crashing down. The peaks glide by onc by one in majestic array. To an eye that has not rested on the gleaming Silberhorn or the sublime Jungfrau they must be of absorbing interest, and the temptation to turn in the saddle and gaze on each giant as it recedes into the rear is too strong to be resisted, even when flying at breathless speed down the winding hillside, with the dizzy slope down to the valley but a few feet away. It is a picture not often seen, not soon to be forgotten. What dreary grandeur there must be in it in the winter time, when the fierce winds sweep through the valleys and the tors are robed in their winding sheets. But that is in the past and in the future, not in the sunlit, gilded present. Now the great hills smile, and their magnificence retains all its hold upon the mind when at length Baslow, nestling in the valley, is reached, the Derwent crossed, and Chatsworth close at hand.

IS CHATSWORTH BEAUTIFUL?

I ask the question in all seriousness, and with a reason. In a book from which I shall presently quote there are references which might lead to the belief that the pride of Derbyshire is but a poor apology for a beautiful domain—cockneyfied, artificial, and commonplace. We who have read of it chiefly from the gardening point of view have surely formed no such opinion as that. Have gardening writers, therefore, given us misleading impressions? Is the reputation that it enjoys, as one of the fairest spots of our "isle inviolate," false? Should we no longer look upon it, as we have done for all these years, as one of the foremost places in the land? Fresh indeed would be the ground broken if I were to study Chatsworth from such a standpoint, and, setting at defiance all established ideas of its beauty and greatness, proceed to show that it is vulgar and inartistic. But no such task is mine. I call attention to such a view publicly expressed with the object of showing, as I hope, that it is inaccurate and untenable. Let us read:—

A CRITICISM AND A DEFENCE.

"If," says Baddeley's "Guide to the Peak District" in its reference to the Chatsworth Gardens, "we once admit that Art does not outstep its province in entering into direct competition with Nature in Nature's own department, that there is nothing impertinent in the cockney pleasantry that a beautiful landscape is almost equal to the transformation scene in a pantomime, we may derive unmixed pleasure from the Chatsworth Gardens." One may be forgiven if he pauses and rubs his eyes over such words as these. Even while admiring the cleverness of their construction, no one can fail to recognise that a tremendous indictment is being levelled at the place of which a description is being indictment is being levelled at the place of which a description is being given, and naturally seeks to ascertain what has prompted them. But before proceeding to that the writer tells us that Nature is gracious and kind. "In some parts of them" (the gardens), he goes on to say, "Art has almost become a second Nature, so forgiving a spirit has the latter manifested in overgrowing hand-built rockeries with her own green livery." And then we learn what is the head and front of the offending. There is a long cascade in the grounds near the house—a made cascade, a cascade such as that in the grounds of the Crystal Palace, with broad stages of stone, each a yard or so below the other, so that the water when "on" may go plunging down, making a series of miniature falls. This grievous thing appears to have had a large share in exercisfalls. This grievous thing appears to have had a large share in exercising the soul of the Guide writer, and the evil work was furthered by a tree of copper, so cunningly contrived that the turning of a tap in a quiet corner near causes water to gush from its stems, and squirt around on unwary visitors like a Californian "sprinkler" on a bed of Radishes. Well, the tree is an absurd fancy of course, and the cascade artificial and indefensible; but admitting both, what is to be said of the person to whose mind these things constitute the gardens of Chatsworth? Vain, it would seem, are the thousands of magnificent Conifers, rearing their tall spires to the clouds, the flower bordered lakes, the huge, the gorgeous masses of Rhododendrons clothing the hillsides, the banks of wild Roses, the Fern-filled dells. All that makes what to visitors who know and love beautiful gardens is a dream and a delight must be blotted out to lcave room for a paltry satire, founded chiefly on a stone cascade and a copper tree! To absurdity so sublime, to ignorance so colossal, as arc evidenced in the description of Chatsworth Gardens from which I have quoted, it would surely be futile to suggest that these are but weak fragments of a great, a powerful, a magnificent whole.

THE VICTORIA HOUSE.

Were it only for the Victoria house, Chatsworth would be well worth a visit. There is something in its very originality which strikes one,

and its breadth and boldness of treatment fit the place. Older and more travelled horticulturists than myself have perhaps met its counterpart, but to me it had all the charm and delight of something that is at once strikingly beautiful and entirely fresh. The greater part of it is occupied by the central basin, and in the middle of that was a plant of the famed Victoria regia with half a dozen leaves 6 feet across. It had started from a small plant put out in April, about two months before I saw it. This will give an idea of the rapidity of its growth. It was not in bloom, but other beautiful aquatics were. The lovely Nymphæa Devoniana, with its bronzy leaves and brilliant carmine flowers, and the pale bluc N. Daubenyana, were two of the most beautiful, but the ivory-hued N. dentata, and the pale lemon odorata sulphurea, with its rich orange centre, were also greatly admired. Wheels turned by the water flowing from taps above them keep the whole volume in motion. Coleuses, large and small, splendidly coloured, line the top of the wall, but immeasurably the most striking objects in the house, apart from the Victoria, are the superb baskets of Achimenes suspended in the air, as may be seen on reference to the engraving fig. 14. The largest are 4 feet high and the same through, living masses of the richest colours. Nelumbium speciosum is largely represented in one of the side basins. The plants trained up the sides are not passed by without admiration. Gloriosa superba is in such condition as to richly merit its name. Thunbergias are producing showers of blossom, and a less familiar plant in Stigmaphyllon ciliatum exhibits rare beauty.

THE FRUIT HOUSES.

These, like the Victoria house and several plant structures, are in the kitchen garden, which is some distance from the mansion and its grounds. A grand house of Pines, in which Queen and Smooth Cayenne are largely represented, is sufficient evidence that these noble but tortoise-like fruits have not been abandoned, as is the case in so many places. Cucumbers are grown on an enormous scale, and the last of the batches of forced Strawberries, which collectively would number from 2000 to 3000, was seen. Amongst the vineries is an old structure on the ridge and furrow system built in Sir Joseph Paxton's time. The Vines, which are planted outside, still yield good bunches. There are four houses of Frankenthal alone, which was the late Duke's favourite Grape, and in his preference for it he displayed, as in so many other things, good sense and taste. That the Vines have sound material on which to feed, and good management to enable them to make the most of it, is proved by a house of Hamburghs four years old and another of Foster's Seedling three years old. Both have splendid foliage, and the latter in particular have made wonderful growth. There is a grand crop of Muscats in another large house. The Peach houses are, for the most part, very wide structures. One old flue-heated house 40 yards long was once filled with a single tree. They are full of fruit, the trees being models of good training, health, cleanliness, and cropping. It would be almost invidious to single out any varieties for special mention, but Goshawk and Royal George deserve it. Figs are splendidly grown, and so are Melons. There is a house of young plants of the latter, such as is very rarely to be met with. Hero of Lockinge, Wm. Tillery, Blenheim Orange, Read's Scarlet Flesh, and The Countess are all largely represented.

THE PLANT HOUSES.

What may be termed the show houses for plants are in the grounds near the mansion, but the nursery is in the kitchen garden. A thousand Chrysanthemums are here grown for cut flowers, and double Primulas are also in strong force. Streptocarpuses of the excellent Veitchian strain are turned to a good use, being grown in 3-inch pots and employed as edgings. With a pinch of Clay's fertiliser now and then by way of a stimulant they flower beautifully. I was much struck with a Justiceous plant, Crossandra infundibuliformis, which I had not previously seen. It has large double flowers bearing a strong likeness to those of a Zinnia, salmon in colour, and lanceolate leaves. It had been in bloom for two months at the time of my call, and is unquestionably a very useful plant worth growing in many other places. The Chatsworth foreman spoke highly of it. I must pass over the other plants in the nursery department to say a word or two about those near the house. There is an excellent collection of Orchids, the Vandas in particular being extremely fine, quite reminding one of the magnificent plants of Messrs. B. S. Williams & Son, and Mr. Measures of Camberwell, which is as high praise as could be given. There are also some splendid pieces of the beautiful Thunia Marshalli, and a very fine collection of Calanthes, Cypripediums, and Cattleyas. Angræcum eburncum, too, is well represented. A good assortment of Heaths provides a source of interest to lovers of hardwooded plants. It would be impossible to refer individually to all the plants that are well grown, but Eucharises call for a special reference, as do Tubcroses, which are splendidly flowered in 4-inch pots. Of table plants there is a grand collection. The Camellia house, with its huge plants, 20 feet high, must be a wonderful sight when its giants are smothered with flowers. What is termed the Portland Walk is a beautiful promenade by the side of a lofty wall covered with a glass case. It must be quite 150 yards long, and the whole of the wall is covered with climbers

THE GREAT CONSERVATORY.

The critical Guide writer's description of the conservatory can hardly be called comprehensive, but it is decidedly quaint. "It is," he says, "nearly 300 feet long, 120 feet wide, and 60 feet high. In it the rarest

exotics, from the Fan Palm, gaunt and heavy topped, to the Maidenhair Fern, the most beautiful thing in the building, find a congenial home. There is one Cactus-like plant—the American Aloe—which is fabled to take 100 years to flower, and then to die." That is all. This lucid description is interesting from the information given as to the dimensions of the great structure. It is truly a wonderful building, but as it is now undergoing complete repair I did not see it at its best. It contains a remarkable collection of plants, amongst them being the blue Adamia cyanea, huge Cinnamons, Theophrasta imperialis, with its fine broad leaf; Inga pulcherrima, a Sensitive Plant; Cibotium princeps 25 feet high, Heritiera macrophylla, Begonia fuchsiodes 20 feet high, Dasylirion acrotrichum 9 feet high, growing luxuriantly close to a pool; grand pieces of Platycerium alcicorne, Bamboos, Yuccas, a splendid collection of Cacti, including some beautiful seedlings; Corypha australis 65 feet high, the top of which has been through the roof; C. umbellifera, 60 feet; Encephalartos Kaffira (the Kaffir Palm), of



FIG. 14.—A BASKET OF ACHIMENES.

which there are two noble plants; Monstera deliciosa fruiting well; Renanthera coccinea 18 feet high, and with four spikes of its rich red flowers; and a gigantic Seaforthia clegans 60 feet high in seed. Other objects of admiration are the basket Ferns, the many beautiful pools, the almost precipitous walls of stones and Ferns, the cases of Filmies, the Bananas (from one of which a 72 lb. cluster has been cut), and the Tree Fern stems spangled over with the beautiful berries of Nertera depressa, which spread over the moss that covers the stem when planted and now produce a beautiful effect.

THE FLOWER AND WILD GARDENS.

I need only make a passing reference to the Italian or west front garden near the mansion, with its conspicuous masses of pink China Roses and golden Yews, or to the French garden near the Portland Walk, with its Moss Roses, Pinks, Violas, and other flowers, but the grounds and wild garden call for fuller notice. From the lake, with its famous fountain, which when in full swing uses 1000 gallons of water a minute, grand views can be obtained. The surrounding country presents a beautiful picture, the white waters of the Weir flash in the sunlight, and Edensor Church may be seen nestling among the trees. Splendid Beeches dot the rising ground near the conservatory, and wild Roses clothe the banks. At one point there is a precipitous wall 40 feet high, from the face of which near the summit water gushes, Moss and Ivy mantling the stones. Paths wind up to higher ground, where huge breadths of Rhododendrons flourish. Sheffielders tell me that in spring they make

pilgrimages to sec the wondrous sight when the broad masses are in bloom, and that their beauty is indescribable. I can well believe it, for my mind recalls the extraordinary picture in the late Mr. McIntosh's garden at Weybridge, where there could not have been a third of the plants which clothe the hillsides at Chatsworth. Beautiful salmon-coloured masses of Ghent Azaleas also arrest attention, and here and there a pause has to be made to admire a noble Conifer. A splendid Pinus nobilis 60 feet high overhangs a lake, and not far away are a grand pair of Abies orientalis 30 to 40 feet high. A wonderful specimen of A. Douglasi, which had an altitude of nearly 70 feet, has unfortunately been torn by the wind. A. Nordmanniana. 30 feet high, is very beautiful in the tender hue of its young growths. Cryptomeria japonica is splendidly represented, as are Araucarias, Firs, Larches, and Austrian Pines. The lake referred to with its dotting of yellow Irises and border of Willow Herbs and yellow Broom is a beautiful picture.

In the trees, shrubs and flowers, in the banks, glades and dells, there is a diversity of beauty and interest which no pen could describe. It is not a tree, but a thousand trees, not rods, but acres of wild garden and woodland with their countless numbers of shrubs, ferns and flowers which have to be seen before the mind can form a conception of the beauties and glories of Chatsworth. My pleasure in the visit was shared by hundreds of excursionists from Sheffield, Manchester, and other places, and I am told there is a similar influx every day. I turn from an imperfectly fulfilled task with the sense that this noble place must exercise powerful influences for good in opening up conceptions of the beautiful to thousands of toilers to whom the joys of gardening are, from circumstances beyond their control, forbidden.—W. P. W.

HORTICULTURAL SHOWS.

TRENTHAM.—JULY 20TH.

WHEN it is considered that the annual exhibitions held in the Ducal Grounds of Trentham are the outcome of the local Cottage Garden Society we are forcibly reminded of the truth of the axiom that "Great results from little causes spring." The first attempt at extension, a very few years ago, was prompted by a desire to provide more attractive features than a cottagers' show could afford, and the results have exceeded the most sanguine anticipations. But while the general exhibitions of high class produce in the form of the artistic arrangements of plants, great displays of Roses and other cut flowers, and superior fruit have attained national fame, the original object of the society has not been lost sight of, and the greatest number of classes are still to be found in the amateurs' and cottagers' portion of the schedule. Moreover, the prizes offered in these classes considerably exceed the average value of the majority that are provided in shows of this nature. This is very satisfactory, and it is also gratifying to observe that the competition in these classes increases and improves from year to year. The society is therefore accomplishing the object it was established to promote—better tilled gardens and more attractive home surroundings in the district.

GROUPS OF PLANTS.

With that reference to what may be termed the foundation of the Show, we pass to the general exhibits as being of wide general interest. It may be premised that no prizes are offered for large specimen plants at Trentham, but instead special attention is devoted to groups. For these the prizes offered exceed those in a similar class at any show in the kingdom, and as a consequence the competition is the best that can be produced. Perhaps nothing could better indicate the superiority of the groups that were arranged last week than the fact of the formidable Mr. Cypher being placed in the third position, and surely never before did such a beautiful arrangement fail to win a higher place. Still, the prize was not small. The first prize provided in this 300 feet space arrangement was £20 with a "special," value £10 10s., added; second prize, £20; third, £13; fourth, £9; or a total of no less than £70 10s. in this one class. That is the way to secure the highest competition, and the groups arranged were worth a long journey to see.

The fortunate winners of those prizes were the Duke of St. Albans (gardener, Mr. J. Edmonds), first; J. H. Manners Sutton, Esq. (gardener, Mr. Webb), second; Mr. Cypher third; and C. H. Wright, Esq. (gardener, Mr. Roberts), fourth. The character of the groups may be briefly referred to, anything like a detailed description of them being out of the question. The space appeared to have been set out in squares. Mr. Edmonds occupied his with a magnificent Kentia as a central plant, elevated on a mound of Ferns, from which sprung, with telling effect, noble scarlet heads of Hæmanthus. There were some eight or nine smaller mounds, in some of which single-stemmed, well grown, and highly coloured Crotons commanded attention; in others were graceful Palms, and in one a beautiful plant of Dracæna indivisa variegata. At the base of these elevated plants were Ferns interspersed with flowers, such as Begonias, a few Orchids, and Francoas, but this was lightly done, while Caladium argyrites and variegated Grasses were placed here and there in the miniature dells between the elevations. Richness, with freedom, was the prevailing characteristic of the group; but if it had a fault it was just a little overdone, but still a beautiful arrangement, or it would not have won its high position at the hands of such Judges as Messrs. Bruce Findlay, F. Sander, and John Wills.

Mr. Webb's arrangement was similar in character, and he ran his rival closely. He formed a bold mound right in the foreground, surmounted by a noble Palm, and had smaller mounds near the corners occupied with handsome foliage plants, including splendid Crotons;

scarlet Anthuriums, and other flowers, associated with Ferns, Panicums, and Caladiums, enlivened the group, which was undoubtedly a good one, but the background perhaps a little weak. Mr. Webb must be regarded as a formidable competitor in classes of this nature.

Mr. Cypher's group was wholly different. It was composed of a clear groundwork of moss with a large central and smaller front mounds of Orchids arranged round a Palm in each case. There was plenty of space between the mounds, in which a pair of Tiger Lilies were effective: but the group was undoubtedly weakened by small patches of blue Lobelias, and the linking of the front mounds by a formal chain of Caladium argyrites did not strengthen the arrangement. The background was composed of Hydrangea paniculata, Crotons, and slender Bamboos—too light for the position, and not a sufficient foil to the plants in the foreground. Formalism is a cardinal fault in arranging plants for effect in the eyes of most experienced judges.

Mr. Roberts' group in the class under notice was similar in style to the first and second prize arrangements, but rather too many plants were employed, and the leading features did not stand out so clearly as is desirable, though the group was superior to many that have won first honours at many shows. In the local group class the chief prize was won by J. P. Maddock, Esq. (Mr. G. H. Smith, gardener), a background of well grown specimen plants, with a free undulated arrangement in front—and altogether a creditable display. The whole of the groups made a show in themselves of great attractiveness to the crowds of visitors.

FRUIT AND VEGETABLES.

Not less important and meritorious was the display of fruit, and nothing approaching it in extent and quality had been seen at any show of the season. The prizes were good—£10, £6, and £3 being offered for nine dishes, and £6, £3, and £2 for six dishes, also similar amounts for four bunches of Grapes, while sufficient inducements were provided to bring plenty of entries in the smaller classes. The numbers show this clearly, and the list is worth giving. In the nine dish class there were seven entries; for six dishes, nine; for four bunches of Grapes, fourteen; for three bunches of Black Hamburghs, twenty-one; for three of any other black Grape, seventeen; for three Muscats, eleven; for three of any other white Grape, sixteen; for a green flesh Melon, twenty; scarlet flesh, seventeen; Peaches and Nectarines, fourteen each; and Cherries, ten entries. A sufficient foundation it will be admitted for a fine show, and a fine show it was, though, of course, all the fruit brought was not staged, and the Committee will have to consider the desirability of providing more prizes in these classes.

In the large class for nine dishes, including three bunches each of black and white Grapes, a Melon, and a Pine, Mr. J. McIndoe, The Gardens, Hutton Hall, was first with a splendid collection, fine Muscat and good Gros Maroc Grapes, excellent Bellegarde Peaches, Humboldt Nectarines, Negro Largo Figs, Souvenir du Congrès Pears, and a fine cluster of well ripened Bananas. This collection was also granted a valuable pedestal and vase offered for the "most meritorious exhibit in the Show," and Mr. McIndoe went home happy. Mr. J. Goodacre was second in this class, his Black Hamburgh Grapes and Elruge Nectarines being very good indeed. Mr. Dawes, Temple Newsam, third with well-grown produce.

In the class for six dishes Mr. G. Reynolds, Gunnersbury Park, had the honour of placing Mr. McIndoe in the second position, sufficient proof that Messrs. Rothschild's fruit was of high merit. The Muscat and Black Hamburgh Grapes were particularly good, and a fine Melon had much weight. Mr. Edmonds followed, but not far distant, with excellent fruit.

Mr. Crawford, gardener to J. Grant Morris, Esq., secured the premier position with four bunches of Grapes in two distinct kinds with superior examples of Madresfield Court and Black Hamburghs. Mr. Alsopp, gardener to Lord Hotham, was a close second with finely finished Muscats and Buckland Sweetwater; third, Mr. J. Wilkes, gardener to Mrs. Meaken, Cresswell Hall, the Hamburghs being finely finished. For three bunches of Black Hamburghs the prizes went in order to Mr. J. G. Morris, Mr. J. Roberts (Gunnersbury), and Rev. Bulkeley Owen, all staging admirable examples of culture. In the any other black class, Mr. A. G. Young (Tanybryn, North Wales) well won the first place with Mr. A. G. Young (Tanybryn, North Wales) well won the first place with grand full bunches of Muscat Hamburghs (also awarded a special for the best three bunches of Grapes in the Show), Mr. Grant Morris second, and Mr. J. Edmonds third, both with Madresfield Court in admirable condition. In the Muscat class Mr. Alsopp was clearly first, Mr. N. C. Curyan second, and Mr. J. Hudson third. Both bunches and berries were very good in this class, but the date evidently too early for general high finish. In the any other white class Mr. Alsopp again took the lead with remarkably fine Buckland Sweetwater. Mr. Banner. took the lead with remarkably fine Buckland Sweetwater, Mr. Bannerman following with good Duke of Buccleuch, Lord Carnarvon's gardener being third with Bucklands. The special prizes offered by Messrs. W. Innes & Co. for three bunches of any variety grown with "Fertilitas" were won first by Mr. W. Elphinstone, Shipley Hall Gardens, with noble specimens of Cannon Hall. Second, the Earl of Shrewsbury, with Madresfield Court; third, N. C. Curzon, Esq, with Black Hamburghs. It may be added that Mr. Elphinstone cut thirty similar bunches of Cannon Hall at the same time from one Vine with three rods-a noteworthy achievement, if not unparalleled, in a gentleman's garden. Mr. Miller Mundy should be proud of his Vine. The display of Grapes in the above classes was magnificent, and dozens of exhibits not in the charmed circle would have been well within it at most shows held during the present year.

In the green fleshed Melon class Mr. Gcodacre was first with the

Countess, and Mr. Wilkes was first in the scarlet flesh class. The names of the other prizewinning varieties could not be obtained. The best Peaches were shown by Mr. Gilman, Violette Hâtive, and the best Nectarines from Bretly Park. Further details not procurable in the crowded tent, and a mere list of prizewinners without varieties is of small interest.

ROSES AND SPECIAL EXHIBITS.

Mr. Wilkins, gardener to Lady Theodore Guest, was the most successful exhibitor of vegetables for Messrs. Taylor's, Sutton's, and Webb's prizes, one of his collections winning the medal for the best example of good culture in the Show. Mr. J. Waite closely followed in most

of the classes with excellent produce.

Roses were undoubtedly the centre of attraction in the cut-flower department, and considering the season the display was remarkable. In the class for forty-eight blooms, distinct, Messrs. Harkness were first with A. K. Williams, Earl of Dufferin, Mrs. John Laing, Madame Hausman, A. Rigotard, Marie Baumann, Madame E. Verdier, Chas. Lefebvre, J. S. Mill, Ulrich Brunner, Fisher Holmes, Exposition de Brie, Horace Vernet, Eclair, Madame Chas. Crapelet, Duchess of Bedford, Edouard Andre, and Countess of Rosebery as the leading blooms. H. Merryweather second with very bright blooms, those most noteworthy being Ulrich Brunner, Sir G. Wolseley, F. Holmes, Thomas Mills, Gloire de Margottin, Pierre Notting, Her Majesty, Souvenir d'Elise,

Horace Vernet. Messrs. R. Mack & Sons, Catterick, third.

With thirty-six distinct blooms Messrs. Harkness were again first, winning the National Rose Society's gold medal. Best varietics.—Mrs. J. Laing, A. K. Williams, Gustave Piganeau, Charles Lefebvre, Marie Rady, Duchesse de Morny, Alfred Colomb, Etienne Levet, Senateur Vaisse, J. S. Mill, Duke of Edinburgh, Madame Hausmann, Horace Vernet, S. M. Rhodocanachi, Louis Van Houtte, The Bride, Earl of Dufferin, Duke of Teck, E. Hausberg, and E. Y. Teas. Messrs. Jas. Cocker & Sons, Aberdeen, second, Her Majesty, Caroline Kuster, A. Soupert, Mrs. J. Laing, Comtesse de Nadaillac, and Margaret Dickson being very good. Third Messrs. Mack & Sons. Twenty-four distinct, three blooms each, first Messrs. Harkness & Sons, the best triplets being Alfred Colomb, Mrs. John Laing, Duke of Edinburgh, H. Vernet, Queen of Queens, Harrison Weir, Fisher Holmes, Pride of Waltham, Prince Arthur, A. K. Williams, Ulrich Brunner, Chas. Lefebvre, Countess of Rosebery. Second Mr. H. Merryweather, the best blooms being Gustave Piganeau, A. K. Williams, Mrs. John Laing, Catherine Mermet, La France, Ulrich Brunner. Third Messrs. Mack & Sons.

In the class for twelve single dark velvety Roses Mr. H. Frettingham, Beeston, was first with Pierre Notting, Messrs. Harkness second with Reynolds Hole, and Messrs. D. & W. Croll, Dundee, with Prince Arthur. Not a good class. Twelve blooms light Roses (much better), first Messrs. D. & W. Croll, second Messrs. Harkness, third Messrs. Perkins and Sons, Coventry, all staging Mrs. John Laing. Twelve Roses, any colour, first Messrs. Harkness, Alfred Colomb, fine; second Messrs. Croll, M. Baumann, good; third Messrs. Mack & Sons, A. K. Williams.

Eighteen Teas and Noisettes, first Messrs. Cocker & Sons, Aberdeen, with Princess of Wales, F. Kruger, Rubens, Ethel Brownlow, Madame Hole, Souvenir d'un Ami, Madame Lambard, The Bride, Comtesse de Nadaillac, S. A. Prince, Cleopatra, Souvenir d'Elise, Madame Cusin, Madame Bravy, and Innocente Pirola. Second Messrs. Croll, Dundee. Third Mr. Merryweather. Twelve distinct Teas or Noisettes, three blooms each, first Messrs. Cocker & Sons, Aberdeen, with Rubens, Cleopatra, S. A. Prince, The Bride, Hon. E. Gifford, Madame Lambard, very good. Second Messrs. Harkness & Sons. Third Messrs. Croll.

Other cut flowers in competition must perforce be passed with the remark that Messrs. Jenkinson & Sons, Newcastle, Staffordshire, exhibited splendid bouquets, defeating Messrs. Perkins in all the classes

—a notable feat.

Silver medals were awarded for special exhibits—namely, Messrs. Birkenhead, Cutbush, Laing & Mather, Dobbie & Sons, Hewitt & Co., Smith (Worcester) and Edmunds (Nottingham) for their specialties. A bronze medal was awarded to Messrs. Pearson & Sons, Chilwell, for a richly coloured Gloxinia, and a first class certificate and silver Banksian medal to Messrs. F. Sander & Co. for their distinct new plant with large blue tinted leaves, Strobilanthus Dyerianus.

We are glad to learn that though several thousands of persons, by kind permission of the Duke of Sutherland, passed through the Trentham grounds not the slightest damage was done to anything. Improvements are visible everywhere. The Duchess, as is well known, is a great lover of flowers, and the gardens of Trentham may be expected to become

still more famed for their interest and beauty.

PRESCOT.—JULY 20TH.

THE ninth annual Exhibition of the Prescot Horticultural Society was held on Thursday in Knowsley Park. Charming weather prevailed, and there were close upon 200 entries more than last year. A most effective circular group of plants was arranged by Mr. J. Bounds, gardener to A. L. Jones, Esq., Oaklands, Aigburth, and this exhibitor was awarded first prize; the second prize went to Mr. R. Pinnington, gardener to Mrs. Banner, Blacklow House, Roby. The leading prize for a group 60 square feet, went to Mr. H. McFall, gardener to E. C. Leventon, Esq., Oakfield, Roby.

Esq., Oakfield, Roby.

For six stove and greenhouse plants there was a close run between Messrs. Bounds and Pinnington, the Judges deciding in favour of the former. For Fuchsias, and Zonal Geraniums, Mr. Leith, gardener to Mrs. Ihler, staged wonderful examples, the Ivy-leaved Geraniums being 7 feet high, and the Fuchsias were not formally trained, although 9 feet high. The prize for six stove and greenhouse Ferns went to Mr. R. Pinnington for

fine specimens. Double and single Begonias were admirable, both prizes being taken by Mr. J. Humphreys, gardener to E. S. Eccles, Esq., The Orchard, Huyton. The prizes for Gloxinias, Cockscombs, and Liliums went to Messrs. Learmont, McFall, and T. Eaton, gardener to J. Parrington, Esq., Roby Mount. For Petunias and Coleus Mr. W. Gibbs, gardener to G. T. Cripper, Esq., Roby, was successful. Roses call for little comment. James Berry, Esq., Prescot, took honours for eighteen, and was second in twelve, the first being taken by Mr. W. Wharton, gardener to J. Royston, Esq., The Orchard, Huyton. In classes for Pansies, collections of cut flowers outdoors, double and single Dahlias, bouquets, six Roses in pots, and model garden, the following were successful—Messrs. Pownall, Eaton, Humphreys, Bounds, and Donnelly.

Fruit was well shown, Mr. W. Oldham, gardener to J. Beecham, Esq., Ewanville, Huyton, taking first for four dishes of fruit, with Buckland Sweetwater and Black Hamburgh Grapes, Gros Mignonne Peaches, and Scarlet Premier Melons, Mr. Eaton and Mr. Pinnington being excellent second and third. The prizes for two bunches Black Hamburgh, two any other black, and dish of Nectarines went to Mr. J. Barker, gardener to J. W. Raynes, Esq., Rock Ferry, for perfect samples of Madresfield Court and Pineapple. For two bunches of Muscats, and two bunches of any other white, Mr. E. Blythian, gardener to Mrs. Baxter, The Towers, Rainhill, was a good first, Mr. Oldham being second. For Melons, Peaches, Cherries, Black, Red, and White Currants, Raspberries, Gooseberries, and Apples, the following secured the awards—Messrs. Ferguson, Eaton, Tyrer, W. A. Allan, Barker, Gibbs, Cook, Aindow, Hughes, and Bounds. Vegetables were grandly shown, the first for collection of twelve varieties being taken by Mr. J. Case, whilst Mr. R. Pinnington took that offered by Mr. H. Middlehurst, seedsman, Manchester Street, Liverpool. Mr. Jno. Young, the President, and Mr. Robert Rigby, the courteous Secretary, and Committee are worthy of every commendation for the hard work they performed.

HUYTON AND ROBY.

The first Exhibition of this newly formed Society was held last week in a field adjoining the new Local Board offices, and more than realised the expectations of the Committee and visitors alike. Over £80 had been offered in prizes for groups fruit, plants, and vegetables, besides a fine silver challenge cup to be won two years in succession, or three times in all, for twenty-four cut Roses in eighteen varieties, and which was presented by the Vice-President, W. H. Crook, Esq., Huyton. There were also special prizes for original paintings of flowers, epergnes, and bouquets. Of the quality of the exhibits there was not a fault to be found. Space will not permit of a full account of the exhibits. Mr. R. Pinnington, gardener to Mrs. Banner, Blacklow House, Roby, took first prizes for six stove and greenhouse plants, six stove and greenhouse Ferns, two Palms, Peaches, and Nectarines, and four dishes of Potatoes; second for one Orchid, a greenhouse plant in bloom, three Coleus, collection of four dishes of fruit, and six stove and greenhouse cut flowers.

Mr. Eaton, gardener to John Parrington, Esq., Roby Mount, secured prizes for four dishes of fruit, single greenhouse Fern, two bunches Black Hamburgh Grapes, and second for Liliums, Begonias, Peaches and Nectarines. Mr. W. Lyon, gardener to A. M. Smith, Esq., Bolton Hey, Roby, gained awards for one Orchid, six stove and greenhouse cut flowers, a very pretty group 7 feet in diameter, and for table plants. Mr. McFall, gardener to E. C. Leventen, Esq., Oakfield, Roby, also was awarded prizes for eight varieties of vegetables, six table plants, two Palms, and four stove and greenhouse plants. Mr. Rattray, gardener to G. G. Musson, Esq., the President of the Show, won with Begonias, and was second for a group of plants and for the twenty-four Roses; the challenge cup being won by Mr. W. Wharton, gardener to J. Royston, Esq., Huyton, with a good collection well arranged.

The prizes for an epergne went to Miss Crook, with a charming arrangement of Iceland Poppies and light Grasses; whilst for the painting Miss Maggie Fishwick, The Orchard, Huyton, had a charming upright panel of Irises and Lilium candidum; Miss Kate Harding, Rydal House, Huyton, being granted an award of merit for a beautiful painting representing a wickerwork basket filled with Bourbon Roses, with blue china vase in background. Nurserymen made a splendid exhibit. Messrs. Middlehurst with herbaceous cut flowers and Gladiolus; Ker & Sons, Aigburth, with new and rare plants; and C. A. Young, F.R.H.S., West Derby, for Carnations and Picotees.—R. P. R.

BEDFORD.—July 20th.

Under most unfortunate circumstances has this Show been held during the last five consecutive years, rain falling each year during the greater part of the day. Thursday last proved no exception to the proverbial wet Bedford Flower Show day, rain commencing by seven o'clock with a most leaden sky, and old prophets predicted a wet day. Fortunately, however, by eleven o'clock things brightened, and the sun appeared to gladden the hearts of Secretary and Committee, who have been working a practically insolvent concern. With a band contest as an extra draw things promised to go off better than could have been expected earlier in the day, and the afternoon and evening holding fine, although threatening, enough money was taken to pay expenses.

Reverting to the Show proper, all were agreed that considering the remarkable season and the lateness of the Show for Roses and herbaceous flowers, it was a very creditable one indeed. The exhibits were good, although not in such great numbers as in former years. In the open class for Roses, forty-eight distinct, Messrs. G. & W. H. Burch, Peterborough, proved the victors in a class of five competitors with clean and

bright, although small, blooms. Mcssrs. D. Prior & Sons proved a close sccond, Messrs. Paul & Son, Cheshunt, third. In the open eighteen Teas, Dr. Budd, Bath, was first; D. Prior & Son, Colchester, second; Rev. W. H. Jackson, Stagsden, Bedford, third. In amateur classes, for twentyfour Roses, distinct, open, Dr. Budd was again to the front, with Mr. E. B. Lindsell second, and Mr. J. Parker, Hitchin, third. In the class for twelve Teas and Noisettes, distinct, Dr. Budd was first, Rev. Jackson, Stagsden Vicarage, Bedford, a good second, and Mr. J. Parker third. For twelve Roses, distinct, Miss E. Druton, Stevenage, was first, Mr. G. Moules, Hitchin, second, and Mr. W. O. Times, Hitchin, third.

In the open class for thirty-six hardy herbaceous there were two very strong exhibits, Messrs. Paul & Son, Cheshunt, first, Laxton Bros. Bedford, a close second. In the class, Messrs. Sutton's prizes for the best collection of vegetables, open to amateurs and gardeners, Mr. Empson, The Gardens, Ampthill House, was first with a good stand, Mr. G. Woodhams second, and Mr. G. Robinson, gardener to F. Howard, Esq., third. The exhibits in the amateur and gentlemen's gardeners' classes in most cases were very creditable indeed, and although there was in some classes but one exhibit, the Judges, owing to the quality, in most cases awarded first prizes.

The cottagers' class was not up to the usual high standard, no doubt owing to the season; neither was the market gardeners' class nor the class for table decorations as good as they ought to have been, but the hard-working and energetic Secretary, Mr. J. S. Verey, and his Committee are to be congratulated on the success of the Show under depressing financial circumstances, and we wish them better success in

NEWCASTLE.—JULY 20TH, 21ST, AND 22ND.

THE sixty-ninth Exhibition of the Durham, Northumberland, and Newcastle-on-Tyne Incorporated Botanical and Horticultural Society was held on the above dates in conjunction with the Northumberland Agricultural Society. This arrangement has proved very advantageous in the Society's interests, and the results financially have been of a most satisfactory character. The Exhibition was held in three large marquees in the Recreation Ground, North Road. This is most suitable for an Exhibition of that character, and it would be well that if in future the

Shows were always held here.

the future.

We have on many former occasions seen a greater number of exhibits. Although lacking in that respect, the quality was exceptionally good, and the Judges declared the Roses of Messrs. Harkness, Bedale, the best and largest they had seen this year. Plants were also well shown, especially the flowering stove plants, those staged by Mr. Letts falling in for a great share of admiration; his Dipladenia amabilis was a true specimen of the plantsman handicraft. It was covered to the bottom of the trellis with blooms so rich in colour. It has often been reverted to in these columns the advantage it would be to the Society if they were to give prizes for groups of plants same as of yore. The much better arrangement and artistic effects produced in grouping plants together have recently been highly developed, and to which all those who visited the York Gala can bear testimony. Had it not been for the excellent exhibits shown by the local nurserymen the Show would have been far from so attractive as it was, which in some way compensated for the group of plants that were formerly one of the salient points of the Exhibition.

Plants. — The plants were very fine, and occupied one of the tents. For six plants in bloom in the open class Mr. E. H. Letts, gardener to the Earl of Zetland, Aske Hall, was first with Dipladenia amabilis and boliviensis, both superbly flowered, and the former in addition an excellent colour; Anthurium Scherzerianum (Shuttleworth's variety), Allamandas nobilis and Wardleana, Erica Aitoniana, worth's variety), Anamandas hooms and Wardieana, Erica Artoniana, also well flowered. The first prize was £10 and the Royal Horticultural Society's medal. Mr. W. J. Morris, Felling, was second with some grand plants of Ixoras, Stephanotis floribunda, and Statice profusa. Mr. D. Wylam, Shankhouse, Cramlington, was third with Statice Batcherianum, Clerodendron Balfourianum, and Anthurium Schertzeignung. In the corresponding close for six states. Schertzerianum. In the corresponding class for six stovc and greenhouse plants Mr. F. Nicholas, gardener to Marquis of Zetland, Upleatham, was first with Stephanotis floribunda, Erica Austiniana ampullacea, Allamanda nobilis, Statice profusa, and Dipladenia boliviensis. Mr. D. Wylam was second with small plants, including Stephanotis and Clerodendron fallax. For eight foliage plants Mr. E. H. Letts was also first with Cycas circinalis, Croton angustifolius, Cycas revoluta, Kentia Fosteriana, Crotons Queen Victoria and angustifolius, and Chamærops Fortunei. Mr. J. Smith, gardener to Theo. Lange, Esq., Heathfield House, Gateshead, was second with Zamia Lehteni, a fine glaucous appearance, Kentia Fosteriana, Sabal Blackmanni, Phœnix sylvestris, Croton Victoria, and Dicksonia antarctica. For six foliage plants Mr. F. Nicholas was first, including good examples of Croton angustifolius, Dasylirion acrotrichum, Cycas circinalis, Croton Johannis, and Dicksonia antarctica.

For six exotic Ferns Mr. F. Nicholas was also first with fine plants of Davallia fijiensis plumosa, Gleichenia Mendelli, Sadleria cyathoides, Leucostegia immersa, Lomaria zamiæfolia, Davallia tenuifolia Veitchiana, the latter very graceful. This stand was fresh and beautiful. Mr. J. McIntyre was second with Adiantum concinnum latum, a fine Davallia, Gleichenia Mendelli, Microlepia hirta cristata, Adiantum farleyense, and Davallia Mooreana. In the corresponding six Ferns in the gardeners' class Mr. J. McIntyre, gardener to Mrs. Gurney Pease, Woodside, Darlington, was first; and Mr. D. Wylam second.

Cut Flowers and Table Decorations.—Table decorations and cut flowers always prove an attractive feature at this Exhibition. For table

plants Mr. McIndoe, gardener to Sir Jos. Pease, Hutton Hall, Guisboro', was first. For the epergne of cut flowers for drawing room, six competitors staged. Mrs. J. Morris, Felling, was a good first with a charming and graceful arrangement, each tier of the stand was made less in good proportions. Liliums, Dipladenias, Pancratiums, Allamandas, and other choice flowers were all used effectively. Six epergnes were staged and had a very pleasing effect on the table. Baskets of cut flowers were also well arranged. Mr. P. Robertson, Mossend Nurseries, Helensburgh was first. The flowers were choice and nicely twined round the basket. They were Pancratiums, Odontoglossum grande, Carnation Duchess of Fife, and Dendrobium Paxtoni. Mr. P. Robertson was also first with the bridal bouquet, which was not too formal, not too large, and contained the usual white flowers. Jennings, Green Market, Newcastle, was first for hand bouquet. The ladies' spray was a choice combination. Mr. J. Battensby, Swalwell, was first with Roses in bud and Cattleya amethystoglossa on Rose foliage and Adiantum gracillimum. Mr. P. Robertson was second with Odontoglossum grande on Asparagus plumosum nana. In the corresponding class Miss Edmondson, Clayton Road, Newcastle, was first for an epergne, and also first for a basket of cut flowers. Mr. T. Battensby, Hagg Hill, Blaydon, was first for a bridal bouquet, and Miss Edmondson first for a hand bouquet.

For forty-eight Roses, dissimilar, £6 and the Royal Horticultural Banksian medal arc given for first, and Messrs. Harkness & Son, Bedale, Yorks, won the leading prize with what was considered, for the season, exceptionally fine blooms both in colour and size. The best flowers were Dac de Rohan, Mdme. J. Laing, Earl Dufferin, Mdme. Hausmann, Maréchal Niel, Duchess of Fife, Merveille de Lyon, and Francisca Kruger. Mcssrs. D. & W. Croll, nurserymen, Dundee, were second, their best blooms being Margaret Dickson, Captain Christy, Souvenir d'un Ami, Innocente Pirola, the Bride, La France, 1889 (a dark Rose), Senateur Vaisse, Etienne Levet, Countess of Bedford, and Earl Dufferin. Mack & Son, Catterick, were third for thirty-six Roses, and Messrs. Harkness were also first with similar varieties to those shown in their forty-eight stand, followed by Messrs. Croll and Mack respectively. For twelve yellow Roses Mr. D. Robertson was first with Francisca Kruger, and for twelve Roses, any variety, Mr. H. May, Hope Nurseries, Bedale,

Yorks, was first with fine blooms of Alfred Colomb.

For forty-eight bunches of hardy herbaceous and border flowers correctly named, Messrs. Harkness were first; Mr. T. Battensby was second. For twenty-four Show Pansies Mr. J. Proudlock, Bates Cottages, Backworth, was first with an extraordinary fine stand, which was very much commended. For twenty-four Fancy Pansies Mr. A. Bailey, jun., Sunderland, was first. Mr. F. Nicholas was first for two bunches of cut flowers from stove or greenhouse plants. For Carnations and Picotees Mr. F. Cowdy was well first with very large blooms, which were greatly admired.

Fruit.—For a collection of fruit, eight dishes, distinct, black and white Grapes allowed as separate dishes, Mr. J. McIndoe was first with good Black Hamburgh and Muscat of Alexandria Grapes, faultless in colour, Bellegarde Peaches, Beurré Superfin Pears, some good Apples, Pitmaston Nectarines, and a very fine Melon. Mr. J. Hunter, gardener to Earl of Durham, Lambton Castle, was second with excellent Black Hamburgh and Duchess of Buccleuch Grapes, Early Mignonne Peaches, Jefferson Apples, &c. Collection of four dishes, Pines excluded, Messrs. Hunter and McIndoe reversed positions. Mr. Hunter had Black Hamburgh and Duchess of Buccleuch Grapes (very finc), Royal George Peaches, and Emperor Alexander Apples. Mr. McIndoc had Black Hamburgh Grapes, Noblesse Peaches, Beurré Superfin Pears. Mr. McIntyre was third.

For four bunches of Grapes, not less than two varieties, the Society offer £3 and the Royal Horticultural Society's bronze medal. Mr. J. Hunter was first. The Black Hamburghs were finely finished and faultless in colour, so were the Muscat of Alexandria. Mr. J. McIndoe was second with Gros Colman and Madresfield Court. Mr. W. Stewart was third; seven stands were staged. For two bunches of Muscats (white), Mr. J. McIndoe was again first, the bunches were about 3 lbs. weight, well shaped, and the berries all regular; there were no vacancies in the bunches whatever. Mr. W. Stewart, gardener to Sir Wilfrid Lawson, Brayton Manor, was first for two bunches of Buckland Sweetwater, and two excellent bunches they were. Mr. J. Atkinson, gardener to Sir Edward Blacket, Matfen Hall, was first for two Black Hamburgh bunches, nine dishes were staged. For two bunches any other variety Mr. McIndoe was again first with Gros Maroc.

Mr. Stewart was first for a scarlet-fleshed Melon. Mr. J. M'Donald, gardener to A. E. Burdon, Esq., Hartford House, was first for Peaches. For Nectarines, Mr. Geo. Marr, gardener to J. Delacourt, Esq., Thorneyholme Gardens, Clitheroe, was first with Elruge. This is a young exhibitor, and he, it is to be opined, will compete again at Newcastle. Figs, Cherries, Strawberries, and Tomatoes were also shown, Messrs. J. Hunter, J. McIndoe, T. Battensby, and J. Punton, being the respective winners. The Committee may be congratulated on their arrangements, and the cultural and financial success of the Show. Mr. J. Hood, jun., must not be forgotten for the admirable way the plants were staged, and Mr. J. Gillespie, jun., for his untiring courtesy and urbanity.

The following nurserymen contributed excellent stands of plants, which formed one of the great attractions of the Exhibition:—Messrs. Joseph Robson & Sons, Hexham, Coniferæ, Roses, and Japanese Maples. Messrs. Little & Ballantyne, Carlisle, Musa Cavendishi fruiting in a 10-inch pot, general foliage plants, which made a most effective display. Messrs. Kent & Brydon, Darlington, a general collection of stove and greenhouse plants. Mr. Ed. Jennings, Palms and greenhouse plants. Messrs. Edwards of Nottingham their rustic pots. Mr. John Forbes, Hawick, Violas and herbaceous plants, also Carnations, a Mrs. Granston a pure white, good strong habit. Messrs. Dobbie & Co., Rothesay, Violas and herbaceous plants, and named Sweet Peas. Messrs. Gunn and Co., Sunderland, garden seeds. Messrs. Wm. Fell & Co., Wentworth Nurseries, Hexham, splendid specimen Coniferæ, well adapted for decorations on a large scale. Mr. John Hood, jun., 100, Elswick Road, Newcastle, their patent bracket flask in terra-cotta, suitable for either flowers, Ferns, and table decoration. Most of these stands enumerated received medals from the Society for the excellence of their exhibits.—Bernard Cowan, F.R.H.S.

EARL'S COURT.—JULY 26TH.

This Show should have been largely made up of Carnations, but the season somewhat upset the arrangements. There was, however, a fair number of these flowers, more, probably, than most persons expected, and the quality throughout was very good. So far as the principal classes were concerned the result corresponded with that at some of the leading Rose shows, a northern exhibitor coming southward and carrying away the chief prizes. He fairly defeated such sterling growers as Messrs. Turner and Douglas, but neither of these was able to show as well as usual at this time of year, and another season the victorious northerner may not find them so easily overthrown. The Carnations were supplemented by some splendid collections of hardy flowers and excellent fruit, the collective display was a good one. The Grapes were particularly noteworthy. The competition with them was very lively, and there was hardly an inferior bunch in the whole number shown. Black Hamburgh and Gros Maroc were splendidly represented.

There were two stands of twenty-four Carnations, the first prize going to an exhibitor whose name is not very familiar in the south—Mr. E. Shaw, Moston, Manchester. His flowers were somewhat small, but very smeoth and fresh. Mr. J. Douglas, Edenside Gardens, Great Bookham was second with larger but somewhat rougher flowers. There were also two stands of twelve, but they were far from good, and only the second prize was awarded, this going to Mr. Chaundy, Oxford. Mr. Chas. Turner had a very beautiful stand of twenty-four yellow grounds, and defcated Mr. Douglas somewhat easily. Mr. Chaundy was the only exhibitor of twelve, and was placed first for a very neat box. The Slough grower won again with twenty-four selfs and fancies, having good blooms of high-class varieties. Mr. Chaundy was second, and Mr. Douglas third. Mr. Shaw was not opposed with twelve, and received the first prize for a very good box. The Manchester grower secured another highly creditable victory with twenty-four Picotees, having very clean, smooth, fresh, and well filled blooms. Mr. Turner was second, and Mr. Douglas third. The only stand of twelve was that from Mr. Chaundy, and the third prize represented its merits. Mr. Sage won with border Carnations; Messrs. Paul & Son, Cheshunt, second. Mr. Turner was first, Mr. Douglas second, and Mr. Sage third with selfs, Mr. Douglas's variety, a new one named Crimson King, receiving a first-class certificate. Mr. C. B. Cole had a beautifully arranged vase, and was placed first, Mr. N. H. Cole being second, Messrs. G. Walton and J. Douglas equal third. Mr. Turner received a certificate for a bright scarlet self named Mrs. Apstey Smith.

Fruit was a very good display, particularly the Grapes. Five competed with three varieties, two bunches of each, and all had good clusters. Mr. Osman, Ottershaw Park Gardens, Chertsey, won with fine bunches of Black Hamburgh, Foster's Seedling, and Muscat of Alexandria. Mr. Tidy, gardener to W. K. D'Arcy, Esq., Stanmore Hail, Great Stanmore, was second with Gros Maroc splendidly coloured, Foster's Seedling, and Muscat of Alexandria; and Mr. W. Messenger, gardener to C. H. Berners, Esq., Woolverstone Park, Ipswich, was third with Golden Queen, Gros Maroc, and Black Hamburgh. Nine competed with three bunches of black Grapes, the first prize going to Mr. Friend, gardener to the Hon. P. C. Glyn, Rooks Nest, Godstone, for Black Hamburgh finely berried; the second to Mr. Mcssenger for the same variety, larger bunches but smaller berries, and the third to Mr. Osman, who also had Black Hamburgh. There were four stands of three whites, Mr. W. H. Lees, Trent Park Gardens, New Barnet, winning with very large clusters of Muscat of Alexandria, Mr. Tidy being second, and Mr. Howe, gardener to H. Tate, Esq., Streatham, third, with the same variety. The best of eight dishes of Apricots came from Mr. Lees. The variety was Moor Park, and the fruit very fine. Mr. Messenger was second, and Mr. Maxim, gardener to the Hon. Miss Shaw Lefevre third. The prizes for Peaches went to Messrs. Maxim, W. H. Lees, and Messenger, in the order of their names, the fruit being excellent. Mr. Tidy was first, Mr. G. H. Sage, Ham House Gardens second, and Mr. Wallis, gardener to R. Sneyd, Esq., third with Plums, the first named having a grand dish of Jefferson's. The prizes for Apples and Pears went to Messrs. Grindrod, J. C. Mundell, J. Friend, T. A. Hester, and A. Maxim.

The competing exhibits of hardy flowers made a brilliant display. Messrs. Paul & Son, Cheshunt, had a splendid collection of twenty-four, winning from Messrs. Sage and Such, who also showed well. Mr. Sage won with twelve bunches, Messrs. Newell and Wythes following. The prizes for Sweet Peas went to Messrs. Newell, Eckford, Elphinstone, and Sage.

The miscellancous exhibits comprised quite half the show, and for several displays medals were awarded, but they had not been announced when our reporter left. Messrs. Barr & Son occupied almost the whole of one side of the tent with a beautiful display of hardy flowers,

amongst which were Hyacinthus candicans, perennial Phloxes, Liliums, Delphiniums, Statices, and Campanulas. Adjoining this collection were a number of Melons (Beauty of Syon), Apricots, and Morello Cherries from Mr. Wythes, gardener to the Duke of Northumberland, Syon House, all indicating excellent culture. The Cherries and Apricots were remarkable for their high colouring. Mr. Wythes also contributed a very attractive group of plants, in which Campanula pyramidalis and C. p. alba were very foundations.

Messrs. Prior & Co., Colchester, staged a splendid lot of Roses, the flowers being particularly clean and fresh. Mr. Henry Eckford was represented by some familiar friends in the shape of a delightful collection of his choice Sweet Peas. Mr. Eric Such had a charming display of perennial Phloxes and Gaillardias. The latter, arranged in bunches of ten in the same way as single Dahlias are exhibited, and with Asparagus foliage, were really beautiful, and the idea is worth copying. Messrs. Laing & Sons had a splendid stand of single Begonias, and another of doubles, together with a very large and diversified collection of hardy flowers, the whole display making one of the best in the Show. Messrs. Wm. Paul & Son, Waltham Cross, had a collection of fruit trees in pots, including Figs, Apples, Peaches, Plums, and Pears, the trees being well grown and fruiting freely. Messrs. Paul & Son, Cheshunt, contributed a very beautiful collection of Roses, Carnations, and other hardy flowers. The Carnations, tied up loosely in bunches of five with their own foliage, presented a delightful effect. There were several stands of them, alternating with Roses. Mr. Chas. Turner had a neat and pleasing collection of Carnations. Messrs. Cannell & Sons contributed a collection of Melons, and Mr. R. Grindrod some very good Gooseberries, Currants, Cherries, and Apricots. Messrs. Laxton Bros. had plants of their excellent Strawberry Royal Sovereign.

WEST OF ENGLAND CARNATION AND PICOTEE SOCIETY.—JULY 19TH.

THE first Exhibition of this new Society was held in the Clifton Zoological Gardens, Bristol, July 19th, and although so many collections were out of flower, there was a fair display. In the class for twelve Carnations Mr. A. R. Brown, Handsworth, Birmingham, was first with C. H. Herbert, Mrs. Barlow, Geggie's Tom Pinley, Douglas's No. 37, John Payne, Squire Llewellyn, Geggie's Ellis Crossley, Samson, Geggie's Tom M'Creath, Douglas's Virgil (bright in colour), Rosy Morn, and Admiral Curzon. Mr. T. Hooper, Bath, was second, and Mr. F. Hooper, Chippenham, third. For six Carnations Mr. Dowell, Chew Magna, Bristol, was first.

For twelve Picotees Mr. Charles Pinder, Slough, was first with Morna, Lyddington's Favouritc, Nellie (very fine), Lady Holmesdale, John Archer, Thomas William (good), Adolphus, Princess of Wales, Lady Emily Van de Weyer (fine), and J. B. Bryant and Mary (both fine). Mr. A. R. Brown, Birmingham, was second, in whose stand were good blooms of Little Phil, Mrs. Beal, Thomas William, and Mrs. Payne. Mr. F. Hooper was third. For six Picotees Mr. F. W. Barker, Bristol, was first with Ethel, Nymph, Edith D'Ombrain, Mrs. Chancellor, and two of Hooper's seedlings.

In the class for twelve yellow-ground Picotces, Mr. Charles Turner, Slough, was first with Mrs. Henwood, Stadrath Bail, Annie Douglas (a seedling like Lilian), Mafret, Mrs. Arthur Barrett (high coloured), Nellie and Edith M. Wynne (both very fine), Lilian, Agnes Chambers, and Mrs. Robert Sydenham. Mr. Arthur Brown was second, in whose stand were blooms of Friedrich Wagner, Almira, Mrs. R. Sydenham, and Janira. Mr. F. Hooper was third. For six yellow-grounds, the Rev. G. R. Brown, Iron Acton, Bristol, was first with Countess of Jersey, Dorothy, Mrs. Henwood, Victoria, Lady Edwards, and Mrs. Robert Sydenham. Mr. F. W. Baker, Keynsham, was second.

For twelve Selfs or Fancies, Mr. Charles Turner, Slough, was first with Germania Ruby Almira King of Scarlets Terra Cotta, Salamander.

For twelve Selfs or Fancies, Mr. Charles Turner, Slough, was first with Germania, Ruby, Almira, King of Scarlets, Terra Cotta, Salamander, The Governor, Romulus, Duchess of Sutherland, Kæning Albert, Rose Unique (very fine), and Janira. Mr. A. R. Brown was second with Ruby, Mrs. F. Baker, Madame Van Houtte, and Schleiben. Mr. F. Hooper was third.

Single blooms were shown as follows:—Bizarres and flakes: First, Mr. A. R. Brown with Joe Edwards; second, Mr. A. R. Brown with Jim's Favourite (Geggie); third, Mr. F. Hooper with Matador. Picotees: First, Mr. A. R. Brown with Thomas William; second, Mr. C. Turner with Thomas William. Third, Mr. C. Turner with Nellie. Yellow-ground Picotees: First, Mr. C. Turner with Countess of Jersey; second, Rev. G. R. Brown with Mrs. Henwood; third, Mr. A. R. Brown with Queen Boadicea (Simonite). Selfs: First, Mr. A. R. Brown with a grand bloom of Rose Unique; second, Mr. C. Turner with Salamander; third, Mr. A. R. Brown with Master Fred.

The premier Carnation was Admiral Curzon in Mr. Brown's first prize stand of twelve. The premier Picotee was Thomas William in Mr. Turner's first prize stand of twelve. The premier yellow ground was Mr. Robert Sydenham in Mr. C. Turner's first prize stand of twelve.

Mr. Charles Turner's silver medal for twelve self Carnations was won by Mr. A. R. Brown, his finest blooms being Rose Unique, Ruby, Benary's Wieland, Aureole (Chaundy), Mrs. Fred, and Rose Wynne.

A first-class certificate was awarded to a superb pure white tree Carnation named Blagdon Surprise, with a flower almost as good in quality as Mrs. Fred and the plant of good habit. This was exhibited by Mr. A. Ambrosc, gardener to F. R. Robinson, Esq., Sneyd Park, Bristol.

THE MIDLAND COUNTIES CARNATION AND PICOTEE SOCIETY.—JULY 22ND.

THE third annual Exhibition of this flourishing Society was held in the Edgbaston Botanical Gardens, Birmingham, on Saturday, July 22nd, and there was a very large display of blooms and a close competition. Carnations were not up to their usual standard, as so few blooms were left, owing to the early season.

For twelve blooms of Carnations Mr. Tom Lord, Todmorden, was first; Mr. Robert Sydenham second; Mr. John Whitham, Hebden Bridge, third; Messrs. Thomson & Co. fourth; Mr. E. Shaw, Manchester, fifth; Mr. Chas. Freeland, Larkhall, N.B., sixth; and Mr. Henry Geggie, Bury, Lancashire, seventh. In the class for twelve Picotees there were eleven exhibits, and better quality prevailed throughout, competition being close. Mr. Robert Sydenham was first with fine blooms of Mr. J. P. Sharps, fine seedling Rosey Sydenham. a superb flower; Mrs. Coldridge, Polly Brazil, Nellie, and Mrs. Payne, all very fine. Messrs. Thomson & Co., Birmingham, were second with a grand bloom of Nellie in this stand. Mr. Arthur Brown, Handsworth, was third, and in this stand were fine blooms of Pride of Leyton and Mrs. S. Beal (both new), also Mrs. Payne. Mr. J. Whitham was fourth; Mr. Tom Lord fifth; Mr. E. Shaw sixth; Mr. Wm. Spencer, jun., Birmingham, seventh.

In the class for twelve yellow-ground flowers Mr. Robert Sydenham, Birmingham, was first with very fine blooms of Countess of Jersey, Janira, Romulus, Mrs. Henwood, Stadrath Bail, Schleiben, Brockhaus, Victory, Mrs. Robert Sydenham, A. W. Jones, and others. Messrs. Thomson & Co., Sparkhill Nurseries, was second; Mr. Charles Turner, Slough, third; Mr. Arthur Medhurst, Oxford, fourth; Mr. B. Simonite,

Sheffield, fifth; and Mr. J. H. Wilson, Birmingham, sixth.

In the class for twelve selfs Mr. Robert Sydenham was first with Germania, Ruby, Gladys, Justinian (light pink), Blushing Bride (a fine bright scarlet seedling), Annie Lakin, Joe Willett, Queen of Buffs, Theodore Aureole, and a dark sport from C. H. Herbert. Mr. A. Medhurst was second with seedlings; Messrs. Thomson & Co. third; Mr. C. Turner fourth; Mr. Wilson fifth. In the class for six Carnations, Mr. Crossley Head, Hebden Bridge, was first; Mr. Ben Simonite second; Mr. A. Medhurst third; Mr. Joe Edwards, Manchester, fourth; Mr. William; Kenyon fifth; Mr. C. F. Thurstans, Wolverhampton, sixth, and Mr. James Bleakley, Manchester, seventh. For six Picotees there were nineteen competitors. Mr. Crossley Head first; Mr. Thurstans second; Mr. A. W. Jones, Handsworth, third; Mr. W. Kenyon fourth; Mr. J. P. Sharp fifth; Mr. William Spencer, Birmingham, sixth; Mr. James Bleakley seventh.

For six fancies of yellow grounds M. A. W. Jones was first; Mr. Arthur Brown, second; Mr. Spencer, third; Mr. George Chaundy, Oxford, fourth; Mr. R. Makepeace, Leicester, fifth; Mr. George Eyre, Derby, sixth; Mr. Ed. Hill, Nottingham, seventh. The classes for six selfs and for the maiden exhibitors were well contested. Classes 10 to 28 were for single blooms, four prizes in a class, and eighty-two prizes,

but we have not space for enumerating all these.

The premiers were—Bizarre Carnation, Mr. Tom Lord with Master Fred; flake Carnation, Mr. B. Simonite with Sportsman; self Carnation, Mr. C. Turner with Germania; yellow ground Picotee, Mr. W. Spencer with Mrs. Robt. Sydenham; heavy edge Picotee, Mr. A. W. Jones with Mrs. Payne; light edge Picotee, Mr. R. Sydenham with Thomas William.

Class 29 was for twelve varieties of border Carnations, five strains of each. Messrs. Thomson & Co. were first; Miss Perkins, Leamington, second; Messrs. Hewitt & Co., Birmingham, third; Mr. Simon Rogers, Whittlesey, Peterborough, fourth; Mr. W. H. Divers, Ketton Hall Gardens, fifth. For six varieties of border kinds, three stems of each, Mr. Thurstans was first; Mr. Wm. Barsby, Lincoln, second; Mr. George Chaundy third; Mr. E. M. Sharp, Edgbaston, fourth.

There was an excellent exhibition of shower bouquets, sprays, and baskets all of Carnations and Picetons and much competition. Plants

There was an excellent exhibition of shower bouquets, sprays, and baskets, all of Carnations and Picotees, and much competition. Plants in pots, six varieties, brought out three exhibitors. Extra prizes were offered for bouquets and sprays of Sweet Peas, and some very pretty exhibits were staged, Mrs. Thewles, Floral Depôt, New Street Station, easily taking the first prize with a charming shower bouquet of pale pink flowers.

Certificates of merit were awarded to Messrs. Thomson & Co., Sparkhill Nurseries, for a new dark, rich-coloured self Carnation, Topsy, and a very fine yellow-ground Picotee, Mrs. Spencer, and to Mr. George Chaundy, Oxford, for a new S.B. Carnation, Albert Whitham.

The Birmingham Botanical Society's two silver medals for the greatest number of points in certain classes were awarded to Mr. Robert Sydenham and to Messrs. Hewitt & Co. The Botanical Society's two bronze medals for the second most successful exhibitors in the same classes were awarded to Messrs. Thomson & Co. and Miss Perkins. A silver medal was awarded to Mr. W. Jones, Handsworth, Birmingham, for excellence of culture.

The honorary exhibits are invariably so good at these Exhibitions that silver and bronze medals are given by the Carnation Society for exhibits of exceptional merit. Silver medals were awarded to Messrs. Hewitt & Co., Solihull Nurseries, for a very fine display of Tuberous Begonias and hardy cut blooms; to Mr. J. White, nurseryman, Worcester, for collection of cut flowers of various kinds; to Mr. B. R. Davis, Yeovil, for a superb display of his excellent double Begonias; and to Messrs. Thomson & Co., Sparkhill Nurseries, for an extensive display of border Carnations and Picotees. Bronze medals were awarded to

Messrs. Jarman & Co., Chard, Somerset, for herbaceous and other cut flowers; and to Mr. Hy. Eckford, Wem, for new and other Sweet Peas of his own raising. Nearly £110 was offered in prizes and medals, and excellent arrangements were made for the Exhibition by Mr. W. B. Latham, the Curator of the gardens.



FRUIT FORCING.

Pines.-As houses become vacant clean them thoroughly before being again occupied with plants. The first thing to be seen to is the bed. If bottom heat be afforded by hot-water pipes, the material forming the bed, whether of tan or leaves, should be removed at least once a year, or woodlice and other predatory vermin rapidly increase, and are harboured by the old material. Syringe every part of the house with hot water, thoroughly cleansing the wood and ironwork with soap and water, using a brush, and keeping the soapy water from the glass, which should be cleaned inside and outside with pure water only. Scald all brickwork and brush with hot limewash, reaching well into holes and crevices. Paint the wood and ironwork, and make the roof as waterproof as possible, as much damage is caused by water dripping on the foliage. Chambered beds heated with hot-water pipes are much in advance of those surrounded or passing through beds of rubble. Those composed of the latter should be turned over, and any dirt or small parts removed to allow the heat given off to penetrate through the whole uniformly to the bed. Fresh tan should be provided in other cases. If wet, turn it occasionally on fine days. With hot-water pipes beneath about 3 feet depth of tan is ample, more will be needed where such aid is not provided. In most cases it will only be necessary to mix new tan with the least reduced portion of the old, this being sifted and the fine rejected.

Routine.—Suckers started in June will soon fill their pots with roots, and must be shifted into the fruiting pots before the roots become closely matted together. Queens, Envilles, and moderate-growing kinds generally succeed well in 9 or 10-inch pots, those of stronger growth should have 11-inch pots. Water immediately after potting if the soil be dry, not otherwise, and plunge in a bottom heat of 90° to 95°. Crowding young plants is a great mistake, as they become drawn and weakly instead of forming a sturdy growth, a condition that should always be aimed at. Attend to the bottom heat of beds that have recently been disturbed by renewal and replacing of plants, not allowing the heat at the base of the pots to exceed 95° without immediately raising them, as too much bottom heat will disastrously affect plants having the pots filled with roots or those with fruit. Examine the plants for water about twice a week, supplying it only to those in need. Maintain a moist, genial, and well ventilated atmosphere. The change in the weather has produced climatic conditions favourable to growth, so that Pine plants grow luxuriantly, therefore discontinue any shading such as may have been employed for an hour or two at midday, when the sun was powerful through the months of May, June, and this, the plants being given all the light possible, admitting air early, especially after dull periods, and plentifully when the temperature ranges from 85° to 95°. Afford fruiting plants a night temperature of 70° to 75°, 65° to 70° at night sufficing for successional plants. Some suckers should be reserved on the stools for starting in September, but they must not be allowed to become too large, detaching and potting them if necessary.

Cherry House.—The trees have now plumped the buds, and the leaves are not capable of much further effort in elaborating the sap and storing it in the buds and adjacent wood, therefore any undue excitement will cause the trees to start into fresh growth. This must be guarded against by exposing the trees to the influence of the atmosphere so far as the house will admit, as the best means of arresting premature growth, to which the Cherry is liable when forced year after year successively. The roof lights must be removed; t ees in pots should be placed outdoors, plunging the pots in ashes. If the roof lights are fixed ventilate to the fullest extent. The borders must not be allowed to become dry, but have copious supplies of water, and if the trees are weak afford liquid manure. To subdue red spider give an occasional washing with the syringe or garden engine. Promptly subdue black aphides with tobacco water. Trees in pots must be regularly syringed and watered to preserve the foliage in a healthy condition.

Figs. — Early Forced Trees in Pots. — When the second crop is gathered examine the trees for red spider and brown scale; keeping the trees somewhat drier at the roots and the freer ventilation to insure a drier atmosphere tends to an increase of these pests. Now that the wood is firm, and there is less danger of injuring the foliage than at an earlier stage, an insecticide may be used for their annihilation more successfully. A petroleum mixture is very effective against scale, and if softsoap is added it is fatal to red spider. Dissolve 8 ozs. of softsoap and 1 oz. of washing soda in 4 gallons of boiling water, add a

wineglassful of petroleum, and apply when cooled to 100° with a syringe. Keep the mixture well mixed by alternate squirts into the vessel and on the plants, which should be well wetted in every part, and if they cannot be laid on their sides and turned over a little dry moss may be tied around the stem, and a sort of pyramid placed about the plants to prevent the solution soaking into the soil. If the wood is badly infested with scale employ a somewhat stiff brush to dislodge it whilst wet. Similar means may be pursued with the leaves, damaging them as little as possible. In bad cases repeat the treatment in a day or two, afterwards syringing thoroughly with tepid water. The trees will need water only to prevent the foliage becoming limp, ventilating to the fullest extent day and night, but protect from heavy rains, which has a tendency to keep the trees active instead of inducing rest. This is absolutely essential to trees subjected to early forcing. For these considerations early forced potted trees should not be placed outdoors if there is any doubt about the maturity of the wood, and they cannot have complete rest if the weather prove wet. If placed outdoors it must be in a sunny position, and the pots stood on rough ashes with finer about them.

Early Forced Planted out Trees.—Admit enough air to ensure a circulation constantly, ventilating freely by day. If dull weather prevail a gentle heat in the hot-water pipes will favour the ripening of the fruit, which is insipid or highly flavoured according to the heat and air. Diminish the watering at the root and discontinue syringing over the trees, but a moderate air moisture may be secured by damping occasionally for the benefit of the foliage. If red spider prove troublesome heat the pipes on a calm evening to 170° and paint them with sulphur brought to the consistency of cream with skim milk, having the house closed, and keeping the pipes hot about an hour, then allow them to cool and the temperature to fall to its usual degree. Repeat in the course of a week to destroy any pests then emerged from the eggs. As soon as the fruit is gathered cleanse thoroughly with the syringe or engine, freeing the trees of red spider, and maintain a free circulation of rather dry warm air until the foliage begins to fall naturally, but it must not be accelerated by allowing the soil to become dust dry at the roots of the trees.

Unheated Fig Houses.—The fruit is now well advanced to maturity and in some cases ripening. Where it is swelling no pains should be spared to keep the foliage clean by syringing in the morning and early afternoon. Do not syringe, however, if the day is likely to be dull, or in the afternoon if there is a prospect of the foliage not becoming dry before night. Under those circumstances damp the border, especially in the afternoon. Admit a little air early, increasing it with the sun heat, maintaining through the day at 80° to 85° with free ventilation, closing early so as to increase the temperature to 90° to 95°, and when the sun's power is declining a little air may be admitted at the top of the house, so as to allow the pent-up moisture to escape and the temperature to gradually cco'. Supply water or liquid manure to the roots according to circumstances, so as to keep the soil in a thoroughly moist condition. With the fruit advancing for ripening lessen the supply of water and discontinue syringing, securing a circulation of air constantly, and ventilate freely when favourable. Husband sun heat, which will not do any harm if the atmosphere is not confined, a little ventilation being given to allow of the moisture escaping instead of condensing on the fruit and causing it to crack and spot.

Cucumbers.—Pot the seedlings for autumn fruiting as they become ready, placing a stick to each plant intended for trelliswork, and pinching out the point of such as are required for growing in frames or pits, at the second rough leaf. Prepare fermenting materials to afford bottom heat for the latter, and cleanse houses thoroughly, the woodwork with hot water, soap, and a brush, the glass with clear water, and limewash the walls. Remove all the old soil and make everything as clean and sweet as possible. Turfy loam stacked until the herbage is dead, a tenth of charcoal, and a sixth of old mortar rubbish thoroughly incorporated form a suitable compost. If heavy add an equal proportion of fibrous sandy peat to the loam.

If the weather prove cold and sunless it will be necessary to employ a little fire heat, as a low temperature induces stunted fruits, canker at the collar, and mildew on the foliage. Enough artificial heat should be used in such weather to maintain a night temperature of 65° to 70°, and 70° to 75° by day. Sulphur dusted on the foliage is the best cure for mildew, and quicklime rubbed into the affected parts acts well against canker. If aphides appear fumigate in a calm evening and repeat early the following morning. After a period of dull weather shade on a return of bright sun so as to prevent flagging. Keep the growths regularly attended to twice a week, remove exhausted growths, and maintain a succession of bearing wood by laying in young fruitful growths. Close early, running up to 90° to 100°, and ventilate early and moderately, keeping up a good moisture by frequently damping available surfaces.

THE KITCHEN GARDEN.

Potatoes.—A complete change in the weather would appear to be very general, and most probably Potato disease will become prevalent. Those who mean trying the effects of the sucrated bouillie bordelaise will now have good opportunities for so doing. The first dressing ought to have been applied in anticipation of disease, and preferably on a dry day, a second application being advisable about a month later. This season, owing to the forwardness of the crops, early lifting would have been found the best preventive of disease. Once more it may be

pointed out that there is no necessity to wait for the haulm to die down before lifting and storing commences. Once tuber growth has ceased and the skins are set, nothing further will be gained, and much may be lost by leaving them in the ground. Should it be inconvenient to lift the crops just now, be content to draw the haulm and wheel this away. In most fairly warm districts the early and the bulk of second early varietics are quite fit for lifting. Unfortunately, the drought has checked the progress of late varieties in all cases where the soil was poor and non-retentive of moisture, and this will most probably be followed by pro-tuberation. There is no help for this, unless, indeed, the first-formed crop happens to be large enough for lifting. Many of the second earlies will also grow out; but this should be prevented by either lifting or haulm-drawing.

Turnips.—It is not often that there are too many of these grown for winter use, and this scason better opportunities than usual will be afforded for growing extra large breadths. Some portions of the ground cleared of second early Potatoes should be devoted to Turnips, the earliest opportunity of sowing the seed of the latter in quantity being taken. As the Potatoes are lifted the whole of the ground should be forked over, levelled, and all lumps broken down. If this is delayed for a few days the soil will not work so well, and seed sowing be a more difficult operation. Some of the best Turnips for present sowing are Snowball, Veitch's Red Globe, Orange Jelly, and Chirk Castle Black Stone. For the three first named the drills may well be drawn 15 inches apart, 12 inches being ample for the latter. As far as hardiness is concerned Chirk Castle Black Stone is the best, the quality also being superior. If the drills are at all dry moisten prior to sowing, and in any case distribute the seed thinly, or much extra thinning out will be necessary. If birds commence drawing the seedlings just as they are coming through the soil dust the latter over with soot and lime while the dew is on them.

Endive.—Very early raised Endive is not to be depended upon, the bulk of it running to seed prematurely. About the middle of July is a good time to sow, the plants thus obtained attaining their full size before wintry weather sets in, and keeping well when stored. Good forms or selections of Green Curled and the Broad-leaved Batavian are the best that can be grown. Supposing a wall border or sunny plot of rather high ground has been duly cleared of early Potatoes, this should be prepared as advised in the case of Turnips. It is the least trouble to sow the seed thinly where the plants are to remain, the drills being drawn 12 inches apart. Space not being available for this, sow the seed in drills 6 inches asunder, and eventually transplant the greater part of the seedlings, leaving the rest to grow to their full size where they are. Early Endive can also be had by sowing the seed broadcast in beds, and the seedlings being thinned to about 6 inches apart each way, they soon press against each other and are self-blanching accordingly.

Lettuce.—It is yet somewhat early to sow Lettuce seed in quantity with a view to having abundance in the autumn and early winter, but should the next two or three months prove as wet and dull as predicted, then it might happen that the July-raised plants will be extra serviceable. Anyway, there should be no cessation of the pains taken in keeping up a good supply of Lettuce, fortnightly sowings being none too often. With each selection of varieties the Black-seeded Brown Cos ought always to be sown, this variety if well grown being one of the best. These may well follow Potatoes, the plants being raised where they are to remain. Sow the seed thinly in drills 10 inches or 12 inches asunder.

Cabbage.—Coleworts or small quick-hearting Cabbages ought to be already in rough leaf, though if other winter vegetables are scarce more seed should be sown. If these late-raised plants fail to heart in where they are planted thickly the tops may yet prove very acceptable. Seed may be sown thinly in drills 12 inches apart, and the plants allowed to remain where they come up. Now is also the best time for sowing seed of Ellam's Dwarf Spring, Wheeler's Imperial, Little Pixie, Hill's Incomparable, and other favourite neat growing varieties. The plants resulting should be ready to form a close succession to spring sown Onions. The more vigorous varieties should be sown a fortnight or three weeks later, as plants of these when raised early are apt to bolt.

Late Peas.—Now that there has been a welcome change in the weather there is a better prospect of the late-sown Ne Plus Ultra Peas and such like growing more strongly than was the case during the very hot and dry weather. There is, however, no certainty about their holding out till frost intervenes, and if extra late Peas must be had more seed ought to be sown. This time the preference should be given to this season's seed of Exonian, William I., Daisy, Chelsea Gem, English Wonder, or any other good first or second early varieties. New seed germinates the most strongly, the plants throughout being more vigorous than those resulting from old seed. The centres of wide spaces between Celery trenches answer for a single row, or the seed may be sown on other rather high ground, early frosts being most felt in the lower part of many gardens. Moisten the rather deep drills if at all dry, covering the seed with about 3 inches of soil. Surface mulchings and waterings in dry weather are considered of much importance.

TRADE CATALOGUES RECEIVED.

W. Cuthbush & Sons, Highgate, N.—Hyacinths, Tulips, and who Bulbous Roots.

W. & C. Gowie, Grahamstown, Cape Colony.—Seeds and Plants.



APIARIAN NOTES.

NOTES FROM THE MOORS.

Since the bees were taken to the Heather the weather has been wet and stormy. More bees have been lost in a few days than there were last year, there being more inducement for them to fly out, and, owing to want of sunshine, the chilled bees overtaken by the lashing showers never rise. These phenomena in hilly districts are more frequent and extraordinary than in the lowlands. On the 19th, between 1 and 2 P.M., when the sun for a brief period shone out with all her spiendour, the air became suddenly very cold, lasting for about fifteen minutes, with a strong wind at the time. Bees fell in showers to the ground, and I had to take shelter, and retreat homewards.

The bees are anxious to work, the flowers being so profuse, and with but one week's calm and fair weather they would gather large quantities of honey. Swarming with all the untoward weather has been prevalent, proving that the advice to the effect that timely room will prevent it is erroneous. An unparalleled case has been brought under my notice this week. After two or three virgin queens had piped and lived together in one hive swarming took place. It is somewhere about eight years since I stated in this Journal a case where three weeks expired after the queens were hatched before they swarmed, and showed the desirability where profit was concerned of getting rid of all the surplus ones at the earliest opportunity.

Punics.

As usual I meet with bee-keepers from different localities who have their bees near mine. One man accosted me with, "How have your Punics done this year?" I replied, and repeated some of the advice that has appeared in the pages of the Journal of Horticulture. Another person exclaimed, "My Punics have been by far my best hives, both last year and this one." The first who spoke explained "that he put supers upon a swarm a few days hived, and in two weeks after they were filled and prettily sealed." Surely these facts disprove the assertions made against these bees. My prime swarm mentioned several weeks since has increased in weight 45 lbs., excelling my others, nearly the one-half of that being gathered after the weather had broken. There is little necessity looking after their doorways, they contract or extend them themselves as circumstances demand.

There are perhaps some persons who may after all these facts have been published still endeavour to disprove them, but let all who seek after truth pay me and my hives a visit, and they will learn more truth in an hour than in years by merely reading what is said about the Punic bees by writers who have had no actual experience with them.—A LANARKSHIRE BEE-KEEPER.



*All correspondence should be directed either to "THE EDITOR" or to "THE PUBLISHER." Letters addressed to Dr. Hogg or members of the staff often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Bee subjects, and should never send more than two or three questions at once. All articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post, and we do not undertake to return rejected communications.

Bees (F. J. W.).—Your letter is received, and the required information will be given as soon as possible.

National Rose Society's Catalogue (Rosarian). — You will find an answer to your question on page 72 of the present issue.

Light Reading (S. J. A.).—Amusing and refreshing, but should have been sent a day sooner to secure insertion.

Book on Table Decoration (G. W. R.).—"Table Decoration," by William Low, and published by Messrs. Chapman & Hall, London, would meet your requirements. It could no doubt be obtained through any bookseller.

Raw Bones and Chrysanthemums (W. A. M.).—Evidently the bones used as drainage are injuring your plants. Clear lime water will not hurt them, and may, or may not, destroy the maggots. Cannot you carefully turn the plants out of their pots and remove the cause of the evil? It may be tedious work, but will be the best way of improving the plants.

Boronia polygalifolia (L. M.).—You are correct in saying that this Boronia is "comparatively little known," but it is one of the most useful of the genus. In few gardens, however, it is largely grown, but wherever it has been fairly tried the highest opinion is held of its merits as a greenhouse or conservatory plant. Perhaps the best examples of its utility can be seen at Kew in the greenhouse, where during the spring and early summer months plants with quite masses of flowers are very noticeable upon the side shelves. These are borne on corymbose heads, are of a bright rosy-lilac hue, and last a considerable time either upon the plant or when cut. The growth being very free, the plant will endure hard cutting, a valuable quality when flowers are so largely in demand; and though the colour is not so brilliant or startling as that of some plants, it is a shade that can be readily associated with many others without producing any unpleasant discord. It requires similar treatment to other species of the genus.

Heaviest Bunch of Grapes (Young Gardener).—We have many times answered similar questions to yours, and can only repeat that the heaviest bunch of Grapes we have seen, and so far as we know that has been officially recorded, was a bunch of the Calabrian Raisin, weighing 26 lbs. 4 ozs., grown by Mr. Curror, gardener to J. Douglas, Esq., Eskbank, Dalkeith, and exhibited in Edinburgh on September 15th, 1875. A bunch of Syrian grown by the late Mr. Dickson, gardener to J. Jardine, Esq., Arkleton, Langholm, weighed at the same show 25 lbs., 15 ozs. This appeared to be the larger bunch of the two, the berries having been more thinned than the former. Mr. Dickson has stated that the bunch when cut weighed 26 lbs. 8 ozs., so that either it must have lost weight before it reached the show or there was a difference in the scales employed in the two instances. An illustration of this bunch was reproduced in the Journal of Horticulture for December 29th, 1892. Mr. Roberts, The Gardens, Charleville Forest, Tullamore, has grown a bunch of Gros Guillaume weighing 23 lbs. 5 ozs.

Acacia grandis (Amateur).—The plant to which you allude is no doubt Acacia grandis, which is a native of Western Australia. It forms a shrub of moderate size, and flowers freely while small. The stems are angular, grooved, and usually, but not invariably, quite glabrous. The leaves consist of two pinnæ articulated at their base, each pinna being about an inch long, and composed of from eight to ten pairs of linear, alternate, smooth leaflets, the rachis or stalk to which they are attached being flattened, and terminated by a small leafy point. A. grandis is a most charming plant for spring flowering, being at that season loaded with its golden yellow balls; and at all periods of the year its elegant foliage gives it an ornamental character. Its propagation is effected either by seeds or cuttings, usually by the latter method; they should be inserted in white sand, or very sandy soil, and covered with a bell-glass or tumbler. As they are impatient of damp, they require a little more care during the rooting process than those of the leafless species. The inside of the glass should be wiped daily, and as soon as the cuttings are well rooted they must be potted into sandy peat, and eventually into good fibrous peat containing less sand.

American Ginseng (L. B.).—You desire to know something about "American Ginseng, which is highly valued as a medicine by the Chinese." The following extract from a recent number of the "Kew Bulletin" exactly answers your question: -- "The American Ginseng to the natural order Araliaceæ, an order closely allied belongs to the Umbelliferæ. Amongst Araliaceæ are included of very different habits and characters, such as Panax, the tropical Sciadophyllum and Hedera (the common Ivy). Fatsia, quinquefolia, A. Gray, has a low herbaceous stem seldom more than a foot or 15 inches high. The leaves are long-stalked, palmatisect, with usually five leaflets (hence the specific name), arranged in a whorl of three or four at the summit of the stem; the leaflets have generally three larger than the others, they are somewhat thin, obovate-oblong, pointed and serrate. A single umbel of flowers appears on the short, slender, terminal peduncle with small yellowish flowers. The calyx is adherent to the ovary and surmounts it with five minute teeth. The corolla is made up of five small oval white petals which soon fade away. The stamens (when present) are five in number, with small heart-shaped anthers, and there are two, sometimes three, persistent ordinary curved styles. The ovaries expand into small round bright red berries about the size of small peas, each with two seeds. The root (the part used) is tuberous, 3 or 4 inches long and usually branching into two or three tapshaped divisions. It is wrinkled by parallel transverse ridges, and gives rise to a number of fibrous rootlets. The upper portions of the root-tuber show several angular scars, the remains of previous stems which die down annually. down annually. As the roots increase with age they often assume strange forms, and such roots are highly prized, the Chinese readily giving large sums for them. In America the roots are not regarded as possessing active medicinal properties. They have, however, an aromatic bitter-sweet taste, are somewhat mucilaginous, and may have a mild, stimulant, tonic effect."



LTHOUGH the great work that has been conducted for fifty years on the Rothamsted Park estate of Sir John Bennett Lawes and his talented and energetic coadjutor, Dr. J. H. Gilbert, is of agricultural interest mainly, we make no apology for inserting a report of the proceedings on another page in honour of those workers in science in its direct bearings on the cultivation of the soil; nor do we hesitate to make this prominent reference to their services, and the recognition of them that has been won so well. No one interested in the art of cultivation, whether on farms or in gardens, can visit Rothamsted without being impressed with the magnitude of the operations there to be seen, both on the land and in the laboratory. Experiments on almost all kinds of crops with various manures, and no manures, over a long series of years teach valuable lessons. The results of soil starvation and soil enrichment are side by side. The effects of the chief chemical manures, both alone and in combination, are displayed, and it is impossible to ignore the lessons the crops teach. The laboratory work is almost bewildering in its magnitude, and the exhaustive nature and complete records of the experiments evoke surprise and admiration.

Few greater treats can be imagined to the gardener or farmer with an inquiring mind, and a desire to trace results to their causes, than that afforded by an inspection of Rothamsted in company with those who have made it famous all over the civilized world-Sir John Lawes and Dr. Gilbert. The untiring zeal of the former in the work which he instituted, and the remarkable energy of the latter, are not likely to be forgotten by the visitor. Those who appreciate the picturesque, as well as scientific and practical experiments, will find the former in the fine old Elizabethan mansion and its surroundings. Particularly noteworthy is an ancient avenue of stately Limes producing in a natural way an avenue of successors. The arms of the old trees have bent over and reached the ground on each side, and at about equal distances from the parent trunks, taken root, thrown up luxuriant suckers that are developing into straight and stately trees parallel with the originals. It is an interesting example of continuity in tree life and orderly arrangement unaided by the art of man, and is in bold contrast to the art and science which in other directions pervade the establishment. We wish, as will all our readers who have seen the work of Rothamsted, still a long period and usefulness to the distinguished veterans who were honoured last week. Rich in knowledge and experience they are still almost physically young. Dr. Gilbert will shortly start for Chicago to deliver a course of lectures, and he will not meet there many men possessing greater mental and physical activity than himself. His friends bid him bon voyage, and will be glad to see him home again.

COLOURING LATE GRAPES.

THE art of perfectly colouring Grapes of all varieties has long been regarded as one of the most difficult points in connection with fruit growing, and the cultivator who accomplishes the feat is accredited with having performed a highly meritorious achievement. As far as my experience goes it is, however, rare indeed that any cultivator succeeds in bringing a dozen varieties to this

desirable state during any one season, unless the bunches are conspicuously small, in which case the performance would not be a remarkable one, for to come up to the high standard of the present day size of bunch and berry, as well as good form and colour, must be combined.

The peculiarities of each season doubtless render uniformity of quality in Grapes difficult of attainment, because during bright hot seasons black varieties seldom finish so well or retain their colour so long as white ones, while in dull seasons the chief obstacle lies in producing the rich amber tint which denotes perfection in the latter. This difficulty is often largely increased by growing too many varieties in one house, under which conditions it is impossible to give each kind the treatment required Much has, however, been done in recent years to lessen this obstruction by planting in mixed houses only those varieties which ripen about the same time, or require similar temperatures. This, together with the special attention which has been given to Grape culture during the last two decades, has resulted in the production of a largely increased per-centage of well-coloured Grapes. Let those who are inclined to doubt this statement carry their memory back ten or fifteen years, and picture to themselves the comparatively few really well-finished Grapes to be met with at exhibitions and in high-class fruiterers' shops at that time, and then compare their mental retrospect with what they may see in similar places to-day; the result I think will be convincing. There is, however, still room for the good work already begun to be still further extended, till badly coloured Grapes, which were once the rule, become the exception. Given clean healthy Vines, not overcropped, it ought not to be a difficult matter to colour every berry which does not shank in a house in which suitable varieties are planted together, and I believe by paying due attention to the following details of culture, any intelligent gardener may succeed in doing it.

The first thing to be done is to ascertain the condition of the soil about the roots in regard to moisture immediately the berries show signs of colouring. If the soil be in the least dry, a thorough soaking of liquid manure should be given, or one of the many approved chemical manures sprinkled upon the surface of the border and watered in. On subsequent occasions, whenever the soil becomes slightly dry, water ought to be applied till the Grapes are ripe. If liquid manure is given just as colouring begins I prefer to use clear water at later waterings, except in the case of Vines growing in narrow borders crammed with roots. Ventilation is a matter which plays an important part in effecting good colour. There is, I think, too great a tendency to suddenly increase the amount as soon as colouring commences, with the result that a check is given to the Vines at a critical stage, and the prospect of securing coloured Grapes greatly lessened. It is not so much the amount of air given which requires alteration as the time of admitting and manner of reducing it. The practice of allowing the thermometer to reach a given point before ventilation is increased is not a good one. When this is done condensed moisture on the berries frequently follows, loss of bloom being the result. No matter what the temperature may be early in the morning, more air should be admitted before it begins rising, and afterwards increased sufficiently to prevent a rapid rise or decreased to avert a sudden change in the opposite direction. During the afternoon of bright days ventilation should be reduced so as to maintain the temperature between 75° and 85°, allowing a little air to be admitted through the top lights continually, and as colouring advances at the front of the house as well. These tactics should be continued throughout the finishing period, with the slight exception that as the berries ripen the air admitted may be increased in volume, which will, of course, keep the temperature throughout the day slightly lower.

It is a rare occurrence to find well coloured Grapes on Vines badly infested with red spider or other insects, yet the treatment

given by some cultivators during the ripening period is calculated to bring about a rapid spread of these pests, which revel in a parched atmosphere such as many consider it necessary to maintain during that stage. Indeed, I will go still further, and maintain that it is the one weak point which in many instances prevents black Grapes finishing well. Vine leaves which are perfectly fresh and healthy when colouring begins, after being subjected to an unnecessary amount of fire heat and but little atmospheric moisture for a few weeks, become dry, brittle, and altogether devoid of freshness, under which conditions they cannot properly perform their functions. If we take a lesson from Nature's book we find that Grapes on walls in the open air which colour during the damp cold nights of August and September usually become as black as

In order to maintain the foliage in a healthy condition, and thus promote good colour, the floor and stages of the house should be damped three times daily during bright weather, and once on dull days when fire heat is constantly employed. Houses in which Vines of Madresfield Court are growing must have less atmospheric moisture to prevent the berries cracking. The hot-water pipes should be heated sufficiently to maintain the night temperature between 60° and 65° during the next month. Later on, when colder nights prevail, it is better to allow the thermometer to fall 5° lower than to overheat the hot-water pipes to keep up a given temperature. The great consideration is to employ a little artificial heat constantly during the night and on dull days, then the exact degree of temperature kept up is not of much

All white Grapes require a somewhat drier atmosphere during the ripening period than is good for black ones, otherwise the berries became spotted, or "cloudy." Muscats should also have a far greater amount of fire heat than black Grapes. A night temperature ranging between 65° and 75° with a rise of 5° from fire heat on dull days is not too much for them. It is also important that a few of the leaves be tied aside to allow the sun to shine directly on the bunches, but this exposure ought to be done gradually, otherwise browned or shrivelled berries may be the result. Some growers advise Gros Colman to be grown in the Muscat house. In my opinion this is the wrong place for it. I have never seen perfectly coloured Colmans produced in a house in which Muscats were well grown, as the king of white Grapes requires a much greater amount of artificial heat to bring it to perfection than does the most imposing of black ones. Any cultivator whose experience differs from mine in this respect will confer a benefit upon readers of the Journal by recording it.—VITIS.

PRUNING SHRUBS—CLIPPING HEDGES.

It is well known that shrubs pruned during the winter or early spring retaliate by producing an abundant crop of shoots. True, it is often most convenient to do the work connected with shrubberies when the season is least pressing, but in my experience it generally occurs that it requires doing over again before the autumn is reached. I have seen pruning undertaken periodically during the month of April, but this is too late, as the plants operated on are made more or less bare at a season when one expects freshness and beauty. The same results accrue if pruning is delayed till too far in the autumn. There is certain to be a long-standing eyesore, ending only when new growth commences the year succeeding. I find that the month of July and the early part of August comprises the most suitable period of the year in which to prune shrubs profitably. In practice I am not particular as to the exact moment, and, indeed, the time varies according to the exigencies of each season. The chief thing to be observed is that the work be overtaken at a time when growth for the season is practically completed, so that no roughness may appear before another year. At the same time a little growth is made ensuring that fresh appearance which is so delightful in a garden.

There are, however, exceptions. Privet when employed as a hedge requires trimming more than once a year. If left till the general pruning, the growths made during the season are so strong that after being cut there is but little foliage to be seen. The plan with Privet is to cut as often as possible. I have seen it done three times a year with good effect. The oval-leaved form is, perhaps, less unsightly after hard cutting than the common sort, but I clip it also twice a year, in spring and at this period. Hedges of Taxus elegantissima also require bi-annual pruning; if left too long the green has to be cut into, and the beauty of the hedge destroyed for a time. Young Yew hedges are improved by cutting often, therefore it is wise to trim these also twice a year. Holly and Box require trimming once a year only, and if the hedges are old and large a year may be passed without pruning,

and that to their benefit. Some plants require to be treated differently than is usual with most hedges. Thus we have a long hedge of Laurustinus. To prune this with shears would be a sure means of destroying all prospect of flower the year succeeding therefore constitutions and the sure that are the sure that are the sure than the sure that are the sure than the sure that are the sure than the sure that the sure than the sure that the sure than the sure than the sure than the sure than the sure that the sure ing, therefore growths are taken out as they trespass beyond the general contour required. So also with common Mahonia. It is necessary to trim this with judgment, as both flower and fruit are beautiful. We have also a long hedge of White Spruce. This is cut twice a year. All the young growths are shorn at present, and during the spring the hedge is again looked over and

any shoots out of bounds pruned.

Rhododendrons should on no account be left unpruned later than July, and the sooner it is done after flowering so much the better. Rhododendrons may be kept in bounds and flowered profusely by cutting out a few growths every year, or every second year. These shoots ought to be cut fairly well back, so that they may break behind those left and in due course take their place when they also have grown beyond their limit. I cut in Laurels and most other shrubs in much the same way. When once a man gets into the method it does not take more time than cutting back the whole face of the shrubs, and it has the advantage of being less unsightly.—B.

SPRAYING VERSUS INSECT PESTS AND FUNGOID DISEASES.

CONTINUING my remarks from page 73, it should be borne clearly in mind that spraying with fungicides is preventive rather than remedial. The fungus cannot possibly develop upon leaves which have been treated with the concoction, as it is poison to it. This fact then gives us a good idea as to the time of application. True, the prospect of disease this year is not great, but it has made a start. The weather at present is exactly suited to its development, and there is ample time for its ravages. As we have found disease in leaves and tubers contaminating spores will soon fill the air, and to take due precaution in assisting our plants to resist the

attack is our main chance of escape.

Now is the time to apply the solution of blue vitriol and lime, choosing a dry day with as little wind as possible. On no account must spraying be commenced until the dew is off the leaf, as the mixture is thereby diluted, and, moreover, will not stick to the foliage. Two dressings, with an interval of one month, will be sufficient, and the cost does not exceed 18s. to £1 per acre for each dressing, resulting probably in a gain of at least twice that sum. A man cannot do thoroughly more than half an acre a day, unless he has a lad to fill his machine, fetch water, and assist in mixing the stuff. He should also start work with his back to the wind. dressing, when dry, should appear of a whitish-blue colour upon the leaves. For a day or so it may seem to retard growth, but experience teaches me that the vitality of the haulm is ultimately increased, hence the improvement in weight of the crop.

The efficacy of the mixture is already beginning to show itself. We have three acres of land under field cultivation, and two acres are planted with about forty varieties of Potatoes in $\frac{1}{20}$ th acre plots. At the top end of the field a long patch of "The Daniels" planted by the tenant, and these are very badly diseased. We purposely left undressed one perch of each of our forty varieties immediately opposite (a four-yard pathway intervenes) this long strip of "The Daniels." On July 26th no trace of disease could be seen on the plots, but on walking round on the 29th disease spots could be counted by the dozen upon the undressed perches of White Elephant, Surprise, Cosmopolitan, Windsor Castle, Satisfaction, Abundance, Perfection, Stourbridge Glory, Holborn Abundance, Magnum Bonum, The Triumph, and The Daniels. We searched most carefully for spots upon the dressed portion, but none could be found below the line of rods. We dressed again on the 31st as our month was up.

I may in passing give one or two practical hints in preparing and testing the mixture. Be sure and use fresh lime, and slake it just before mixing, as it then sticks so much better to the foliage; use it when warm, and pour it through the strainer of the Eclair into the tub. Never mix in iron vessels, and especially do not dissolve the copper in such, as a chemical action is involved, which gives the mixture a dirty green colour, instead of which it should be a beautiful blue (royal blue).

In preparing the ferrocyapide of potassium for testing take

half an oz. of the lemon-yello r crystals and dissolve in 5 ozs. of cold water. The solution will be ready for use in twenty minutes, and

will last for a very long time.
With regard to the dressing upon Tomato plants, it is almost too late now to apply it with safety, for fruit has in most cases formed and is ripening fast. Such plants should be sprayed before the blossoms fall, as the disease usually first shows itself upon the

older leaves. We must in fact anticipate an attack in accordance

with the season, and be prepared for resistance.

Leaf blight in the Cherry, Plum, and Pear may all be treated to advantage with the same mixture, but for fruit trees several dressings are necessary, and should all be applied before the fruit has quite set, in order that it may not be tainted and ruined in colour. The first dressing could be applied just as the leaves begin to open, and the second directly the blossoms begin to fall. When the second dose is given, 4 ozs. of Paris green added to every 50 gallons of Bordeaux mixture effectually destroys insects and grubs.

Before real progress can be made the Eclair will have to rank as one of the most important requisites of the garden. It is equally useful for insecticide and fungicide work. It ought to supersede the syringe for dressing trees upon walls with the well-known and admirable solution of quassia chips and softsoap, and it should prove invaluable in the application of kerosene and other emulsions to Onion beds with the object of scaring and finally extirpating that terrible pest the Onion fly.—EDWARD H. SMITH,

Warminster.

INSECTS OF THE FLOWER GARDEN.

(Continued from page 25.)

Our flower beds and frames furnish a home to a host of those small and singular insects which have been dignified into an order and called the Thysanura. Science has puzzled itself about their place in Nature; some would join them to the centipedes or the Crustaceans; some think them akin to crickets or dragon flies; others put them near the spiders and mites. Entomologists generally have taken no heed of them, gardeners are mostly unaware of their existence; but the microscopist rejoices over them, for the scales of these insects furnish him with very capital test objects. Formerly the whole group were also called the Springtails. This name, however, was found to be only suitable for part, as they do not all jump or leap, and so they have been divided into the Thysanura proper, and the Collembola. There are other differences, too, besides the presence or absence of the peculiar springing apparatus. All of them show a dislike to light, hence we have difficulty in getting acquainted with their habits; but the Thysanura like warmth, and occur upon dry walls, or in earth and substances not very moist, while the Collembola seem to flourish in damp places, and they suffer nothing from the effects of cold. It is the Collembola that we chiefly meet with in gardens, since they feed upon decaying leaves, or any kind of vegetable matter undergoing change, also upon some fungi, and they occur upon growing plants; sometimes they swarm in our frames, being partial to succulent species. Collembola, though from their minute size they are frequently unnoticed, infest some of the flower beds, attacking leaves near the soil, the crowns or bulbs of plants, as well as some roots, and weaken, if they cannot kill. On the other hand, it is in their favour that they help to decompose substances which become then valuable as manure.

As in all true insects, the body is, amongst the Collembola, divided into three sections—head, thorax, and abdomen; the head bears the antennæ and mouth organs, the six legs are attached to the thorax, and the abdomen has the saltatorial appendage, with its catch and spring. Some have the skin protected by scales, and catch and spring. Upon the heads of some are a number of round others are hairy. colourless points, which have been taken for eyes, but which are really organs of touch. The simple eyes are behind the antennæ, and form two little groups, one each side of the head. mouth we find a pair of fine feelers or palpi and a pair of jaws, which are long, and strengthened by horny muscles; within the mouth is a double and complicated system of teeth, which the insects use far too effectively sometimes upon young leaves and tender rootlets. Amongst these little creatures a few species occur that are blind, yet they, in spite of this disadvantage, move about with activity and decision; probably their antennæ are specially sensitive. Some species have not the leaping apparatus that most possess, which has the form of a sort of fork, having a spring and catch. When we see one of them jump, it appears to us a wonderful display of muscular force perhaps, yet it is not so much by effort that it is made as by the elasticity of the spring, and in this way force is economised. Sir John Lubbock has remarked that many people might suppose that in these insects, and in some of similar habit, the condition of inactivity was one of repose, though the muscles might be ready to move at the slightest impulse, but he thinks the position of rest is one of high tension, there is then a conflict of opposing forces, which for awhile balance each other. He takes, for comparison, the case of certain Orchids, where the part of the flower which insects visit is not close to the pollen, yet the plants depend on insects for fertilisation. In Catasetum there is found a long sensitive (process, which overhangs the place where insects are likely to settle, so that when they arrive it is almost certain they will touch it. Immediately they do this the flower starts into action, and throws its pollen masses in the direction of the insect, with such force that they will travel 2 or 3 feet. It is evident, therefore, that the plant is on the qui vive, just as an insect might be, waiting to put forth its power at the moment it is needed.

Returning to the Collembola we notice the singular fact that species which are leapers, and those which cannot leap because they possess no spring, are often to be found in company under the same piece of board or amidst a little pile of decaying leaves. More than that, some of those having the ability to jump occur in localities where leaping performances are hardly possible. The present season, owing to its dryness, has not been favourable to the increase of the insects; one who has studied their habits reports that they are speedily killed by a weak solution of salt. Smynthures fuscus, about one-tenth of an inch in length, is one of the largest of the tribe, and feeds chiefly on fungi upon trees, fences, or elsewhere. Its relative, S. viridis, which has green eyes and red antennæ, prefers lawns and borders, where it occurs from May The species of Papirius are very active, running and to September. jumping gracefully; they have globular bodies and long antennæ, in colour some are brown, some black and green. It appears that in the summer they frequent damp wood, but during the winter months they may be sometimes detected on the leaves of evergreens and other plants in gardens.

In the genus Degeeria hairs replace scales; some of these hairs are club-like, and others resemble a bow, and have even a seeming notch at the end, representing that to which the string is attached. They have sixteen eyes, and the body is prettily mottled. Upon some of the old-fashioned wooden edges to flower beds which one comes upon now and then the Degeerias occur abundantly, above and beneath the soil. Orchesella cincta is also without scales. This is a common species amongst dead leaves, which it helps to disintegrate; in colour it is black, barred with yellow, sometimes entirely black. Larger than most of its kin is Tomocerus longicornis, named from its long antenne. It is well equipped in lead-coloured scales, and can brave the cold of winter, even when severe.

The species of Seira are scaly, some of them dark hued, some have bright metallic tints; they are rather partial to conservatories and hothouses. One that is rare, called S. curvicollis, has a thorax projecting over the head, which gives the insect somewhat of the aspect of a hippopotamus. Lipura fimitaria requires no leaping apparatus, since its life is passed in feeding upon the roots or underground stems of plants; it is white and velvety, short-legged and stout, quick in movement, though we often turn up small parties of them when digging or hoeing. Quite different in colour is Anoura muscorum, being dark purple, about one-fourteenth of an inch long, dotted over with points arranged in rows (as a magnifying glass shows us), the mouth has a sucker and not jaws. It seems to lodge under the bark of shrubs, and in the joints or hollows of stems, but does not appear to be particularly hurtful. One more species I may mention which occurs in damp earth, but has a preference for the warmer corners and sides of our beds; this is Campodea staphy-linus, a soft white, narrow-bodied insect, having neither scales nor eyes, and which many persons might regard as a mite.-ENTOMOLOGIST.

EASTERN LILIES.

Under the above title, which has the merit of comprehensiveness, are included the Liliums of the Levant, of Siberia, Persia, India, China, and Japan. L. candidum, one of the most beautiful and perhaps the most familiar of Lilies, is Levantine, davuricum or umbellatum is Siberian, giganteum cordifolium is a native of the Himalayas, tigrinum comes from China, while auratum, longiflorum, and speciosum are of Japanese extraction. The American Lilies are for the most part interesting hybrids, and the Bermuda Lily, Lilium Harrisi, is just the Japanese longiflorum, as I learn from Dr. Wallace of Colchester, somewhat modified and improved in appearance and productiveness by tropical cultivation. But it is not more impressive, as experience has proved to me, than Lilium longiflorum giganteum, which comes to this country direct from Japan. This variety, though its name is somewhat similar, must not be confounded with the great Himalayan giganteum, which I must confess to have found somewhat disappointing. I planted it in a finely sheltered and otherwise congenial situation last November, and attended most faithfully to the instructions of Dr. Wallace regarding its cultivation, yet, owing perhaps to the exceptional dryness of the summer, it only attained to a height of 4 feet. It, however, produced several magnificent blooms (ivory white with violet-crimson streaks), which was undoubtedly a great consolation. Nevertheless, I think this Lily is over-estimated, when I compare it with the much more beautiful Lilium auratum or Golden-rayed Lily, which is now in full bloom. Its flowers are unusually large with me this year, being in many instances 12½ inches in diameter. Among other species that grow luxuriantly with me are candidum, davuricum, croceum, tigrinum, Thunbergianum

(or "elegans"), martagon, longiflorum, and speciosum; of the last mentioned I have several exquisite varieties, such as album, roseum, rubrum, and Kroetzeri. Of all the speciosums I am persuaded that Kroetzeri is by far the most valuable; its colour is the purest white, it is very prolific, remarkable for durability, and easily grown.

The Lily is now, even as it was in the days of William Cowper, the

rival of the Rose. If the latter is the queen the former is assuredly the empress of flowers. I admit that the Rose for brilliancy of colour and perfect sweetness of fragrance is not surpassed; but for stateliness, imperial majesty, and imposing splendour of aspect there can be no rivalry with the Lilium auratum. No flowers are more impressive in their perfect purity and beauty than Lilium candidum and Lilium longiflorum. How deeply we regret the absence of these when their season, always too transitory, has passed; when, like the last Rose of summer, they are "faded and gone." During their short-lived reign they seem to make the very atmosphere of our gardens more exquisitely pure. No picture can delineate the full expressiveness of their beauty; they have a charm of sweetness most sacred in its meaning which no pen can describe, because they are the work of a mystic ineffable art our utmost efforts fail to find.—DAVID R. WILLIAMSON.

POCKET-BOOK NOTES.

THESE jottings will not be of much account, they can be private if you like, but I thought I would write them just to say that this week's Journal of Horticulture is more than usually interesting. Some numbers are so, at least they are so to readers, if not to editors and compilers.

To begin. I enjoyed "An Anglo-American Day" thoroughly, and in imagination formed one of the very pleasant company who had such "a good day" in such an unique round of visits. "Orchids" I do not indulge in, I am a spade and wheelbarrow man, and "Spraying" has not yet become one of my round of duties.

The Rose correspondence I enjoyed immensely. It carried me back to the days of nearly forty years ago, when I showed my first Roses, large, full blown, and to me glorious, but which the Judges refused to look at, to my disgust and inward wrath. Fortunately for me a good rosarian, one of the best the midlands has produced, though only a working man, came across me in that state of indignation, and he most kindly but faithfully, very faithfully, as I felt at the time, showed me where I was wrong, and that Roses should be cut and staged in all their maiden leveliness. Or as Mr. Charles I Grahame gays page 73 quoting where I was wrong, and that Roses should be cut and staged in all their maiden loveliness; or, as Mr. Charles J. Grahame says, page 73, quoting from the N.R.S. definitions of a good Rose, "in the most perfect phase of their possible beauty." The lesson I never forgot. I trust Mr. David R. Williamson may be as benefited by the plain speaking of his brother rosarians as I was. Through a long life I have found that these friendly rebukes, though at the time somewhat hard to bear, are the best things that could come to us.

"Parsley for Winter and Spring" is a timely little note. I always sow a frame, or part of it, of nine lights in which I grow my earliest Potatoes, with Parsley about midsummer, and the other part with Lettuces, &c., for winter a little later. This gives me an unlimited supply of Parsley all through the winter and spring. A friend and neighbour of mine always throws a pinch or two of Parsley seed about August on the soil of his orchard house, and thus gets over the difficulty of a scarcity of it in a hard winter.

"Notes and Gleanings" I usually read first, and this week one of them gave me a shock, for, though a near neighbour, I had not heard of the illness of Mr. Pithers of Chilwell, and the news of his death startled me. I can emphasise all you say of him and more, for he was one of the pleasantest of companions, not only in a gardening tour round his beloved Chrysanthemums, but also in a friendly professional confab with a few gardening cronies. Amongst these he could let himself out and give and take with the keenest enjoyment.

"Scarlet Runner Beans Not Setting." This fact is rather prominent this season, and I think we must look to the absence of bees to account for it. I have amongst my gardening scraps notes of a paper by Professor Henslow given some years ago, in which he demonstrates quite plainly that this family of Beans must be pollenised by insect agency in this country, or they will be inevitably barren; the construction of the flower making it so. This was only the case with respect to the Runner Bean, the form of the flower of the Dwarf Bean being quite different and self-fertilising. The subject is worth discussing.

In 1855, in Sir Joseph Paxton's days, I made the same journey from Sheffield to Baslow and Chatsworth which "W. P. W." did, and I enjoyed going over the old route with him, in his visit to Chatsworth, our "Palace of the Peak." I have never forgotten that visit and never shall, and, though "W. P. W." has seen, and will see, many other gardens, I do not think he will see another Chatsworth. By this, he and you will see that one person enjoyed reading pages 80 and 81 and you will see that one person enjoyed reading pages 80 and 81.

I must not go on, though the reports of the shows are deeply interesting, that of Trentham very much so. Reports of shows have a

tendency to become monotonous and wearisome, but those of the Journa of Horticulture are exceptions, inasmuch as that the Editor allows the personality of each reporter to appear more fully and pronouncedly than do the Editors of other gardening papers. The blue pencil does not dash out all original expressions of opinion, thus leaving the report as if done by a machine, and therefore there is in their reports a freshness and brightness often absent in others.—P. H. N.

PECULIARITIES OF APHIS LIFE—EAST WINDS.

I BEG to thank "Entomologist" for his note on this subject, on page 505 of the last volume. He is quite right in presuming I spoke of A. Pruni as the Plum aphis, although there was some difference of opinion as to the species when I introduced them at a meeting of fruit growers at Evesham, in February, 1890, from Prune Damson trees growing in an exposed orchard. A gentleman who had a copy of Mr. Buckton's excellent work wrote me afterwards confirming my opinion. It cannot be too deeply impressed on the minds of fruit growers that these mothers of millions in future generations are exposed on the unopen buds at the base or neck, taking their nourishment at the only vulnerable point of attack, and that applications of strong insecticides will not injure the buds at that time. I have tried experiments on some trees, leaving others untouched, and as the seasons advanced the contrast was most marked. I do not, of course, deny that aphides take flight when at maturity, and spread themselves to "fresh fields and pastures new;" but the general or popular delusion that they come from some mysterious place in the "east winds" is exploded, so far as I am concerned. Many I have seen on flight on a warm still day, and the wind south-east; but the source is not far to seek on examining the back of the foliage of Plum trees.

As an illustration as to the popular idea respecting this kind of blight, perhaps I may mention one case which came under observation about a month ago. A man who has a few acres of orcharding called on me. I asked him about fruit prospects, and his reply was to this effect, if not in exact words, "Oh, the Plum trees are all 'shrimed' up with blight, and the bloom all fell off. I wish you would come and see them, and tell me what I am to do." I said it was too late to do much good, as the aphides were then inside the curled foliage. If he had attended the lectures in the village in February and March and seen the mothers on the buds and specimens under the microscopes as others did, and took action, he could easily have counteracted the attack to a great extent, if not entirely. As usual in such cases he commenced blaming the "east winds" in spring, yet, as everybody knows, we had less east wind and so-called "blight clouds" and more blight than usual, on account of the warmth and dry weather. I then pointed out Plum trees on walls east, west, north, and south all free from blight, or nearly so, saying at the same time if east winds were the cause surely it would have caught some of them. I next called his attention to the streaks of lime, soap, and petroleum below the branches, the residuum from the spring dressing, as the preventive to the "east wind" notion and where blights come from. I then took him into the house and showed him the viviparous mothers and their families of young wingless aphides in all stages of growth, remarking at the same time they could not have come in east winds, as they had no wings to fly with from the mysterious unknown source. As this was his first acquaintance with a microscope he was much interested in the matter. At my leisure I gave him a call (three miles away), and found his orchard and garden trees in a sad plight from aphides and caterpillars of the winter moth. He called my particular attention to a Hawthorn hedge, which was blighted and brown as if scorched with fire for a distance of about 20 yards, he asking how I could account for that. I took off a few shoots with the curled foliage, and showed him the caterpillars in the rolled leaves as they came tumbling out on being stirred. I again referred him to the east wind notion and blight, pointing out that almost to a foot the hedge was protected from the east winds by buildings where it looked so bad, and that the moths when laying their ages much have been very coreful not that the moths when laying their eggs must have been very careful not to expose themselves and their future progeny to its influence, and that the surrounding hedges exposed to east winds were free from blight.

There is another popular idea respecting aphis attack that I do not agree with, over which I have had many contentions in a friendly way with some of the best gardeners—viz., their preference for unhealthy trees and plants. My experience is that they "go for" the best and most succulent, and that by degrees they bring the plants into the bad condition by sucking the sap to such an extent as to bring them into a decrepit state before they are noticed, or before steps have been taken to save the plants or trees. The worst attack I have met with from Aphis pruni I can safely say is at the Toddington fruit plantations, and I sincerely hope experiments will be made early next spring with Messrs. Stott's killmright at the right time before the bloom is open, dressing alternate trees or definite lines, leaving others, and I have no doubt as to results in the following summer.—J. HIAM, Astwood Bank.

NOTES FROM IRELAND.

THE Royal Botanic Gardens, Glasnevin, two miles north-east of the city of Dublin, are of easy access by tram which passes the gates, before reaching which, Prospect Cemetery, bounding the gardens on the south is passed. A conspicuous landmark is the lofty monumental tower marking the last resting-place of O'Connell. In the Botanic Gardens many fine and rare trees and shrubs stand as memories of the late curator

Dr. Moore; the same good work is carried on and kept up to date by his son, the present curator, pro bono publico, and how much the public avail themselves of the privilege statistics show by the ever-increasing number of visitors, though you may be stopped by the official-looking janitor at the gates and bid inscribe your name in the book. This time I slipped in unchallenged, but was immediately arrested by a fine Paulownia imperialis with a grand timber-like trunk; this would be worthy of a special visit when in flower, but I fear that, as in England, spring frosts are its bête noir.

Hunting up Mr. Moore's lieutenant, whom I had met a few hours previously at the Royal Horticultural Society's Summer Show arranging one of those fine groups which so materially aid our exhibitions, we enter the new Palm house, 100 feet long, 60 feet wide, 66 feet high, well furnished with fine specimens. One notable example of the Sago Palm sweeps up to the roof, and as I look up the 66 feet, Mr. Pope looks back on forty years and speaks of the time he had carried it himself from one house to another. Very noble, too, is a giant Bamboo rivalling the Palm in height; here also are the Browneas, not now in their gorgeous inflorescence. The abrupt ending of this house in a heavy wall is not a pleasing coup d'æil, but Begonias and the Monstera are at home on it and Tradescantia very much so.

From here we enter the Fern house where, amongst the many plants, Davallia Mooreana, 8 feet through, stands pre-eminent, and the quaint Conifer-like Lycopodium squarrosum from the Himalayas claims attention. The next division contains Orchids, including some large Sobralias, of which xantholeuca is in flower and also the deep rich Cattleya Sanderiana. Cypripediums are largely represented. Parrishi is fine, and very pretty is Trichopilia Wagneri with pale green sepals

and white lip.

The curvilinear range, 350 feet long in five divisions, contains a vast collection, that of Bromeliads being the largest extant. Succulents, too, are in vast array. Napoleona (Bonapartea) imperialis is a fine Citron-foliaged shrub with a Passion-flower-like blossom, and very pleasing are the soft pale yellow blossoms of Bignonia Chamberlaini. Illumining a back wall in one division is the golden Cassia lævigata. Leaving this range the aquatic house comes next, where the Victoria regia rightly holds sovereign sway, whilst floating round the outer leaves Pistia stratiotes, the Water Soldier, acts as a guard of honour to the Water Queen, a small overshot wheel fed by a pipe keeps the water in circulation; huge plants of Caladiums, exceptionally fine, stand on the edges of the tank and side stages, and Nymphæas rosea and coerulea are in beauty inside and outside in an overflow tank; near this house is one devoted to tree Ferns.

Entering the private grounds "Mums" (unworthy abbreviation, why not Chrysanths?) are in strong force, and call forth some notes of admiration from me while my guide strikes a discordant one by asking, "Are they worth the trouble?" But he regards with such an air of fatherly affection the sturdy brown legs of his 600 children that I conclude without resorting to the argumentum ad hominem that we are both on the one side. In the private houses is a fine collection of Odontoglossums and Masdevallias. Mr. Moore has an army, some in flower, more curious than handsome, and though it may be heresy to say so, here in the cool temperature is the prince of Pitchers the Rajah, the only plant in Ireland. Alas! that it should be so. To describe "His Highness" I should say that he is short and stout, yet withal having a dignity quite his own, holding the same position in the great family of Nepenthes that the Eastern potentate does to his subjects, an idea helped out perhaps by the "gobble you up" appearance of the brown - hued pitchers, hence perhaps the reason for guarding a magnificent Cephalotus with a bellglass, and preventing a catastrophe. Darlingtonias and Droseras are en masse. A house of Filmy Ferns is fine, with grand Todeas, a cartload of the Killarney Fern, and many choice Hymenophyllums. Another house is filled with choice Zonal Pelargoniums and Tuberous Begonias over which my friend lingers lovingly, but I have trespassed long enough on his time, two hours have slipped by all too quickly but very pleasantly.—E. K.



SOBRALIA LEUCOXANTHA.

This beautiful Orchid does not appear to have become very plentiful yet, judging by its non-appearance in many collections, notwithstanding that it has been known to specialists for some years. The plant is dwarf in habit, the slender stems 1 to 2 feet high, bearing plicate leaves like those of other better known Sobralias, and the flowers are clustered near the apex of the stem. It is related to S. macrophylla, but must not be confounded with S. xantholeuca, also a valuable and handsome plant bearing pale yellow flowers.

When well grown the flowers are really handsome. The sepals on some blooms I have are nearly 3 inches long and 1 inch broad, massive, pure white, and recurving. The petals are of similar length and breadth, slightly recurving, not quite so thick as the

sepals, but pure white. The lip is partially tubular, the tube 2 inches long, the limb rounded one-half to three-quarters of an inch across, and beautifully frilled, rich orange, yellow in the throat fading to the margin, which is pure white; the base of the lip and the column are also white. Each flower is very neat in form, the wax-like substance and purity being beautifully relieved by the dash of orange in the lip. An illustration of this charming Orchid would doubtless interest your readers.—Specialist.

[The engraving (fig. 15) depicts a bloom of Sobralia leucoxantha.]

NEW ORCHIDS.

Among other interesting features of the July number of the "Kew Bulletin," a copy of which has come to hand, are some notes on "New Orchids." Ten species that have flowered at Kew or



FIG. 15.—SOBRALIA LEUCOXANTHA.

have been determined there are described, and as being of special interest to our readers we extract the four notes which follow this paragraph.

POLYSTACHYA IMBRICATA.

This species was sent by Mr. J. O'Brien of Harrow-on-the-Hill, Middlesex, with whom it flowered in August, 1891. It may be placed near to P. ensifolia, Lindl., which, however, has much longer leaves and a lax inflorescence. There does not appear to be any species with which the present one can easily be confused. The sepals are pale yellow, the lateral ones suffused with pink along the margins; the petals straw colour, and the lip pink, with a yellow callus, and wholly pubescent inside.

ONCIDIUM LUTEUM.

This Oncidium flowered in the collection of Sir Trevor Lawrence, Bart., Dorking, in June, 1892, when it was sent to Kew for determination. It is closely allied to O. chrysopyramis, Rchb. f., but that species has invariably a broader isthmus to the lip, and a few other structural differences which seem to indicate the distinctness of the present one. Its flowers are uniformly light yellow, and borne in a large lax panicle. It belongs to a group of species in which the column and its elongated rostellum resemble the head and beak of a bird, from which one of the species, O. ornithorhynchum, Kunth, derived its specific name. Lindley distributed the species into four or five different sections, but they are so intimately allied as to leave no doubt of their forming one natural group, which may bear the name Rostrata (a name used by Lindley in a more restricted sense). About twenty species have been described, but several of them are still very imperfectly known.

HABENARIA CINNABARINA.

This species was introduced by Messrs. W. L. Lewis & Co. of Southgate, together with Disa incarnata, Lindl., and Cynorchis grandiflora, Ridl. The colour of its flowers is rather unusual, being cinnabar-orange, with a few red spots on the back of the sepals, and thus resembling those of Disa incarnata from the same locality. The plant here described has nine flowers and buds, but appears as if very imperfectly developed, and normal specimens may be much larger. It is very different from everything hitherto described from Madagascar, so far as can be discovered, but its exact affinity remains a little doubtful.

LUISIA AMESIANA.

This species was sent to Kew by Messrs. Hugh Low & Co. of Clapton in June, 1891, who state that it was imported together with Vanda Kimballiana, Rchb. f. Thus its habitat must be on the hills of the southern Shan States, at 4000 to 5000 feet elevation. Shortly afterwards it was sent by Messrs. F. Sander & Co. of St. Albans, who gave its native country as "Burma." It has since been received from Glasnevin. It is allied to L. macrotis, Rchb f., but has flowers more than twice as large. The sepals and petals are pale yellowish white, slightly suffused with purple near the apex, and having a few obscure dull purple markings on the back. The lip is suffused with purple, and blotched with dark purple, the margin being light greenish yellow. The column is pale green.

ORCHIDS IN THE OPEN AIR.

As many readers of these pages are aware, Orchids have for a long time formed a special feature at The Grange, Carshalton, the residence of A. H. Smee, Esq., whose name is well known in horticultural circles, and on a recent visit to "My Garden" it was seen that the enthusiasm in this respect had by no means abated. Mr. Smee is apparently as fond of his Orchids as he is of his fruit, and in Mr. G. W. Cummins he has an able cultivator. Several houses are devoted to Orchids, and a large collection has been brought together. The plants, moreover, are for the most part remarkably healthy, and when in flower doubtless produce a bright effect.

The most noteworthy feature in regard to the Orchids at "My Garden," as Mr. Smee terms the beautiful grounds attached to his house, however, is the fact that hundreds of them are grown in the open air during the summer. This is not news to old readers of the Journal, inasmuch as references to this fact have frequently been made, and an illustration appeared in the issue for October 30th, 1884, demonstrating clearly the method in which the Orchids are managed. Much the same exists at the present time, and a sojourn outdoors for a few months proves so beneficial to the plants that Mr. Cummins adopts the plan every season. It must not be imagined, though, that everyone "may go and do likewise." Were such the case it is very probable that thousands of Orchids would annually collapse, for, notwithstanding that some species are easy to manage under glass, they quickly resent any sudden and extreme climatical changes. This, of course, is known to most Orchid growers, and, therefore, it is not at all surprising that they are sometimes slow to adopt new ideas in preference to oldworld plans. But, as already remarked, it has been proved that Orchids can be grown outdoors during the summer under favourable circumstances.

In the garden alluded to there are facilities that cannot be found in every establishment. "My Garden" is charmingly situated, being well watered and intercepted by several small streams from the river Wandle. Dells and winding walks exist, and these, being covered with a canopy of foliage, form excellent places for the plants. No drying winds and scorching atmosphere, the bane of Orchids, can reach the plants. On all sides Ferns luxuriate, and the plants are placed on open lathed platforms directly over and at about a foot from the water. Several hundreds are subjected to this treatment, and the whole of them appear to revel in the cool moist surroundings. In one dell, amidst trees which afford abundance of shade, we find a collection of Masdevallias, some of which are in flower, whilst in another part of the garden may be seen a group of Odontoglossums in variety. Lycastes, too, and numerous cool-house Orchids are placed in the positions indicated during the summer. Most of the plants present a healthy appearance, so different to the sickly hue which is a characteristic in those kept under glass during scorching weather.

All kinds of Orchids are not, however, subjected indiscriminately to the open air treatment. Years of experience have taught Mr. Cummins what plants will do well under such circumstances, and those that will not. The latter are kept under glass, together with the kinds that require a warmer temperature than can be obtained under natural circumstances in this country, even during an exceptionally "favourable" summer. In the latter category we may place Cattleyas, of which the best and most choice forms are

grown. Last week several were in flower, including the beautiful C. Mossiæ Hardyana. Cypripediums are well represented, and the same may be said of other Orchids. Arranged in a charming fernery many of them make a fine display when in bloom.—C.

NOTES BY THE WAY.

There are pleasant examples of English scenery around the little Sussex town of East Grinstead, north of which lie the Surrey hills, east Ashdown forest, and southwards the South Downs; there is therefore little wonder that the locality has tempted many wealthy Londoners and others to establish estates in its vicinity. The breezes which sweep down from the forest are robust and invigorating, carrying, perhaps, a little ozone from the salt waters lying some twenty-five miles beyond them. Possibly they are a little too convincing in the winter and spring, but even then their influences cannot be very malevolent, otherwise there would be something less significant of healthfulness than the death-rate of under ten per 1000 to which Grinsteadians now proudly point. For these reasons, not less than for the fact that there are many places of interest in the neighbourhood, horticulturists of a wandering turn may do far worse than spend a few days in the little town near the Surrey border.

There was a time when a gardeners' society existed there. Neighbouring blue aprons lifted up their voices in instructive intercourse with their fellows, shook their heads sagely over knotty problems, pulverised trembling opponents with eloquent invective, and brought examples of their skill as ramrods to drive home the bullets of argument. Where is that Society now? Why is the council chamber empty; the Demosthenes and Ciceros of the locality silent; and all things in a state of stagnation? I visited Grinstead in days gone by, and there was talk of meetings and shows, of papers and discussions, of competitions and medals—everything, in fact, to stir up gardening talent and give gardeners something special to think and talk about as well as to work for. I return; and, lo! the meetings are no more, the papers unwritten, and the cobwebs settling down upon the brains of the orators. It is a sad change, and it is natural for a visitor to wonder what has brought it about.

But wondering is not knowing. Trouble appears to have arisen in various ways. The excellent President, Mr. George Truscott, took unto himself a wife, and fixed his quarters in the neighbouring county. Another official took something else and also quitted the scene. Active members became disgusted with the supineness of the majority, and it is a fact worth noting that the greater number of the members of most associations consider that those who are willing to work for it and them are honoured by being allowed to do so. From these and other causes things went wrong, and the end of it was that the Society's affairs were wound up, and its career of usefulness terminated. Gardeners of Grinstead, this is not well. When Greece fought Troy she lacked the services of only one of her great warriors, but here all play the part of Achilles, and there is no one to carry on the work so well begun a few years ago. If there were no good men in the neighbourhood this state of things would not be so surprising, but there are numerous fine places and practical men, besides the usual complement of cottagers and amateurs.

There is Dunn of Oakleigh, a smart young gardener and generally intelligent, cut out for a secretary if there ever was one; Simmons, gardener at Mr. Murchison's beautiful place, whose speeches are still talked about; Glen of Brambletye, a canny Scot, whose native shrewdness has been sharpened up by a sojourn amongst the Yorkshire Tykes; Draper of Plaw Hatch, a gardening Lawson in his mixture of wit and wisdom; Harris of Hammerwood, a first-rate vegetable grower; Jupp of Felbridge, whose Conifers are something to be proud of; Boland of Imberhorne, whose special qualities I have had no opportunity of finding out; Prentice of Paddock Hurst, about whom I am equally ignorant, and quite a number of men in smaller places. Here is material enough for a practical set of officials and working committee to begin with. Why do they not set to work and make a fresh start? With a long pull, a strong pull, and a pull altogether the Society could be put on its feet again. Who is going to take the lead?

Mentioning these gardeners and their places suggests to me that a few jottings about them may be of interest. I will not study any order of precedence nor attempt formal reports, but make a few random remarks about them as they come, beginning with Oakleigh. This is the residence and estate of Sir Francis Wyatt Truscott, ex-Lord Mayor of London, prince of printers, director of railways, and otherwise a very prominent figure in the higher City circles. His house is a delightful one, standing on high ground and commanding a splendid view of the surrounding country. The establishment might almost be termed a model one, every department being in admirable order. The work of development and improvement has been carried out on substantial lines. There has been no jerry-building or cheap-jack fitting, but everything looks solid and enduring. The fields are well fenced, the cottages handsome and well built, the stables, outbuildings, and garden walls thoroughly constructed, the vineries, Peach houses, and garden fittings generally of the best type. It is quite clear that Sir Francis is a firm believer in good work, not caring for tinsel and flashiness.

If there is one thing in the gardens likely to interest gardening visitors more than another it is a splendid fruit cage constructed against the northern wall of the kitchen garden. About the wall itself there hangs a story. Though substantially put together it is much exposed, and a considerable portion of it was blown down by a terrific hurricane two or three years ago, carrying with it, of course, the promising line of cordon trees which Mr. F. Dunn, estate manager and gardener, was beginning to look upon so proudly. Pride goes, we know, before a fall; in this case it was the wall and not the grower of the trees who came to grief, but no doubt he sorrowed extremely for all that. All good gardeners grieve to see evil come upon the property of an esteemed and respected employer as much as they do upon the week of their own handiwork. The wall fell, like the society before referred to, but Oakleigh knows no failure. In a short space it rose again, better and stronger than before, fresh trees were planted, and once more the chest measurement of the gardener increases as he gazes upon it.

I return to the cage, which is really something out of the common and worthy of special attention, for such a fixture would be of the and worthy of special attention, for such a fixture would be of the utmost value in any garden. It is 216 feet long and 12 feet wide. The wall is 12 feet high, and from it projects a glass coping 2 feet 6 inches wide; the cage arching gracefully from the coping to the ground. These figures will show that it is spacious, and "cage" is perhaps hardly the word to apply to it, especially as the birds have no chance of becoming acquainted with anything more than the outside of it. Two-inch galvanised iron piping, painted black and fixed beneath the front of the coping, constitutes the supports, and angle iron arches perforated for the strand wires sustain the covering, which is of \(\frac{3}{4}\)-inch mesh wire netting, the strand wires being about a foot apart. There is a netted door at each end, and completeness is added by the spouting connected with the coping, by which rain is conveyed to a pipe emptying itself into a tank in one corner.

The advantages of such a structure as this are pretty obvious. The smallest bird which British fruit growers have to contend with has no chance of scraping its hungry body through the netting, nor can the most wily member of the feathered tribe imitate the small boy outside the circus and gain admission by crawling under. It is clearly a case of "no admittance" to thrush and blackbird, sparrow and finch. Wasps are not debarred of course, nor moths and other egg-laying pests, but all such have a watchful enemy. Moreover, the coping acts as a protection to the wall trees. One improvement, and one only, suggests itself, and that is to have this moveable, so that it might be raised to admit genial showers to the border. A batten path is provided, which can be readily removed to permit of cultural operations and does away with the disadvantage of a hard, trodden walk.

A large amount of choice dessert fruit may be grown in a cage such as this. On the back wall at Oakleigh is a collection of cordon Pears and Plums, flanked by an Apricot cropping heavily at each end. The cordons were planted in October, 1891, after the rebuilding of the fallen wall, and have made remarkable progress. But they have been well treated. The soil was removed to a depth of about 2½ feet, and fresh loam resting on a foundation of lime rubbish was substituted. The trees were planted firmly 18 inches apart, and well mulched. No manure was put in the soil. The result is that they have made free but fruitful growth, and are now bearing good crops. The Plums but fruitful growth, and are now bearing good crops. The Plums—Jefferson's, Cox's Emperor, Peach, Washington, and Prince Englebert—are full of fruit. The Pears comprise Thompson's, Duchesse d'Angoulême, Zephirin Grégoire, Doyenné Boussoch, Beurré Bachelier, Doyenné du Comice, Bergamotte Esperen, Calixte Mignot, Beurré d'Anjou, Clapp's Favourite, Beurré Diel, Beurré Superfin, Princess, Glou Morçeau, Pitmeston Duchess, Louise, Benne of Jersey, General Teddleben, Jersey, Pitmaston Duchess, Louise Bonne of Jersey, General Toddleben, Jersey Gratioli, Vicar of Winkfield, Beurré Alexandre Lucas, Maréchal de Cour, and Durondeau-by no means a bad selection.

The front portion of the cage is devoted to choice Cherries, Gooseberries, and Currants. Cherries of such varieties as May Duke, Late Black Bigarreau, Black Tartarian, Elton, Early Rivers, Royal Duke, and Bigarreau Napoleon are trained to the angle iron supports; and Gooseberries are being trained toasting-fork fashion up the netting. A row of Gooseberries is planted behind them, and further in the interior is another row, planted alternately with Black, Red, and White Currants. At present these are young bushes bearing light crops, but when they have filled their allotted space they will give a very acceptable supply of fruit. So much satisfaction has the fruit cage given that there is talk of erecting another one against a wall with a west aspect. If this sort of thing goes on it will be bad for the neighbours, as the birds will flock to them in disgust.

The Oakleigh gardens are in excellent order throughout, and Mr. Dunn need not be afraid of his work being seen. The Peaches and Vines are particularly well done, being a wonderful contrast to the condition they were in when I saw them on his taking charge five years ago. They are now well furnished with healthy growth, and bearing excellent crops. The early Peach house, in which are two large trees of Barrington and Violette Hâtive, have yielded magnificent fruit, which, if exhibited, would have taken a great deal of beating in the best company. The rejuvenation of the trees shows how plastic Peaches are in skilful hands. The outdoor fruit is also well managed. Apples, Pears, and Plums are all cropping admirably. One walk in the kitchen garden is

lined with rows of cordons, a substantial erection being provided for their support. It is high enough to give them a good run, and they are doing all the better for it. The restriction principle is often carried to such an extent as to starve the trees into comparative barrenness. More Grinstead gleanings another week.—W. P. W.



NATIONAL ROSE SOCIETY.

As inquiries have reached us as to the character of the circular recently issued by Mr. C. J. Grahame, owing to the circular and envelope being headed "National Rose Society," we think it should be clearly understood by our members—1, That Mr. Grahame has resigned his position as a member of the Committee. 2, That the document in question has no official sanction whatever.—H. HONYWOOD D'OMBRAIN, EDWARD MAWLEY, Hon. Secs.

MR. GRAHAME'S QUESTIONS TO ROSARIANS.

In order to obtain the views of as many members of the National Rose Society as possible on certain subjects which have been under discussion for some time past in regard to the Society's arrangements, Mr. Charles J. Grahame has posted the following questions to a number of gentlemen with a request to be favoured with early replies.

1, Do you think the annual Tea Rose Show at the London Scottish Drill Hall, Westminster, advantageous or otherwise to the Society and

its exhibitors, and would you maintain or abolish it?

2, (a) About what date do you consider best for our annual Metropolitan Show? (b) Do you think Saturday the best day on which to hold that meeting, or do you think the exact day of the week immaterial?

3. About what date do you consider best for the Provincial Show, bearing in view that this meeting should be fixed chiefly to suit growers in late districts.

4 (a) Do you think two Metropolitan Shows of equal importance would be preferable to the present arrangement of a Metropolitan and Provincial Show? (b) Or if the arrangements for the two shows be left as they now are, would you divide the prize money more equally?

5, Do you think it would be desirable that candidates for member

ship in our Society should go through a form of election?
We suspect the replies will be "varied and interesting."

FRAGRANT ROSES.

PERHAPS there may be, as Mr. Williamson asserts, page 73, "unquestionably a strong and growing aversion to inodorous Roses," but if so, I do not think it influences to any extent the exhibiting Rose-grower. For thirty-five years I have been a grower of Roses, but amongst the hundred that I may cut every few days, how rarely do I do more than hold my pets in different positions and fill my eyes with their beauty. When I do feast the prominent feature of the face with its perfume it is generally some Tea or bloom of La France that, watered by the dews and showers, has refused to further unfold its charms. To break off at the inscrtion of the petals the whole unexpanded bud, and tearing it in two from the base, is indeed a surfeit of fragrance, which, as far as my experience goes, no beautifully expanding bloom ever

Many years ago one of the Rose elections I conducted was on the point of fragrance. I recollect that, in my innocence, I felt certain that the old Cabbage must head the poll, but very few of the voters appeared to be cognisant of its existence, or, if they were, disliked its perfume. There is something in antipathies even as regards scent, and the old Latin proverb, tot homines, surely applies; and I recollect one reply stated that the perfume (?) of Duke of Edinburgh was to him perfectly disagreeable. As a rule as for as my passi organ guides me perfectly disagreeable! As a rule, as far as my nasal organ guides me, and being decidedly prominent I follow its guidance, the dark H.P.'s are the most fragrant, and amongst these Pierre Notting is to myself the most agreeable aroma. La France and Augustine Guinoisseau, both classed as H.P.'s, have undoubtedly a Tea taint. What a description! as if there could be a taint of Tea? But in some of the Teas the astringent tinting is too powerful for some persons to allow the fragrance to be altogether an agreeable perfume.

At that perfume election I recollect that Mr. Curtis's remarks, which were printed in full in the Journal, were most interesting, and showed an amount of discrimination in fragrance which would tax most of us to emulate. In conclusion I would ask, Why need our most of us to emulate. In conclusion I would ask, Why need our interchanges of thought on Rosc matters be as thorny as some of our favourites? and if some of us prefer to write under a nom de plume where is the harm? Many of these are as well known as though they signed their names in full. Who does not know "D., Deal," "E. M.," "A. C.," and in bygone days "Wiltshire Rector" and "Herefordshire Incumbent?" Are all these, including your humble correspondent, to be ruthlessly anathematised because we prefer to write and perhaps offer advice under a nom de plume? Why should our non-exhibiting friends sneer at the N.R.S.? That Society has done much for Roses,

and although the exhibiting division may have been in at the birth I do not think they despise or look down on the lovers of garden Roses. With many of us it is by no means a disregard for their beauty; it is indeed the impossibility of doing both from want of room. That, at least, is my case; otherwise I should delight in having my old favourites "looking in at the window," rambling in their own sweet luxuriance and graceful charms. -Y. B. A. Z.

ROSES AND ROSARIANS.

In reply to the latest contribution to your columns of "A Jubilee Rose Grower" (page 73), allow me to say that so for the say that (page 73), allow me to say that, so far as I can remember, I have never allowed my judgment, when writing on horticulture or any other subject, to be biassed by the influence of personal friendship; nor in my articles have I consciously over-estimated any personal friend. It is gratifying to believe that the generous hope of "W. R. Raillem" may be realised, and as amusement is often beneficial I trust my contribu-tions to the "Rose column" will not be without wholesome effect on the minds of the more serious section of correspondents.—DAVID R. WILLIAMSON.

[Mr. Williamson is not a literary dry-as-dust, and we should be sorry for him to become one. Writers who can combine pleasure with instruction are public benefactors.]

I HAD not noticed "Audi Alteram Partem's" letter, page 51, in the Journal in more than a very casual way. With "W. R. Raillem" I have frequently been amused at the way "Rose-growers of taste" (as we must accept "A. A. P.'s" description of himself and Mr. Williamson as gospel) write on Roses. Mr. Mawley and "W. R. Raillem" have let down these gentlemen fairly easy, the former giving the practical part of the story about the catalogue, and the latter vivisecting the "Rose-growers of taste" in a way that I trust they will thoroughly enjoy and appreciate.

I shall look forward while on my holidays in the next few weeks to enjoying further letters in the Journal replete with "fresh observations" on horticulture from these gentlemen who are "true lovers of plants and flowers," and by the sad sea waves I may reflect on the year we rosarians, who are unfortunately exhibitors, have wasted in following a "will o' the wisp," or even, to give it a worse name, a "chimera" which can never help us to become "keenly alive to what is beautiful in nature."—CHARLES J. GRAHAME, Croydon.

JUDGING.

I THINK Mr. Grahame (page 72) is a little hypercritical in objecting to the words "more variety," as applied to a stand of Roses. I think we should all understand it as alluding to colour, and that it is quite a legitimate expression. One man may show a stand of twenty-four, or thirty-six blooms for the matter of that, all of red H.P.'s, while another

with a good sprinkling of Teas, especially yellow ones, as well as light H.P.'s, would surely show "more variety," though not "more varieties."

I confess I do not like to hear of a "weighty" stand or "heavy" blooms, though I fear I am becoming used to it. It seems rather like bringing Roses down to the prize goose level, but I do not think it is as bad as it sounds. It is not mere "size," but implies fulness and stout

thick petals as well, for size does not necessarily involve weight.

As to "freshness," which is distinct from colour, though rather difficult to define separately, has not Mr. Grahame rather overlooked the words of his own quotation from N.R.S. rules, "Where flowers are of equal merit judges shall consider arrangement, freshness, &c.?" I have never found a judge who in such a case would refuse to consider "arrangement;" but, of course, he might say that "freshness" had already received its due meed in points in comparison with the standard, for they would necessarily be pointed where of equal merit.

In two or three instances where I have been judging this year the points have been equal, and "arrangement" has settled the matter, to the satisfaction of all concerned. In these cases "freshness" would already have been estimated in the pointing.

Considering the great distances they have to travel, both Messrs. Dickson and Messrs. Harkness, the former especially, have to be congratulated on the freshness of the blooms they have staged. surprised to see that the fine stand of herbaceous flowers with which Messrs. Harkness won at Woodbridge travelled entirely uncovered, yet lost none of their freshness. In a dusty time I should think this was impossible. I understood that the point was that railway officials took more care of the flowers when they could see them.—W. R. RAILLEM.

METROPOLITAN EXHIBITION OF THE NATIONAL ROSE SOCIETY.

WHEN we remember the fierce controversy which fluttered the rosarian world last autumn it was instructive, not to say amusing, to see the "flattened" condition of the advocates of the later date, for long before the day arrived it was clear that most of the exhibitors from early districts were entirely hors de combat. When I met Mr. R. G. Baker, the former champion of the Rose world, who it is well known hails from Exeter, and asked him if he had any Roses, "No," was his reply, "mine were over weeks ago;" and, with very few exceptions, the same may be said of most southern growers. True the season has been an extraordinary one and none of us may over goo its like same has been an extraordinary one, and none of us may ever see its like again, but it is just these possibilities in our uncertain climate which should incline us to a date which a long series of years has on the whole proved to be

It is always more pleasant to record success than failure, but still the truth must be told, and I think it may be safely averred that, with the

exception of the disastrous year of 1879, when the smallness and poverty of the exhibition from a totally different cause—namely, the excessive wet—the N.R.S. never held a poorer exhibition. The number of Roses exhibited, of which, however, I have no accurate account, appears to have been some 2000 less than those exhibited last year, and in consequence the competition was not near so keen, and in some classes even there were not enough stands for the prizes offered. This falling off would be naturally more conspicuous amongst amateurs than nurserymen, who, from the large quantity that they grow and their different localities, have a better chance of making up a good stand, and hence, with the exception of some stand amongst the Tea Roses, the standard of excellence was considerably lowered. As was anticipated, the cooler climate of Yorkshire and the copious rains that they have had there helped forward Messrs. Harkness & Sons of Bedale, who carried off with flying colours the much-coveted challenge trophy. There were in their stand of seventy-two some grand blooms. The Horace Vernet, which gained the silver medal, was a grand flower, of fine build, great substance, and brilliant colour. Almost as good, if not quite so, was a beautiful bloom of Dickson's Earl Dufferin; in addition to these there were some splendid flowers of Comte de Raimbaud, Victor Hugo, Fisher Holmes, and other high coloured flowers, which are always well shown by the Yorkshire firm. The other prizes of these principal classes were carried off by the East Anglian growers, in whose stands some fine flowers were shown. Mr. B. R. Cant had in his stand, beside some excellent H.P.'s, some remarkably fine Teas, amongst which were a grand bloom of The Bride, which obtained the N.R.S. silver medal for the best Tea among the nurserymen's class; in fact, the success of this part of England, and the discomfiture of the southern and western growers, which was foreshadowed at the Tea and Noisette exhibition at the Drill Hall, were complete. It was somewhat remarkable that in a season of such brilliant sunshine the dark coloured hybrids should so many of them have been shown in such fine form. My friend, Mr. Biron, and myself have both encouraged Mr. Mount of Canterbury in his ambitious projects of Rose growing, and I think it is somewhat remarkable that in so forward a season as the present, and from so early a locality as Canterbury, he should have captured so many prizes, and even in some instances have beaten such giants as the Cants of Colchester. Some of these days, when he wins the trophy to which he aspires, he must take out a coat of arms with two parsons as the supporters, and an anvil and hammer for his crest; the motto must be left for the present.

Those who recollect the long line of boxes of Teas and Noisettes which overflowed in all directions in 1892 will be ready to confess the immense falling off in numbers in the present Exhibition, and the success which at the Drill Hall attended the East Anglian growers foreshadowed a still greater triumph at the metropolitan Show. "We mean," it was said to me some time ago, "to have the Tea Trophy in East Anglia this year," and so it has happened, for it was carried off in triumph by the Rev. A. Foster-Melliar, whose winning stand will not be easily forgotten. The magnificent flower of Madame Cusin, which won the N.R.S.'s medal for the best Tea in the amateur division, was itself worth going a long distance to see, and was unquestionably the finest bloom in that variety ever exhibited. There were other fine flowers in the stand, one of them a grand bloom of Marie Van Houtte was an instance of what can be done with Tea Roses. It was cut on the Monday previous, had been placed in a nearly airtight and perfectly dark cellar for three days not tied up, and for two more in a cellar with a little light and air, and was almost entirely unchanged when brought out on Friday evening; in fact this has been a year in which this variety has been remarkably fine. The same may be said of Ethel Brownlow, whose brilliancy of colour and stoutness of petal has been conspicuous, displaying merits which some of its most ardent admirers never before thought resided in it. A little disappointment has been felt with regard to Ernest Metz, and this was a scason above all others which was supposed to be favourable to it, and yet there were only two stands of it exhibited, coming from the two Cants of Colchester. I think this of it exhibited, coming from the two Cants of Colchester. seals its doom as to its being offered in a separate class, which has now been tried three seasons and with the same indifferent results. One flower which has sometimes been disparagingly spoken of, but which I have always looked upon with favour, Madame Hoste, has come quite to the front, the box shown by Mr. B. R. Cant being all that could be desired. Alas! the "fortifications of Beaulieu" and the "Paradise of Teas" added nothing to their fame. I was sure the former in such a season would be stormed by enemies that it would be impossible to resist, and that thrips and red spider would make many a breach in the ramparts; but why the latter should have so utterly collapsed I cannot quite understand.

As was anticipated, the season militated strongly against that which has of late years formed so attractive a portion of the Exhibitionnamely, the garden Roses. Hardly one of the single species was in evidence, and it was only through breaking the rules laid down by the N.R.S., introducing Teas and even hybrids, that the stands could be filled. It was, of course, a disappointment, especially to those who, like Lord Penzance, have encouraged progress in this direction, but it was one of those things for which the season had prepared us. By next year Messrs. Keynes, Williams & Co. will have distributed many of Lord Penzance's seedlings, and we may expect a keener competition. New Roses were scarce. Of those of the last two years the only one that has obtained any position is Gustave Piganeau; it is a Paul Neyron style of flower the colour spinson and at present it seems to be much in favour flower, the colour crimson, and at present it seems to be much in favour. It is not in its style one that commends itself much to me, but I think

that it is somewhat early to complain of its growth. It may be as some say of poor habit, but like most new Roses that are likely to be popular, it has been so hard worked that every bit of constitution must have been taken out of it. Another French Rose of a very different character, Gustave Regis, is likely to be a favourite for buttonhole purposes. It appears to be a Hybrid Tea, has a long pointed bud, bright yellow in colour, but with very few petals, so that really it might almost when expanded be considered a single Rose. It is, however, among our home growers that we must apparently now look for sterling novelties, and especially to the Newtownards firm, Alexander Dickson & Sons. exhibited three seedlings, and to two of them was the gold medal of the N.R.S. awarded, an honour which no firm has ever obtained before. One of these, Mrs. Sharman Crawford, is a beautiful bright pink Rose, of fine form and build, reminding one a little of Mrs. John Laing, but quite distinct from that flower, but appears also to have a vigorous constitution. The other was a large full white Rose, suggesting Lady Mary Fitzwilliam. There is an immense quantity of stuff in it, and if it opens well will be a valuable addition to our white Roses. Another gold medal of the N.R.S. was awarded to Mr. Turner's new climbing Japanese Rose, Crimson Rambler. It had already obtained a similar honour at Paris, and has been seen so well and so often that there is very little doubt that everyone who possesses a garden will be anxious to obtain it, and by thus giving the N.R.S.'s highest award to a purely garden Rose the Society has shown its sympathy with the current taste, and that it is by no means bound to bestow all its favours on the exhibition varieties.

Such, then, is a rapid view of some of the more salient points of the show, which, although disappointing in many respects, was the means of bringing together a considerable number of fine blooms, showing that even the most adverse seasons cannot utterly quench the ardour of the rosarians .- D., Deal.

BACTERIAL DISEASE IN TOMATOES.

APPARENTLY Mr. Iggulden (page 79) thinks me inconsistent in my remarks on the use of animal manure for Tomatoes, but if he will turn again to my note on page 49 he will fail to find that I said its use had been followed by the best results. Had I found it so it would indeed be strange for me to advocate the use of chemical manures in preference to animal.

If I could bring myself to believe that the absence of bacterial disease is attributable to the use of animal manure it would rise greatly in my favour. But having lost one or more plants in each of four houses, some fed with animal others with chemical manures, it is very apparent that the absence or otherwise of the disease is not due to the manure used. My principal objection to animal manure is that it renders the plants more liable to the attacks of cladosporium and allied fungoid diseases, especially in badly ventilated houses, as some of mine are.-C. Lock, Bristol.

As Mr. W. Iggulden expresses his intention of convincing others that I have mistaken "effect for cause," when he has "thoroughly convinced" himself, perhaps he will, in the meantime, send a specimen of the disease in Cucumbers which he considers to be identical with that in Tomatoes submitted by Mr. Lock to the Editor, so that I may have an opportunity of satisfying myself of their being synonymous or otherwise. This is imperative prior to a display of "cross swords" for the understanding of what it is all about. Mr. Iggulden, however, indulges in philippic in his preliminary canter, which is not calculated to impress an opponent favourably, and seeking to discredit a prospective antagonist is not usually a proof of prowess. Something more than "appearance" will, of course, be expected from Mr. Iggulden, for unless he gives evidence of his acquaintance with and knowledge of bacterial diseases I must decline to step into the arena for the special delectation of preconceptionists. But I am quite ready to enter the lists with him or anyone undertaking to prove that Mr. Lock's specimen of Tomatoes were not attacked by and destroyed through bacteria. Of these I have representations as shown by the microscope, which exhibit

things as they are, and it is safer to be guided by facts than to strive to erect castles on "appearance."

This shall be the test. Mr. Iggulden to send to me (through the Editor) specimens of Cucumbers, Melons, or Vegetable Marrows collapsing from the disease of which he is "far from being a stranger," and I will subject them to microscopical examination and submit the results, both of Mr. Lock's Tomatoes and Mr. Iggulden's Cucumbers, to the readers of the *Journal of Horticulture*. This will give Mr. Iggulden a chance to display his abilities as a scientist, for in these days something more is expected than mere guesses at diseases and empirical cures .- G. ABBEY.

NOTES IN SEASON.

ANOMATHECA CRUENTA.

This charming Cape bulbous plant is exceedingly useful for flowering at the present time. It is of comparatively easy cultivation, requiring similar treatment to the Ixias, to which it is closely allied. The plants are of a very dwarf nature, attaining only from 6 to 12 inches in height. The flowers, which are produced in great profusion, are of a bright scarlet colour blotched with crimson, and are produced continuously over a lengthened period, thereby making them indispensable plants where a display of flowers has to be kept up.

main flower stem is furnished with numerous flowering branchlets, and is terminated with a spike of from nine to eleven blooms.

The plants must not be allowed to suffer through lack of moisture at the roots. After the flowering season is over, and when the foliage commences turning yellow, the supply of water may be gradually curtailed, but it should never be entirely withheld. The bulbs ought to be shaken out and reported about the third week in February, placing from nine to eleven bulbs in a 6-inch pot. Good fibry loam and leaf soil, with a little sharp sand will form a suitable compost for them.

GLOBE AMARANTH.

Gomphrena globosa or the Globe Amaranth is a most beautiful annual flower, and is exceedingly useful for the summer decoration of the greenhouse and conservatory. It is of a neat and erect branching habit, attaining a height of from $1\frac{1}{2}$ to 2 feet, each shoot being terminated with a compact round head of rich purple flowers. Seeds should be sown in March or April in well-drained pans filled with sandy soil, and placed in gentle heat. When the seedlings appear assign them a light position, and immediately the plants are large enough to handle place them singly in small 60-sized pots. Keep the plants well down in the pots, so that the cotyledon or seed leaves rest on the soil. They should then be grown in a temperature of from 60° by night and 70° by day, with a rise of from 5° to 10° by sun heat.

For ordinary decorative purposes 7-inch or 8-inch pots will be sufficiently large provided liquid farmyard manure or one of the numerous chemical mixtures be applied two or three times a week after the pots are well filled with roots. After the flower heads are fully developed the plants may be removed to the greenhouse or conservatory, where they will keep up a display of flower for a very considerable length of time. Like the old Everlasting Flower, Helichrysum bracteatum, the blooms require cutting just before they are fully expanded, as they then last much longer in perfection.—GEO. PARRANT.

ROYAL HORTICULTURAL SOCIETY.

JULY 25TH.

SCIENTIFIC COMMITTEE.—Present: Dr. H. Müller (in the chair); Dr. Russell, Dr. Scott, Rev. W. Wilks, Dr. Bonavia, Rev. G. Henslow (Hon. Sec.), and Mr. W. Sykes (visitor).

Dianthus, sp., &c. — Dr. Müller showed a speeimen of a Pink from Val d'Annivieres, in the Rhone Valley. It was referred to Mr. F. N. Williams for identification, and proved to be Dianthus prolifer, L. He also exhibited an "Etelweiss," from Mount Cook, New Zealand. Though the inflorescence bore much resemblance to the European form, the foliage was quite distinct, the leaves being obovate, and one-quarter of an inch in length. It was referred to Kew for identification. He also exhibited a Peach, apparently attacked by fungi. It was also referred to Kew for investigation.

Fir-leaved Clover.—Dr. Bonavia showed a specimen of this tolerably

well-known form from garden culture.

Preserving Fresh Ripe Fruit.—Mr. W. Sykes of Woodleigh, East Dulwich, described some methods for preserving fruit in tins and otherwise, the air being exhausted from the tins. The following is the description of Tomatoes:—"The fruit was quite ripe and perfect; after seven days they had not altered, and kept two or three days after being exposed to the atmosphere. After fourteen days the fruit showed signs 'sweating.' They kept the same time exposed and ate all right. After twenty-one days there was considerable sweating, after thirty days more so, after thirty-seven days, still more, the juice draining out badly. The fruit throughout never lost its bright brilliant colour. discussion arose as to the advisability of adopting the plan of exhausting the tins of air. Both Dr. Müller and Dr. Russell were of the opinion that this method was unadvisable, inasmuch as the vacuum can never be perfect, and it tended to expand the cells, and so by rupturing the tissues, "sweating" would increase. Another method described was to bury the fruit like Potatoes or Mangold:—"Apples buried straight from the trees in heaps like Potatoes, surrounded by straw and covered with earth a few inches thick, keep well into the following year. Nonpareil, a very astringent, bright coloured and bad keeper, loses neither colour nor flavour after being buried. Similarly Peas in jars covered over with a bladder and buried, were quite 'fresh' at Christmas. In these and similar cases it appears to be the carbonic acid evolved by respiration of the fruit which acts as a preservative by driving away the air from the

the fruit which acts as a preservative by driving away the air from the enclosed space. This tends to destroy, or at least hinder, the fermentive or putrefactive action of bacteria. Mr. Sykes hopes to communicate further results from experiments with this year's fruit.

*Pelargonium ignescens, \$\beta\$ sterile.—Mr. Henslow exhibited a specimen of this plant found in a cottage garden at Zeals, Devon. On referring to Sweet's "Geraniacea," it appears to have been raised from the seed of P. fulgidum by Sir R. C. Hoare. Another seedling of the same species was P. scintillans. Though called "hybrids" the parentage is unknown. The word "sterile" refers to the anthers being devoid of pollen. P. ignescens (proper), as well as the above, are all figured by Sweet, op. cit., viz., P. ignescens, vol. i., No. 2; P. ign. \$\beta\$ sterile, i., 55; P. scint., i., 28; and P. fulgidum, i., 69. The date given is 1821.

"Shaky" Ash wood.—Messrs. Holland & Holland of Oxford Street forwarded a remarkable specimen of the peculiarity known as "shaky timber" among carpenters. On splitting the wood a central portion

timber" among carpenters. On splitting the wood a central portion separates from the surrounding layers. It is probably due to some seasonal influence when the cambium formed an imperfect and easily separable layer.



EVENTS OF THE WEEK.—The ensuing week will be rather a busy one amongst horticulturists. To-morrow (Friday) there will be a sale of Orchids and animals at Messrs. Protheroe and Morris' Auction Rooms in Cheapside, E.C. On Saturday Shows will be held at Croydon and Southampton, the latter continuing on Monday, August 7th. The Exhibition of the Beddington and Wallington Horticultural Society will also be held on the 7th inst. As announced in another paragraph the Committees of the Royal Horticultural Society will meet at the Drill Hall, James Street, S.W., on Tuesday, August 8th. On the 9th and 10th inst. a special Show of flowering and foliage plants will be held at the Gardening and Forestry Exhibition, Earl's Court, a class being also provided for six dishes of hardy fruit.

- THE WEATHER IN LONDON. The past week has been characterised by changeable weather in the metropolis. Sunday was showery, rain falling heavily at intervals. Similar weather prevailed on Monday. Tuesday was fine and warmer, but much rain fell during the night. Wednesday opened bright, and at the time of going to press it is fine.
- ROYAL HORTICULTURAL SOCIETY.—The next meeting of the Royal Horticultural Society will be held on Tuesday, Aug. 8th, in the Drill Hall, Westminster. Mr. J. J. Baker, F.R.S., of the Roya! Herbarium, Kew, has promised to deliver a lecture on "Cannas" at 3 o'clock, and the Council will feel obliged to exhibitors who will make a special feature of these plants on that day. There will not be another meeting in the Drill Hall until September 12th owing to the four-days show in the Agricultural Hall, Islington, from August 29th to September 1st.
- —— DEATH OF MR. W. THOMSON, JUN.—With great regret we record the death of Mr. William Thomson, son of Mr. W. Thomson of Clovenfords, which took place on July 30th, from pleurisy. Mr. Thomson was in his forty-fourth year, and his untimely decease will be regretted by numerous Scotch and English horticulturists.
- NATIONAL AMATEUR GARDENERS' ASSOCIATION. The members of this Association held their monthly meeting at the Memorial Hall, Farringdon Street, E.C., on Tuesday, August 1st, Mr. T. W. Sanders presiding. There was a large attendance, and some excellent exhibits were staged. Silver medals were awarded to Messrs. H. A. Needs, G. Bell, A. G. Rowberry, G. Stevens, and Cook. Mr. J. Bateman of Highgate read an interesting paper on "Roses for Exhibition," dealing with the subject in a practical manner. A vote of thanks to Mr. Bateman for his essay concluded the proceedings.
- —— Shropshire Horticultural Society.—We are requested to correct the statement made on page 75, that the Carnation prizes to be offered at the forthcoming Shrewsbury Show are withdrawn; all classes stand as in the schedule. The special new class is only to provide for a contingency. Should any Carnation collections come, and we hear some will be staged, these prizes will be awarded just as if no special class has been offered.
- A GOOD ACTION.—At the Committee luncheon of the Reigate Show last week a letter was read by Mr. Wells from a gentleman stating the very deplorable condition through ill-health of a local gardener whose name was given, and asking for pecuniary assistance. A list was handed round the table, and some 35s. collected by Mr. Steer. The case seems to be a very distressing one, as the poor man is in consumption, and there is a large family to be maintained.
- Wakefield Paxton Society.—At the usual weekly meeting of the members of the above Society on Saturday, 23rd ult., the subject for discussion was "Carnations and Picotees." A large table was filled with beautiful specimens, some being the old-fashioned varieties and others were examples of the florist flowers. There were also on the table Stephanotis and Allamanda flowers. The discussion was opened by Mr. Maddock of Lofthouse, who is an extensive and successful grower of Carnations and Picotees. Mr. Maddock strongly recommended his friends to grow Carnations and Picotees. He said they were good town flowers, as they will withstand the effects of smoke, and by a little arrangement it was possible to have plants in bloom all the year round.

- THE DUTCH HORTICULTURAL SOCIETY.—We are informed that members of this Society have intimated their intention to visit Messrs. H. Cannell & Sons' establishments on Saturday, the 12th inst., together with a few other friends.
- —— GARDENING APPOINTMENT. Mr. C. Page, for some years gardener to H. P. Leschalles, Esq., Highams, Ascot, has been appointed to succeed Mr. Lee as gardener to J. B. Fortescue, Esq., Boconnoc, Lostwithiel, Cornwall.
- —— BULBS FOR THE ROYAL PARKS.—We understand that Messrs. W. Cutbush & Son, Highgate, have been favoured with an order for bulbs for the Royal Parks, including St. James's, St. Margaret Square, Regent's Park, and Hampton Court Gardens.
- —— GRAPES AT TRENTHAM.—Through a clerical error on the exhibition card the first prize for four bunches of Grapes was credited to Mr. Crawford in our report on page 82 last week. The winner was Mr. J. J. Craven, The Gardens, Allerton Priory, Liverpool.
- WASP NESTS.—Mr. Edward Gristwood, The Gardens, Hearts Hill, Loughton, Essex, informs us that himself and Mr. W. Dickens, of Dibden Hall Gardens, have destroyed sixty-three wasp nests by pouring petroleum into them, applying a light and burning them out.
- —— BORDER MAID VIOLA.—Mr. John Forbes, Hawick, sends us some blooms of a splendid Viola to be named "Border Maid." It is to be a close compact grower and a free flowerer. The blooms are large and beautiful, of a rich orange colour, with a distinct purplish blue margin.
- MUSHROOMS IN THE NORTH. Mushrooms have been very plentiful in Westmoreland, large quantities being sent away for sale to large provincial towns. In the district around Kirkby Lonsdale, says a writer in a local paper, Mushrooms have been selling at $1\frac{1}{2}$ per lb.
- THE PROPOSED FLORAL CONTEST AT CHICAGO.—We understand that in view of the small amount of encouragement received the Chicago Committee has deemed it best to abandon the project of an international contest in the arrangement of flowers at the World's Fair in August.
- EARLY PEARS.—"J. H. W." observes:—"As evincing the extreme earliness of this season we have been obliged to gather the fruit from two trees of Jargonelle Pears on July 27th, which in 1891 were not ready until September 12th. From two horizontal trained trees on a wall with a west aspect we have gathered 1½ cwt. of very fine fruit. All our bush and pyramid Pear trees are loaded with fruit this season. We have given bushels of fruit to the pigs, but still there are bushels too many left."
- ENGLISH HORTICULTURISTS IN AMERICA.—An American exchange to hand says: "Among notable visitors to Boston during the first week in July was Mr. Nicholson, of Kew Gardens, England, on his way to Chicago. He visited, as does everybody nowadays, the Arnold Arboretum, and spent a few hours among the trees and shrubs. Mr. W-Goldring, brother of the Messrs. Goldring, of Albany, N.Y., honoured Buffalo with a very short visit on Saturday, July 1st. Mr. Goldring has just returned from India, where he has been laying out grounds for some of the native princes."
- TRADE IN COVENT GARDEN MARKET.—As a specimen of how the trade in this market has been developed, we understand, says a daily contemporary, that last week one firm alone dealt with 64,734 packages, including—Green Gages, 27,583; Orleans and other Plums, 15,138; Pears, 8,043; Peaches and Apricots, 5,002; Tomatoes, Salads, and Cucumbers, 4,077; Nuts, 2,098; Cherries, Black and Red Currants, Apples and Grapes, 645; Bananas, Melons and Lemons, 995; Potatoes, Peas and Onions, 1,153. Ten years ago it was considered a wonderful business for one single firm to turn over 20,000 packages in a week.
- STUARTIA PENTAGYNA.—One of the most beautiful American shrubs now in flower is Stuartia pentagyna; its large creamy white flowers, 3 or 4 inches across, with scalloped margins resembling those of some Camellias, to which, indeed, the Stuartia is related. Perhaps, says the "Garden and Forest," the slow growth of this plant while it is young has discouraged growers; at all events, it is so rarely found in gardens that it has never received a common English name. When fully established, however, so that its beauties are developed, this Stuartia is one of the most pleasing of all hardy shrubs which flower in summer, and it should be omitted from no carefully selected collection. It appreciates liberal treatment, and when planted in good loam mixed with peat and enriched occasionally with a dressing of old and well-pulverised manure it will always repay such attention.

LADY GARDENERS.—Mr. J. Riddell, The Gardens, Castle Howard, York, writes:—"Among the weekly papers a report has been going the round that Lady Carlisle contemplated the substitution of women gardeners for the staff at present employed in the gardens here. As the Journal of Horticulture quoted the statement (page 76), and having been asked to contradict the report when occasion for doing so occurred, there not being a shadow of truth in it, I hope you will be able to find space for this note in your next issue,"

— THE FESTIVAL OF FLOWERS.—The sixth National Co-operative Festival will be held at the Crystal Palace on Saturday, August 19th. The flower show will probably be as large as ever, notwithstanding the adverse season. The co-partnership exhibition of goods from workshops in which the workers share profits and management will be much extended, as several new and interesting societies will take part. Mr. Wm. Broomhall, General Secretary, 49, Bedford Street, Strand, offers to send information to all interested in the co-operative movement.

—— STAPELIAS.—The collection of Stapelias formed by the late Mr. Thomas Westcombe of Worcester has recently been presented to Kew by his sister, Miss Westcombe, along with numerous notes, descriptions, and a collection of beautifully executed coloured drawings, prepared by Miss Westcombe from the plants (of Stapelia and allied genera) flowered by her brother. Stapelias, remarks the "Kew Bulletin," are exceedingly difficult plants to cultivate, and many of the species can only be kept through an English winter with the utmost care and attention. Mr. Westcombe's success as a cultivator of these plants was quite exceptional. Since his death some of the plants have somewhat suffered, but most of them will probably recover in their new quarters at Kew.

— A FINE CARNATION.—Mr. Bernard Cowan, The Lodge, Harton Cemetery, South Shields, sends us a photograph of a plant of Carnation Souvenir de la Malmaison that bore 105 blooms, open and unopened. The plant was in a 10-inch pot, and has been grown by Mr. Alex. Turvis, South View, South Shields, who is an amateur grower, and is Chairman of the General Purposes Committee of the South Shields and Northern Counties Chrysanthemum Society. Mr. Turvis takes an active interest in the Exhibition, and his well-known popularity is of considerable advantage to the Society. He is also a grower of Roses and Chrysanthemums, and when his commercial transactions are over the rest of the evening is spent attending to the cares and wants of his favourite flowers.

— KINGSTON GARDENERS' ASSOCIATION. — At the monthly meeting of this Society, held on the 25th ult., a short but very useful paper on "The Gloxinia" was read by Mr. Hawkes of Lismaine Gardens. During the discussion which followed questions were asked as to the insect termed the creeping or jumping thrips, which proved to be so difficult to deal with, so fond of the Gloxinia, and was impervious to fumigation. From Messrs. Sutton & Sons came a collection of cut flowers of their beautiful strain, and Mr. Peed, a local gardener, also brought some brilliant flowers of the same strain. Mr. Hawkes showed some very fine Cockscombs, and Mr. T. Cushon exhibited a good Melon Imperial Green-Flesh, grown in a frame without bottom heat after Potatoes had been taken out. Mr. A. Dean will give an address on "Hardy Border Flowers" to the members at the meeting on August 29th.

- FLORA OF MOUNT KINI BALU. - The collection of dried plants from the above locality in N.E. Borneo, referred to in the "Kew Bulletin," 1892, p. 249, has been worked out by Dr. O. Stapf, the Assistant for India at the Herbarium, who read a paper on the subject before the Linnean Society on the 15th June last, which will probably appear in one of the Society's publications. In addition to the plants collected by the Drs. Haviland, Dr. Stapf has also taken up a small collection from the same mountain, made by Sir Hugh Low some forty years ago, together with a few plants collected more recently by Mr. F. W. Burbidge. Altogether they number about 400 species, 320 of which are phanerogams. There are two new genera and upwards of 150 new species, for the greater part shrubs. Melastomaceæ and Rubiaceæ largely predominate in the lower elevations, and the last family is somewhat numerously associated with increasing numbers of Ericaceæ, Vacciniaceæ, Orchids, and Ferns at higher levels. Noteworthy among the novelties are eleven very distinct new species of the Ericaceous genus Diplycosia, and two new species of the Australian Irideous genus Patersonia. Many other new facts have been brought to light by the combined collections, and Dr. Stapf's paper promises to be of more than ordinar interest.—("Kew Bulletin.")

— A NOVEL CONTEST.—In connection with the Show of the Beddington, Carshalton, and Wallington Horticultural Society, to be held in Carshalton Park on the August Bank Holiday, a class instituted by Mr. A. H. Smee is creating a good deal of interest. It is thus set forth—"For the best dinner to be produced at a cost not exceeding 2s. The dinner must consist of meat and at least two distinct kinds of vegetables, and be sufficient for a man, his wife, and three children. The value of each article must be clearly stated. First prize, £2; second do., £1 10s.; third do., £1; fourth do., 10s." We are informed there are thirty entries. Also in connection with the same Show a conference on gardening is announced under the presidency of E. J. Halsey, Esq., Chairman of the Surrey County Council. Superior and inferior garden produce will be exhibited, and a short address thereon given by Mr. J. Wright for the instruction of amateurs, cottagers, and allotment holders.

— DWARF CONVOLVULUSES. — Amongst the numerous hardy annuals which were recently blooming so profusely in the seed grounds of Messrs. Sutton & Sons, Reading, were three forms of dwarf Convolvuluses, which were so wonderfully true to character that 10,000 flowers seemed to be exactly alike. It was quite remarkable to find how well these annuals were doing in the drought, and still more how effective and lovely in their respective masses they were. Very charming indeed is subcæruleus, the flowers of a pleasing sky blue colour. This is at once a novelty and a beauty. Quite different because so dark is Crimson Violet, the flowers of a heavy but rich hue, as its name implies; and most effective is the brilliant Dark Blue. To these may be added the White, but the others are delightful.—D.

- AUTUMN-SOWN ONIONS.—This is a good time to make a sowing of Onions for producing bulbs next May and two following months to succeed those raised from seed sown during last spring. If the ground is in fairly good condition as regards fertility it need only be dug, trodden, surface-dressed with soot, and raked level; then draw drills from 12 to 15 inches asunder and about 1 inch deep, running north and south, for the reception of the seed. Early White Naples and White Elephant are good varieties to sow for standing the winter. Sow the seed sufficiently thick, the drills to admit of some of the young plants being drawn for salading, where used for that purpose, and to make good any blanks that might occur in the ranks through any cause during the next five or six months. Close the soil over the seed in the drills with the feet, tread, and afterwards rake level in the same direction as the drills. Transplantings can be made from the thinnings in the spring if it should be deemed necessary to extend the crop, allowing a space of from 6 to 12 inches between the plants in the rows, the ground being prepared in the manner advised for seed .-H. W. WARD.

- THE WEST AFRICAN PALM OIL TRADE.-In his report to the Colonial Office on the botany of Sierra Leone, Mr. Scott Elliot says that the export of Palm oil and kernels forms by far the largest part of the West African export trade. In 1890 the value of the Palm oil exported from Sierra Leone was £13,599 and of the Palm kernels £107,827. The tree is more abundant further down the West African coast, and appears to prefer alluvial, often marshy, ground near the sea. It particularly seems to thrive on the rich soil of the Mangrove accumulations. There are large numbers of Palm trees in the Mahela district, where a factory once existed, and there are also a considerable number up the Scarcies River and in the lower part of the Limba district. It grows also on low sandstone or gneissose hills, but probably does not produce so much in such places as on the low-lying, rich alluvials. The Palm is propagated from the offshoots that appear at its base, and these are said to begin in the second or fifth year, and are in full bearing about the tenth to fifteenth year. They continue producing for sixty years. A single tree yields from 1 to 3 gallons of Palm oil, or, according to Semler, 16 litres annually, and this amount of oil will give from onesixth to half a hundredweight of kernels. This would be a profit of from 2s. to 6s. a tree per annum, as about 300 gallons of Palm oil give a ton of oil and about $2\frac{1}{2}$ tons of kernels. Hence plantations of these trees should be profitable in time. It is, however, exceedingly difficult to get any trustworthy information, and the above, Mr. Elliot says, must be regarded as very approximate. The Palms require no care, and are not, apparently, attacked by any injurious insects. The preparation is of a very rough and makeshift character; the fruits are thrown into a tank and left till decomposition begins. They are then boiled and afterwards pounded in a mortar. Probably 25 per cent. of the oil is lost in preparation.

— HIPPEASTRUM PROCERUM. — This is the blue Amaryllis of horticulturists, and the Amaryllis Rayneri of "Botanical Magazine," t. 5883. It was introduced by M. Binot from South Brazil about 1863, says the "Kew Bulletin," but it has remained rare in cultivation, probably on account of the difficulty experienced in getting it to flower. Two plants of it have been flowering in the Succulent house (No. 5) at Kew. The species is quite distinct from the rest of the genus, the bulb having a neck 18 inches long and distichous falcate ensiform leaves, firm in texture, with a white cartilaginous edge. The flowers are borne in an umbel, and they are as large as the Belladonna Lily. The colour is bluish-lilac with numerous spots of a darker shade of purple.

— WIDCOMBE HORTICULTURAL CLUB.—Some members of this Society had, on July 24th, the privilege of seeing the Begonias grown by the Rector of Newton St. Loe. The visit came as a surprise, for it was not included in the printed programme of the Club's proceedings, but was arranged at the invitation of the Rev. E. Lascelles by the energetic Hon. Secretary of the Club, who is always seeking opportunities of increasing its usefulness and of affording instruction and enjoyment to the members, about forty of whom with a few friends left Widcombe shortly after six o'clock in three well-horsed conveyances for Newton. Mr. Lascelles cordially welcomed the party, and after showing the visitors all over his beautiful garden, promised to give the members a lecture upon his favourite flower—the Begonia.

— Hanbury Medallion.—According to the July number of the "Kew Bulletin," the museum of the Royal Gardens has lately become possessed of a medallion portrait of the late Daniel Hanbury, F.R.S., F.L.S. This medallion is the original model in plaster by the late Thomas Woolner, R.A., and was copied in marble for Mr. Thomas Hanbury, F.L.S. It is a faithful likeness of the great pharmacologist. The ornamentation on the flat surface surrounding the portrait represents the plants to which Daniel Hanbury gave special attention—namely, Liquidambar orientale, Mill, which he proved in 1857 to be the source of Liquid Storax, and Ipomæa simulans, a species of his own, and described by him in a paper read before the Linnean Society in 1869 as the source of Tampico Jalap. Kew is indebted to Mrs. Woolner for the gift of this medallion, which finds a fitting bome in a museum greatly enriched by numerous contributions of vegetable drugs made by Hanbury himself during his lifetime.

- FRUIT CULTURE IN RUSSIA .- We are informed that "The Russian Society of Fruit Culture is, with the sanction of the Czar. organising an international Exhibition to be held at St. Petersburg in the autumn of 1894, with the object of showing the present condition in Russia of the cultivation of fruit, medicinal plants and vegetables, and of the manufacture of their products." It is also stated that "A congress of pomologists will be convened simultaneously with the Exhibition, and all persons interested in the progress of horticulture and pomology, both in Russia and other countries, are invited to take part in the Exhibition, which will comprise the following sections: Fresh fruit, fresh vegetables; dried fruit and vegetables, preserved or treated by other processes; wine, cider, perry, and other fruit beverages; Hops and medical herbs, seeds, fruit trees and bushes, horticultural implements and appliances and technicality of production, together with literary, scientific, and educational accessories, collections and plans." It is expected that further details will be forthcoming in due course.

- ORIGIN OF THE PEACH.—Nothing is now more universally accepted than the fact that the Peach is an improved variety of the Almond. The Almond has a thin shell around the stone, which splits open and exposes the stone when mature. This outer skin has simply become fleshy in the Peach, so that is all that gives it its specific character. It seems now clear from investigation in the history of ancient Babylon that in their gardens, now nearly 4000 years ago, the Peach was cultivated then as it is now. It must have been many years before this that the Peach was improved from the Almond, and this fact goes to show the great antiquity of the fruit. Possibly gardening in some respects, at least so far as it relates to many of our cultivated fruits, was as far advanced six, or perhaps eight or 10,000 years back as it is to-day. Phoenec ans, many thousands of years ago, as is proved by the records, had in their gardens Almonds, Apricots, Bananas, Citrons, Figs, Grapes, Olives, Peaches, Pomegranates, and even Sugar-cane was in extensive cultivation. Certainly this shows how very far advanced these nations were in garden culture these many years ago.—("Meehans' Monthly.")

—— PLATYCODONS.—Not very appreciable, if indeed is there any distinction, between the Platycodons and Campanula grandiflors and its varieties. Possibly the distinction is found only in name, and if there be none, then the diverse appellations are misleading. At Messrs. Barr and Son's Long Ditton Nursery, various Platycodons are in abundant bloom, and at this season most deservedly rank amongst the best of hardy garden flowers. The growth is in most cases about 2 feet in height, the stems producing numerous side flowers on long stems, which are admirable for cutting. Grandiflora, single blue, and plenum, double and darker; album and striatum, also Mariesi, are capital varieties.—A. D.

- EARLY APPLES.-I specially noted the best six varieties in the respective dessert and kitchen sections of Messrs. G. Bunyard & Co.'s very fine collection shown at the Drill Hall on the 25th ult. The Apples for the time of year were wonderfully fine, and all from the open air. Mr. Woodward of Barham Court, however, tells me that Apples are swelling wonderfully fast since the rains, and that there should be some grand fruit at the Agricultural Hall Show. I found of dessert varieties Gladstone, Red Juneating, Red Astrachan, Beauty of Bath, Lady Sudeley, and Red Quarrenden to be the best, ripening in about the order placed, whilst of kitchen sorts Lord Grosvenor, Lord Suffield, Grenadier, Stirling Castle, Peter the Great, and Potts' Seedling were the best. I have seen elsewhere Warner's King and Emperor Alexander very fine too. On the whole, we shall probably find it needful to have many of our finest Apples gathered fully a month earlier than usual, or they may fall from the trees. The netting of the finest samples will become imperative in many cases.—A. D.

- DEATH OF A LADY BOTANIST.—The death is announced, on Thursday last, of Miss Anne Pratt, who was born at Strood, near Rochester, in 1806. This distinguished botanist published her first book when just twenty years of age, entitled "Flowers and Their Associations," a work characterised by elegance of thought and refinement of diction, qualities that marked all her numerous subsequent writings. A devoted student of nature, accurate and painstaking in all her researches, she was also gifted as an artist. She made exquisite sketches of plants to illustrate her subjects. She was the author of "Pratt's Catechism of Botany," "The Field, the Garden, and the Woodland," "Wild Flowers," "The Dawnings of Genius," "Poisonous Plants," "Common Things of the Seashore," and other works. Heropus magnum was "Flowering Plants and Ferns of Great Britain," which was illustrated with coloured block-printed plates, and forms anexhaustive history of all British species, which ever since its appearand has taken rank with standard botanical works. The copyright expiring in 1879, it was bought by the publishers, Frederick Warne and Co., the senior partner of that firm having from the first entertained a great partiality for the work, and in 1880, at the age of seventy-three, the author, with her characteristic vivacity, revised it, and the work was reproduced in a cheaper form. Miss Pratt married in 1867 Mr. John Pearless, of East Grinetead, who survives her.

- HISTORY OF WHINHAM'S INDUSTRY GOOSEBERRY. - The originator of the Gooseberry, which has now become an almost universal favourite with the market gardening fraternity, was, says the "Newcastle Chronicle," Mr. Robert Whinham of Morpeth, himself a market gardener. Whinham was born early in this century, and up to within a few years of his death, which occurred in 1858, he occupied as tenant the Allery Banks Gardens, belonging to the Earl of Carlisle, at Morpeth. There it was that he first began cultivating and propagating the Gooseberry. All the time the labour and the thought he expended in perfecting his venture profited him but little in the shape of pecuniary reward. He died a poor man. His grave in Morpeth churchyard is practically unknown, and no memorial of him exists other than which he established himself by giving his own name to the fruit he originated. Attracted as we always have keen by fruit culture, it was not without feelings of interest that we paid a visit the other day to the very garden which witnessed the early struggles of Robert Whinham. Situated on the rising ground to the south-east of Morpeth, and in close proximity to the railway, we found the scene of his labours. The summer evening was closing in as, escorted by Mr. George W. Purdy, the present tenant, we wandered through the garden, which is almost entirely given over to the cultivation of Gooseberries, the whole area being sheltered and protected by old Apple trees. Mr. Purdy's father immediately succeeded the Whinham family in the tenancy, and when he took over the garden he found there bushes of the identical berry which must have been some of the very first cultivated by Whinham. These bushes had then reached maturity, and some of

them yet remain in very vigorous growth. One of these, which cannot possibly be less than forty-seven years old, has cropped heavily ever since 1856. Last year it yielded three and a half stones of berries; this year it was still more heavily laden, the estimated weight of the crop being four stones.

CAMPANULA GRANDIFLORA MARIESI.

At the meeting of the Royal Horticultural Society on July 25th Messrs. G. Paul & Son, the Old Nurseries, Cheshunt, staged a plant of Campanula grandiflora Mariesi, and for which the Floral Committee

John Bennet Lawes, LL.D., F.R.S., and Dr. John Henry Gilbert, F.R.S., in commemoration of the fifty years agricultural, chemical, and botanical investigations which those gentlemen have jointly carried out on the Rothamsted estate, and which have become famous throughout the world. The proceedings on Saturday were the result of a movement initiated by the Prince of Wales, who called a meeting at the rooms of the Royal Agricultural Society on March 1st last, when His Royal Highness gave the following brief outline of the work of Sir John Lawes and Dr. Gilbert:—

and Dr. Gilbert:—

"All those who are interested in the progress of agricultural knowledge, and especially in the application of chemistry to the cultivation
of crops and the feeding of stock, must be aware of the extreme importance of the valuable series of experiments so long carried on at



FIG. 16.—CAMPANULA GRANDIFLORA MARIESI.

awarded a first-class certificate. The plant, also known as Platycodon grandiflorum Mariesi, is not a new one, inasmuch as it was introduced upwards of a decade ago. It is nevertheless worthy of more extensive culture, and should be given a place in every garden.

As shown in the illustration (fig. 16), the plant is dwarf in habit, being not more than 6 inches in height. The flowers are large and broad, measuring 3 inches or more in diameter, and of a brilliant purplish blue colour with darker veins. It is a charming plant, and deserves a better fate than it hitherto has had.

THE ROTHAMSTED JUBILEE.

An event, which was described as "unique in the history of scientific collaboration, as well as in the history of scientific research," was celebrated in the Hertfordshire village of Harpenden on Saturday, when a huge granite memorial was dedicated and presentations made to Sir

Rothamsted by Sir John Bennet Lawes. These experiments were commenced in the year 1843, so that the current year will witness the conclusion of no less than half a century's investigations, which have been conducted during the lifetime of their founder. During the whole of this period, moreover, Dr. Gilbert has been associated with Sir John Lawes in the work of experimental research. The Rothamsted experiments have from the commencement been entirely disconnected with any external organisation, and have been maintained at the sole cost of Sir John Lawes. For the continuance of the investigations after his death, Sir John has recently made the munificent endowment of £100,000, besides the famous laboratory and certain areas of land, and has nominated some of the most distinguished scientists of the day to administer the trust. In view of all these facts, and the great national importance of the Rothamsted experiments, it is only fitting that some public recognition should be made of the invaluable services rendered to agriculture by Sir John Lawes and his distinguished colleague, Dr. Gilbert.

As the result of the meeting an Executive Committee was formed,

consisting of the Duke of Westminster, K.G., President of the Royal Agricultural Society of England, Chairman; the Earl of Clarendon, Lord Lieutenant of Herts; Viscount Emlyn, Chairman of the Chemical and Woburn Committees of the Royal Agricultural Society; Lord Kelvin, P.R.S.; Sir John Lubbock, M.P., F.R.S., Trustee of the Lawes Agricultural Trust; Dr. H. E. Armstrong, F.R.S., President of the Chemical Society; Professor Charles Stewart, President of the Linnean Society; Sir John Evans, F.R.S., Treasurer of the Royal Society, Honorary Treasurer; and Mr. Ernest Clarke Secretary of the Royal Agricultural Treasurer; and Mr. Ernest Clarke, Secretary of the Royal Agricultural Society, Honorary Secretary. Subscriptions were invited with the result that a sufficient sum was obtained to erect a granite memorial weighing over 8 tons immediately opposite the laboratory (which was built by public subscription and presented to Sir John Lawes in 1854), and which stands out boldly in view from all points of Harpenden Common; to have a three-quarter length portrait of Sir John Lawes painted by Herkomer; and to purchase a massive silver salver to present to Dr. Gilbert. The mcmorial is a massive boulder of granite placed end-ways on another square block. On the side facing the common is this inscription:— "To commemorate the completion of fifty years of continuous experiments in agriculture conducted at Rothamsted by Sir John Bennet Lawes and John Henry Gilbert, A.D. MDCCCXCIII." But besides these presentations, and also addresses from the subscribers, various learned and agricultural societies, both at home and abroad, took the opportunity of presenting other addresses, so that the proceedings of Saturday were international in their character.

There was a large and distinguished company present. Mr. Herbert Gardner, M.P., President of the Board of Agriculture, presided. On his right were Sir John Lawes and Dr. Gilbert, and on his left the Duke of Westminster and the Duke of Devonshire. Among the others present, in addition to the members of the Executive Committee whose names are given above, were Earl Cathcart, Lord Amherst of Hackney, Viscount Grimston, the Hon. A. Holland-Hibbert, M. Johanet and M. Aubin (representing the Société des Agriculteurs de France), Sir J. D. Hooker, Sir Owen Roberts, Professor Michael Foster, Professor F. O. Bower, Professor Kinch, Sir Jacob Wilson, General Cohnsae, Mr. W. Carruthers, Dr. Fream, Professor Sheldon, Major Craigie, Professor Church, Mr. Henry F. Moore, Mr. Ludwig Mond, Professor W. Odling, Dr. W. J. Russell, Mr. Martin J. Sutton, Mr. Charles Whitehead, Dr. J. A. Voelcker, Mr. A. Warrington, Professor W. A. Tilden, Dr. Bernard Dyer, Mr. W. H. Perkin, Mr. W. Crookes, and Mr. W. H. Parkin, all of whom were subscribers also to the testimonial. Apologies were read for non-attendance from the Prince of Wales, M. E. Tisserand, Councillor of State, Director of Agriculture for France, and many others, as well as a telegram of congratulation from the Association of Experimental Stations in the United States and Canada.

Mr. HERBERT GARDNER, M.P., who was received with cheers, said they had met to honour as far as it was in their power, in the name of agriculture and of the agricultural classes, two distinguished men—Sir John Lawes and Dr. Gilbert (cheers)—who had rendered invaluable services to our great national industry. It was felt that, in addition to mere personal testimony of regard, there should be some outward and endurable memorial of the admiration which the agricultural world felt for the valuable work which had illustrated the lives of those two More durable even than that granite block would be the complete series of records of the work done at Rothamsted which were contained in the large series of works which lay on the table before him (cheers), and he had done something towards making these of more value by obtaining a grant from the Treasury in order to purchase fortyfour complete sets which he had presented, at the expense of the nation, to leading public institutions. (Cheers). During the fifty years the experiments at Rothamsted had been in progress there had been remarkable changes, Wheat having fluctuated no less than 50s. per quarter, having been as high as 74s., and in May last as low as 24s. 8d. He thought the development of the steam ocean traffic had done more to bring down the price of Wheat than either Cobden or Bright, and the present low range he attributed to England having accumulated an unusual surplus just after the Russian famine, and in the diminution which had been going on there might be found some scintilla—slight it might be-of better times. (Cheers.)

The DUKE OF WESTMINSTER, after offering his personal congratulations, read the following addresses from the subscribers:-

"To Sir John Bennet Lawes, D.C.L., LL.D., F.R.S., &c.—On bchalf of the Committee of the Rothamsted Jubilee Fund, and of the numerous subscribers to that Fund in all parts of the world, I offer you the most hearty congratulations on the completion of half a century's uninterrupted investigation of agricultural problems of the highest practical value and interest.

"These investigations, which originated with you, relate not only to the growth of cereal and other crops under the most varying conditions, but also to the economic effect of different foods on the development of the animals of the farm. They have embraced, moreover, most important researches concerning the chemical constituents of soils, the rainfall, drainage waters, and the sources from which plants derive their supply

of nitrogen.

"During the whole of this period of fifty years you have had the zealous co-operation of your lifelong friend Dr. Joseph Henry Gilbert,

you we desire on the present occasion to congratulate.

"For the continuance of the experiments and investigations which have already extended over so long a period, you have munificently provided by the establishment of the Lawes Agricultural Trust, so that

our successors will profit even more, if possible, than we of the present day have done, by your enlightened labours.

"The memorial which is now erected, will, it is hoped, preserve your joint names in honoured remembrance for centuries to come, while the portrait that is presented to you herewith will hand down to future generations the likeness of one of the most disinterested as well as the most scientific of our public benefactors. — ALBERT EDWARD P., July 29th, 1893."

"To Joseph Henry Cithort M. A. D. T.

"To Joseph Henry Gilbert, M.A., Ph.D., LL.D., F.R.S., &c.—In celebrating the jubilee of the Rothamsted agricultural experiments, it is impossible to dissociate your name from that of Sir John Lawes, and on behalf of the subscribers to the Rothamsted Jubilee Fund in all parts of the world, I offer you the most hearty congratulations on the completion of your fifty years of continuous labours in the cause of agricultural science.

"The nature and importance of those labours are so well known that it is needless to dilate upon them; but if the institution of the various investigations and experiments carried out at Rothamsted has been due to Sir John Lawes, their ultimate success has been in a great measure secured by your scientific skill and unremitting industry. Moreover, by your lectures and writings, you have been a leading exponent in this and other countries of the theoretical and practical aspects of the researches that have been undertaken at Rothamsted.

"A collaboration such as yours with Sir John Lawes, already extending over a period of upwards of fifty years, is unexampled in the annals of science. I venture to hope for an extended prolongation of these joint labours, and trust that the names of Lawes and Gilbert, which for so many years have been almost inseparable, may survive in happy conjunction for centuries to come.—Albert Edward P., July 29th,

M. JOHANET then read an address in French from the Société des Agriculteurs de France, and M. AUBIN one from those employed in the laboratory of the same Society.

The DUKE of DEVONSHIRE presented addresses from the 11,000 members of the Royal Agricultural Society of England, and offered to Sir John Lawes and Dr. Gilbert their most hearty and cordial congratulations on the completion of half a century of investigations at Rothamsted, which had been of such paramount importance to the agricultural community, and the continuance of which had been secured to succeeding generations by the generous benefaction of Sir John Lawes. At Rothamsted they saw what experimental work ought to be—work which had had a great effect on all other experimental work in the country. In the name of the Royal Agricultural Society of England he had to offer their most sincere and grateful thanks to Sir John Lawes and Dr. Gilbert for their valuable work, and to express the hope that they might long be spared to continue their labours, as was well described in the charter of the Society, "For the general advancement of agriculture." (Cheers.)

Dr. Michael Foster presented an address from the Royal Society of England; Dr. Armstrong next presented an address from the Chemical Professor Stewart from the Linnean Society; Professor Kinch from the Cirencester College; and Mr. Ernest Clarke (in the absence of M. Tisserand, Director of Agriculture in France), on behalf of the Société Nationale d'Agriculture de France. This address, coming as it does from what is probably the oldest and most unique agricultural Society in the world—a Society in which membership is more prized than in any other—was probably the most gratifying of any presented. It ran as follows:—"Société Nationale d'Agriculture de France. Hôtel de la Société, Rue de Bellechasse, 18, Paris, 19th July, 1893. To Sir John Bennet Lawes, Bart. Sir and dear colleague,—We, the members of the board and officers of this ancient agricultural Society of France, in our name, and in the name of our fellow Associates, have the honour, on this members he day, to tender to your and to your constant and faithful this memorable day, to tender to you and to your constant and faithful companion Dr. Gilbert, the expression of our sincere respect and admiration for your invaluable contributions to agricultural science. By a remarkable concurrence of circumstances we observe that in the year 1856 two of the then most prominent agricultural chemists of Europe were received in our ranks—namely, Dr. Julius Liebig and Sir John Bennet Lawes, thus finding their opportunity to blend their superior knowledge with the science and experience of our own Boussingault, whose methods of investigation bore a striking similarity of genius and a frame of mind akin to theirs. More fortunate than Boussingault, you have enjoyed the rare advantage of conducting with an unequalled vigour and singleness of purpose through a long series of years the toil-some and arduous but glorious pursuits to which you have devoted your life, and of crowning your multifarious researches with results of scientific and practical value, which for ever will engrave your name in the grateful memory of mankind. May you, Sir and dear colleague, with the powerful assistance of your learned friend Dr. Gilbert, continue during many years to come your noble and fruitful existence for tinue during many years to come your noble and fruitful existence for the benefit of your contemporaries and of posterity. With this our heartfelt wish, we have the honour, Sir and dear colleague, to remain your respectful and affectionate admirers, and in special Committee assembled appose duly our signatures:—E. TISSERAND, President; CHATIN, Vice-President; LOUIS PASSY, Secrétaire Perpetuel; HENRY L. DE VILMORIN, Vice-Secrétaire; A. LIEBAULT, Tresorier Perpetuel; J. LAVERRIERE, Librarian. Paris, 19th July, 1893."

SIR JOHN LAWES, who, on rising to reply, was received with hearty cheering, said that it was only a very few months since he and his wife received the congratulations of many friends on having attained fifty years of married life, which was occasionally called a golden wedding.

afternoon he had to return thanks to that distinguished company for congratulating himself and Dr. Gilbert on the work they had carried on together for fifty years. When two persons were joined together in marriage they could not part—they were bound together by a solemn tie. Dr. Gilbert and himself were bound by no ties; but this connection, as he had said, had continued fifty years. What was the cause of that? It was nothing less than that he had an immense love of the work they were engaged in. He had delighted in the work from the very beginning, and had given as much time to it as he could consistent with other duties; but Dr. Gilbert had made it the work of his life. Had it not been for the labours of Dr. Gilbert the affairs of Rothamsted would have been in a different state to that in which they now were. Dr. Gilbert was not only at work when he was at home, but what were called holidays were spent by him in visiting other countries and places, by putting himself in communication with other bodies, so that he might make his own work more valuable to those at home. This year he was going to Chicago to deliver a course of lectures on the work at Rothamsted. Sir John Lawes then cordially thanked those present for the presentations which had been made to him, and hoped that in fifty years' time such a representative assembly as he saw in front of him would meet to do honour to those who came after them. (Cheers.)

Dr. GILBERT, in acknowledging the gifts, referred to the coldness and doubt with which their early experiments were received, especially when they departed from the orthodox lines, and instanced how those who at first opposed them eventually were converted and became their firm advocates and supporters in a work so important to the agricultural interest. He thanked Sir J. Lawes for the very kind way he had referred to their connection, and expressed the hope that it would continue, although in the natural course of things it could not be expected to exist for many more years, but they desired that matters would be left in such a way that their work might still be carried on

by others. (Cheers.)

Votes of thanks to the Executive Committee and to the Minister of Agriculture for presiding brought a memorable function to a pleasant conclusion. Most of the visitors afterwards attended a reception given by Lady Lawes in the picturesque old manor house at Rothamsted.—
("The Times.")

CARNATIONS AT SLOUGH.

Carnation growers, like others interested in horticulture, will have cause for remembering the season of 1893. Good blooms have been as abundant this year as on any other previous occasion, but the period of flowering has been disastrously short. Evidence of this one could not help noting in many ways. Where possible dates of the Carnation shows were altered to meet the requirements of growers, and in such eases flowers of excellent quality were staged. There were, however, exceptions to this rule, and where it was found practically impossible to change the dates of the shows according to the season, the display of bloom was far from being extensive. In a similar manner the Carnations in the garden have been affected, and it is only by the greatest difficulty that it has been possible to retard the blooms. Nurseries as well as private gardens have suffered in this way, and on calling at Mr. C. Turner's Royal Nurseries, Slough, a week or so ago I found most of the blooms practically past their best. I was, however, in time to take a hasty glance at the flowers that were exhibited at Birmingham on Saturday, July 22nd, before the boxes were despatched to the railway station.

For the purpose of keeping the blooms clean, and perhaps retarding them, many plants were in pots in shaded houses. It could be easily seen that the Carnations had been exceedingly fine, and that a large and choice collection is grown at Slough. The best in flower at the time of my visit included some grand varieties. Among the selfs Rose Wynne was specially noticeable. This is a crimson self with a fine broad petal, and the bloom is very large. When shown at the Harl's Court Exhibition last year it attracted attention, and a first-class certificate was awarded for it. King of the Scarlets was also exceedingly good. This is a grand self of good shape and substance, and should be found in every garden. Iver White is one of the best white Carnations in eultivation, being of good habit, early, and very profuse in flowering. Rose Unique, a splendid flower with broad petals, was in good condition, as likewise was Salamander. The latter is an exceedingly fine bloom of a salmon scarlet colour, and has been certificated. Germania, one of the best yellow selfs, was in first-rate condition; and of Rose Celestial, a large rose-coloured self, and an improvement on the well-known Mary Morris, it can only be said that it should be found in every garden. The Governor is a fine white with a blush tint, and Dazzle is a very bright scarlet of a free flowering habit. The latter is strongly recommended for bedding purposes. Ne Plus Ultra, a fine fringed white, was grand, and Duchess of Fife, a soft pink shade, was specially noteworthy. Tree or perpetual flowering Carnations are also extensively and well grown, and the same may be said of seedlings. The latter were past their best, but the huge beds of them left evidence of what a grand display of bloom there had been. The flowers were obviously produced in hundreds on each plant, the latter forming a sturdy tuft of growth.

With regard to the Picotees these, like the other sections, are admirably represented. The plants are vigorous, healthy, and the flowers, what remained of them, were all that could be desired. Duehess of Sutherland is a most distinct and beautiful variety. The flower is large, full, and heavily edged with bright rose. Madeline is an extra

fine variety, with broad pure white petals, edged with bright rose; and in Gazelle we have a medium sized but good shaped flower, with a rich purple edge. Romulus is a grand Picotee, with a buff ground suffused with pink; and Countess of Jersey is a yellow ground variety, edged with bright rose. Annie Douglas is an attractive flower, with a yellow ground and deep pink margin. Victory is a splendid variety, with an orange-coloured ground, flaked and edged with red; and Old Coin is another distinct variety of the same character. Lord Rendlesham, Mrs. Henwood, and Sunset are also good yellow or buff ground varieties, and being good growers will doubtless find their way into most collections if they have not already done so. Carnations are by no means the only plants that are well grown at Slough, but to see them was the purport of my visit, hence, for the present, the reference to them alone,—C.



THE CHRYSANTHEMUM SEASON.

I THINK the coming Chrysanthemum season will be more "peculiar" than either early or late. Some varieties have been much affected by the very hot season. The wood has ripened and plants are showing the crown bud, in some cases three weeks earlier than in other seasons, while in other varieties the weather has not made any appreciable difference. Although it is more than likely that some of the best blooms will be seen towards the end of October, yet many of the varieties usually taken on the "crown buds" will this season have to go to the "terminals," and thus the majority of the flowers will probably develop somewhere about the usual time.—Geo. Woodgate, Warren House Gardens, Kingston Hill.

CHRYSANTHEMUM PROSPECTS.

It is difficult at present to accurately guage the prospects of the season as to its being early or late. My opinion is that it will not be a late one, but rather the opposite amongst the general body of cultivators who cannot be said to have had much experience in the cultivation of Chrysanthemums primarily for cut blooms. My reason for thinking so is this. There is such a tendency nowadays to obtain size in the flowers, and those persons to whom I chiefly allude have learnt that the early formed buds give the largest blooms in one way, and as many of the plants showed "crown" buds during the month of July they were loth to let them pass, and consequently many were "taken," with the result that must inevitably follow, early and coarse flowers.

By following such a method of culture I prognosticate much

By following such a method of culture 1 prognosticate much grumbling from the middle of October about the earliness of certain varieties. When we see such varieties as Mdlle. Lacroix and Peter the Great showing the colour of their florets and developing from "crown" buds in July, what must we expect in October? Such instances as this are but examples of what are to follow. Experienced growers know that buds "taken" in July are entirely useless with but few exceptions, that they fight shy of any that form at that time, preferring to have others which will show themselves about the third week in August, as the result of pinching out the July buds and running on the growth another stage.—E. MOLYNEUX.

THE Chrysanthemums about here are forming their "crown" buds very early—in fact, too early to be of any use for exhibition. Stanstead White, Etoile de Lyon, E. Molyneux, Beauty of Castlewood, Viviand Morel, and Comte de Germiny have all shown the "crown" bud. During the past week buds could plainly be seen on Avalanche, Puritan, W. H. Lincoln, Hamlet, Louis Bæhmer, Mrs. A. Hardy, Gloire de Rocher, and several others. W. H. Lincoln, Madame Lacroix, and Viviand Morel have already thrown three "crown" buds each.

The following varieties of incurves are also showing this morning (July 31st):—Jeanne d'Arc, third bud; Mons. Bahuant, third bud; Madame Pierre Blancard, over 6 fect high; Ami Hoste, G. Doughty, Queen of England, and also on a plant of Miss M. A. Haggas that was pinched back on May 29th. Several others look as though the bud would appear in a few days. With the exception of Mrs. A. Hardy, Beauty of Castlewood, and Louis Bæhmer, none of the buds have been taken. The plants are very strong and healthy, and at present have not received any stimulant with the exception of a little soot water occasionally. Taken all round, I am afraid it will be a difficult matter to time the buds with any certainty, and several gardeners I have spoken to on the subject are of the same opinion. It would be interesting to know how other Chrysanthemums are behaving in different localities.—W. J., Sutton, Surrey.

CANKER IN FRUIT TREES.

In Mr. Abbey's article entitled "Canker in Fruit Trees" occurs the following passage, on page 50:—"There is no question about the Pear trees; they or their fruit arc troubled with the seab fungus, Cladosporium or Fusicladium dendriticum var. pyrinum, which attacks the young wood and produces eankerous sealy condition of the bark, &c."

There is a fungus which attacks the young wood of the Pear tree as

above stated, and also the young wood of the Apple tree, the bark of which splits, and underneath is an erumpent stroma (black perithecium) subcarbonaceous externally, said to be fleshy within. The leaves of a Pear tree which are attacked by this fungus are previously attacked by the leaf fungus Actinema cratægi orbiculatum, and the fruits in such case are attacked by the Fusicladium dendriticum. The opinion now seems to be that the Actinema is the forerunner of the other, and an earlier stage of it. I should be very glad if Mr. Abbey would tell your readers whether this fungus on the young wood with the black perithecium is the one to which he intends to refer to, and apparently considers to be Fusicladium dendriticum. In my younger days it used to be called Dothiora pyrenophora of Fries.

I should also be obliged if Mr. Abbey has been able to find Nectria ditissima on the roots of Apple trees, and what are the factors which produce canker on the root. I have often found roots of trees the top growth of which is badly cankered perfectly free from canker. I may add that both the Dothiora and the Fusicladium dendriticum are the

food of the beetle mite Oribata orbicularis.—H. P.

In your number of July 20th Mr. Abbey has incorrectly, and I think unfairly, quoted my letter to you, published on page 498 of your journal.

Firstly, he states that I gave no reasons for coming to the conclusion that insects and fungus were due to the disease (canker), and not the disease to them, whereas I stated that "I had tried insecticides and cleansing the wound," and as these did no good I abandoned the theory of insects and fungus.

Secondly, I said canker may differ—i.e., have a different form—on various soils and in different localities. Mr. Abbey says, "Just so; it is a question of varieties suited to different soils and localities." I did not apply the remark to particular varieties, but simply to convey that I could only speak of canker as it appeared in my own garden, as I had no knowledge of it anywhere else.

Thirdly, Mr. Abbey states my remedy to be cutting off the worst cankered branches and cleansing the remainder, but omits the chief remedy as stated in my letter, as I go on to say, "I pared off the top soil and round the stems of the trees as far as I thought the roots would reach to the depth of nearly a foot, and put some strong decayed farmyard manure on the top of them, covering it with the top soil to induce the trees to find their sustenance near the surface instead of striking downwards to the poverty-stricken and cankerous undersoil." "The result was a complete success."

Mr. Abbey goes on to say that if I had cut away all the cankered parts it is perfectly clear I should not be troubled with canker again. This I beg leave to doubt, as it does not agree with my own experience

of some trees from which I cut all the cankered parts away.

Fourthly, Mr. Abbey says that "Mr. Pendered cures canker in Gooseberry and Currant bushes by letting it have its run of them, and when they are no longer profitable roots them out and plants new trees," whereas I said "I did not try to cure them." As to whether the disease in them and Laurels is canker I am not sure, but I know it is similar in its operation, and believe it arises from the soil. Fifteen years ago I planted a hedge of Laurels upon a bank of made soil. They are now 10 feet high, and are most luxuriant in their growth, with scarcely a dead bough. Seven or eight years after I planted in the same garden a hedge of the same kind of Laurels on the level ground. These grew rapidly for a few years, but latterly whole branches have died, though they grow again near the bottom. With this example before me I think I am justified in attributing the disease to the soil and not to fungus.

Mr. Abbey's lengthy articles are, no doubt, very good from a scientific point of view, but I doubt whether they are not beyond the reach of the ordinary fruit grower, and I invite your readers to try the simple remedy contained in my letter on page 498 of your Journal, and I believe they will have the same success in destroying canker as I have.-

THOS. PENDERED.

SCARLET RUNNER BEANS NOT SETTING.

I CAN corroborate the experience of "T. S., Bristol" (Journal of Horticulture, July 27th, page 80). My Scarlet Runners at Ealing have also failed this year to a very large extent, notwithstanding constant and copious watering through the whole period of their growth. Sutton & Sons have noticed a similar thing at Reading, and I find the same is occurring in Dorset. Mr. Darwin observed that this species of Phaseolus often fails to set pods in the abscnce of bees, which are required to fertilise the flowers; whereas the French Bean is independent of them, being always self-fertilised, and consequently can be forced in winter. Moreover, the bees often secure the honey illegitimately by perforating the calyx from without; the humble bees come first and make the hole, the hive bees following suit and taking advantage of the holc.

That bees are scarce this year appears to be the case from the following extract from a letter in the "Daily News" of July 10th. The writer from Much Hadham, Herts, says:—"The present is one of the worst seasons ever known for swarms. Under ordinary circumstances I should have had at least a dozen swarms, but I have not had one. The bee crop is, like many other crops this year, almost a total failure."

-GEORGE HENSLOW.

I, LIKE "T. S.," have noticed that these Beans do not set so well as usual this season. In this garden we have rows which have run up 10 feet high, and to all appearances are the picture of health, having received copious supplies of water during dry weather and mulchings of partly decayed manure. Even now that we have had such delightful showers the Beans do not set as well as could be expected. Although plenty of the flower racemes are 1 foot in length, only a very few pods are forthcoming from the base. I am totally at a loss to understand the reason for this state of things, and am waiting for some scientific reason to be given.—E. MOLYNEUX.

THERE seems to be a very general complaint hereabouts concerning the non-setting of Scarlet Runner Beans. It is not often the plants grow so strongly and are in such good condition for bearing so early in the season, and the failure to set is all the more disappointing accordingly. From Breconshire I hear the same, or very nearly the same report. Curiously enough in the latter case a few pods did form at first, then comes a gap on the spikes, and now more Beans are setting again. In this locality they failed completely at first, and now are doing fairly well. As it happens our first pods are not more than two-parts the size they ought to be, imperfect pollination evidently being responsible for this malformation of pods.

I am under the impression the first flowers were, owing probably to the excessive heat in which they were partially developed, imperfectly formed, or at any rate deficient in pollen, this accounting for their dropping off prematurely. It is true humble bees are not nearly so numerous as usual, but if their assistance is needed in the case of the earliest flowers, why not also for those that follow? The common bees are working among our rows every day, but no humble bees. It is doubtful if a remedy for this non-setting can be suggested, and the chances are the same circumstances will not be noticeable again by the present generation of gardeners.—W. IGGULDEN, Somerset.

OUR Beans are in the same condition as those of "T. S., Bristol." The plants are a picture in health and robustness; they never know what it is to be in want of either drink nor food, and are very floriferous. But alas! how disappointing to observe a naked raceme with but a couple of pods at its base, and two flowers at the points, whose fate is

to fall like its predecessors.

For an hour I viewed the bees, both humble and hive, searching for nectar in these showy flowers. Out of the whole number only one hive bee entered the flower in front; they all seemed to alight outside between the calyx and corolla, and thus from one flower to the other they flew. I could not imagine how they obtained any honey, as both calyx and corolla are so closely united, until I plucked a few, and then found out the secret, of which many more are in quest. At the base of each corolla there was an aperture, drilled no doubt by these honey searchers, and into this hole they pushed their proboscis, and obtain the honey with greater ease than down the tube. The same thing is done to extract the honey out of the flower tubes of my Bouvardias, which soon get unsightly and wither.

The disturbance of the reproductive organs is the cause of failure. They are enveloped in a spirally twisted keel, which makes it awkward for the bees to enter, hence the reason for the short cut for hidden treasure. No doubt were the bees to enter the flower the right way a

better set would be the result.—J. D., Duffryn, S. Wales.

THIS important crop is unusually late and the gatherings sparse this season, few growers having picked pods before August. The cause is generally attributed to the droughty weather, and it certainly is the chief reason of the late and scanty crops. In the early part of the season the flowers are often defective, dropping wholesale; but it is not confined to that exclusively, as many racemes cast greater part or the whole of the blossoms at different parts of the season without forming pods. Stopped plants, as in field cultures, usually set the first flowers better and afford earlier pickings than those staked and unstopped. The latter, however, produces pods more abundantly later in the season, and this points to drought or starvation as the prime agent in non-setting. Mulched plants also yield a good crop when those in dry and poor soil are sterile, and plants in the open are often loaded, while those grown against walls or fences produce little beyond flowers.

The Scarlet Runner is merely a form or variety of the Dwarf or French Kidney Bean (Phaseolus vulgaris), a native of tropical and temperate regions; "universally cultivated but not anywhere clearly known as a wild plant" (Baker), and was introduced to this country in 1597 as a tender annual, yet it is much hardier than the Scarlet Runner (P. v. multiflorus). This is considered to be a native of South America, and it is a remarkable fact that the evolutions from it are much more hardy and prolific than the old type or common Scarlet Runner, and points to the necessity of originating new varieties and selecting those best fitted to the environment. There is considerable difference in the old variety both in hardiness of plant, setting, and productiveness, and by saving seed from those most profitable large growers have secured strains which are far more productive and certain in cropping than where saving seed indiscriminately is practised. It is also a notable fact that "runners" with the pods of French Beans are less hardy than Dwarf Kidney Beans generally.

As to the necessity of humble bees for effecting pollenation in Scarlet Runners, it is certain that in large towns, where these plants are grown

largely for ornament and use against walls, fences, and as screens, the abundant crops must be mostly, if not entirely, due to self-fertilisation. Indeed, it is doubtful if humble bees contribute to the setting of Beans, for in towns they are by no means plentiful, and French Beans set abundantly under glass when the bees are asleep. Besides this, the humble bees are never seen partial to Beans, and work most on wild plants, though they will visit exotics in cases of emergency, and sometimes damage Beans by boring a hole in the calyx to obtain the nectar more easily. In that case the flowers are not fertilised, and the seeds become abortive. Nevertheless, there is reason to believe that certain plants—that is, Red Clover, are dependent on humble bees for their fertilisation, and they may generally be regarded as useful allies through their conveying pollen from flower to flower.—G. ABBEY.

FRITILLARIA ARMENA.

AMONG the dwarf-growing Fritillarias, the species depicted in the illustration (fig. 17) occupies a prominent place. As the specific name implies, F. armena is a native of Armenia, and was introduced in 1878, but it is not generally well known in gardens. It is a charming little plant, growing about 6 inches in height. The flowers are brownish purple, and as will be seen by referring to the woodcut, are small, campanulate, and slightly drooping. They are usually produced in April. There is a yellow form of this species named F. a. fusco-lutea. This was introduced in 1887 and is a native of Smyrna.

The engraving was prepared from a sketch taken at the Royal Gardens, Kew, where the choicer Fritillarias can be seen in bloom during the spring and early summer. F. armena can be grown in sheltered positions on a rockery or border, or in pots in a cool greenhouse.

COOMBE COURT.

AMONGST the residences and gardens that so finely decorate the lower portion of the Duke of Cambridge's estate at Coombe, Kingston-on-Thames, there are few prettier or more admirably kept than is that under notice. For some years it was the residence of Mr. Watney, but now is the property of Mr. W. A. Bevan, one of a well-known banking firm, and Mr. Springthorpe is the able and esteemed gardener. The front or upper side of the grounds abuts on a new road that runs through Coombe Warren, and there are seen on the outer wall, which is most pleasingly covered with Ivies planted outside, evidence of the neatness which prevails within. The lower side of the grounds, probably one-third of a mile distant, abuts on to Coombe Lane, where a long line of close-trimmed Limc trees shows again the estimation in which order and neatness is held. The fine house, one of red brick, stands on the upper margin, and for that reason obtains some splendid views over the county of Surrey, the which spreads out south like a beautiful panorama.

In the grounds the eentre portion comprises two or three enclosures, in which cows luxuriate, whilst surrounding these are extensive shrubberies and walks, all admirably kept, and where there are many beautiful trees, that are not at all common, whilst there are some effectively planted flower beds on the upper terraces for the summer. In the spring it is possible to look down in divers places in the grounds of really grand masses of Rhododendrons, Azaleas, and other flowering shrubs, the which, even at remote distances, have been planted to be seen from the terrace. Kalmias do wonderfully here.

There are good walled kitchen gardens admirably cropped, and a large number of houses, in which fruit and flowers are well grown, whilst there seems to be not an inch of level ground in the place. A good tennis court has been formed, and, in spite of the sand which

forms so much of the subsoil, trees and shrubs thrive splendidly.

I was much interested in the fine wall of Cherries. The trees are in the best of health, very clean, and some of them reaching to the top of the 9-feet wall, also run from 12 to 16 feet in length, and in all cases were carrying heavy crops of fruit. They were all close netted; the nets, however, not hanging in immediate contact with the leaves, but held off from some 3 feet at the base, slanting up to the top, by long bamboo rods.

Asked whether much trouble had been found from aphis, Mr. Spring-thorpe said that when the points of the summer shoots were being infested, he cut them all bare back, had their trimmings carefully removed at once, and burnt, and the fly had since given no further trouble. Of course the fruit was a little less in size than usual, owing to the drought, but then none of the fruits had cracked, as is so

commonly the case, when rain is plentiful.

From the earliest variety, Early May, fruits for tarts were gathered early in May, and for dessert in the middle of the month. Early Rivers followed, then May Duke, Frogmore Bigarreau, Black Eagle, Bigarreau Napoleon, and latest the Old Bigarreau. The Cherry portion of the wall is about 100 yards long, and eapitally furnished throughout. In one part of the garden low down a standard Morello is fruiting heavily, whilst within 20 feet is another that has hardly a fruit upon it. Both were in full bloom in the middle of April, when as is well known one or two sharp white frosts prevailed. These frosts, erratic in effect, killed the blossom on one tree and left the other unharmed, yet both were apparently equally exposed.—A. D.

LIVERPOOL SUMMER SHOW.

JULY 26TH AND 27TH.

NEVER perhaps in the history of the Liverpool Horticultural Association has there been a better all-round Show than that which was opened on the Review Ground, Sefton Park, on Wednesday and Thursday last. In every class the competition was of the keenest character, and the exhibits numbered 100 more than last year. Although the large marquee in which the plants were shown covered some 3000 square yards, the entire space was fully occupied, the centre portion containing one broad stretch of beautiful foliage and flowering plants.

SPECIMEN PLANTS AND GROUPS.

Mr. Finch, gardener to W. Marriott, Esq., Coventry, secured the highest award for eight stove and greenhouse plants, having grand examples of Cycas circinalis, Kentias australis and Fosteriana, and

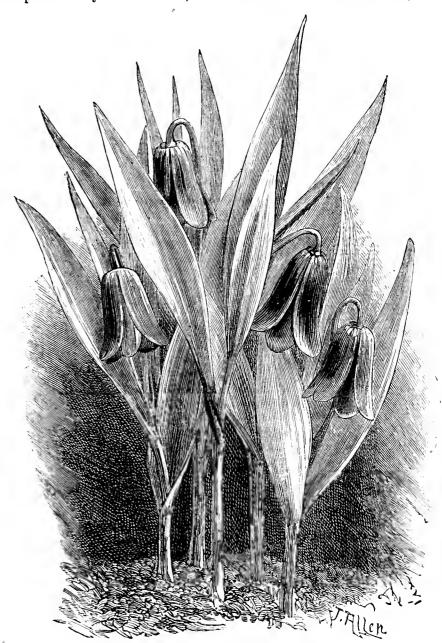


FIG. 17.—FRITILLARIA ARMENA.

a fine Croton Queen Victoria; Erica impressa, Phœnocoma prolifera Barnesi 5 feet across well flowered, Ixoras Fraseri 5 fect, and a grand salicifolia. Mr. Cromwell, gardener to T. Sutton Timmis, Esq., Cleveley, Allerton, was a close second, his grand Croton Queen Victoria 7 feet 6 inehes across being the admiration of all. This exhibitor also showed splendid plants of Alocasia Lowi, Statice profusa and Ixora Williamsi. Mr. R. Pinnington, gardener to Mrs. Banner, Blacklow House, Roby, was third in this class with smaller plants. There was a close competition between Messrs. Jellicoe, gardener to F. H. Gossage, Esq., J.P., Camp Hill, Woolton, and Healey, gardener to Col. Wilson, Hillside, Allerton, for six stove and greenhouse flowering plants, the former winning by the superiority of his foliage plants, which contained two magnificent bush Crotons Countess and Mortfortainensis, his best flowering specimens being Allamanda Hendersoni, Anthurium Andreanum. Mr. Healey staged beautiful examples of Crotons interruptus, aureus, and Queen Victoria; and Cycas revoluta, Erica impressa, and Allamanda Hendersoni. Mr. Leadbeater, gardener to W. J. Davey, Esq., Aigburth, a good third. Mr. Healey also succeeded in defeating Mr. Finch with four stove and greenhouse flowering plants, staging Allamanda Schotti, Erica Wilsoni, Ixora Williamsi, and Cypripedium barbatum. Mr. Finch had a fine Allamanda grandiflora. Mr. Bracegirdle, gardener to W. H. Watts, Esq., Elm Hall, Wavertree, being third. In the elass for three stove and greenhouse plants in flower, Mr. Jellicoe was first also for four fine-foliage plants, Mr. McFall and Mr. Healey taking second honours, whilst the latter succeeded in securing the prize for three Palms, Mr. Pinnington being

second. For one fine-foliage plant Mr. Cromwell staged one of the most charming specimens of Croton Williamsi it would be possible to see, grand in colour, 6 fect across. For one stove plant and one greenhouse plant in bloom Mr. Finch secured both prizes, the second honours going to Mr. Carling, gardener to Mrs. Cope, Dove Park, Woolton.

Ferns were admirably shown, the prize for six plants going to Mr. T. Gower, gardener to J. A. Bartlett, Esq., Lynton Lodge, Mossley Hill, the chief being Goniophlebium subauriculatum, Davallia Mooreana, and Dicksonia antarctica. A splendid second prize exhibit was arranged by Mr. Cromwell, his best being Davallia fijiensis, Nephrolepis davallioides furcans, and Microlepia hirta cristata. Mr. Bracegirdle was third. Mr. Cromwell took the prizes for three Fuchsias and one Fuchsia, showing In the class for three Ferns Mr. J. J. Craven, gardener to good plants. J. G. Grant Morris, Esq., Allerton Priory, was a good first, having Microlepia hirta cristata, 9 feet, and Gleichenia rupestris glaucescens, very fine; Mr. G. Eaton, gardener to W. H. Shirley, Esq., Allerton, being The prizes for one tree Fern and one (not tree) went to Messrs. Bracegirdle and T. Moorhouse, gardener to R. Brocklehurst, Esq., West Derby, the latter being first for one Zonal Pelargonium, and second for six Tuberous Begonias. The first honours for six Begonias and one went to Mr. T. Ankers, gardener to W. B. Bowring, Esq., Aigburth, for some of the finest varieties ever seen at the Show. With six Zonal Pelargoniums Mr. T. Gower was the only exhibitor. Ivy-leaf Geraniums, Caladiums, table plants, Gloxinias, Cockscombs, Coleus, and Liliums were admirable, the prizes going to Messrs. J. Stoney, gardener to Sir Thomas Earle, Bart., Allerton Tower; G. Eaton; J. Bounds, gardener to A. L. Jones, Esq., Oakfield, Aigburth; P. Greene, Eaton, Bounds, and Pattison, gardener to S. J. Waring, jun., Esq., Palmyra, Aigburth, in the order named, the latter winning with one Palm, Mr. Finch being first for one Erica.

There were four groups arranged for space not exceeding 150 square feet. In this Mr. Jellicoe was an easy first with a light central mound, and at intervals outside several smaller ones. There was a good ground-work of Maidenhair Fern, from which peeped small Francoas and other plants, the whole being edged with Panicum. Mr. Moorhouse, for second place, showed much improvement from anything he has done before, and should prove a difficult competitor at a future Show. Mr. Bracegirdle staged a very pretty group, but used scarlet Pelargoniums rather too freely, which impaired the effect. In the nurserymen's section, 250 square feet, Messrs. R. P. Ker & Sons, Aigburth Nursery, were easily first with a charming group. Mr. P. Poulton, Aigburth, was second. The prize for four Orchids went to Mr. J. Bounds with Cattleyas Eldorado Wallisi and virginalis, Oncídium craipum grandiflorum and vexillaria rubellum. Mr. Bracegirdle followed closely, his best being Cattleya Sanderiana and Disa grandiflora. Mr. W. Lyon was first with a single Orchid.

CUT FLOWERS.

Considering the season Roses came as a surprise to all visitors by reason of their excellence. The battle was fought entirely between Ireland and Scotland, Messrs. Cocker of Aberdeen winning in every class from Messrs. Alex. Dickson & Sons, the Royal Nurseries, Newtownards, Co. Down. In the class for forty-eight distinct they had charmingly fresh blooms. Messrs. Dickson & Sons had very good charmingly fresh blooms. Messrs. Dickson & Sons had very good Suzanne Marie Rhodocanachi, Mrs. John Laing, Alfred Colomb, Prosper Laugier, Louis Van Houtte, and Her Majesty. For eighteen Teas and Noisettes, Messrs. Cocker & Sons were first, and Messrs. Dickson second. For twelve cut Roses, six light and six dark, Messrs. Cocker & Sons were first with Her Majesty and Gustave Piganeau; Messrs. Dickson & Sons second with Marchioness of Londonderry and Alfred Colomb. For twelve cut Roses T. Raffles Bulley, Esq., Liscard, was first; Mr. J. M'Coll, gardener to J. W. Hughes, Esq., News Heys, Allerton, second; and Mr. J. Rimmer, Ashurst, Formby, third. The boxes of Roses arranged for effect showed a wonderful improvement. Mr. Carling winning with a beautiful a wonderful improvement, Mr. Carling winning with a beautiful arrangement arranged with Maidenhair Fern. T. Raffles Bulley, Esq., was second, and Mr. P. Greene third.

Stove, greenhouse, and hardy cut flowers were excellent, and the competition very keen. For twelve stove and greenhouse and twelve herbaceous flowers, Mr. Jellicoe won honours, the prize for twenty-four herbaceous going to Mr. G. Eaton for well arranged bunches; Mr. T. Coulton was second. The prizes for one and two bouquets went to C. J. Proctor, Esq. Dahlias and Carnations have never been seen in better condition, the prizes going to Messrs. H. Banks and A. J. Rogers. For Messrs. Sutton & Sons' prizes for Nemesia Strumosa Suttoni Mr. Harrison, gardener to Mrs. W. G. Bateson, Allerton, was placed first. The winner in the model garden class was Mr. A. Randall.

FRUIT.

Seldom has there been such a display of fruit seen at Liverpool, the Judges remarking that their duties had been of the most difficult description. For eight dishes of fruit, distinct, Mr. J. Goodacre, gardener to the Earl of Harrington, Elvaston Castle, Derby, was gardener to the Earl of Harrington, Elvaston Castle, Derby, was accorded the premier position, having Madresfield Court and Muscat of Alexandria Grapes, small but well finished; Dymond Peach, Elruge Nectarincs (splendid), High Cross Hybrid Melon, very large; McLaughlin's Gage Plum and Moor Park Apricots. Mr. Bennett, gardener to Hon. C. H. Wynn, Rûg, Corwen, N. Wales, was second, showing fine bunches of Muscat of Alexandria and Black Hamburgh Grapes, not quite finished; Al Melon, Barrington Peaches, Pine Apple Nectarines The Czar Plum, Moorpark Apricots, and a good Queen Pine. For six dishes Mr. J. Stoney was first, staging grandly finished Muscat and

Madresfield Court Grapes, Têton de Venus Peach, Downton Nectarines, Masterpiece Melon, and Purple Gage Plum. Mr. W. Oldham, gardener to J. Beecham Esq., Ewanville, Huyton, for second position, had grand Buckland Sweetwater, and Black Hamburgh Grapes, Grosse Mignonne Peaches, Stanwick Elruge Nectarines, Blenheim Orange Melon, and Kirke's Plum. Mr. T. Elsworthy, gardener to A. R. Gladstone, Esq., Court Hey, Broad Green, was a good third. Mr. Stoney was also first for a dish of Peaches with Têton de Venus, for a scarlet-flesh Melon with Masterpiece, and with two bunches of Muscat of Alexandria, which with Masterpiece, and with two bunches of Muscat of Alexandria, which for size of perry and perfect colouring could not be surpassed. Mr. Coates, gardener to W. H. Verdin, Esq., J.P., Knutsford, Cheshire, was second; and Mr. J. Gray, gardener to Sir G. Meyrick, Bart., Bodorgan Anglesea, third. Mr. Bennett was an easy first for four bunches of Grapes, showing Buckland Sweetwater, Madresfield Court, Black Hamburgh, and Muscat of Alexandria. Mr. J. Grey, second; Mr. G. Middleton, gardener to R. Pilkington, Esq., Rainford Hall, St. Helens, third. Helens, third.

For two bunches of Black Hamburghs Mr. Middleton was awarded the silver medal and first prize from amongst ten competitors for what the Judges considered the best bunches ever staged at an exhibition; berries like Plums, good colour, and perfection in thinning were the qualities they possessed. Mr. J. Gray had larger bunches, well coloured, but smaller in the berry, a good third coming from Mr. T. Elsworthy. For two bunches any other black, Mr. J. J. Craven had perfect Madresfield Court black as Sloes; Mr. J. Bennett second; Mr. J. Barker, gardener to J. W. Raynes, Esq., Rock Ferry, third. Mr. J. Gray was placed first for any other white Grape with good Foster's Seedling; Mr. J. Wynn, gardener to J. Johnson Houghton, Esq., Westwood, Neston, second; Mr. W. Oldham third. Mr. Gray was first for green-fleshed Melon with Hero of Lockinge, Mr. Goodacre scoring with one Pineapple and Elruge Nectarines. The prizes for six dishes of hardy fruits and basket of fruit went to Messrs. G. Dutton and Stoney. Nectarines.

For twelve varieties, Mr. R. C. Townshend, gardener to Colonel Lloyd, Aston Hall, Oswestry, was placed first, his best dishes being Autumn Mammoth Cauliflower, Cranston's Excelsior Onion, Elcombe's Improved Parsnip, Intermediate Carrot, Sutton's Exhibition Beet, and Supreme Potato. Mr. J. Hathaway, gardener to the Earl of Latham, Latham House, Ormskirk, was a good second, having fine Globe Artichokes, Cranston's Excelsior Onion, Intermediate Carrot, Wright's Grove White Celery. Mr. J. Stoney third. For eight varieties Mr. J. Pownall, Prescot, was first; Mr. J. J. Craven second, and Mr. J. Stoney third. For six varieties Mr. Hathaway was again a good first; Colonel Lloyd second; Mr. J. Stoney third. The prizes for Peas went to Messrs. MacIver and Craven, the latter also winning with two dishes of Potatoes and Mr. Hathaway with four dishes. For three dishes of Tomatoes, one dish, and brace of Cucumbers the prizes went to Messrs. Forrester, Craven, M. Hannagan, gardener to R. C. Naylor, Esq., Hooton Hall.

NURSERYMEN'S EXHIBITS.

These were a feature of the Show, certificates of merit being awarded to Messrs. R. P. Ker & Sons for a variegated Hop, climbing Roses, and Rose Souvenir de Bonn; Dicksons, Ltd., for splendid assortment of herbaceous flowers; Mr. John Forbes, Hawick, for new white Carnation; Mrs. Cranston, Pentstemons, Hollyhocks, border Carnations, and herbaceous plants; Messrs. Hewitt & Co., Birmingham, for magnificent Begonia blooms; Messrs. Dobbie & Co., Rothesay, for Sweet Peas, Violas, Begonia blooms; Messrs. Dobbie & Co., Rotnesay, for Sweet reas, violas, Carnations, Marigolds and Dahlias, a choice exhibit; Liverpool Horticultural Co., for fine bank of Tea Roses, Orchids and Gloxinias; Mcssrs. Charlesworth, Shuttleworth & Co., Bradford, for a group of Orchids; Messrs. Thomas Davies & Co., for herbaceous flowers and vegetables; Mr. Henry Middlehurst, Manchester Street, Liverpool, for splendid spikes of seedling Gladioli; J. de Bels Adam, Esq., for a group of Tomatoes in 6-inch pots; and to Messrs. Laing and Mather, Kelso, Scotland, for a superb collection of Carnation blooms in variety, amongst them being the charming new variety Lady Nina Balfour, a flesh-coloured them being the charming new variety Lady Nina Balfour, a flesh-coloured self, sweetly scented and very attractive.

THE NATIONAL CARNATION AND PICOTEE SOCIETY.

NORTHERN SECTION.

THE annual Exhibition of this section was held in the Botanical Gardens, Manchester, on July 29th, and as all the other exhibitions in the South had taken place, it was somewhat a surprise to see so many flowers exhibited. There was only one Birmingham grower able to stage a few blooms, for Carnations in the Midlands were really over. The

following were the awards:-

For twelve Carnations, dissimilar, first, Mr. T. Lord, Todmorden, with a stand of superb blooms, consisting of Duke of York, Arline (very fine), Oscar Wilfred, George, S.B. (a grand flower, probably the finest bloom ever exhibited), Thalia, Master Fred (very rich in colour), Dan Godfrey, Seedling No. 12, Bruce Findlay (fine), Admiral Curzon, Thaddeus, and Biddy Malone. Second, Mr. J. Whitham, Hebden Bridge, with Robert Lord, Oscar Wilfred, Fanny Hudson, Master Stanlar Thalia Leganh Lakin William Dear (1997), Master Fred Stanley, Thalia, Joseph Lakin, William Dean (very fine), Master Fred, Wm. Skirving, Lily Cannell, Edward Rowan, and Admiral Curzon. Third, Mr. H. Geggie, Bury; fourth, Mr. E. Shaw, Morton, Manchester; fifth, Mr. G. Chadwick, Dukinfield.

For twelve Picotees, dissimilar, first, Mr. T. Lord, with Norman Carr, Thomas William, (a wonderfully fine bloom), Little Phil, Morna, (good), Zerlina (fine), Mr. Payne, Mrs. Gorton, Mr. Sharp, Mary D. Anstiss, (a superb bloom), Favourite, Campanini, and Alliance. Second, Mr. E. Shaw, with Little Phil, Nellic (excellent), Mrs. Open. shaw (Geggie's, a grand flower and will take a leading position), John Smaw (Geggle 8, a grand nower and will take a leading position), John Smith, Thomas William, Morna, Clara Penson, Favourite, Muriel (fine), Daisy, Mrs. Summers and Campanini. Third, Mr. J. Whitham. Fourth, Mr. A. R. Brown, Birmingham. Fifth, Mr. H. Geggie. Sixth, Mr. H. Pomroy, Stakehill, Manchester.

For six Carnations, dissimilar, first, Mr. Crossley Head, Hebden Bridge, with Master Fred (fine), George, Gordon Lewis (fine), Fanny Hudson, Joe Edwards, and Richard Bealey. Second, Mr. G. Tholorniley, Middleton, with C. H. Herbert, Joe Edwards, Master Fred, Young Meynill, Ivanhoe, and Thalia. Third, Mr. G. Maddock, Wakefield. Fourth, Mr. W. Kenyon, Bury. Fifth, Mr. Squire Greenwood, Hebden Bridge. Sixth, Mr. Joe Edwards, Blackley. Seventh, Mr. Pomroy.

Bridge. Sixth, Mr. Joe Edwards, Blackley. Seventh, Mr. Pomroy. Eighth, Mr. C. F. Thurstans, Wolverhampton.

For six Picotees, dissimilar, first, Mr. Crossley Head with Morna (good), Little Phil, Miss Wood, Thomas William, Lady Louisa (a very fine bloom), and Zerlina. Second, Mr. C. F. Thurstans with Dr. Epps (grand), Zerlina, Mary, Thomas William (very fine). Mrs. Sharp, and Campanini. Third, Mr. J. Edwards; fourth, Mr. W. Kenyon; fifth, Mr. B. Simonite, Sheffield; sixth, Mr. Thorniley; seventh, Mr. Greenwood; eighth, Mr. Meddock wood; eighth, Mr. Maddock.

For twelve selfs, first, Mr. E. Shaw, with Germania, Reuben Butler (two), Mrs. Muir, Lillie Shaw, Mrs. Fred, Mrs. Lee, and four seedlings. Second, Mr. A. R. Brown, Handsworth, Birmingham, with Ruby, Mrs. Fred, Attraction, Germania (two blooms), Wieland (two), Koerner, Patience, Aurora, Hebe, and Berenger. Third, Mr. J. Edwards. Fourth, Mr. T. Lord. For six selfs, first, Mr. Kenyon. Second, Mr. Pomroy.

Third, Mr. C. F. Thurstans.

For twelve Fancy Carnations or Picotees, first, Mr. A. R. Brown, Birmingham, with an excellent stand of flowers, made up from his fine remaining blooms on his plants—viz., Alice Brook, fine; Janira, Eclipse, Dodwell's Seedling 166, Richard Tryan, Romulus, Schleiben (two), Agnes Chambers, Lilian (grand), Stadrath Bail, and Terra Cotta. Second, Mr. B. Simonite, with Romulus and eleven seedlings. Third, Mr. Pomroy. For six Fancy varieties.—First, Mr. J. Edwards, with Harlequin, Jessica, Mrs. Robert Sydenham, A. W. Jones, Dodwell's Seedling 580, and a seedling.

In the single bloom classes the awards were as follows:—Scarlet bizarre.—First and fifth, Mr. T. Lord with George, and third with Duke bizarre.—First and fifth, Mr. T. Lord with George, and third with Duke of York. Second, Mr. E. Shaw with George. Fourth, Mr. G. Thorniley with C. H. Herbert. Crimson bizarre.—First and second, Mr. T. Lord with Master Fred. Third and fourth, Mr. T. Maddock with Edward Schofield. Fifth, Mr. C. F. Thurstans with Master Fred. Pink and purple bizarre.—First and second, Mr. T. Lord with Seedling No. 4, and third and fifth with Arline. Fourth, Mr. Maddock with Sarah Payne. Scarlet flake.—First, second, and fifth, Mr. G. Thorniley with Joe Edwards. Third Mr. Geggie, and fourth Mr. Simonite with William Dean. Rose flake.—First and fifth, Mr. T. Lord with Thalia. Second, Mr. Maddock with a seedling. Third, Mr. J. Edwards with Teddy, and fourth with Mrs. Gunn. Purple flake.—First, Mr. Lord with Gordon Lewis, third with Mayor of Nottingham, and fourth with James Douglas. Second Mr. B. Simonite, and fifth Mr. J. Whitham with James Douglas. James Douglas.

Picotees were shown thus:—Heavy red edge.—First, Mr. Lord, with Mary D. Anstiss, very fine, fourth with the same variety, and second with Morna. Third, Mr. Shaw, with Morna. Fifth, Mr. Thurston, with Dr. Epps. Light red edge.—First, second, and fifth, Mr. Lord; third, Mr. Thurstans; fourth, Mr. Shaw; all with Thomas William. Heavy purple edge.—First, Mr. Geggie; second, Mr. Thorniley; fourth, Mr. Shaw; all with Mrs. Openshaw; third, Mr. Lord; and fifth, Mr. A. R. Brown; with Muriel. Light purple edge.—First, third, and fourth, Mr. Thurstans; second, Mr. Brown; and fifth, First, third, and fourth, Mr. Thurstans; second, Mr. Brown; and fifth, Mr. Chadwick; all with Mary. Heavy rose edge.—First, Mr. Brown; second, Mr. Thorniley; both with Mrs. Payne; third and fifth, Mr. Lord, with Mrs. Sharp; fourth, Mr. Kenyon, with Little Phil. Light rose edge.—First, Mr. Thorniley; second, Mr. Kenyon; and fourth, Mr. Brown; all with Nellie; fifth, Mr. Shaw, with Favourite.

The premier Carnation was a grand bloom of George, from Mr. T. Lord; the best Picotee being a superb bloom of Thomas William, also from Mr. Lord.

A first-class certificate was awarded to Mr. T. Maddock for Edward Schofield, a fine high coloured crimson bizarre Carnation in the style of Joseph Lakin. A certificate was also awarded to Mr. Joe Edwards for a dark maroon self Carnation of fine form, petal, and substance, and named Mancussian.

TRADE CATALOGUES RECEIVED.

The "Acme" Chemical Company, Limited., St. Stephen's Street, Tunbridge.—Weed killers, Shading, Anti-Fungi Powder, &c.

De Vries & Co., Aurora Nursery, Beverwijk, Haarlem.—Bulbous

Messrs. Laxton Bros., Bedford .- New Strawberries and Coloured

E. D. Shuttleworth & Co., Albert Nurseries, Peckham Rye, London, S.E -Trade Circular.

L. Spath, Baumschule, Berlin .- Bulbs and Miscellaneous Plants.



HARDY FRUIT GARDEN.

Preparing Ground for Strawberry Planting.—The nature of the ground on which future crops of Strawberries are intended to be grown must be first taken into consideration. Poor soil is of little use for such a gross feeding plant as the Strawberry, but it is possible with too much manuring and good soil combined to form a rooting medium which will favour the growth of foliage at the expense of fruit. Adding manure to ground already full of humus is the most likely to be productive of gross growth in Strawberries. Such soils should be deeply dug and the whole bulk of material to the depth of 18 inches well

The Best Soil.—The best soil for Strawberries is undoubtedly that of medium quality and richness. What are usually termed holding loams are good, as well as heavy soils not naturally stiff or wet to any extent. Such soils encourage a firm and steady growth, not over-luxuriant but strong and favourable to fruitfulness. If deeply dug and freely manured for any recent crop, such as early Potatoes, very little need be done in order to prepare the ground for planting beyond completing the removal

of the crop, afterwards forking and levelling the surface.

Light Soil.—On very light gravelly soils it will be advisable to again manure the plots intended for Strawberries, giving a heavy or light dressing according to the special requirements. As the ground should not be too loose when the plants are placed permanently out, its preparation may take place a week or two previously, compressing the surface into a firm condition at planting time by the simple operation of treading with the feet, but only when dry or crumbly. If obtainable the addition of clay or marl to light soils will greatly improve them.

Wet Soil.—Wet soils need special preparation, the subsoil being made free and open to allow superfluous water to drain away readily. Should water collect within 3 feet of the surface nothing will make the soil fit for Strawberry culture but draining. Damp soils produce foliage at the expense of fruit, and the latter when produced, except

perhaps in very dry seasons, is subject to mildew.

Heavy Soil.—Many soils, usually stiff and heavy, only require working well to be admirably suited for Strawberry culture. Adding sand, road scrapings, or fine coal ashes together with thorough and frequent moving and mixing will bring them into suitable condition. Ridging roughly in the winter to expose as much surface as possible to the action of frost tends to hasten the amelioration of such soil. A season's cultivation is often requisite with the most obstinate and retentive soils. It is little or no use planting if the ground is not friable. Better continue to work the ground during the autumn, winter, and spring, planting at the latter period if the results of thorough cultivation are sufficiently evident to warrant it.

Manure.—Farmyard manure is usually the best to work into the ground, not applying it, as a rule, in a fresh state or fully decomposed, but partly decayed, it then containing its most important constituents. For light soils cow excreta is good, and for very heavy retentive ground farmyard manure containing a large proportion of strawy

material is excellent.

Trenching Ground.—It is not wise to follow immediately an old bed of Strawberries with the same crop again. If, however, it be absolutely necessary to do it the best plan to adopt is to pare off the strong clumps of plants, leaving the mass of rooted cunners, if not wanted, and weeds to be trenched in. The nature of the subsoil must determine whether ordinary or bastard trenching should be carried out. Poor subsoil must not be brought to the surface, and the rich buried deeply. In bastard trenching properly done the layers of soil will practically remain the same. Work in plenty of good manure, also trench any hard or weedy ground. The deep moving facilitates the passage of air and water through it, and an opportunity is afforded of burying troublesome weeds, except such as Bindweed or Couch Grass, which ought to be picked out as trenching proceeds. The sooner the ground for this season's planting is prepared the better.

Planting Strawberries .- In order to secure early and heavy supplies of fruit from young plants the first year it is imperative that early planting be adopted, and that the best, strongest, and most vigorous rooted plants only be inserted. Runners rooted carly in pots, turves, or mounds of soil will supply plants in the right condition. Plant during the first two weeks in August, choosing if possible a dull period with the surface not wet. If dry weather prevails at the time of planting draw rather deep drills, placing the plants in these so that cach may be in a slight depression or basin in which water can be poured to enable them to become readily established.

After Treatment.—Along with fresh growth runners will form and extend, but nip them off closely and regularly as they show. The Dutch hoe run frequently between the rows will loosen the surface soil, destroy

seedling weeds, and promote growth of the plants.

Distances to Plant.—The exact distances between the rows and plants vary with the different varieties and soils. The width between the rows containing the strongest growers may in good soil be 3 feet. For robust growers have the rows $2\frac{1}{2}$ feet asunder, moderate growing varieties being allowed 2 feet. The distances between the plants in the rows may be 6 inches less in each case. On poor ground the rows and plants may be a little closer. Insert any spare runners or small plants 6 inches apart in nursery beds. These come in useful for spring planting.

FRUIT FORCING.

Peaches and Nectarines .- Early Houses .- The leaves on trees started in December and early January are now beginning to fall, and there is great danger of over-maturity of the buds or their premature excitement, which, followed by a check however slight, causes them to drop. The trees must not lack moisture, affording water or liquid manure to those that are weakly as it becomes necessary. Excessive moisture at the roots, however, is liable to cause premature growth in the buds, Excessive moisture which must be guarded against by cool treatment and judicious management. There is little danger of the borders being made unduly wet by rain, provided the drainage is thorough and the soil sufficiently furnished with gritty and calcareous matter. Allow such laterals as are green and unripe to remain as an outlet for any excess of sap; they are the best safeguard against starting the bloom buds, and equally effective in maintaining activity at the roots. Early forced trees form far too many blossom buds as a rule, so that there is comparatively few wood buds, and these mostly confined to the base and extremity of the shoots. Neither is the growth strong, hence in pruning it is not desirable to cut back next year's bearing wood unless the shoots are of great length.

Where disbudding has been attended to, no more wood being trained in than is required to replace the bearing shoots of the current year and to renew worn-out growths, as well as to provide for the proper extension of the trees, very little pruning will be needed. Indeed, trees that have long been subjected to early forcing frequently become so enfeebled as to need the removal of the weak growths, which afford much smaller fruit than is yielded by the moderately vigorous and well-ripened shoots. Such trees, if very weak, may have the old soil carefully removed from amongst the roots, supplying fresh rather strong calcareous loam in its place. Any trees which grow too luxuriantly must be lifted and the roots carefully laid in fresh soil, if necessary, near the surface. Give a good watering to the trees that have had the soil renewed about the roots, also to those which have been lifted. These operations require to be performed as soon as the leaves are mature and before they fall from

Succession Houses.—Cut away the shoots that have borne fruit unless required for extension, and thin the growths where they are too crowded. This will allow of the thorough cleansing of the foliage with water from the syringe or engine, repeating as necessary, so as to keep the foliage and wood free from insects, preserving the leaves in health as long as possible. The freer access of light and air will also assist the perfecting of the buds and ripcning of the wood. Attend to a due supply of water at the roots. Where the fruit is ripening a free circulation of air will enhance the quality considerably, sufficient water only being given at the roots to prevent the foliage becoming limp, and securing air moisture by occasionally damping the surfaces. If the trees suffer from dryness at the roots the fruit ripens prematurely, and an arid atmosphere induces red spider and mealiness in the fruit.

Ants are particularly voracious this season, and eat into the choicest and best fruits, preferring Nectarines to Peaches, and especially Lord Napier Nectarine. The ants are attracted by partially picked bones laid near the haunts, and when smothered with ants the bones are dropped into boiling water. After the bones are drained and parted with the water they are eligible again as baits. To prevent their ascending the trees strips of "honey fly gum paper" may be wrapped around the stem, securing with string, but this is not necessary, only let the strips overlap and keep close round.

Late Houses.—The wood is best somewhat thinner than is usually allowed in earlier houses, for it does not ripen so well generally. By allowing plenty of room the foliage assimilates the sap better, more food is stored, and the buds form perfectly and the wood ripens well, other conditions being favourable. Gross growths must be stopped, or better removed altogether, for they only impoverish the weaker by appropriating an undue amount of sap, preventing its equal distribution, and favouring nothing but unfruitfulness and gumming. Endeavour, therefore, to secure an equal balance of moderately strong short-jointed growths, and to insure their ripening ventilate freely in the morning, and allowing a good heat from sun through the day, closing in time to run up to 85° or more. Admit a little air before nightfall to allow the pent-up heat and moisture to escape, and the atmosphere to gradually cool, thereby securing rest. This and the early ventilation promotes the solidification of the wood and its ripening. Forcible syringings will be necessary until the fruit commences ripening to keep the trees free from red spider. The borders also must be well supplied with water or liquid manure, and a light mulching will further surface rooting, as well as assist in keeping the soil regularly moist, and at the same time affording nourishment.

Melons.—Late Fruit.—If Melons are required very late seed should now be sown. Plants from this sowing will be fit to put out in about a month, and setting their fruit in September will afford Melons in November and to the new year. This, however, can only be effected in a light, airy, well-heated structure, and not always then, for Melons abhor the autumn mists and fogs. Bottom heat is absolutely necessary, and is best furnished by hot water pipes in a chamber, as fermenting materials induce too much vigour in the plants, and decline in heat vien most is required.

Late Summer and October Melons.—To ensure these the plants must

be placed out at once, giving them about a couple of barrowloads each of good loam, with a sixth each of horse droppings and old lime rubbish intermixed. Make the compost very firm, and have it in a moist state before planting. Strong plants, watered the previous night, only are suitable, for it is far more difficult to produce late than early Melons. Encourage the plants to make free growth by syringing at closing and damping surfaces in the morning and evening of hot days. Ventilate between 70° and 75°, and keep the temperature through the day at those figures by artificial means, 85° to 90° from sun heat, and close so as to raise the heat to 95° or 100°, allowing it to fall to 65° through the night. The plants will show and set fruit upon the first laterals, and the plants being almost at fruiting stage when put out, this will speedily be effected.

Plants Swelling their Crops.—Overcropping ruins more Melons than anything else, therefore reduce the number of fruits when fairly swelling to two on a weak plant, three on one moderately vigorous, four on a strong, and six on large and strong plants. Overcrowding the foliage is equally disastrous to the quality of the fruit, for it requires all the solidity that can be given to it, and to effect this the growths must be kept fairly thin, all having full exposure to light. Stop the laterals to one joint, and where this is likely to result in crowding thin them. Earth up the plants as the roots protrude, less soil being needed than earlier in the season, and afford copious supplies of liquid manure, always weak and tepid. Syringe from 3 to 4 P.M. or earlier, and then raise the temperature from sun heat to 95° or more. With due supplies of water at the roots shading will not be necessary, or only after dull weather, when a light shading will be of benefit from powerful sun until the plants become inured to it. It may also be needed when the houses have the ends north and south, and the sun is powerful on the west side. Place supports to the fruits in good time, and slanting so that water will not rest upon them.

Fruit Ripening.—A dry atmosphere is essential to secure quality and prevent the fruit cracking. Admit a little air constantly, maintaining a circulation by gentle warmth in the pipes, and employing enough artificial heat to keep the temperature at 70° to 75° by day, advancing 10° to 15° from sun heat, and to prevent its falling below 65° at night. Withhold water from the roots, but the foliage must not flag or the quality of the fruit will be seriously deteriorated. Where there is fruit swelling in the house an occasional damping will be necessary for the benefit of the foliage, and it will not affect the ripening fruit disastrously if plenty of air is afforded.

Late Plants in Pits and Frames.—The setting of the fruit should now be effected, to allow time for its swelling and ripening. If necessary give a good watering before the flowers open, and line the sides of the frame and bed with hot manure. Give a little ventilation constantly at the top, so as to prevent the deposition of moisture on the blossoms, and continue it until the fruit is set and commences swelling. Impregnate the blossoms daily, and when sufficient fruits are obtained remove all flowers, and afterwards keep the growths well stopped and fairly thin, so that they have plenty of air and light. Maintain a moist and warm atmosphere to assist the swelling of the fruit, closing early with sun heat, and sprinkling the plants on fine afternoons. Water will be required twice a week in bright weather, but supply it sparingly or not at all when dull, and admit a little air to prevent a stagnant atmosphere. Ventilate early on fine mornings, and maintain a temperature ranging from 80° to 90° through the day from sun heat. If sunny weather prevails and the heat is properly maintained by linings the fruit will be good often up to November.

PLANT HOUSES.

Bignonia grandifiora. — In 5-inch pots this plant flowers profusely and is very useful for various decorative purposes. Cuttings of young wood root freely in houses where a fair amount of moisture is maintained. The plants should be well ripened and rested in a cool house. When started into growth in the spring an intermediate temperature suits them well if fully exposed to the sun. The wood made must be firm or else the plants fail to flower.

Gloxinias.—Plants raised from seed sown late in the spring and now in small pots should be transferred into others 4 and 5 inches in diameter, according to their size. These, if shaded from bright sunshine and grown close to the glass in cold frames, will make excellent decorative plants a few months hence. Few plants when well grown are more effective. By starting the tubers at intervals of a month and raising seedlings, a very long succession of bloom can be obtained. Plants that flowered early and have enjoyed a good season of rest may be started again into growth. They will soon commence to grow in any structure that is kept moderately close. The plants may be flowered in the same pots.

Tuberous Begonias.—Seedlings may be grown in cold frames, for although they may appear to be late they will make wonderful progress, and flower profusely during October and November if placed in a warm house close to the glass where the atmosphere is kept moderately dry. The flowers of these Begonias are very useful for house decoration. They are easily bruised, and therefore do not travel well.

Nertera depressa.—This is really a charming little plant when well grown and covered with its coral-like berries. Plants that have berried well, and have started again into growth, may be broken up and dibbled thickly into small pots or pans, the latter being best when needed for table decoration. This plant grows freely in any light moderately rich soil, and should be kept moist until well established in an intermediate temperature. By autumn the surface of the pots or

pans will be covered with growth, and if well watered we find the plants winter well on shelves where the temperature does not fall below 45°. In spring a fair amount of air and full sunshine should be afforded

them, when they will be found to berry freely.

Celosias.—Plants for autumn and winter now in 3-inch pots, and may be transferred into 5-inch without delay. Grow the plants in frames where they can enjoy a liberal amount of air. They should not be hurried in their last stages or they will be almost certain to damp at the base when arranged in conservatories and other structures.

Asparagus deflexus.—However effective and useful other varieties of Asparagus may be for furnishing in pots and for supplying greenery for cutting, A. deflexus is a handsome basket plant. It is very distinct in appearance, and its fairly long feathery shoots droop gracefully over the sides of the basket. This is certainly a great gracefully over the sides of the basket. This is acquisition to the numerous basket plants at disposal.

Epiphyllums.—These, if assisted by gentle warmth to make their growth, should now be fully exposed to the sun, and at the same time be given abundance of air. They flower profusely when the growths are thoroughly ripened, which is best accomplished by exposure to light and air and not have been supported by the same time. air, and not by the barbarous system of drying them at their roots until the plants shrivel. Where stage room is limited these plants do well grown in pots suspended from the roof by means of wire. In this position they do not suffer so quickly from the drying conditions of the atmosphere as many other plants. Even in baskets the plants do very well, providing they are not overwatered. If strong stocks of Pereskia are at hand they may be cut into lengths and inserted in small pots. well, providing they are not overwatered. It strong stocks of Pereskia are at hand they may be cut into lengths and inserted in small pots. If pieces of Epiphyllum are attached on the top and then stood in the propagating frame they will unite by the time the stocks are rooted. Grafting is easily effected by splitting the stock at the top and the removal of the bark from the scion, or by placing pieces on each side after removing a portion of the stock, so that the two barks come together. When placed on each side of the stock, and each scion pointing outwards, they form good shaped heads much quicker than when ing outwards, they form good shaped heads much quicker than when one piece only is attached.



APIARIAN NOTES.

Notes from the Moors-Swarming.

During the two first weeks of my stay at the moors, amidst very boisterous weather, I have had not less than eight unexpected swarms. One hive sent off a swarm that had several young queens living together for six weeks, which is another lesson of the many I have had not to put trust in bees killing the supernumerary queens by returning swarms. The above case is the most extraordinary one I have experienced, but it is not uncommon. The Heather is gorgeous, but it was midday on July 27th before the honey began to flow, which has been of short duration, as the morning of 28th dawned with an overcast sky and low temperature.

Where do drones congregate? Ancient writers on bees tell us that drones ascend to the top of the highest hill near the apiary for the purpose of meeting queens. The 23rd of July being a fine day with the exception of a drizzling rain at intervals, drones were flying in great numbers. Being also a likely day for queens to be on the wing I ascended by a ridge to a height of 1400 feet above sea level and from 300 to 400 feet above the bees. In the bosom of two prominences and at a great height the drones were in myriads and the humming they made was converted into a roar. By their quick movements and darting at each other proved that our early observers were a great deal more accurate in their observations than many modern writers.

PUNIC BEES.

I hope to be able with these bees to prove an important point, that is whether being bred at so high an altitude they will become acclimatised, and consequently hardier. But although a writer tried to impress us with the belief that Punic bees being natives of a warm country were tender, I have not found them so. I have one of my queens that was imported in 1891 still alive and breeding well, and I know of six others. This is proof that Punic queens are long lived and very prolific. The queen referred to has been at the Heather here for three years, which doubly taxes the laying powers of queens.—A LANARKSHIRE BEE-KEEPER.

SWARMS NOT WORKING.

I HAD a swarm of bees on May 6th, which began to work well until about a month ago, when they appeared to stop working, and I never see any workers among them. The bees are still in the hive, and they have a little comb, there being a large number of them, but they do not work. I commenced to feed them, but it did not make any difference to their working. I had another swarm on the 22nd of May, so I put them in a much larger hive.

They did well, filled the hive, and they are still working, having commenced to fill a cap I placed on the top of the hive. first swarm I sometimes see the bees fighting with much larger ones in the same hive. If "A Lanarkshire Bee-keeper" would kindly advise me what to do I should be much obliged, as the time of year is drawing on, and I am afraid they will not fill their hive with comb for the winter.—F. J. W.

[The key to enable me in your case to give a proper explanation is wanting. Prime swarms often issue with an effete queen, so that it is no better than queenless, and not unfrequently with one or several young ones, which always run the risk of being lost or The swarm under such remaining unfertile for several weeks. conditions throws off a portion of her bees, which renders the original one too weak to be of much use for the present season, being with a young and fertile queen too intent on breeding. Examine the hive or watch the entrance for young bees at a time when rallying, and if these are present feed till full of comb and of proper weight to stand the winter. It then ought to be an excellent and profitable hive for next season. Make it a rule in your apiary to have no queens older than from ten to twelve months, and you will be pleased with the little extra labour and save disappointment. Your hives will also be in the best possible condition for gathering honey with the minimum amount of swarm-Raising nuclei and deposing old queens early in the season constitute sensible work for the current year as well as for the following season.—A. L. B. K.]

GARDENERS' CHARITABLE AND PROVIDENT INSTITUTIONS.

THE GARDENERS' ROYAL BENEVOLENT INSTITUTION .- Secretary, Mr. G. J. Ingram, 50, Parliament Street, London, W.C.

UNITED HORTICULTURAL BENEFIT AND PROVIDENT SOCIETY .-Secretary, Mr. W. Collins, 9, Martindale Road, Balham, London, S.W.

ROYAL GARDENERS' ORPHAN FUND .- Secretary, Mr. A. F. Barron, Royal Horticultural Society's Gardens, Chiswick, London, W.



*All correspondence should be directed either to "THE EDITOR" or to "THE PUBLISHER." Letters addressed to Dr. Hogg or members of the staff often remain unopened We request that no one will write privately unavoidably. to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Bee subjects, and should never send more than two or three questions at once. articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post, and we do not undertake to return rejected communications.

Poetry (Fleur).—We are unable to inform you in what book the lines you send occur.

Presentation Book (Flora).—If the gardener to whom you kindly wish to present a comprehensive book does not possess "Thompson's Gardeners' Assistant" it would be a very useful and appropriate gift. It is published by Blackie & Sons, and can be obtained through a

Mealy Bug on Vines (A.J.).—Your letter arrived too late to be fully answered this week. Do the best you can with a forcible jet of water and the aid of a pointed stick for dislodging the insects before sending the bunches to table, allowing time after the unenviable operation for the berries to become dry before dishing the fruit.

Chrysanthemum Leaves Failing (Chrysanthemum). — It is possible that the bones, if raw, also the excessive use of the guano, have had a deleterious effect. An application of clear lime water could not do harm, and might do good, followed by a solution of soda as advised to another correspondent. The leaves shall be examined The leaves shall be examined microscopically.

Chrysanthemums (Bob).—The crown buds showing now will give larger and earlier blooms than you are likely to obtain from the terminal buds. We do not know in what way you can retard the flowers of Madame Desgranges other than keeping the plants in the coolest position you can find, but not under trees. Many plants are producing buds sooner than usual this year through no fault of their cultivators.

Tomatoes Diseased (A. A. B.).—The specimens did not arrive in time for the requisite examination being made for the purpose of reply in the present issue. The case shall have attention.

wireworms in Vine Border (J. J.).—These not easily destroyed pests are no doubt injuring your Vines. Pursue sedulously your practice of inserting baits of Potatoes and Carrots, withdrawing them frequently for securing the depredators. We have known squares of fresh turf buried in the soil even more effectual than the roots mentioned. We have heard that sowing Mustard seed on wireworm-infested land and allowing the plants to grow has in some mysterious way acted beneficially, but catching the pests is the most certain mode of riddance.

Cucumbers Failing (Hampshire).—The disease in the roots is caused by minute nematoid worms, and they may be communicated with soil, manure, or water. We fear your plants are beyond recovery. Heating the soil to 212° destroys parasitic germs. An experienced cultivator has found that practice, then mixing with each bushel of the soil a pint each of steamed bonemeal and soot, and a quart of wood ashes, keep his plants in health and free from this destructive visitation. Every part of the house should be thoroughly cleansed, floors and walls of the pit washed with hot lime. You do not say, however, whether the plants are grown in pits or frames.

Potatoes for Montevideo (Quintero).—It would be impossible for anyone to name a solitary variety as the best for your purpose. Possibly you are right in assuming that early varieties may answer the best in sandy soil because of the risk of drought more prejudicially affecting the later crops. Even in this country the best varieties for particular soils and localities can only be ascertained by experiment, and so it must be in your case. Potatoes of American origin would be likely to answer the best, such as Early Puritan, Early Rose, Beauty of Hebron, Extra Early Vermont, and Charles Downing. Of good-sized tubers (and it would be a mistake to plant small ones) half a ton will be needed to plant an acre of land in rows 27 inches asunder and 12 to 15 inches in the lines. We do not know of any small work on Ferns such as you appear to require. Possibly the Director of the Royal Gardens, Kew, might be able to advise you on the subject, and we are sure he would be willing to do so.

Melon Leaves Diseased (Subscriber).—Yes, the Melon leaf subjected to microscopic examination is "smothered" with a disease caused by a fungus-like creature allied to that which produces fingerand-toe in Turnips and clubroot in Cabbages. But it is higher specialised than that fungus (Plasmodiophora brassicæ), for, though this curious group of fungi, called Myxomycetes (to which finger-and-toe fungus belongs), have the power of movement by changing their forms, like the low microscopic animals called Amæbæ, it possesses the power of locomotion in a higher degree, and is capable of attacking any part of the plant. The malignant bacteroids causing disease in Melons, Cucumbers, and Vegetable Marrows sometimes attack the stem only, level with or within a foot of the ground, and the plants so attacked collapse as suddenly as those infested at the roots. the roots and stem intact, fastening on the bines here and there, and causing a swelling, with sometimes an exudation, which is due to the ferment set up by the bacteria, and in other cases it may infest the leaves only. In the latter case the leaves are usually thick in texture and abnormally green and healthy in appearance, but this gives place to a jaundiced hue, and transparent yellow pustules appear on the upper These soon shrink, forming specks, and the leaves turn rusty and collapse, the midribs and footstalks remaining intact; all the same, the plants die, apparently healthy at the roots, in the stems, and even bines. If the plants are examined they will be found to have no (or only small and discoloured) nitrogenic nodosities on the roots, which is a common case where fermenting materials are employed for bottom heat, and we may assume that the bacteroids which convert free nitrogen into the form by which it can be assimilated by the plant are not present. This is a vital point in proving that the presence and vitality of the micro-organisms which give rise to the root-tubercles is the indispensable factor by which atmospheric nitrogen is taken up and elaborated. It is still further necessary to show that the malignant bacteroids do not attack the roots, stem, bines, footstalks, and midribs of the leaves because This is seen in the case under they contain assimilated nitrogen. notice by the micro-organisms concentrating their forces on the parts where the free nitrogen enters the plant, which can only take place by the parts above ground, and most freely by the leaves. On examining thinner tissue of the leaf, where the free nitrogen must enter most and freest, we found the stomata swollen and closed, and the hairs remarkably short, blunt, and stunted, whilst they were almost entirely wanting on the thicker portions. In the interior of the latter the bacteria were very abundant, but not so much so as to cause the sudden collapse or decay of the affected part, for there were some perfectly healthy cells, but most had been invaded, and we anticipate the drying up and falling away of those parts of the leaves as if scorehed, leaving the midribs and footstalks intact. The plants, however, will positively refuse to grow, though their roots and stems appear perfectly healthy, and they, with their fruit, gradually wither. The fruit ripens prematurely, and the seeds are for the most part very defective, if, indeed, they store sufficient matter to effect germination. The seeds, however, are not in any way affected by the bacterial affection, and the disease will not show itself in the progeny. It is not by any means a new disease, for it has been known in England more than a century, although

diseases of this nature have only received the attention of bacteriologists within the last quarter of a century.

Bones Becoming Putrid and Maggotty in Chrysanthemum Pots (W. A. M.).—This is a very common occurrence this season, many plants being ruined by the broken bones employed as drainage to the pots at the time of the final potting having become putrid, alive with maggots, and emitting a stench. The bones, though perfectly dry and in excellent condition when received, soon become decomposed when moistened because they have undergone a process of fermentation so as to render the gases they contain more readily available for the plants. Such bones, however, should never be used for drainage, nor, indeed, any bones, for all are liable to ferment and foster the development of maggots. It is different when the bones are mixed with the soil; then the producers of the maggots cannot get at them, and the decomposition takes place much more gradually and they are likely to prove advantageous. There is nothing like a clean drainage composed of potsherds for Chrysanthemums. It is imperative to get rid of the bones, clearing every particle away, cleansing the pots, and using crocks only for drainage. The soil also that has not been occupied with roots should be removed, using fresh loam intermixed with lime rubbish and charcoal, as these, especially the old plaster, will have a tendency to sweeten the soil, and it will further be freed of sourness by watering the plants with tepid water in which 1 oz. of washing soda to 3 gallons has been dissolved. The sodic solution will saponify the fatty matter present in the soil, and this practice a large grower has found necessary to pursue with plants that were almost killed by indiscreetly using bones for drainage, which by the vendor were described as particularly strong

Arrangement of Grounds and Orchards (J. H. E.).small kitchen garden, 47 yards by 16 yards, would, as the ground is heavy, be best occupied with half-standard Plums. They would come into bearing soon and be profitable in a few years; plant in the autumn as soon as the leaves have fallen. The Czar, Belgian Purple, Prince Englebert, Gisborne's, and Victoria are suitable varieties, with Crittenden and Bradley's King Damsons. The spaces between the trees, which may be 15 feet apart, could be utilised with vegetables, or be temporarily planted with Strawberries or Gooseberries and other bush fruits. The drying ground must of course remain as it is, also the 43 by 40 yards orchard, which, however, seems to have many vacant places, especially on the west and north sides, but these, we presume, you intend to fill up by the trees you name. The 80 by 38 yards meadow might be planted with fruit trees, employing standards if you wish to have the use of the grass; but it is an undesirable practice unless the grass is eaten by calves or sheep, though it may be mown only. Manure is given after or before every crop, say not less than 20 tons of stable or farmyard manure each year. Apples would perhaps answer under such circumstances, provided the soil is well drained, along with the hardier Pears. It would, however, be much the best broken up, properly prepared, and planted in the autumn with bush trees, as the choicer varieties would have a better chance. Mr. Gladstone, Duchess of Oldenburg, Worcester Pearmain, King of the Pippins, Cox's Orange Pippin, Gascoigne's Scarlet Seedling, and Baumann's Reinette are desirable dessert Apples; and for culinary, Keswick Codlin, Lord Grosvenor, Potts' Seedling, Ecklinville, Queen, Peasgood's Nonesuch, New Hawthornden, Golden Noble, Prince Bismarck, Lane's Prince, and Bramley's Seedling. They may be planted 6 feet apart, but unless root-pruned they would require thinning in about six years, leaving them 12 feet apart, or plant them that distance at the commencement, and crop with vegetables between. Of Pears, Beacon, Jargonelle, Williams' Bon Chretiên, Beurré d'Amanlis, Durondeau, Beurré Superfin, Pitmaston Duchess, Maréchal de Cour, Emile d'Heyst, Doyenné du Comice, Beurré d'Anjou, and Josephine de Malines. You may gct shelter for these by planting the north side with Damson trees, also in the hedgerows, or by them, so as to break the force of winds. Of course trees can be planted in the 80 yards by 30 yards meadow on the grass, and they may be either Apples, Pears, or Plums as standards, and the hedgerows, except on the south, might be planted with Damson trees for shelter. Of the plans for the flower garden, No. 3 is the most simple, and by enlarging the beds, most likely to meet your requirements. There certainly is more accommodation for plants in No. 2, but Ferns are not likely to do any good on the south of the house, though other plants would do well on the rockwork. The beds in No. 1 are too near the house, where it is desirable to have grass next the gravel instead of bare earth—an everlasting eyesore. We cannot submit plans. Some good perennials are Adons vernalis, Allium pedemontanum, Alyssum saxatıle compactum, Alstromeria psittacina, Anthericum liliastrum, Aquilegia glandulosa, Armeria plantaginea rosea, Aubrietia græca superba, Calochortus luteus oculatus, Campanula aggregata, C. dahurica, C. glomerata alba, C. Van Houttei, Centaurea montana and var. alba, Convallaria majalis, Corydalis eximia, Delphinium nudicaule, Dianthus floribundus, Doronicum Clusi, Fuchsia pumila, Funkia lanceolata, Gentiana verna, Geranium Endressi, Geum Fremonti, Hemerocallis flava, Hepatica triloba vars., Hypericum calycinum, Iris germanica vars., I. orientalis, Lobelia fulgens, Lychnis dioica rubra plena, Mertensia sibirica, Narcissus Emperor, N. Empress, N. incomparabilis, N. poeticus ornatus and plenus, Enothera Youngi, Pæonia arietina vars., Papaver nudicaule vars., Phlox amœna, P. subulata vars., Polemonium Richardi, Pulmonaria azurea, Ranunculus aconitifolius plenus, R. bullatus plenus, Saxifraga Camposi, Sedum spectabile, Spiræa japonica, Trollius europæus, and Zauschneria californica. All are under, or not exceeding, 2 feet in height, and do not need stakes, but you should add Pinks, double Primroses, Hellebores, Auriculas, Mimulus, Pansies, Violas, Violets, and single and double Pyrethrums, with bulbs to have a good display.

Plums Decaying (James Brown).—The fruit is affected by Plum rot or the monilia of fruit (Monilia fructigena). It is recommended to spray the trees with Bordeaux mixture at a safe strength, say 2 ozs. sulphate of copper dissolved in a vessel by itself, 2 ozs. quicklime, slaked and formed into a thin whitewash, pouring this into the vessel containing the copper solution through a hair sieve. Stir well, and dilute to 3½ gallons. Spray when the fruit is a quarter grown, again when half grown, and just before commencing to ripen, yet prior to colouring. The only thing that can be done now is to collect and burn all the affected fruits and practise clean culture. Although there is a considerable amount of flocculent matter on the pieces of branch, it is not fungal, but preceded from the coole which are constant to the Shindle but proceeds from the scale, which appears to be allied to the Spindle-tree scale (Chionaspis Euonymi). Syringe the trees, as soon as the fruit is gathered, with noftsoap, half a pound dissolved in a gallon of boiling water, place in a 2-gallon stone bottle with a wineglassful of petroleum, cork, and agitate violently for five minutes, so as to churn the contents, then pour in a gallon of boiling water or a little less, so as to allow of mixing by shaking, pouring into a 4-gallon watering can, and add two gallons of hot water, mixing well with the syringe. When cool enough (100° Fahr.), syringe the trees, wetting every part with the emulsion, and repeat, if necessary, in ten days. In the winter, use the spray treatment according to the formula given in vol. i., page 251, of the Fruit Growers' Guide, to which you refer.

Names of Fruits.—Notice.—Special attention is directed to the following decision, the object of which is to discourage the growth of inferior and promote the culture of superior varieties. In consequence of the large number of worthless Apples and Pears sent to this office to be named, it has been decided to name only specimens and varieties of approved merit, and to reject the inferior, which are not worth sending or growing. The names and addresses of senders of fruit to be named must in all cases be enclosed with the specimens, whether letters referring to the fruit are sent by post or not. The names are not necessarily required for publication, initials sufficing for that. Only six specimens can be named at once, and any beyond that number cannot be preserved. (M. M. C.).—Apple, Duchess of Oldenburg. (W. J. B.).—2, Jolly Beggar; 3, Red Astrachan; 4, Sugar-loaf Pippin; 5, English Codlin. (B. W.).—White Joanetting.

Names of Plants.—We only undertake to name species of plants, not varieties that have originated from seed and termed florists' flowers. Flowering specimens are necessary of flowering plants, and Fern fronds should bear spores. Specimens should arrive in a fresh state in firm boxes. Slightly damp moss, soft green grass or leaves form the best packing, dry wool the worst. Not more than six specimens can be named at once, and the numbers should be visible without untying the ligatures, it being often difficult to separate them when the paper is damp. (South American).—An Argemone, most probably a sport from A. mexicana. (H. W.).—Harpalium rigidum. (F. B.).—Calystegia pubescens. (Amateur).—Catananche bicolor. (J. F. Cranswick).—Rubus odoratus, a native of North America, introduced in 1700. (J. D.).—1, Saponaria officinalis; 2, Scutellaria galericulata; 3, Echium violaceum; 4, Rosa rugosa.

COVENT GARDEN MARKET .- AUGUST 2ND.

FRUIT.

Heavy supplies to hand with trade quiet.

Apples, half sieve 1 0 t , Tasmanian,per case 0 0 , Nova Scotia, per barrel 0 0 Cherries, half sieve 0 0 Filberts, per 100 lbs 40 0 Gooseberries, half sieve 1 6	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Grapes per lb
B. d.	s. d.	s. d. s. d
Asparagus, per bundle 0 0 to Beans, Kidney, per lb 0 3	$\begin{bmatrix} 0 & 0 & 0 \\ 0 & 4 \end{bmatrix}$	Mustard and Oress, punnet 0 2 to 0 0 Onions, bunch 0 3 0 5
Beet, Red, dozen 1 0	0 0	Parsley, dozen bunches 2 0 3 0
Carrots, bunch 0 4	0 6 3 0 1 3	Parsnips, dozen 1 0 0 0
Cauliflowers, dozen 2 0 Celery, bundle 1 0	3 0 1 3	Potatoes, per cwt 2 0 5 0 Salsafy, bundle 1 0 1 6
Coleworts, dozen bunches 2 0		Scorzonera, bundle 1 6 0 0
Oucumbers, dozen 1 6 Endive, dozen 1 3	3 0	Seakale, per basket 0 0 0 0
TY 1 1 .1	4 0 3 0 1 6 0 0	Shallots, per lb 0 3 0 0 Spinach, bushel 8 0 0 0
Leeks, bunch 0 3	0 0	Spinach, bushel 8 0 0 0 Tomatoes, per lb 0 3 0 6
Lettuce, dozen 0 9	1 0	Turnips, bunch 0 4 0 6
Mushrooms, punnet 0 9	1 0	
		PRICES.—OUT FLOWERS.

AVERAGE						PRICES.—OUT FLOWERS.				
		Orc	chid	\mathbf{B}	1001	ns in variety.				
	s.	d.		s.	d	1	8.	d.	g	đ.
Arum Lilies, 12 blooms						Mignonette, 12 bunches			to 6	
Asters (French), per bunch	ī	0		1	6	Myosotis, dozen buuches				ŏ
Bouvardias, bunch				1	0	Orchids, per dozen blcoms			12	-
Calceolaria, dozen bunches	4	0		6	0	Pelargouiums, 12 bunches		ō	9	ŏ
Carnations, 12 blooms	1	0		3	0	Pelargoniums, scarlet, doz.		_		•
Carnations, dozen bunches	4	0		8	0	bunches		0	6	0
Chrysanthemums, dozen						Primula (double) 12 sprays	0	9	1	Ó
bunches	4	0		6	0	Pyrethrum, dozen buuches	2	0	6	0
Cornflower, dozen bunches.	1	6		3	0	Roses (indoor), dozen		6	1	6
Eucharis, dozen	3	0		4	0	, Red, doz. bunches	4	0	8	0
Gardenias, per dozen		0		4	0	" Tea, white, dozen	1	0	2	0
Lilium lancifolium, dozen						" Yellow, dozen	2	0	4	0
blooms		6		3	0	Stocks, dozen bunches	4	0	8	0
Lilium longiflorum 12						Sweet Peas, doz. bunches	3	0	6	0
blooms	2	0		4	0	Sweet Sultan, per dozen				
Maidenhair Fern, dozen						bunches	3	0	4	0
bunches		-			0	Tuberoses, 12 blooms	0	4	0	6
Marguerites, 12 bunches	2	0		4	0					

PLANTS IN POTS.

8	3.	d.	s.	$^{\mathrm{d}}\cdot$	(s. d	. 5.	d.
Arbor Vitæ (golden) dozen	3	0 to	12	0	Ivy Geraniums 4 0	to 6	0
Aspidistra, per dozen 18	В	0	36	0	Lilium lancifolium per doz. 12 0	18	0
Aspidistra, specimen plant	5	0	10	6	Lilium Harrissi, per dozen 12 0	24	0
Balsams, per dozeu	3	0	6	0	Lobelia, pci doz 3	6	0
	9	Ú	18	U	Lycopodiums, per dozen 3 0	4	0
Dracæna terminalis, per					Marguerite Daisy, dozen 6 0	12	0
dozen 18	3	0	42	0	Mignonette, per doz 4 0	6	0
Dracæna viridis, dozen 9	9	0	24	0	Myrtles, dozen 6 0	9	0
Euonymus, var., dozen 6	3	0	18	0	Nasturtiums, per dozen 4 0	6	0
Evergreeus. iu var., dozen 6	;	0	24	0	Palms, in var., each 1	15	0
Ferns, in variety, dozen 4	Ł	0	18	0	" (specimens) 21 0	63	0
	Ł	0	6	0	Pelargoniums, per dozen 6	12	0
Ficus elastica, cach	1	6	7	6	" scarlet, per dozeu 3 0	6	0
Foliage plants, var., each 2	3	0	10	0	Petunia, per dozeu 6) 9	ŏ
	,	0	9	0	,, single, in boxes 1 6	3	0
Hydrangea, per dozen 12	?	0	24	0	Rhodauthe, per dozen 4) 6	0



FARM ORCHARDS.

Now is the time to closely inspect farm orchards, to make a critical survey of each tree, so as to form a reliable opinion of its condition and requirements; to decide if it is or is not as healthy and as fruitful as it ought to be; whether it is capable of improvement under special treatment, or is worthless and a mere waster of valuable space. Seven such special inspections have we made recently, all of them highly important, showing, as they did, how general is the ignorance of the mere rudiments of fruit culture even in its most simple guise of the grass farm orchard. This is all the more deplorable from the fact that many of the trees of both Apples and Pears in such orchards have heavy crops of fruit this season, very much of which is so small as to be comparatively worthless for market. "The trees bear well, but the fruit is always small," said the owner of one of those orchards, and he went on to suggest root-pruning as a remedy! We had to explain that root-pruning is only required to repress undue vigour of wood growth; that his trees, with their heads grown into thickets, with no young wood growth now or for several years, with the whole of the branches heavily laden with fruit and thickly set with blossom buds, were in such a condition of exhaustion that fine fruit was an impossibility. The remedy was simply a judicious branch-thinning, with frequent and full doses of liquid manure to the roots.

We have no doubt that our advice is applicable to most old farm orchards throughout the land. It is a good sign that such advice is asked for so frequently now, but we fear it is not always applied so well as to do much good. It is so difficult for beginners to grasp the significance of a full dose of liquid manure. A mere surface wetting does no good; the whole of the soil about the whole of the roots must be dosed so persistently that it is fully supplied with plant food. To make sure of this it is poured over the whole of the surface under the tree and for fully a yard outside the radius of its branches. In some instances it is necessary to open a small trench a spade deep right round the tree under the tips of the branches and to make a few holes between this circular trench and the stem; then by repeatedly filling holes and trench with liquid manure it spreads and sinks deep enough in the soil to reach all the roots. There the orchard adjoined the homestead, from whence the sewer ran into a large cesspool overflowing with sewage in the lower part of the orchard. It had never occurred to the worthy farmer to turn this rich source of fertility to account, but he promised to do so at once and persistently. A supply of such excellent liquid manure is forthcoming at most farm homesteads; at many it is justly regarded as invaluable for grass land, and if enough cannot be spared for the trees

a splendid substitute can be had by dissolving in 40 gallons of water 1 lb. nitrate of soda, 1 lb. muriate of potash, and 2 lbs. superphosphate. This is an excellent fertiliser for all fruit trees and bushes, as well as for those in old orchards, but there especially do we recommend the combination of potash with the other salts, because of the too probable exhaustion of the soil near the trees.

At another farm, in an old orchard near the house an attempt had been made to gradually clear off and replace the old and much cankered trees with young ones. The soil was a cold heavy clay, and though the young trees had made some growth, it had cankered so badly that the restoration of the orchard was practically a failure. Evidence of the remarkable energy and ability of the farmer is afforded by the general excellence of the whole of the other crops on the farm, notwithstanding the long drought. He was not content to fail in even such a minor matter as the management of his crchard, and so came his appeal for advice. As usual, the remedy was a very simple matter; he has to discard the diseased trees, to open stations 6 feet square and 2 feet deep, to lay a row of 2-inch drain pipes across the bottom, to fill the stations with sound top-spit soil, using enough of it to allow for its gradually settlement to the common level, to connect the station drains with a central main drain running right through the orchard, and to plant strong healthy standard trees immediately after the leaf falls in autumn. To make stations in clay without outlets for water must lead to failure. The farmer's puzzle was why the orchard trees failed, while a dozen or more others planted at the same time in a hedgerow had made healthy growth and were bearing fruit. Upon going to the hedgerow we pointed out to him that the surface of a field on one side of it was quite 3 feet lower than that on the other side, there was no possibility of accumulation of water about the roots, and they were healthy thriving trees.

WORK ON THE HOME FARM.

Never was there a season when nitrogenous manures played such an important part as they have in this summer of trials and difficulties arising from the great drought. The application of the mixture of nitrate of soda, superphosphate, muriate of potash, and steamed bone flour to pasture during the last week of February told even better than usual, for the soil had been well soaked by the heavy rain of that wet month, and there was plenty of rain then and at the beginning of March to thoroughly dissolve and wash in the manure to the soil about the roots of Grasses and Clovers. A full hay crop thus became a certainty. It has repeatedly been so in other seasons when, although there has been no long drought, drying March winds have not been followed by April showers. Clearly, then, the lesson enforced once more is to apply chemical to all grass land about the last week in February. "But," we were once told, "it could not be done with snow upon the ground." It could, and with this advantage, that as the snow melts it carries the manure into the turf.

Nitrate of soda alone has also and is playing an important part now. With frequent showers free growth is a certainty if only 1 or 2 cwt. per acre of this splendid fertiliser is sown broadcast over hungry pasture, among catch crops, roots, or any other crops requiring a lift onwards. It is really lamentable to find so many graziers, with ruin staring them in the face, doing nothing of the sort to help them-Want of means? Surely not, for it is entirely worth while for a man to sacrifice something in order to obtain command of such a means of giving food to his hungry cattle and hope to himself. It is certain that wherever the soil has been well tilled in autumn and well stored with fertility that crops are highly satisfactory now. Equally clear is it that poverty of soil under the drought has led to a ruinous crop failure. Corn harvest is in full swing very generally south of the Trent. It is a month earlier than usual, and points to one of the finest opportunities for thorough autumn tillage we have had for many years. Let us try and turn it to full account.

FARMING AT HOME AND ABROAD.

THE following interesting note by Mr. Martin J. Sutton, of Kidmore Grange, appears in the Times of July 31st. Mr. Sutton says:-

"On my return home I find that very little improvement has taken place in the situation since I left in the last week in June. It would appear that, though the second cuttings of Clover leys will be improved, the root crops have not been so much benefited by the heavy rains of the last fortnight as might reasonably have been expected, while those

rains have done more harm than good to the corn. I should like to say a word on the condition of affairs on the Continent. I started on my usual journey abroad on the 26th of June, after travelling some hundreds of miles the week previous through some of the best agricultural districts of England. I was thus able to compare the agricultural conditions then obtaining in this country and those on the Continent. I have since travelled some 3000 miles by road and rail inspecting the crops in the north of France, Belgium, the Rhine Provinces, and Southern Germany. It is true that in all these countries the first hay crop was a comparative failure, and it seemed at one time that the roots might also be short. But I was agreeably surprised to find there the grass growing very rapidly for the second crop, and, excepting in parts in the north of France, the roots looking very well indeed. Rye this year appeared to me a specially heavy crop, and it has been mostly secured in splendid condition. I saw some very heavy pieces of Wheat, and both Oats and Barley are far better than those to be met with on this side of the Channel. Indeed, it was lamentable all the way between Dover and London, travelling through the richest districts of Kent, to contrast the miserable crops there growing with the abundance on the other side. It is satisfactory to know that north of the Humber agricultural prospects, even in our own country, are just as good as they are bad in the south, and unless a very wet hay and corn harvest follows there and the Potato disease spreads rapidly and injures the tubers, the Yorkshire, Lancashire, and Scotch farmers will have little to complain of, as they will have good crops of hay to sell at famine Very different is the prospect for agriculturists in the western, southern, and eastern districts of England, where hay, roots, and spring corn are all seriously deficient, and Wheat cannot be an average crop.

THE FIRST POCKETS OF HOPS.

THE first pocket of new Kent Hops arrived in the Borough on Monday last, and was sold at £25 per cwt. In sending this information, Messrs. W. H. & H. Le May state that the effect of the rain that has fallen during the last three weeks can now be seen. It has freshened up all, but the Golding Hops in Mid and East Kent have benefited the most. The bine is now full of sap, and the foliage a very dark green. With fine hot dry weather from now till picking they would estimate the Golding grounds to give a crop of 8 cwt. per acre. With regard to the Fuggles on the heavy clays of the Weald of Kent and Sussex, the rain came too late to increase the crop much. These Hops, with the earlies, such as Prolifics, Hobb's, and Seale's, may produce an average of 3 cwt. to 4 cwt. per acre, if the red spider that is running very fast through most grounds does not prevent the development of the Hop cones. Many experienced growers think there will not be a pocket per acre picked in those grounds that are badly infested with red spider. The market is very firm.

On Saturday Messrs. Edward Webb & Sons, Wordsley, received a pocket of new Worcester Hops, which passed the public scales at Worcester on Friday, which is the earliest date on record. It was grown by Mr. H. T. Taylor, Showle Court, Ledbury. The pocket was resold to Mr. W. Butler, Crown Brewery, Birmingham. The quality of the year's crop is likely to be good, but a light yield is expected.

METEOROLOGICAL OBSERVATIONS.

CAMDEN SQUARE, LONDON.

Lat. 51° 32′ 40" N.; Long. 0° 8′ 0" W.; Altitude, 111 feet.

DATE.			9 A.M	•		:				
1893.	Barometer Sea 132°, and Sea Level. Dry. W		ygrometer. Direction of of soil Temp. Shade Temperature.			oil peratur		Radia Tempe		Rain.
July.	Barc at 32 Sea	Dry.	Wet.	Wind.	at 1 foot.	Max.	Min.	In Sun.	On Grass.	
Sunday 23 Monday 24 Tuesday 25 Wednesday 26 Thursday 27 Friday 28 Saturday 29	Inchs. 30·190 29·911 29·873 29·838 30·161 30·305 30·136	deg. 65.7 66.3 65.2 65.0 61.8 63.4 64.9	deg. 55.8 63.6 56.9 58.7 54.4 55.1 59.9	S. S.W. W. S.W. N.E. N.E. S.W.	deg. 62.0 62.2 62.7 62.2 62.7 62.3 62.6	deg. 73·3 75·6 73·7 71·0 72·3 71·3 70·8	deg. 48.9 59.0 57.4 55.9 54.4 47.3 58.8	deg. 108.9 117.1 123.7 1.0.2 119.8 104.8 96.7	deg. 43.0 57.4 53.9 52.9 50.4 43.2 55.2	Inchs. 0·391 — 0·020 — 0·072 0·483

REMARKS.

23rd.-Generally sunny in the morning and cloudy in the afternoon; rain after 6 P.M.

and heavy rain from 9 P.M. to 11 P.M.

24th.—Rainy till 6 A.M., and overcast till 11 A.M., bright and sunny after.

25th.—Generally sunny throughout the day; cloudy with spots of rain in the evening.

26th.—Bright early; showery with thunder from 8.30 A.M. to 10 A.M., then generally sunny till 3 P.M. and variable after, with frequent thunder and occasional rain

Fine and generally sunny, but occasionally overcast in the afternoon.

-Bright early, but very calm, and the sun became gradually obscured by the accumulation of smoke; cloudy in the afternoon and overcast with spots of rain

in the evening.
-Occasional sunshine in the morning, but generally overcast; rain at 0.30 P.M., and slight showers later.

Temperature very similar to that of the previous week and of the average. Very little rain except on the 23rd.—G. J. SYMONS.



HERE are various ways of spending Bank Holiday, and it will L be conceded that those persons who endeavour to combine pleasure with instruction on holiday occasions spend the time at their disposal not unwisely. When we remember the methods that were indulged in by the community during periods of recreation some half a century ago and compare them with those in vogue now, we cannot fail to recognise an advance in the right direction in the habits of the people. The change has been brought about in part by the better system of education that is now well established, and in part—and a very large part too—by the development of railways and the temptations of their managers to secure as large a share as possible of the loose cash of the million. Inducements to travel have been offered till they seem to have become irresistible, and cities and towns become perceptibly emptied by the exodus of their inhabitants. Some, it is true, indeed many thousands, stop short at the parks and commons that have been provided or preserved near populous centres, and this proves the value and usefulness of those large, enjoyable, and healthy places of popular resort. Thousands more go farther afield and have a veritable "day in the country" or at the seaside. Then efforts are being made in semi-rural districts to attract the people to some pleasant centre, such as a gentleman's park, where a flower show and an exhibition of cottage garden and allotment produce is held and modes of healthy enjoyment provided.

There is a greater disposition now than ever existed before to afford encouragement to the working population to derive pleasure and profit from small gardens and allotments, and, happily, greater alacrity on the part of workers to accept it. We read in a daily paper that the excellent institution known as the Finchley Allotment Holders' Society contrived on Monday last to combine business with pleasure, and it succeeded admirably. It took advantage of Bank Holiday to show what it could do in the cultivation of fruit, flowers, and vegetables. There are 345 allotment holders in the Seciety, and they contributed nearly 450 exhibits. The Finchley Society is an example of what may be done throughout the country. It is beyond question that the cultivators of allotments, small holdings, and cottage gardens may put into their own pockets a great amount of money that is now spent upon importations from abroad. Under a fully developed system the cultivation of allotments and small holdings would go far to arrest or counterbalance the decline which is observable in several branches of what is still the chief national industry. The existence of this Society of Allotment Holders at Finchley also reminds us that the English petty cultivator may profit by the example of his French neighbours. In a recent report, drawn up at the British Embassy in Paris and lately published by the Foreign Office, an interesting account is given of the unions which the small farmers of France have formed among themselves for the purpose of buying the best seeds, manures, and implements at the lowest prices, and of selling their surplus produce on the most favourable terms.

Another example of spending Bank Holiday on similar lines was afforded by the Show of the Beddington, Carshalton, and Wallington Horticultural Society that is established to promote interest and efficiency in cottage gardening and allotment culture in a district having an area of about four square miles. Mr. A. H. Smee, C.C., is a leader in this work, and takes active personal

interest in the welfare of the Society. At this last Bank Holiday Show he provided a class at once novel and useful, and which also proved an unqualified success. It may be fittingly termed a Sunday dinner class for a working man's family. The idea "caught on," and it is impossible to speak too highly of the results. It is not easy to conceive the effect of some thirty dinners arranged side by side, all giving evidence of thought, taste, and culinary skill. As the entries came in the question of judges became a matter of concern. It is thought that the views of high class experts, such as club chefs, might be different from those accustomed to dinners of this character. It was eventually decided that one of the County Council lecturers on cookery should, in conjunction with a gentleman who during many years had practical experience of a working gardener's fare, and who also well knows what is good in advanced cookery, award the prizes. Having regard to the novelty, excellence, and altogether satisfactory character of this dinner show, we asked Mr. Edward Luckhurst to describe the exhibits in the belief that his description would be of interest to the majority of our readers, and he obligingly complied as follows:-

"At the annual Show of the Society above mentioned, held at Carshalton Park on August Bank Holiday, a novel feature was introduced in the guise of a competition open to the wives and daughters of all subscribers and members for the best dinner to be produced at a cost not exceeding 2s; the dinner to consist of meat and at least two distinct kinds of vegetables, and be sufficient for a man, his wife, and three children, the value of each article to be clearly stated. This was proposed by A. H. Smee, Esq., who with his usual liberality gave £5 to be awarded in four prizes of £2, £1 10s., £1, and 10s., to which, owing to the hearty response made to this offer, and the evident utility of the competition, Mr. Smee added three other prizes of 7s. 6d. each.

"How popular this new departure is was shown by the thirtytwo entries, filling the central table of a large tent. So good were most of the dinners that the work of judging was anything but a light matter. To visitors the Show proved an irresistible attraction, the tent being thronged all the afternoon, and discussion ran high over the merits of the exhibits.

"As was to be expected this class showed praiseworthy traits of humble life and character. How much time, thought and care had been devoted to the work, how thoroughly the competitors had thrown themselves into it, and how eagerly results were looked forward to, could probably hardly be grasped by even such an appreciative throng as made access to the table most difficult. One point about which there was an unmistakeable concensus of opinion was that the best dinner gained the first prize; but "how Mrs. Stevens did it for the money" was evidently a puzzle. Mrs. Stevens is the thrifty wife of the worthy head gardener to E. G. Coles, Esq., The Lodge, Carshalton, who himself took high honours as first for a collection of vegetables, first for a collection of fruits, and several other leading prizes in the Show. Mrs. Stevens' dinner consisted of a well cooked joint of pressed beef, a tureen of soup made in cooking the beef, which was temptingly glazed and garnished with Beetroot and Parsley; two equally well cooked dishes of Runner Beans and Potatoes, a Plum tart, and custard with bread comprised the rest of this appetising meal, which was alike admirably selected, cooked, and placed on the table. The cost was precisely 2s. To go into details the prices given were soup flavouring 1d., beef 9d., Beet, Parsley and Glaze 11d., Beans 3d., Potatoes 2d., Bread 1d., Plum tart 4d., and custard 1½d. The whole of the judging was done by pointing; the points awarded to the first prize being 54, to the second 51 to the third prize 47, and to the fourth prize 46, showing plainly' how close the competition was. The maximum points allowed amounted to 98: soup 8, fish 8, stews 10, meat or puddings 10, vegetables 12, sweets 6, pastry 6, savory or cheese 6, bread 4, salad 4, sufficiency 6, cost 6, skill in preparation 12. It will be

understood that several of the points were provisional, and not touched at all. No two dinners were alike, and the main details are given in case they may be suggestive to others, as they may wish to add an interesting feature to cottage garden shows.

"Good management as well as good cooking had its due influence upon the Judges' decision, and Mrs. Stevens' admirable management certainly exemplified true economy, not only in the cooking and serving of the food, but in the purchase of it. Mr. Smee is to be congratulated upon his successful innovation, and upon the admirable illustration of domestic economy which this new feature in exhibiting affords."

Another special feature set forth in the schedule was for a collection of vegetables in nine distinct kinds, which were to include a selection from the following:—Nine tubers of Potatoes, three Cauliflowers, nine Onions, thirty-six pods of Peas, twentyfour pods of Broad Beans, six Carrots, three Marrows, fifty Kidney Beans, three Cabbages, six Parsnips, and six Turnips, Parsley being admissible for furnishing. This class was rendered the more interesting by the fact that it was open to all amateurs, cottagers, and professional gardeners in the district. The competition was remarkably keen, and the work of the Judges thus rendered unusually difficult. The maximum number of points which could be gained was 73, and the winner of the first prize, Mr. J. H. Stevens, was adjudged $54\frac{1}{2}$, or $18\frac{1}{2}$ below the maximum, which, considering the season, was very good. It will doubtless be interesting to readers to know with what produce Mr. Stevens gained his position, and the number of points he was awarded for each kind, and a list is appended. Potatoes 6 (out of 10), Peas 6, Scarlet Runner Beans 5, Cooking Cabbages 6, Cauliflowers 7½, Onions 6, Turnips 6, Carrots 7, Parsnips 5 (the standard of all these being 8 points) which gives an aggregate of $54\frac{1}{2}$. We have said the competition was keen. Mr. J. Slater, who was awarded the second prize, reached 54 points; Mr. Wm. Newton third, 53, and Mr. Hy. Schoolbridge fourth, $51\frac{1}{2}$. It was a popular class, and gardeners won all the prizes but the third. Mr. Newton was a working builder last year but is developing into something else. After hearing lectures on horticulture he commenced the erection of glass structures. They were completed this spring, and during the present summer he has grown and sold 12,000 Cucumbers and 2 tons of Tomatoes. He is further "making land pay," not under glass though it costs him £8 an acre in rent and taxes. The improvement in garden and allotment culture in the district is remarkable, a comparison with the pointing of every crop on plots in competition for prizes last year and this showing an average increase of 40 per cent. during the present season of drought, as ascertained by Mr. Smee. This is the most effectual, practical and conclusive test of cultural knowledge—appraising the crops for prizes, and not 1 per cent. of the men who learn the most and work the best could be induced to sit for examination in a room and attempt answering a series of questions on paper.

In connection with the Show under notice, at which some 300 prizes were awarded, including a silver medal to Mr. G. W. Cummins, a Conference on gardening was held. E. J. Halsey, Esq., Chairman of the Surrey County Council, presided, and in an admirable speech promised that all possible help and encouragement should be afforded to those workers who wished to improve their position by their own efforts, and gain something in addition to their wages, in order that they might feel themselves more independent and happier in their homes. Mr. J. Wright also gave an address with "object lessons," showing the effects of right and wrong methods in the production of vegetables, fruit, and flowers. The tent would not hold half the people. The sides were removed, and the packed audience, inside and out, manifested the closest interest in the proceedings. Pleasure was undoubtedly combined with instruction in the spending of Bank Holiday in Carshalton Park, and doubtless many other places in the kingdom on that bright and beautiful day.

PEACH-GROWING FOR MARKET.

ROUND London there appears to be a tendency for market growers to confine their attention to the cultivation of one or at the most two kinds of fruit or "fruit vegetables." Some grow nothing but Cucumbers, others Cucumbers and Tomatoes, a few grow Grapes and Tomatoes on a very large scale, and instances have also come under my notice of Peaches and Nectarines being the fruit principally grown. Undoubtedly it is a great mistake to attempt the cultivation of a variety of crops, especially if it ends in none of them being done well, and beginners in the neighbourhood of the Metropolis ought certainly to be warned in time. The case, however, with market growers starting in the provinces is different and greater variety is called for. According to my experience, provincial towns are far from being well supplied with Peaches and Nectarines. There seems to be a good demand for all but the very earliest fruit. Last June the prices obtained for good average fruit from a provincial fruiterer was 25 per cent. better than that allowed by a leading salesman in Covent Garden, and judging from the published returns the improvement has been well sustained. On June 19th a consignment of six dozen selected Peaches realised £3 12s. after carriage was paid, commission not being charged, and that I think very good for a country town. This year Peaches and Nectarines were in greater demand than usual during the latter part of June and the first fortnight in July (owing to the scarcity of high-class Strawberries), telegrams for more to be sent on being frequent. I like telegrams to be flying about, as that means a brisk trade and good prices.

On page 515, last volume, I briefly alluded to a class of 14 feet wide span-roofed houses that answered well for Tomatoes and Chrysanthemums. Such houses are very suitable for Peach and Large quantities of fruit are not desired Nectarine culture. at one time, and a succession is obtained by growing early and late varieties in one house. For instance, I commenced gathering Early Alexander during the first week in May, Hale's Early, A Bec, Crimson Galande, Bellegarde, Dymond, Barrington, Sea Eagle, and Walburton Admirable forming a good natural succession, the two last-named not yet being marketed. Good sized highly coloured fruits are most in demand. Waterloo and Early Alexander, both very showy varieties, with very little to choose between them, are the best early Peaches, but, unfortunately, addicted to bud dropping. Hale's Early, also of American origin, is from a week to ten days later, but far more reliable, while the fruits are large and well coloured. All three are bad travellers and keepers, and must certainly be marketed before they are fully ripe. A Bec is a really good second early variety; fruits large, of good colour if properly exposed, and fairly firm when ripe; quality first-rate. In Crimson Galande we have the beau ideal market Peach. It is of free, yet very productive, habit of growth, a sure setter, and the fruits, without being greatly exposed, colour grandly. Perhaps the best midseason market Peach, and good also for private gardens. Barrington should be included by growers who wish to keep up a long succession. The tree is a healthy grower, and good bearer of fairly large and well-coloured fruits which travel and keep well. Princess of Wales, unfortunately, does not colour well, otherwise it is a fine easily grown Peach. Sea Eagle possesses a fine constitution, sets freely, and the fruits, if properly thinned, attain an extra large size, colouring grandly, and keeping longer than most varieties. I have frequently obtained 18s. per dozen for good samples of Sea Eagle in August, and, all things considered, this is one of the very best that a market grower can cultivate, either under glass or in the open air. Walburton Admirable ripens still later and attains a large size, but cannot be depended upon to colour well. It may not have occurred to many market growers to give Salwey a trial, but this "turnipy" Peach sometimes pays remarkably well. I have known instances of 30s. per dozen being given for fruits from an open wall, but they were sold during the first fortnight in November. In an unheated house this variety can sometimes be kept till November, and medium-sized, highly coloured fruit will fetch not less than 18s. per dozen in Covent Garden Market. Salwey is a sure bearer, but not much must be said in favour of its eating qualities.

Nectarines do not pay so well as Peaches, and in addition are not so easily grown. Being smooth skinned the fruits are more liable to be disfigured by insect pests and scorching. There is a demand for them, but nothing like that for Peaches, and I find one tree of Nectarines to four of Peaches a fair proportion for market culture. As a rule Nectarines are not large enough to please buyers, and if colour is lacking the prices will fall accordingly. The new Early Rivers promises to meet a long-felt want—viz., a Nectarine that will ripen at much the same time as the earliest Peaches under similar treatment. It is also a fine variety and colours as well, if not better, than Lord Napier. The latter was

hitherto the best early Nectarine, and till Early Rivers can be had in quantity should be planted the most freely. I have never obtained more than 9s. per dozen for Lord Napier, the prices gradually coming down 4s. per dozen for fairly good samples. I do not advise market growers to plant the richly flavoured Pineapple and Pitmaston Orange, but they may grow Stanwick Elruge to succeed Lord Napier, this being an easily grown, heavy-cropping, highly coloured variety. Hardwicke is also large and free-bearing and colours well, being better for market purposes than the much better known Elruge from which it was raised. If a late variety is desired plant Victoria. The variety is a great cropper, rendering free thinning necessary, and the fruits must be well exposed to increase their size and develop the best colour.—Market Grower.

(To be continued.)

HARDY FLOWER NOTES.

In a season such as this has been, we feel inclined to withdraw the unkindly expressions which, openly and mentally, we have applied to our British climate. The brief period of drought we have had here (near Dumfries), and which has left its mark in slight degree, has been broken, and welcome rain has given refreshment to gardens and gardeners alike. As we wander into the garden to work among its inmates or to study afresh the beauty of their forms and hues, they seem to stand "smiling by" with a blithe welcome for their admiring owner, who has in these bright blooms a reward for much forethought and care. The matchless Rose, the wax-like Lily (which will perhaps forgive the comparison of the texture of its petals to the work of the bee); and many others, stately and lowly, join in this welcome, and he is indeed callous whose heart does not respond with joy to their

greeting.

These flowers of summer are so numerous and so beautiful that selection is always invidious and generally unsatisfactory; but the many Meadow Sweets or Spiræas, some past and some at the time of writing still in flower, by their feathery beauty have pressing claims for notice, as they rise above other border plants, or form neat tufts covered with their graceful flowers. Among these Meadow Sweets or Dropworts there is none more graceful that the noble Spiræa Aruncus, the Goat's Beard, with its fine panicle of plume-like flowers. Even more graceful, and in some positions more desirable on account of its dwarfer habit, is S. astilboides, the Astilbe-like Meadow Sweet, a native of Japan, which is rapidly becoming popular both for border and forcing A newer variety, known as S. astilboides floribunda, I have not met with, but if superior to the type it will certainly be an invaluable plant. I have at present in the room in which I write a plant of the typical species in full flower which was lifted and potted, not being forced in any way. The only fault it possesses for the house is that its fragrance is towards evening rather overpowering. There is a great wealth of material among the Meadow Sweets, and they are worthy of more extended cultivation in their various forms, herbaceous and shrubby, and in their various colours; although, personally, I prefer the white and creamy shades to the pink or red colours of some.

The various Thistle-like plants of our gardens are always appreciated by all who see them. The Eryngiums, with their steel-blue or ivory heads and stems, are justly becoming increasingly popular, and this favour is also being extended to the various Echinops or Globe Thistles. A fine plant of E. commutatus, the Changeable Globe Thistle, has attracted much attention here.

Tusser tell us that—

"If Thistles so growing prove lusty and long, It signifieth land to be hearty and strong."

If we are to take that old writer to be an infallible authority my garden must be of soil "hearty and strong." The contrary is, however, the case, and I have little doubt that the height of 7 feet which E. commutatus has attained here is due to the plant being a seedling and thus full of vigour. The Changeable Globe Thistle is a native of Austria and other parts of Europe, and was introduced in 1817. It is classed as a perennial, but many of the Echinops in our gardens are either not true perennials or are short-lived, and it is well to have a young plant in store to replace a lost one. Very stately is, as may be supposed, this fine plant, with its spiny pinnatifid leaves, rough above and downy beneath, and its round, whitish balls of flower.

In sharp contrast to the stateliness and rugged beauty of the Echinops is the grace and elegance of the Feather Grass (Stipa pennata), which has for a time been in full beauty. Here is no glittering beauty, no Pæony-like bloom of striking colour, no massive grandeur, but instead a plant of tenderest grace. Little wonder was it that in olden times, as Gerard tells us, ladies wore

the plumes of this Grass as feathers, and, if we no longer see it thus in use, its elegance commends it as a garden plant. Even before it flowers the tussock of arching grass is very beautiful, and when the blooms appear, and while they last, they are full of attraction, moving as they do with the lightest breath of air. When winds are fierce they toss and pirouette, when softer gales are blowing they float lightly to and fro, and when hardly a breath is to be felt they move gently with the slightest current, their gossamer-like lightness making them the sport of the lightest breathings. We want graceful as well as showy plants in our gardens, and these hardy Grasses are not nearly enough grown.

Not the least pleasant time in the garden is the evening, when some flowers seem to shine with a softer and gentler beauty. It is true that some have closed their petals, desiring not the cool dew, or seeking to screen themselves from the flying moths in search of food. It is also true that then the sun no longer shines through the petals of the Poppy, giving it the appearance of some piece of stained glass taken from some cathedral where the glass stainer's art is shown in perfection; but, on the other hand, some flowers, such as the Evening Primroses, which look dowdy in the sunlight, come into beauty as the shades of evening creep along. Then it is that the white or golden cups of the Enotheras seem beautiful. As Bernard Barton says—

"I love at such an hour to mark
Their beauty greet the night breeze chill."

And such flowers as these may give much delight to those whom business calls from home by day, and whose evenings in the garden might be made more enjoyable by the beauty of the delightful Œ. marginata, with its white cups; of the pretty Œ. taraxacifolia, with its Dandelion-like leaves and white flowers changing to crimson; or even by the more common Œ. biennis, no mean plant, with stately habit and soft golden flowers. Those, too, who can enjoy their gardens by day need not confine themselves to the night-blooming species, but will find in Œ. Youngi and Œ. Fraseri

two plants which will give much pleasure.

One of the charms of the garden of hardy flowers is its cosmopolitan character. Here some native plant grows side by side with one from the steppes of Siberia; there a Greek Crocus reposes under a carpet of Spanish Stonecrop; here, again, a plant from the Himalayas is cheek by jowl with one from the South American We read much of triple alliances, but the garden would almost exhaust the vocabulary to describe the characters and multiplicity of its friendly leagues. I fancy, however, that most of us must confess that we may have some "respect of persons" or plants-in our likings, and that we may have a preference for flowers from some particular portion of this globe of ours. I, for one, must confess to a desire to possess more of the flowers which, in the newer Britain of the Antipodes, for long displayed to the Maori the charms of Nature, and now give the colonist some compensation for those he left behind. Thus it is that the New Zealand Veronicas are specially attractive to me, and glad am I that their real beauty only enhances their attractions. them are quite hardy on rockwork here, and, although well known, yet worthy of repeated notice is V. Traversi, which in good soil will form great bushes of evergreen glossy foliage, clothed in summer with countless spikes of pretty white flowers with purple anthers. Beautiful as it is thus, the prettiest plant I have ever seen is one on the top of a dryish rockery here, where it is somewhat stunted in growth, with the effect of increasing the quantity of flowers and its neatness of habit. It has been very beautiful, forming a bush only 18 inches in height and $2\frac{1}{2}$ feet across, and coming into flower before an "Alpine Rose" (Rhododendron ferrugineum), which is close to it, had passed out of flower. The two formed a pleasing picture. Very fine, too, has been V. speciosa, with its beautiful glossy leaves and its spikes of purple blue. This is on the top of a rockery, but protected by a wall from the north wind—a needful precaution for this species, which is not nearly so hardy as Travers's Veronica. Others, such as the curious V. salicornioides, V. Colensoi glauca, or V. Lyalli, are grown here, and I hope gradually to add to my collection of hardy sorts. Thus on border or rockery does summer yield her floral charms-rich in beauty, grandeur, grace, or in tenderest associations, and all things that endear them to our hearts.—S. ARNOTT.

SCARLET RUNNER BEANS NOT SETTING.

THE failure of Scarlet Runners to produce pods has been attracting my notice for some time, and I have read all that your correspondents have written on page 106, about which I offer the following criticisms. There does not appear to be anything abnormal about the form of the flower this year. The double coil at the point of the keel is quite usual, so is the sheath, within

which anthers and stigma are contained, the point of the stigma protruding slightly, and being pushed out more on the slightest pressure from above, the anthers remaining just visible at the mouth of the opening. Whether pollen is unusually deficient I cannot say. The flowers can hardly be fertilised by bees, as it is their habit in visiting these flowers to puncture the lower side of the calyx, if not already done; and I observe that they proceed at once to this aperture as if by instinct. Neither hive bees nor humble bees nor wasps are below the average in quantity this year. All of these visit the flowers, and all extract the honey in the same way; I believe they do so every year. I know several other flowers which they invariably treat so. My gardener believed that the unusual abundance of these insects, and their habit of licerating the base of the calyx, and so damaging the attachment of the embryo pod, was the cause of failure; but I do not agree to this. I tried brushing a quantity of marked flowers with a camel-hair pencil, and my gardener tied up in muslin a quantity more whilst still in bud, but the result did not answer our expectation. About the same proportion, and no more (say 10 per cent.), set pods. Those within the muslin may have been self-fertilised but I find in nearly all the flowers within the sheath of the keel thrips, small coleoptera, and mites sufficient to fertilise them. The Scarlet Runners in my garden have at no time of their growth suffered from drought, and are more luxuriant than usual. I think in this fact we may perhaps have a clue to the cause of failure. It is generally believed that too luxuriant growth is a cause of sterility both in the animal and vegetable creation. Virgil warns farmers against it, both as regards corn and live stock; and the only point on which all your correspondents agree is that the appearance of the plants this year is unusually healthy and luxuriant.—C. Wolley Dod, Edge Hall, Malpas.

P.S.—On dissecting the flowers and examining them with a quarter-inch lens I find that they abound with thrips and red spider. These pests, which have been everywhere abundant through the spring and summer, find a comfortable home within the twisted sheath of the keel which encloses the vital organs of the flower. They worry and render abortive those parts, and are perhaps a more probable cause of the failure complained of than the luxuriance of growth as suggested above. The prevalent wet weather will probably lessen the plague, and we shall get more beans.—C. W. D.

I BEG to correct one word in the latter portion of my note in last week's issue, page 106. It runs thus, "The disturbance of the reproductive organs is the cause of failure." For "disturbance" read non-disturbance of the pollen grains; nor is it either distributed by insects from flower to flower to ensure the desired Whilst jotting this correction I came across some of Professor H. Müller's observation on the fertilisation of Phaseolus coccineus, Lam.). He says, the hive bee and other small bees which are unable to press the carina down obtain the honey by taking advantage of holes which a humble bee (I suppose Bombus terrestris, L.) bites through the calyx. More powerful bees, with sufficiently long proboscides, alight on the left ala, and in forcing the proboscis down into the flower bring its base in contact with the stigma. Now, when the ala and the carina (which is united to them) are further depressed, there emerges from the tubular apex of the carina, which is coiled nearly into two complete whorls, the similarly coiled style, and it emerges in such a way that its stigma points downwards and towards the left, and its pollen covered hairs come in contact with the base of the insect's proboscis, dusting it with fresh pollen. In this manner crossfertilisation is insured, and self-fertilisation prevented in case of insect visits. In absence of insects self-fertilisation cannot occur, insect visits. since the stigma protrudes from the carina, while the pollen is enclosed within it.

The similar mode of fertilisation in the Kidney Bean (Phaseolus vulgaris, L.) was described ten years earlier by Darwin, who showed by experiment that insect visits are essential for the fertilisation of this plant. Plants covered with fine net remained completely barren, unless the action of bees were artificially imitated. When Darwin repeated the experiment on a larger scale a few flowers on some specimens bore fruit. Small insects (thrips) had presumably gained access to these. Dr. Ogle also gives a description of the floral mechanism in P. vulgaris (French Bean), and P. coccinea (Scarlet Runner). Of the flowers which Dr. Ogle protected from bees by means of a gauze net no single one bore fruit.— J. D., Duffryn, S. Wales.

THE FERTILISATION OF RUNNER BEAN FLOWERS.

Whilst I generally agree with Mr. Abbey in his conclusions as to the non-uses of insects in relation to the fertilisation of Bean flowers, I differ from him entirely in his assertion that the

Scarlet Runner is, after all, not derived from Phaseolus multiflorus, but from Phaseolus vulgaris, the Dwarf or French Bean. That the old Case Knife, the Butter, and the climbing white or pale flowered section of the French, are come from Phaseolus vulgaris can hardly be doubted, but the scarlet and white Dutch Runner section is absolutely different in every respect; the plants never assume a dwarf form, and always have fleshy or tuberous roots, which practically make them perennial. But the question opened up under the above heading has wider range than is found in its present limitations. The matter applies to all flowers, more or less to the question as to how far insect agency is absolutely essential to pollenation or floral fertility, or how far, on the other hand, Nature performs her functions in flowers without external aid. We have here, whether it be limited to the consideration of the fertilisation of Runner Bean flowers only, or to the wider one of the actual necessity for insect agency in relation to flowers generally, a subject into which the Scientific Committee of the Royal Horticultural Society may well dip with perhaps much greater advantage to horticulture than is at present made evident from the deliberations of that distinguished body.

I do not think that insect agency is absolutely essential to the fertilisation of Bean flowers, because I think the actual pollenation has taken place before the flowers are expanded. It is certainly the case with Peas, and I think it is the case with most pod-bearing plants. Anyone who dissects a Bean flower will find that it is practically impossible for a bee or other similar insect to assist pollenation in any way, and as the bees, if carefully watched, are found to avoid all partially expanded blooms, and to operate on those fully open, the inference is that they are too late to assist in fertilisation.

Looking over literally hundreds of allotments in different parts of Surrey in almost every one of which Runner Beans were growing well, I invariably found a fine well set crop. This I attributed to the cooler atmosphere and active air found in open fields as compared with what is found in hot enclosed gardens. Great heat, and especially a dry temperature, may be, indeed I think must be, productive of barrenness, and especially so when aided by drought at the roots. Thus we invariably find that the earliest flowers on Runner Beans set well, also the later ones when the temperature is lower, indeed the flowers never set so freely as towards the end of August and early in September. It is during exceptional hot dry weather that barrenness results; but the trouble is all over now and there is a plentiful setting going on. I find this to be the case in a very hot dry town yard with my Runner Beans.—A. Dean.

HARDY PERENNIALS FOR CUTTING.

No garden can be considered complete without a serviceable border of hardy perennials for cutting. Although there is never at any time a general display, except, perhaps, when Squills, Narcissi, and other spring-flowering bulbs are in bloom, something of interest may be had continuously, and by judicious selection it is possible to have at all times a good supply of cut flowers. Flowers in early spring are especially appreciated, since considerable time must elapse before a general display of summer-blooming annuals, like Sweet Peas, Stocks, Poppies, and Asters may be had. New or rare kinds are not always satisfactory to the amateur, but there are many of free and easy growth which can be thoroughly recommended.

Lenten Roses, mostly hybrids or forms of Helleborus orientalis, are among the earliest flowers. These are bowl-shaped, white, sometimes shaded with green or reddish purple, and often beautifully spotted. They are borne on leafy stems, and are very serviceable flowers to cut, keeping well for a long time. The best time to plant or to divide the clumps is in the autumn. Some of the best hybrids are Frau Irene Heinemann, Hofgarten Inspector Hartweg, and Willby Schmidt. The Christmas Rose (H. niger) blooms in southern and eastern Europe during the winter, and imported roots are frequently offered in America. It would be well to note here that it is not a very satisfactory hardy plant, at least in the New England States. Being disposed to bloom on the occurrence of a mild spell, it is sure to be cut down by the succeeding sharp frosts. Spring frosts usually injure the young leaves, and consequently it is rarely in a very thrifty condition in that part of America.

The numerous species and varieties of Narcissus furnish some of the most beautiful spring flowers useful for cutting. While many of the newer and rarer garden hybrids are costly, there are common kinds in abundance which may be had cheaply enough to be within the reach of all, and it may be taken as an axiom that the cheaper they are the more satisfactory they will be. The common English Daffodil and its varieties are probably better

known than any, and are seen in florists' windows from January until Easter-time, having been forced in greenhouses. The flowers are large, trumpet shaped, borne singly on stout stems, wholly yellow in such varieties as Golden Spur and Trumpet Major, and with a white perianth and yellow trumpet in Horsfieldi, and a primrose trumpet with yellow perianth in Obvallaris, the Tenby Daffodil. The Incomparabilis and varieties follow the trumpet section in their period of blooming, and are distinguished by a larger perianth and smaller trumpet, which is in these called the crown. Of this class the great Welsh Chalice Flower, Sir Watkin, is the best. It has a vigorous constitution, and increases quite rapidly. The Poets' Narcissus is the latest of all to bloom. flowers are white, with a small crown edged with red. It is, moreover, very sweetly scented.

Doronicum plantagineum excelsum is a very handsome early yellow blooming Composite. It makes an excellent border plant, and furnishes a good supply of flowers for cutting. The Virginian Cowslip (Mertensia virginica), with its lovely panicles of metallicblue flowers, is ever welcome; the cut flowers are charming. should always be planted where it can have especial care. It forms long tuberous roots; dying down very early in the season it is apt to be overlooked and destroyed by hoeing. The common English Primrose and the more recent Primrose-Polyanthus hybrids have developed a beautiful class of plants for early spring border work, as well as for general house decoration. There are now strains producing flowers of all shades of red, purple, lilac, yellow and white. Heuchera sanguinea is a comparatively new and beautiful species from Mexico. It is suitable for the front rank of the border or for the alpine garden. Its long, slender spikes of coral-red flowers are particularly beautiful, and last for a long time. Sweet Williams (Dianthus barbatus), although rather unwieldy for cutting, have the affectionate regard of all flower lovers. They are best cultivated as biennials. Seeds may be sown in May, and, transplanted 8 inches apart, they make good clumps for shifting into blooming quarters in the spring following. Day Lilies (Hemerocallis) are among the most satisfactory border plants. The flowers are of various shades of yellow. By taking H. Dumortieri, orange yellow, early; H. graminea, sulphur yellow, early; H. flava, yellow, summer blooming; and H. Thunbergi, sulphur yellow, late, a supply of these may be had for a long time. The flowers are sweet-scented, and are effective for decorative work.

Pæonies generally suggest, in the popular mind, very showy but rather coarse double flowers. The single varieties are exceedingly handsome and very appropriate for vases. The Maltese Cross, or Scarlet Lychnis (L. chalcedonica), is a very common border plant, very bright and pure in colour. In this respect it is unique. No plant gives so much satisfaction, taking care of itself perfectly; it remains more or less in bloom during the entire summer. L. vespertina plena is the double form of the common evening scented species of Europe. While healthy enough where established, it is safer to protect its rather fleshy rootstock with a few dry leaves. The Alpine Poppy (Papaver alpinum) and the Iceland Poppy (P. nudicaule) are more or less in bloom the whole season, and if picked when freshly opened will last two or three days. colours of the first-named are mostly shades of red and white, of the latter yellow. In habit and constitution they are very much alike. These elegant little species are not quite happy in an ordinary border; they should have a space set apart, free from the shade of coarse growing plants, and also have the slight protection of leaves or Pine needles rather than manure. Perennial Larkspurs are noble border plants. Their majestic spikes of blue stand out distinctly. The double varieties are desirable for cutting, lasting well. By a little care in cutting away seed stems a supply may be had until late in the autumn. The double white Achillea Ptarmica, although rather weedy in habit, is a free bloomer and quite indispensable where cut flowers are required.

Coreopsis grandiflora is a clear yellow flowering species, giving an abundance of blooms until late. It is rather biennial in character, but sows itself so freely that there is never any danger of losing it. The double as well as single varieties of Pyrethrum roseum and Potentilla grandiflora are general favourites in European gardens, where many fine named varieties are cultivated. These should be grown in beds or borders by themselves and receive abundance of water in summer and light protection in winter. Thermopsis caroliniana, a yellow-flowered member of the Pea family, makes a bright and attractive border plant. Its handsome spikes of yellow flowers are useful in vases. Many other perennials might be added, but Helianthus decapetalus, single and double, Aster bessarabicus, A. Novæ-Angliæ, and the Japanese Anemones must close this list of useful plants, and these will furnish flowers from spring until autumn.—T. D. H. (in Garden and Forest).



BULBOPHYLLUM VIRIDE.

This small species was sent to Kew for determination by Philip Crowley, Esq., Waddon House, Croydon, in December, 1890. A plant presented to the Kew collection has since flowered on two or three occasions. It is allied, says the "Kew Bulletin," to B. intertextum, Lindl., from the same region. The flowers are wholly light green, except for the presence of a pair of small dull purple eye-like spots on the base of the lip, and a stain of the same colour on the face of the column.

ERIA ALBIFLORA.

This plant was sent to Mr. J. O'Brien of Harrow-on-the-Hill, Middlesex, with whom it flowered in June, 1891, and again in August of the following year; and it has also flowered at Kew. It belongs, the "Kew Bulletin" observes, to the section Bryobium, and may be placed next to E. articulata, Lindl. The flowers are white, and are borne in a lax raceme on a slender scape. There is a drawing in the collection marked "Wynaad, Sept., Jerdon's sale, 1873," which is evidently the same species, but it does not appear to have been previously described.

CŒLOGYNE TENUIS.

This species belongs to Lindley's section Flexuosæ, and, according to the July number of the "Kew Bulletin," may be placed next to C. borneensis, Rolfe (supra p. 62). It differs in its one-leaved pseudo-bulbs, slender scapes, and other characters. It was introduced by Messrs. Linden of L'Horticulture Internationale, Brussels, with whom it flowered in August, 1892. The flowers were somewhat without when received but appear to be of a light were somewhat withered when received, but appear to be of a light buff shade, with very few markings on the lip. The pseudo-bulbs. and leaves are described from a reduced sketch.

Masdevallia Gelengiana.

When exhibited by Sir Trevor Lawrence, Bart., at the meeting of the Royal Horticultural Society, on April 25th of this year, a

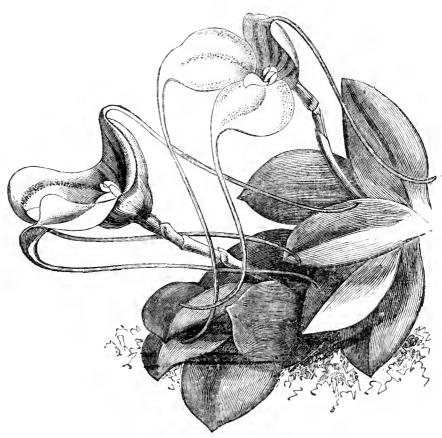


FIG. 18.—MASDEVELLIA GELENGIANA.

plant of Masdevallia Gelengiana created some interest amongst orchidists, and a first-class certificate was awarded for it. As shown in the engraving (fig. 18), the plant is dwarf in growth, being less than 4 inches in height. The flowers are not very large, and are pale greenish yellow tinge, covered with minute rosy crimson spots. The tail-like appendages to the blooms are about 3 inches in length.

EPIDENDRUM PUMILUM.

A pretty little species allied to E. Endresi, Rchb. f. (apparently the nearest ally which has yet appeared, but very different in the shape of its leaves and colour of its flowers. It was imported by Messrs. F. Sander & Co. of St. Albans, with whom it flowered in January, 1890. Early in the present year it was also received for determination from Mr. F. W. Moore, Glasnevin Botanic Garden. The sepals and petals are light greenish yellow, also the lip, with the exception of the orange-yellow callus. The column is very pale green below, nearly white above. As in E. Endresi, the sheaths of the leaves are covered with small brown warts.

THE VIOLA.

This beautiful flower, the culture of which has of late years received a remarkable stimulus from the writings of Mr. Dean of Birmingham, Mr. Cuthbertson of Rothesay, Mr. McLeod of Chingford, and others, may perhaps be accounted by many of my readers, who do not know its value, a minor consideration when compared with other and more ambitious flowers, and yet it is possible that the Viola may have attributes of the greatest importance which they do not possess. not the glowing splendour of the imperial Lily or the queenly Rose, yet in its own exquisite department of Nature it reigns supreme. The period during which it graces our gardens is considerably longer than that which is glorified by any other flower. It blooms upon the grave of the Snowdrop and Hepatica; it is a charming contemporary of the vernal Daffodil; it sees the Aquilegia, after a brief yet delightful term of beauty, consigned to decay; it is not unnoticed in its unobtrusive sweetness, when the Musk Carnations break and swell. Of all of these floral magnates it is the lowly companion, and it survives them all. I hope my enthusiasm has not carried me away, but in the special direction of durability can as much be asserted of any other flower? Hybrid Perpetuals and Tea-scented Roses have two seasons, but each of these is sufficiently short in duration, and on the whole I greatly commiscrate those writers who can write only on the Rose, that most evaneseent of flowers. I have Roses such as the Reynolds Hole, which, though immensely eulogised by rosarians, can stand effectually neither sunlight nor rain. The former, if ordinarily powerful, annihilates their complexion; after a single shower of the latter, by which the Viola is greatly revived, they are found in a condition of putridity—a saddening revelation, which during the last extraordinary summer, and especially within the last three weeks, has often come to me. The flowers which, in my experience, most heroically withstand and survive the elements I have indicated are the Sweet Pea, the Aquilegia, the Lily, the Viola, and the Tropæolum. I have no desire, while thus emphasising the durability of our humbler garden treasures, to under-estimate thereby the value of the Rose. It is indeed, when perfect, a work of indescribed the control of the control o able beauty, but its glory is like that of the rainbow or the sunsct—it is marvellously short lived. It was Montgomery, that florist among poets, who sang:

"The Rose is but a summer's reign;
The Daisy never dies."

Almost as much might expressively be said of the Viola, for there are few indeed of the "Daughters of the Year" to whom its aspect is unknown.

I presume that every successful cultivator of this charming flower has his special favourites, and I am free to confess that my own are Violetta, a lovely miniature rayless Viola, with the fragrance of the sweet-scented Violet; the Countess of Wharncliffe, which is white sating alike to the vision and to the touch, perhaps the most cherished of my floral possessions; Bridesmaid, the White Duchess, H. M. Stanley, the Lemon Queen, the Countess of Kintore, and the uniquely complexioned Duchess of Fife. I have no desire to dogmatise upon so delicate a theme; I know there are no confines to the vast domains of taste, that prejudice is often so mysterious in its origin as to be perfectly unaccountable, save upon the principle of the law of variation; yet of this I am assured, that by reason of their faultless form and delicate perfume the varieties I have cnumerated should be included in every collection that is worthy of the name. I have little doubt that such veritable gems as Violetta and the Countess of Wharncliffe find favour with that veteran midland cultivator Mr. Wm. Dean, who has probably done more than any living man to raise the Viola into that eminence of popularity which, through his powerful exertions and its own inherent virtues, it presently commands

I have spoken of its manifold invaluable characteristics; I leave it to the specialists whose names I have recorded to describe its cultivation. -DAVID R. WILLIAMSON.

MIGNONETTE.

In the onward march of flowers towards perfection Mignonette has not been forgotten. not been forgotten. Many improved forms have been raised, but it would be too much to affirm that the ordinary cultivator has given to these the justice they deserve. Therefore, before I write a word of praise about the improved sorts, I shall draw attention to the negligent way in which Mignonette is cultivated. The ordinary grower commences wrong in sowing the seed much too thickly. The result is thin stems, small foliage, and poor heads of flower, with a short season of blooming. The truth is this sweet flower yields a return for the slightest amount of Many improved forms have been raised, but it

care devoted to it, consequently it has been culturally greatly neglected. I have some growing in a bed of Narcissi the ground being hard through want of digging, yet these plants are producing large spikes of bloom.

Mignonette succeeds well on dry soil. We have a long border which is always dry, unless when rain is falling, and Mignonette thrives well in this border; but it revels in a light rich open soil. In this, if given room, it grows and spreads with great rapidity. The plants should be at least 18 inches asunder, unless in the case of a dwarf sort, such as Tom Thumb which may be grown at a foot apart. Another point of importance is to see that no seeds are allowed to form and remain on the plants. Personally, I have no difficulty in this direction, as the plants are cut so hard and so often for their flowers; but where the flowers are not required it is worth while to remove all those spikes which get to the seeding stage.

For many years past we have had a choice of good varieties, and that being so, it is as well to grow these. Those I am this year growing are Cloth of Gold, Machet, Garraway's White, Crimson King, Tom Thumb, and Queen Victoria. All these are worth growing, a good selection being the three first named.—B.

CANKER IN FRUIT TREES.

In reply to "H. P." (page 105) I have the pleasure to say that the fungus I intended and referred to as producing scaly canker on Pear trees was as stated—Cladosporium dendriticum, Wallr., var. pyrinum. Actinonema cratægi is merely a form of C. dendriticum, which it is not usual to refer to when treating generally of the species. Besides, I was under the impression that the variety of the species found on Cratægus, especially the leaves of C. Pyracantha, was C. dendriticum orbiculatum. It is so given by the Rev. M. J. Berkeley in his "Outlines of British Fungology," and differs from the species as found on Apple trees, also from that found on Pear trees.

Dothiora pyrenophora, Fr., belongs, as "H. P." is no doubt aware, to the order Sphæronemei, and produces another form of canker on twigs of Apple and Pear. Another species, D. sphæroides, Fr., does the same on Ash twigs, and of both the fungus causing canker in its most malignant form—viz., Nectria ditissima—is not slow to avail itself.

Cladosporium dendriticum belongs to the order Dematiei, in which

the threads are free, rarely collected into stipitiform bundles, yet corticated and carbonised as also frequently are the spores. These in Cladosporium spring from the sides or terminally, and are short at first, finally uniseptate. Does "H. P." mean to imply that Dothiora pyreno-

phora and Cladosporium dendriticum are synonymous? D. pyrenophora spores are pedicellate, obovate, and simple.

Allow me to thank "H. P." for his interesting and (to me) instructive communication, and to say that I have not found Nectria ditissima on the roots of Apple trees, but the fungus has been found on those of Ash trees, which, however, are often exposed. The worst form of root canker (so called) that I have acquaintance with is that produced by American blight on Apple trees, and there is an allied species which infests the roots of Beech trees, and renders the stems almost white in some cases. Can any correspondent give the correct name and history of this species? I have an impression that it attacks the Crab, and if so it will attack Apple trees. If it be the same species that infests Crabs, as that which is found on Beech tree roots, it would make sad havoc in an orchard if once established in the trees. Perhaps "Entomologist" will enlighten us upon this point.

In making researches into the diseases of Larch which died off by the hundred acres when nearly large enough for pit props, for which purpose the Larch was grown, I found a number of fungi on the roots. These, however, were mostly stages of Agaricus melleus, namely Rhizomorpha fragilis and R. subcorticalis, the mycelium of which lives between the wood and the bark, and this species may occasionally be found on Apple-tree roots. The mischief to the Larch had manifestly been caused by Peziza Willkommi or calycina, which acts much in the same way as Nectria ditissima on Apple trees. Of course, a number of fungi will live on dead roots, but I have not found any on the live roots which has produced canker. Nectria cinnabarina will grow on almost any kind of detached exposed root, preceded by Tubercularia vulgaris, but neither occurs on living tissue, and if canker occurs at the roots it is generally in consequence of some damage or leaving portions of

broken or detached roots in planting or root-pruning.

I am extremely obliged to "H.P." for his excellent factor in connection with canker:—"I have often found roots of trees, the top growth of which is badly cankered, perfectly free from canker." That completely settles the soil theorists, and Mr. Pendered in particular, whose valued communications have clenched all my arguments, and I am sorry that he thinks I have quoted his letter unfairly. If this is meant to apply to the facts, which I certainly did not question, I tender my best apologies. But that is not the point, for it was not the facts but the deductions Mr. Pendered drew from them that were and are still questioned, and it is quite clear Mr. Pendered could have saved immensely by first finding out the cause before proceeding to apply remedies. Anything short of that is mere quackery. There is nothing like resource, and it is remarkable that Mr. Pendered should reserve the fact of his having cut all the cankered parts away of some trees. Of this he said nothing in his previous letter, and I decline now to entertain it as evidence, for keeping back essential facts is fatal to any case. Nevertheless, the Laurel hedge is put forward as proof that gum on Laurels arises from the soil, yet those on the bank have some dead boughs, or as Mr. Pendered puts it, "scarcely a dead bough," therefore they are not canker

proof notwithstanding the difference in environment of those on the level ground. These Laurels grew rapidly for a few years, but in seven years whole branches died, and growths start again near the bottom. In his previous letter Mr. Pendered said he cleared them away and planted fresh. How does he reconcile the two statements? Or if the soil was the cause of the canker why do shrubs grow again healthily?

Your correspondent may rest assured that the simple remedy he advises will continue to be followed as spasmodically a little longer as it has been during the past 2000 years; but I have no doubt whatever that my "scientific" efforts will be within the grasp of every ordinary fruit grower, and possessed by every schoolboy within this decade.—G. ABBEY.

THE word "orbiculatum" in my letter to you, printed on page 106, August 3rd, fifth line from the top, should have been placed in the next line, after "dendriticum," thus: "var. orbiculatum." It is my mistake entirely.—H. P.



TEA ROSE ERNEST METZ.

"D., Deal," in Journal of Horticulture, page 98, writes in rather disparaging terms of the above Rosc. Can he be aware of the fact that in an election of the best twenty-four Tea Roses The Bride received the highest number of votes, viz., forty-six, and Ernest Metz forty-one; to me this is conclusive proof that leading exhibitors think very highly of the latter. All through June I could gather splendid specimens, but by the time of the National (July 1st) the best were over. In my opinion Ernest Metz is far away the finest and best Tea Rose sent out during the last six years. It was shown in fine form at the National Tea Rose Show (June 20th) this year.—Benjamin R. Cant, Colchester.

SOUVENIR DE LA MALMAISON (BÉLUZE, 1843).

I WISH to say a word about the Rose thus described in the National Rose Society's catalogue. It is a very old Rose, as I have always believed once a favourite with the Empress Josephine. That, however, hardly agrees with the N.R.S. date. It is hardly an exhibition Rose. I remember twenty years ago it had rather a way of appearing in the boxes of Teas of beginners, but it is well worthy of more extensive cultivation by those who are not Rose showers. My intimate acquaintance with it dates from this year. Up to then I never had more than one plant of it in my garden; but last autumn, whilst arranging a very small town Rose garden, a liberal friend who buys his Roses by the beds, seldom less than a dozen of any variety, and who also has a way of changing his Roses, presented me with a whole bed of Malmaisons. T hey were large old plants and were cut in very hard. They began blooming in May, and have never ceased for a day, and seem disposed to keep on steadily until checked by the frosts. It is the nearest instance I have known of a true Perpetual. My hot little shut in garden also suits Teas. The Bride, Waban, Comtesse de Nadaillac, and others of the kind have done, and are doing, very well; but I have had nothing to surpass, or indeed equal, the Souvenir de la Malmaison in the early stage of its bloom. It must be admitted we townsfolk have one valuable advantage—we can turn on the hose whenever needed; and plenty of sunshine and plenty of water go a long way towards perfecting flowers.—A. C.

NATIONAL ROSE SOCIETY.

THE manifesto of the Secretaries of this Society set forth in the Journal, page 97, as a sort of counterblast to my circular to exhibiting members, has caused me some amusement; and although it may annoy other people, they should not take it too seriously, as it can be only looked on as a jeu d'esprit, to which both the Honorary Sccretaries are prone at times. No one, even the proverbial and much-maligned Scotsman, could by at any natural process of reasoning come to the conclusion that my circular was issued by the Society, or required official sanction. If the manifesto be meant as a sly hint to the members that they should not reply to my queries, the Secretaries have been somewhat dilatory in issuing it, and I may mention that these gentlemen were amongst the very first persons to receive the circular, which has been out quite a fortnight.

I have received replies from all the largest as well as many other well informed exhibitors, also from others highly thought of amongst our members, from the President downwards. I am quite satisfied with these replies, many of them accompanied with letters expressive of gratification that these subjects are being at last properly inquired into, and I intend in due time to give an analysis of the opinions expressed. As the Secretaries have taken the trouble to mention the fact of my resignation of Committee, which took place carly last June, I may as well supplement their information by stating that in order that I should in future have no official connection with the Society, I also at the same time resigned my local secretaryship of the Croydon district. No doubt the Secretaries will soon find a better representative.—Charles

J. GRAHAME.

TEA ROSES FROM CUTTINGS.

So immensely popular are Tea Roses, that notwithstanding the vast number of bushes disposed of annually by nurserymen, few gardens can boast of being able to maintain a continuous supply of their deliciously scented flowers. The death-rate of plants in the open air has, during the last two years, been unusually heavy, and in order to obtain a sufficient number of plants to fill up vacancies, a considerable outlay has, in many instances, been necessary. To some this is a matter of little moment, to others it is one of importance; and there are few indeed who would not be glad to expend upon new Roses a greater amount than they at times find available. This I think they might carily do if plants of older varieties were propagated freely each year, so as to have a sufficient stock in hand to fill up gaps, or at least some of them.

I have tried many experiments in connection with the propagation of Tea Roses from cuttings, and I am convinced that if the right kind of wood is selected the present is the best time in the whole year to set about the work. When the right method is adopted it is surprising with what ease and certainty a good stock of vigorous plants may be obtained. The plan I find best is the following. I select the requisite number of short-jointed half-ripened shoots which, if possible, have been severed from the parent plant with a heel attached. Cut in lengths containing from three to five joints, although it is only necessary to have a couple of joints above the soil after the cuttings are inserted. Varieties differ much in the length of joints, and I find that the most vigorous plants are produced from cuttings having a moderate amount of growth above the soil, provided the leaves and stems are kept from shrivelling till young roots are emitted. In preparing the cuttings, cut the base with a sharp knife, trim any projecting portions of bark, remove a couple of the lower leaves, and if needful shorten the top to a good bud.

Fresh yellow loam two parts, with an equal quantity of leaf soil and a liberal amount of sharp sand added, form the compost I employ. This is pressed moderately firm into well drained 5-inch pots and given a surfacing of sand. Half a dozen cuttings are inserted round the sides of each pot and one in the centre. The soil is pressed firmly around the base of each cutting. Failure is frequently brought about through not attending to this simple detail. A watering is then given and the pots be plunged in cocoa-nut fibre or sawdust in a cold frame, one having a north or west aspect is preferable. Much less difficulty is then experienced in keeping the atmosphere cool and moist without resorting to dense shade. No air need be admitted for a couple of weeks, except in dull weather to dry superfluous moisture. The cuttings are syringed once or twice daily during bright weather. This keeps the soil sufficiently moist till air is admitted, but should it become in the least dry upon the surface water is given through a rose, as the least approach to dryness about the base of the cuttings causes the cellular tissue to become contracted, and failure is the result. A little air is admitted daily after the cuttings have been inserted a fortnight.

Some growers make a mistake in being in too great a hurry to pot the young plants directly they see growth has commenced, the result being that they are lost. It is rare indeed that the cuttings have more than callused by the time growth begins, and even when young roots are just pushing into the soil it is a dangerous practice to pot. This operation should be deferred till the roots have obtained a good hold of the soil, and there is no difficulty in determining when they have reached this stage if they are carefully turned out of the pots. Three or 4-inch pots will be quite large enough to transfer the plants to, as it is important to have the soil well permeated with roots before winter sets in. The plants should if possible be wintered in a pit or other structure from which frost is excluded. They succeed fairly well if plunged in coal ashes in a cold pit; but during a long spell of severe frosts they suffer considerably from the damp and confined atmosphere. Under such conditions the plants do not start into good growth in the spring, and much time is lost. When, however, they are kept, as above advised, in heated structures, the wood gets thoroughly hardened during the winter, and the plants are ready for potting early in the spring.

When all danger from frost is over the strongest will be available for planting in beds in the open air, while the remainder may either be grown in pots or planted in a warm corner of the reserve garden. Whichever course is pursued, if good culture is given splendid plants will be produced by the following season. A number of cuttings put in annually will then maintain a constant supply of Tea Rose trees which will be available for all purposes, and being always ready at hand, may be planted at the most opportune times. Any who act upon the advice above given will, I am sure, have no difficulty in raising a good stock of Tea Roses, and, judging from the exclamations I frequently hear, there are not a few who would gladly increase their stock in a way so simple, yet satisfactory. — H. Dunkin, Castle Gardens, Warwick.

NATIONAL ROSE SOCIETY'S PROVINCIAL SHOW AT WORKSOP.

It was a bold venture to hold the Provincial Show this year at the small Nottingham town of Worksop, bold on the part of the local Society which ventured upon the trouble and expense which such a proposition involves, bold on the part of the Society which entrusted the second great event of the season to a small local Society which had indeed for some years been affiliated, but whose modest pretensions had not hitherto given any indication of the more ambitious projects that lay beneath the surface. It is another instance of what can be done when one energetic person undertakes such a work. He infuses his

enthusiasm into powers who warmly second his efforts and do their best to forward the interests of the Society.

It is due to Mr. Henry V. Machin in the first instance, and to Messrs. Whale, Baxter, and the zealous Committee, that all the arrangements were so carefully made; but there is one element in all such matters with which we must have to reckon, but which we cannot control, the character of the weather. As week after week of the continued drought rolled by, the thought could but be present, When this breaks up shall we not have a wet and dreary time? and then came the remembrance of Chester last year, the most disastrous day that the N.R.S. has ever experienced at its provincial shows; and when I arrived at Worksop on the evening previous and was told that already there had been registered 1½ inch of rain that day, one could not but feel that ill-fortune is likely to follow, and that Worksop will be a reproduction of Chester. The morning broke gloomily with a drizzling rain, but happily it cleared off between twelve and one, and the afternoon was tolerably fine; but the wet had had its effect on both exhibitors and the public, and the result was unfavourable in a financial point of view. To anyone who result was unfavourable in a financial point of view. recollected the overflowing show at Chester, that at Worksop must have appeared small, and that it was so was borne out by the fact that in the highest class for seventy-twos there was but one competitor, that the great Essex firms were unrepresented, while from the further south no one appeared except plucky Mr. George Mount amongst nurserymen, and Mr. Budd amongst amateurs.

The Metropolitan Show has by some been rather absurdly called the Rose Derby, but the Derby is but one incident in the great Epsom meeting. The analogy of that great race is to be found in the competition for the much-coveted trophics. Carrying out this comparison I think we may compare the competition for the Jubilee trophies to the race for the St. Leger at Doncaster. Like it, it was carried out on northern ground, and, like it, only stands a little lower in the estimation of winners to the great Metropolitan event. It sometimes happens in these races that an outsider on whom nobody reckoned defeats all the calculations of the book-makers, and so it happened at Worksop; and while anticipations as to whether Budd or Pemberton or Lindsell would carry it off, one whose name was never even alluded to, Mr. A. Whitton of Bedale, bore off the trophy. As to nurserymen everybody concluded that it would go to Messrs. Harkness, and for the second time this firm has accomplished a feat which no other firm has done—namely, carrying off both trophies for the year. It was not so casily won, as Messrs. Alex. Dickson & Sons of Newtownards ran them so close that there were but few points of difference between them; indeed, in one respect they had an advantage—namely, the greater variety of colour in their stand. I think it was disappointment to a good many that Mr. Machin did not take a higher place, but it was no surprise to me, who had heard that he had not cut his Roses until the drenching rain came on. It is but another instance of the fatal mistake that amateurs so often make of putting off the cutting of their Roses until the very latest time possible, especially if the show be near at hand. Let an exhibitor only think at what time the Roses from Canterbury and Newtownards must have been cut, when he will at once see that his best plan is to make hay while the sun shines. Had Mr. Machin but cut his Roses in the early morning of the day before, I have no hesitation in saying that he would have easily taken the premier place. Although the season has been so unfavourable, yet there are some Roses which have been exhibited in as fine condition as ever they were shown in. Take for example Horace Vernet, which has secured the silver medal for the best H.P. both at the Vernet, which has secured the silver medal for the best H.P. both at the Crystal Palace and Worksop. Grand blooms also were shown of Comte Raimbaud, Earl of Dufferin, Duc de Wellington, Victor Hugo, Suzanne Marie Rodocanachi, A. K. Williams, Charles Darwin, Dr. Sewell, Louis Van Houtte; whilst amongst Teas some grand blooms of Ethel Brownlow, Marie Van Houtte, Madame Hoste, a beautiful bloom of which secured the N.R.S.'s medal in Messrs. Dickson & Sons of Newtownards firm, the same flower securing the silver medal in the amateurs' class for Mr. Walter Drew. The Mrs. John Laing, which secured the silver medal for Mr. Pemberton, was a good flower, though I have seen finer blooms of it. Amongst the smaller exhibitors who hailed from the South, few indeed in number, must be noted Mr. Charles J. Grahame of Croydon, Mr. Edward Mawley, the Honorary Secretary, and the Rev. H. H. Gall of Hitchin, all of whom showed exceedingly well, especially when we consider the disadvantages under which they laboured from the long drought.

The wisdom of the alteration in the Society's rules with regard to new Roscs—namely, that of allowing those in the last three years instead of two to be included in the stands—was shown here, as it had already been in the Crystal Palace. Formerly we used to get a few indifferent blooms from grafted plants, whereas now we can not only have our English raised Roses but whatever French ones there are, and they are very few, are no longer from pot plants, but from those grown in the open ground. One has only to recollect what Madame Hoste was when first exhibited among new Roses, and then to see what it is now, is how widely different the flowers are under these two different conditions. Thus probably so good a stand of new Roses has not before been exhibited as that of Messrs. Alex. Dickson & Sons, containing as it did some of their own fine Roses, Marchioness of Londonderry, Margaret Diekson, and Marchioness of Dufferin, Duke of Fife, Gustave Piganeau, which would have been excluded but for the new rule, with the American sport Chabaw, and a few French Roses of no particular merit, but of which we may perhaps hear more by-and-by. While upon this subject I may mention a very remarkable stand of new Roses shown by a local exhibitor. When I say that it contained a white Charles Lefevre, a red

Baroness Rothschild, and a pink Baron de Von Stettin, it will be at once seen how perfectly unique it was. Out of the twelve blooms there were only five correctly named. It could not be disqualified as there were no duplicates, but surely one would think that even a "crock boy" would have known better than to have made such preposterous mistakes, and it seemed very hard to be obliged to give a prize to a stand whose nomenclature was so very mixed as in this case.

Garden Roses, as might have been expected owing to the character of the season, were not largely exhibited, but there was one very excellent stand from Mr. Machin, in which some of the plants, such as the Rugosa, were shown with a good deal of foliage, and I cannot but think that this is the condition in which these exhibits should be seen in future—at least, where the exhibitors are near home—for it is no easy matter to carry these flowers any distance. A bunch of L'Ideale attracted considerable attention, and some bunches of the small Poly-

antha section were very attractive.

As your reporter has already given a full account of the prizetakers and of the flowers they exhibited I have not entered into any details upon these points, but have merely indicated the chief points of interest, and it is to be sincerely hoped that this Exhibition may have given a stimulus to Rose growing in the northern midlands, and that, as in other places, although it may not have resulted in any immediate profit to the local Society, good effects may be felt in future years.—D., Deal.

FRUIT PROSPECTS IN BEDFORDSHIRE.

APPLES are a good average crop. The fruits of many kinds are rather smaller than usual, but now the rains have come they are swelling fast. The Codlin class, such as Lord Suffield, is better than I have seen for some years. Pears, about half a crop upon bush and standard trees, better results on walls. Beurre Clairgeau, Louise Bonne of Jersey, Williams' Bon Chrêtien, and Marie Louise are amongst the best. Plums are a good average crop, Apricots half a crop, Peaches and Nectarines on unprotected walls are carrying full crops and ripening about a month earlier than usual. The trees generally are healthier and better than they have been for some years. Peaches of good size and quality were gathered from the walls the first week in July, but it was necessary to assist the trees with liberal supplies of water, otherwise the fruit would have been very small.

Strawberries showed abundance of blossom, but owing to the late spring frosts, the long drought, and excessive heat, we had only about half a crop, and this was only secured by heavy waterings. Laxton's Scarlet Queen was the pioneer this season, beating John Ruskin and Noble by a few days; Laxton's Latest of All has proved itself a good variety of the British Queen type, of excellent flavour and size. It seems to do well on rather light sandy soil, where British Queen will not succeed. Oxonian was the latest with finely coloured fruit.

Bush fruits have been about half a crop, and very small. These ripened irregularly owing to the long drought. As soon as the fruits showed signs of colouring they were attacked by birds. The little blue tits are very troublesome, they set nets of ordinary size at defiance, flying clean through 1-inch mesh; but owing to the welcome rains we have had during July, upwards of 5 inches, vegetation is making rapid progress. Apples and Pears are swelling very fast now, and promise to be of good size, the fruits of most kinds being clear and bright.

Most kinds of vegetables have suffered from the drought. It has only been from highly cultivated soil, deep digging, and generous manuring that the best results were obtained.—G. R. Allis, Old Warden,

Biggleswade.

NOTES FROM BRISTOL.

BRISTOL, like most large cities in this country, can boast of many good gardening establishments in its suburbs, supported by its most wealthy merchants and private residents who take an interest in some phase of garden work for pleasure or profit or a combination of both. The Chrysanthemum and spring Shows which are held in Bristol testify in a marked degree to the higher class of gardening carried on there, the Chrysanthemum fixture being looked upon as one of the best in the provinces. For want of time I was enabled only to visit a few of the many interesting gardens I am acquainted with, and notes on such may not be without some interest to the many readers of the Journal resident in the district.

SPRINGFIELD.

This is the pleasantly situated residence of F. Savage, Esq. Although good all-round gardening is carried on there are specialities both in winter and summer, foremost of them being Orchids, which are wonderfully well grown by Mr. Edwards, who, it may be said, has held his present position for thirty years, and I believe for the whole of that time has been a constant reader of the Journal of Horticulture. The collection is not a large one, but it embraces sufficient in point of numbers and variety for furnishing a succession of bloom at all seasons. At the present time Odontoglossum Insleayi leopardianum, O. tigrinum, and O. pulchellum are conspicuous, while of Oncidiums O. Cavendishiana, O. sphacelatum—the first named a good form, the latter a fine specimen now fast opening. Oncidium splendidum must have been fine, judging from the size of the remaining portion of the flower stem and the vigour of the plant. O. crispum and O. varicosum are each strong and healthy, and produce a good annual display. O. macranthum,

to my mind the queen of Oncidiums, is here in splendid form; last season its spike reached across the house, and for convenience was trained to the roof girder, and must indeed have been very fine. Lyeaste Skinneri resembles the well known Phaius grandifolius in its growth, and was just pushing forth vigorous flower spikes. Among Cattleyas, gigas Sanderiana was conspicuous by its fine bold growths; this plant last year produced nine of its massive and richly coloured blooms, which measured inches in diameter. C. Bowringiana, C. Skinneri, C. Mendelli, C. Mossiæ, and C. Harrisoniæ violacea were each in a healthy, vigorous state, not mere scraps but fine large pieces. Imported plants of the now popular autumn-flowering Cattleya labiata were noticed, some of which had already bloomed, others being awaited with interest, because of their varying character of growth. Cypripedium insigne in 7-inch pots were carrying twenty and upwards of their useful blooms, which are valuable for house decorating. Dendrobiums nobile, Wardianum, and Farmeri, among others, were noticeable, the plants being fine with an abundant promise of bloom.

Crotons, Dracænas, and other foliage plants and Ferns are grown to meet a large demand for indoor work; while Eucharis, Dipladenias, and Allamandas furnish choice flowers for cutting purposes. Eucharises are particularly strong, and flower frequently, and for the cleaning their leaves no insecticide is ever employed, Mr. Edwards being of opinion that injury to the foliage brings on premature debility, and sometimes failure. Small pots of Adiantum farleyense are always a feature here, and a useful employment is found for them in the house, where they are naturally very striking. Winter-flowering Pelargoniums are given prominence to for cutting purposes, and Poinsettias form another of Mr. Edwards' specialities; a good batch of the late blooming variety, judging from those now remaining, must have been very fine. In 48-pots I noticed bracts measuring from 16 to 20 inches across, and very dwarf in stem. Old plants are started early, and grown vigorously until June, when the tops are taken off and put into small pots, and these plunged in a frame on a prepared manure bed when the thermometer indicates a temperature of 90°. In a fortnight they are rooted and ready for potting, and from that time they are gradually exposed to light and cooler surroundings, so as to keep them dwarf.

Two very light and well ventilated houses furnish a supply of

Two very light and well ventilated houses furnish a supply of Peaches, Nectarines, and Plums from the middle of June to the end of September. The body of the houses are filled with a double row of trees in pots, the lofty back walls having permanent ones trained to wires. All the trees are perfectly clean and healthy; those in pots, as soon as the fruit is gathered, are plunged outdoors and their places occupied with Chrysanthemums for the winter. An excellent provision for increased ventilation is carried out by means of 4-inch glazed socket pipes, conveyed through the centre of the border from end to end. Upright pipes connected with this ventilating drain are placed at equal distance apart, and an upright one at each end outdoors forms the shaft for the conveyance of air into the house without any adjustment of the ordinary ventilators. The outside ones are each fitted with a cover, so that their use can be regulated with ease, and this additional volume of air moving from the floor of the house is of great value in summer, especially in such light structures.

I was interested in the heating arrangements carried out at Springfield. Mr. Edwards is much in favour of small pipes, and find by their use a steady heat can be maintained more easily and with less strain on the boilers than is the case with larger pipes. The mains are 3-inch pipes, and reduced to 2-inch sizes in all the latest built structures which the present proprietor has erected. Two tubular boilers are connected, so that one or both may be used as occasion demands. There are many other points of interest at Springfield which do credit to their owner and gardener, but space does not permit of further detail.—W. S.

(To be continued.)

STRAINS OF GRAPES — CONTINENTAL STRAW-BERRIES.

THE French "viticulteurs," the nurserymen of the craft, such as Etienne Salomon of Thomery, have gone very exhaustively into the classification of the varieties of the Grape Vine. This has led them—as it quite naturally should, and the only wonder is that others, the English specialists included, have not made more of the fact—that there exist many different "strains" of the same, and chiefly of the more popular sorts. For instance the Black Hamburgh, or Frankenthal, has been found to differ in this respect from the standard at least a dozen times; and the Gros Colman is classed with the French in two very distinct strains—the one light leaved (in colour) with large berries, colouring with difficulty, and the leaves dying or ripening quicker; the other darker leaved, berries smaller and colouring very early and quite black. I know all that the difference of soil and manuring can do; but the fact of different strains of the same variety existing cannot be denied, and it would be more wonderful if such were not the case than that it should be a fact.

I recollect reading some time ago in the Journal some queries about the Marguerite Strawberry. The Marguerite Libreton, raised by Libreton in 1856 or 1859, I do not recollect which, is a very large light rose and very early Strawberry, of a most regular tapering shape. I have seen some grown by a specialist of Brussels, now departed (De Jonghe) 3 inches long and 2 inches across the shoulder. There were two on the plant which had only two or three leaves, and grown in a small pot. It was the best market Strawberry for forcing, but is much discarded

now. It is not of first quality; it mildews easily; and the chief cause of its not paying is—it is soft and does not keep; the shop people do not like it.

The Strawberry best liked for forcing here is Louis Vilmorin. It is not an early sort, but grows very sturdy; few leaves; sets capitally; is of dark varnished red; keeps and travels the best. By starting early enough and quite gradually they come as soon as any other; the first fruits are large. The largest Strawberry is considered to be Maréchal MacMahon, all the fruit comes large; also Dr. Morel, which strange to say (I have been told so) forces well on hotbeds, but mildews fearfully if forced by hot-water heating.—Helenevell.



THE WEATHER IN LONDON.—After local thunderstorms towards the end of last week, and much hail in places, a sudden change occurred. On Monday and subsequent days this week the weather has been of a tropical character, the sun being powerful and unclouded, but meteorologists have discovered a "depression" somewhere, and expect it to reach us in the course of a few days.

— DUTCH HORTICULTURAL SOCIETY.—The members of the "Dutch Horticultural Travelling Society" were present at the last meeting of the Royal Horticultural Society at the Drill Hall on the 8th inst. The conductor of the party was Mr. J. K. Budde, the Curator of the Botanic Garden, Utrecht.

VERMOREL'S ECLAIR.—You had better warn your readers that Vermorel's sprayer cannot be used for emulsions containing soap or oils, minerals or others. In a few hours' time the indiarubber organs would be destroyed. Mr. Vermorel in his notice points out the fact. The Eclair is to be used for bouillie bordelaise alone; at any rate, never with any compound containing soap or oils.—H.

— Johnson's Gardeners' Dictionary.—The new edition of this work will soon be completed, the sixth part having come to hand. This instalment includes the portion of an article on Mushroom culture, and ends with a description of the genus Pleopeltis. Two more parts are, we believe, to be published to complete the book.

- DEATH OF MR. THOMAS LAXTON.—Just as we are preparing for press we learn with much regret of the death of Mr. Thomas Laxton of Bedford, which occurred on Sunday afternoon, the 6th inst., after a distressing illness of eight weeks' duration, at the age of sixtythree years. As is well known, Mr. Laxton was one of our chief experts in the art of cross-fertilization, and he exercised this art with remarkable diligence and success. He has added to our gardens new flowers, vegetables, and fruits that will long keep his name in remembrance. Only a few days prior to his death we were reminded of his achievements in the form of a coloured plate of the new Strawberry Laxton's Royal Sovereign—a splendid early variety, as large as Sir Joseph Paxton, with much of the British Queen flavour. This Mr. Laxton considered his masterpiece among Strawberries, and the distribution of plants, we presume, will be continued by his sons—the Laxton Brothers, Bedford. Well it will be if they have inherited their father's skill in the work in which he engaged so zealously over a number of years.

— PHILOSOPHY OF DRAINAGE.—Few cultivators understand how water operates in soil culture. One of its chief uses is to purify the soil. The roots of plants require the agency of oxygen in preparing food, just as much as the leaves do; and after the air has lost its oxygen it is impure and unfit for the use of the plant. A heavy fall of rain completely saturates the soil and drives out the impure air, and as this water passes away a new supply of air follows. In no other way can the soil be rendered free of impure air than by this curious process of Nature. In brief, says "Meehan's Monthly," rain is a purifier of the earth. Of course the soil rctains moisture, and from this moisture the roots subsequently are enabled to draw their supply. This is necessary, but air is no less necessary than the water. One of the most interesting treatises on the subject, and by which this paragraph has been suggested, is an essay delivered before the Marion County Horticultural Society of Salem, Oregon, by President John M. Bloss, of the State Agricultural College, and Director of the Agricultural Experiment Station.

- —— GARDENING APPOINTMENT.—Mr. J. A. Cox, who has been the past nine and half years foreman at Aldenham House, Elstree, Herts, has been appointed gardener to the Hon. A. Holland Hibbert, Munden Park, Watford, Herts,
- PRINCE CONSORT'S ASSOCIATION.—This Association recently held its fortieth exhibition in Windsor Home Park. Collections of plants were arranged by Mr. O. Thomas, Royal Gardens, Frogmore, Messrs. Sutton & Sons, and Mr. C. Turner.
- PROFITABLE CULTURE.—It is quite certain, says the "Rural World," that to make agriculture pay in this country it must approach market gardening to a greater extent than it does, which means more work for the rural labourer and better profits for the farmers.
- —— SANDRINGHAM FLOWER SHOW.—This annual exhibition was held on Wednesday, August 2nd, and proved a great success. The fruit, flowers, and vegetables staged by the cottagers were plentiful and of good quality. The Sandringham gardens were open to visitors, who were more numerous than for some years past.
- —— St. Mary's Fields, Hampstead.—The preservation of these fields as an open space is engaging attention in the district. At a meeting held on Wednesday evening August 2nd, at St. Mary's Hall, Abbey Road, Hampstead, presided over by the Earl of Meath, resolutions in favour of preserving as a public recreation ground the portion yet unbuilt upon of St. Mary's Fields were unanimously adopted.
- PAVIA MACROSTACHYA.—A fine specimen of this beautiful late flowering North American shrub was recently in full bloom in Mr. Smee's garden at Hackbridge, but suddenly died last week as if through the effects of lightning. The flowers are produced with great freedom and in dense plumy spikes. The growth is spreading and the foliage abundant, in rich contrast to the wealth of bloom. Ample space must be accorded to this plant to allow it to spread out in its own characteristic way, whilst it thrives in any good garden soil.
- —— PARKS AND OPEN SPACES.—The Chairman stated in the course of his address at a recent meeting that the parks and open spaces under the charge of the London County Council had had their area increased by 1000 acres during the past four years. The Council possesses fourteen parks, thirty open spaces, and twenty-two gardens, the annual cost of maintenance of which is £82,992, but there are few items of expenditure devolving upon the Council that receive more general approval than the expenditure in connection with London's open spaces.
- SUTTON'S Al TOMATO.—At the first Exhibition of garden produce held last week at Purley, the best dish of Tomatoes was this not yet very well known variety. It is of the Challenger type, but is larger, the fruits being more deep than broad. Perhaps for that reason the exhibitor (Mr. Houlder) had it set up in heaped form, when the full depth, form, and solidity of the fruits were made so much the more apparent. A good dish of a flat round variety, the fruits set out singly, looked best at the first, but the fruits were found to be lacking the depth and weight as well as the finish of the A1 variety. I saw the plants from which these fruits were gathered later in Mr. Houlder's garden, growing in a small span house and fruiting splendidly. I think these deep or Apple-shaped Tomatoes will become popular. At the same Show a very beautiful group of Begonias interspersed with effective Caladiums and various flowering and foliage plants was staged by Mr. J. M. Box of Croydon, who is an extensive grower of excellent varieties.—A. D.
- PHACELIA CAMPANULATA.—There are many shades of blue in annuals, and the most popular one just now seems to be the familiar Cornflower, Centaurea Cyanus. As a buttonhole flower this has been extensively worn during the past season. It is hoped that some day it may be possible to obtain a selection that shall give a richer colour than in even the best forms found in a garden strain. But one of the most beautiful of all blue flowered hardy annuals is Phacclia campanularia, a somewhat dwarf grower, and giving a fine mass of colour for bodding. I saw this in grand form and colour the other day in Messrs. Sutton & Sons' seed grounds at Reading, and as it was then still hot and dry the result showed that this Phacelia is a capital dry weather It is also very hardy, for if sown so late as the end of September the plants will pass an ordinary winter. The colour of the cup-shaped flowers, which are about the size of those of Nemophila insignis, is just the intense blue of Salvia patens. It is indeed a beautiful flower.-A. D.

- —— FRENCH MARIGOLDS.—We have pleasure in sending a few blooms of our French Marigolds for your inspection.—Dobbie & Co., Rothesay. [The blooms sent were of excellent substance, and: the colours perfectly defined.]
- —— CARNATION LOTTIE KIRLEW.—Herewith I send you flowers of a new yellow-ground border Picotee named Lottie Kirlew, of which I should like your opinion.—GEO. HOLMES. [The flowers are very good, and the variety will doubtless become popular when well known.]
- VIOLA MISS CANNELL.—Mr. H. Cannell writes:—"I think you will say my Viola (Miss Cannell) is decidedly whiter and more effective than the renowned Sylvia, it has a far better habit. I send blooms of both." [Though the blooms were curled up through resting in the post over Bank Holiday the greater purity of Miss Cannell was very apparent.]
- Golden Rocca Onion.—"W. K. W." writes:—"This is a great improvement upon Giant Rocca, and is the best variety for autumn sowing. This opinion has been firmly fixed in my mind by the numerous fine beds of it I have recently met with in various Norfolk gardens, especially some splendid samples thereof at Sennowe. The bulb is of a beautiful straw colour when mature, large in size, and of most handsome shape. For exhibition purposes I believe it is unequalled."
- CONTINUITY LETTUCE.—The same correspondent observes:

 —"Another good thing which has received much praise this season from many Norfolk gardeners is Daniels' Continuity Lettuce, a brownish coloured Cabbage kind of good size. In spite of heat and drought during the past months it has wherever grown developed large solid heads, which appear to stand longer than those of any other known variety."
- CAMPANULA GRANDIFLORA MARIESI. Referring to the plant figured on page 103 last week, Mr. George Paul writes from The "Old" Nurseries, Cheshunt:—"I think the plant is Japanese, and was introduced by Maries. It is a dwarf hardy form of Platycodon grandiflora. I think it wants the south slope of a rockwork, and probably, having done so well this year, likes a warm summer. These Japanese plants vary much, probably from the island they come from, but I should think they would like England to be just a little warmer to feel quite at home."
- METEOROLOGICAL OBSERVATIONS AT HODSOCK PRIORY, WORKSOP, NOTTS, FOR JULY, 1893.—Mean temperature of the month, 60.9°. Maximum on the 18th, 84.7°; minimum on the 28th, 42.3°. Maximum in the sun on the 8th, 135.9°; minimum on grass on the 28th, 35.7°. Mean temperature of air at 9 A.M., 62.5°; mean temperature of soil 1 foot deep, 61.4°. Total duration of sunshine in the month 154 hours, or 31 per cent. of possible duration. We had three sunless days. Total rainfall, 3.98 inches. Rain fell on eighteen days. Approximate averages for July—Mean temperature, 60.7°. Sunshine, 160 hours. Rainfall, 2.42 inches. A showery, wet month, rather warmer than the last few years.—J. MALLENDER.
- UNRIPE AND DECAYED FRUIT. The "Lancet" says:-"Nothing is more essential to method in learning than frequent reiteration, and it is therefore needless to plead excuses in seeking thus to impress even the elementary facts of sanitary science. It might be supposed that by this time everyone understood the importance of observing particular care in the selection of a summer dietary, especially as regards fruit. Hardly any question of domestic management is either more vital or more elementary; yet error continually arises in this connection in the simplest way. A few days ago a child died soon after eating Strawberries. Why? Because the fruit had been purchased two days previously, and, as was only to be expected, when eaten was in a state of decay. It is impossible to resist the impression that neglect had something to do with the sad result in this instance. Luscious fruits are particularly liable to putrefactive change, and such thrifty processes as exposure to a cold and dry air, spreading out and the like, suffice only to postpone decay for a brief period. We cannot do better than point to the incident above mentioned in order to remind the vendor and the purchaser alike that freshness is the only certain guarantee of safety when any succulent fruit forms an article of diet. We have not forgotten that another hardly less serious danger of the season awaits those who indulge in fruit which is under-ripe. In this case taste as well as judgment commonly interpose a caution the importance of which can hardly be exaggerated. Yet here, also, the consequences of neglect have too often been sadly apparent."

- THE TOTAL RAINFALL FOR JULY AT ABBOT'S LEIGH, HAYWARD'S HEATH, SUSSEX, was 3 48 inches, being 0.82 inch above the average. The heaviest fall was 0.59 inch on the 4th; rain fellon sixteen days. The highest temperature in the shade was 74° on 12th, the minimum 42° on 28th. Mean maximum 73°, mean minimum 58.28°, mean temperature 65.62°. Mean in the sun 83.6°. A very favourable month. Vegetables now make rapid progress.—R. I.
- JULY WEATHER IN HERTS.—The past month here has maintained its character of being one of the wettest months of the year. This season the rain was much needed, and vegetation has gone forward by leaps and bounds. The early part of the month was intensely hot. Rain fell upon seventeen days during the month. Maximum in any twenty-four hours, 0.72 on the 26th; minimum in any twenty-four hours, 0.01 on the 13th. Total during the month, 3.06, against 4.02 of 1892.—E. WALLIS, The Gardens, Hamels Park.
- THE WEATHER LAST MONTH.—July was very changeable and showery, with only four really bright days. Barometer fluctuated very much. The highest reading was 30·30 at 9 A.M. on 28th; lowest, 29 54 at noon on 20th. Wind in a westerly direction eighteen days. Total rainfall, 2·41 inches, which fell on twenty days, the greatest daily fall bring 0·50 inch on the 2nd. The total is 0·31 inch below the average for the month. Temperature in shade: highest, 87° on 7th; lowest, 40° on 28th; lowest on grass, 33° on 28th. Mean daily maximum, 69·63°; mean daily minimum, 52·64°; mean temperature of the month, 62·27°. We had several thunderstorms. The garden spring ran 17 gallons per minute on 31st.—W. H. DIVERS, Ketton Hall Gardens, Stamford.
- GARDENERS' ORPHAN FUND.—The monthly meeting of the Committee was held on the 28th ult. at the Horticultural Club, Hotel Windsor, W. Marshall, Esq., in the chair. Matters of interest connected with the administration of the Fund were discussed, and reserved for further consideration. The Hon. Secretary announced the following receipts:—From Mr. J. Lyne, local Secretary, The Gardens, Foxbury, Chislehurst, £16 ls.; Mr. G. W. Cummins, local Secretary, The Gardens, The Grange, Wallington, sale of flowers at Croydon Horticultural Show, £8; collected at the Wimbledon Flower Show, £4 2s. 6d.; and box per Mr. J. Kneller, The Gardens, Studley Royal, Ripon, 9s. The next meeting of the Committee will be held on the last Friday in October.
- LINCOLN'S INN FIELDS. The Parliamentary Committee reported at the meeting of the London County Council, held on August 1st, that they had been advised by the solicitor and the Parliamentary agent that the way in which the Council would be most likely to be successful in obtaining possession of Lincoln's Inn Fields as an open space for the public would be by sceking compulsory powers of acquisition under the terms and provisions of the Lands Clauses Act. They recommended that they be instructed to preparc a Bill accordingly, and communicate with the Benchers of Lincoln's Inn and the trustees of the garden concerning same, and inviting them to enter into a conditional contract for the sale of the area within the square. This was agreed to.
- PRESENTATION TO MR. MEEHAN. On the 4th of July at Vernon Park, Philadelphia, the citizens of that city presented to Mr. Thomas Meehan a handsome silver plaque as a testimonial of their appreciation of his services in establishing small parks in various sections of the city. The plaque is of solid silver, 19 inches by 24 in size, and framed in carved mahogany, set in a polished mahogany shadow-box covered with plate glass. It is etched with oxidised shading to represent the original parchment granted to William Penn. In the central part of the top of the plaque is the following apt quotation from Penn's letter to his Commissioners, dated September 30th, 1681 - "That it may be a green country town and always wholcsome." We have more than once called attention to the singular value of Mr. Meehan's work, and we are glad to know that he is one of the prophets who is not without honour in his own country. Onc of the speakers at the presentation called attention to the extraordinary spectacle of a man elected and re-elected to the City Council for a decade of years by the common consent, and, in fact, by the urgent desire of the leaders of all parties and all factions, simply because he has pursued steadily the work for which he was fitted by his own good judgment and training. It is rare indeed that any one man is able to do so much good in a civic position; rare, too, that he can command the confidence of his fellow citizens so generally, and rarer still that they manifest such a grateful appreciation of unselfish work.—("Garden and Forest.")

- Extraordinary Fasciation in Anthemis. We have received from the Rev. F. E. Ainger, of Newcastle-on-Tyne, an interesting specimen of the fasciation of Anthemis Cotula. The most ordinary example of the monstrous growth in plants known as fasciation is to be scen in the Cockscomb. There the stalks and petioles of the plant are all massed and confounded, while the flowers appear at the top in the curious scarlet crest which forms the attractive feature in its cultivation. The Anthemis Cotula sent by Mr. Ainger exhibits a similar distortion. The stalks lie conglomerated together in a broad markedly ribbed band, not unlike the leaf of an Iris, of about a foot in length, and surmounted by a dull yellow crest similar to that of the Cockscomb. All around the massed stalks appears a network resembling a parasite, but which is in reality an excess of the leaves, petioles, and flowers of the Anthemis remaining incorporated with the other solidified portions. At a superficial glance the whole looks like an Anthemis climbing, Dodder-wise, round a flag, but the terminal cristate growth upsets this theory.
- BURNT FRUIT AT THE WORLD'S FAIR.—The only exhibitor's fruits saved from the burning of the Cold Storage Building at the World's Fair were, says an American exchange, about five barrels of winter Apples, belonging to New York, which were dug from the ruins three or four days after the fire. These Apples were put on exhibition, and they now occupy about 350 plates on the tables formerly used for the Lemon display of Riverside County, California. They are still in presentable condition, and include Baldwin, Roxbury Russet, English Russet, Golden Russet, and Campfield. California has received Oranges from the Pacific coast to supply her loss in the fire.
- MUSHROOMS AND TOMATOES.—Have you ever tried Mushrooms and Tomatoes cooked together? If not, says a writer in "Truth," you will thank me for this recipe:—Remove the peel and stalks from seven or eight good sized fresh Mushrooms; lay them, the hollow part upward, on a buttered sauté-pan, put a small piece of butter on each, season with salt and pepper, cover with a lid and cook them in a hot oven for twenty minutes. Meanwhile prepare a similar number of round pieces of toast buttered on both sides. Fry an equal quantity of thick slices of ripe Tomatoes. Now place a slice of Tomato on each piece of toast, and finish with a Mushroom on the top. Dish on a white paper and serve very hot.
- THE SIBERIAN CRAB AS AN ORNAMENTAL TREE.—The great utility of this tree as an ornament in the garden. It is evident that it is appreciated by A. W. Smee, Esq., The Grange, Hackbridge, as many trees are to be seen in his garden. At the present time the fruits are just ripening—a month earlier than is customary—and the sight presented is a very beautiful and at the same time a very unique one. Planted here and there on the borders the trees are universally admired. Apart from their beauty, it should be borne in mind that from the fruits a most toothsome and nourishing jelly can be made; the tree, therefore, has two points at the least which render it desirable in every garden—it is pleasing to the eye and also to the palate.—H. W.
- CLERODENDRON FALLAX.—"W. B." writes:—Seedlings of this plant should not be allowed to become checked in small pots, or they will fail to do satisfactorily. To grow these plants well they should be potted directly they need more root room, when they will abundantly repay for the care bestowed upon them by the large scarlet trusses they are capable of producing. These plants in their early stages ought to be grown in heat, and afterwards in an intermediate temperature. They must be kept growing freely from the first to the time they show flower. When the plants are in full growth the points may be removed, and the plants induced to branch. It is useless pinching them after they show flower, especially if the plants have become woody through checking them.
- Battersea Amateurs' Horticultural Society.—This Society held its first annual summer Show on Bank Holiday in a field kindly lent for the occasion by Percy Thornton, Esq., M.P. The number of exhibits was large, some good plants being shown by the amateurs o the district. A charming group of plants was arranged by Mr. W. Welsford, Binfield and Lansdowne Nurseries, South Lambeth, which included amongst others perennial Phloxes, Asters, Delphiniums, Hydrangeas, and stove and greenhouse plants in great variety. Mr. G. B. Fischer, florist, 30, High Street, Clapham, staged a highly creditable collection of stove and greenhouse foliage plants, as also did Mr. W. Charman, gardener to H. Russell, Esq., Beechwood, Clapham Common. A fine collection of Ferns was shown by Mr. Brown, gardener to H. Ravenhill, Esq. Clapham Common.

— Wasps.—A wasp plague continues to cause great inconvenience in the neighbourhood of Dover. A curious incident, says a daily contemporary, happened on Saturday in a village near Sandwich. A labourer discovered a wasp's nest, and struck with the beauty of its formation instantly took it home and carelessly put it aside, with the object of taking it to a naturalist. The nest proved to be full of eggs, which the warmth of the house developed during the night into hundreds of wasps. When the family awoke in the morning the house was swarming with wasps, and the family had to make their escape as best they could. Some of them were severely stung. We do not think this man will take home another wasp's nest.

- GARDENING AT THE WORLD'S FAIR.—The picturesque dwarf trees of Japan interested me greatly. One old Cypress, 300 years old, perished during the winter, but there were some ancient crooked Maples, about a foot high, and a Pine tree with gnarled branches and massive roots that would have adorned a forest in Lilliput, for they were not more than 18 inches high. Every leaf had been carefully trained on the Maple, and the pine-needles were held imperceptibly in place to produce that fine cushiony effect that is so highly prized. It seemed like looking at some venerable monarch of the forest through the reverse end of an opera-glass, so perfectly did the Lilliputian tree reproduce all the storm-wrought eccentricities of the great one. Among other curious objects says a writer in "Garden and Forest" was the exact model of a Japanese garden, quaintly rendered, with little figures crossing its toy bridges or lingering by its tiny lake. Here were the hillocks, the cascades, the stonc lamps, the sheet of water, the smooth stones, the summer houses hidden in the clumps of trees, the flowering shrubs, the groups of Irises by the water's edge—a complete and fanciful little pleasure ground within the circumference of a large

- EWELL HORTICULTURAL SOCIETY.—The twenty-ninth annual Exhibition of this Surrey Society was held on a nice fine day on the beautiful grounds of The Grove, the residence of the ex-Lord Mayor, Sir D. Evans. The grounds were thrown open to the public, and their entire keep, which is really first-rate, reflects on the gardener, Mr. Quinton, the highest credit. Of plant groups there was a very fine one sent by Messrs. J. Laing & Sons, Forest Hill, of Begonias, Gloxinias, Caladiums. Foliage plants—i.e., of the competing groups—the largest and best was set up by Mr. Whiteman, gardener to A. W. Gadesden, Esq. Mr. Worsfold, gardener to Lady Glyn, coming second with a charming arrangement; and Mr. Quinton was third. Mr. Whiteman had the best six foliage and flowering plants; also the best six Begonias, excellent specimens, and the best six Fuchsias. Mr. Quinton had six superbly flowered Zonal Pelargoniums, some 3 feet through, and well grown. Several noble Palms sent by Mr. Whiteman helped to decorate the flower tent. Hardy flowers were in capital form, the best twelve bunches coming from Mr. Worsfold, whose selection and setting up were excellent. Mr. Elsey, gardener to Miss Carlisle, was second. Mr. Worsfold had the best twelve bunches of annuals, a capital lot of flowers, Mr. Elsey again being second. Mr. Quinton was a good first with four dishes of fruit, having finely finished Alicante Grapes, Royal George Peaches, Elruge Nectarines, and Jargonelle Pears; Mr. Worsfold was second. Vegetables all round were excellent, and one class is mentioned elsewhere. An odd class was that for head gardeners' bouquets, the best coming from Mr. Whiteman, whilst in the class for under gardeners' bouquets Mr. Simmonds, from the same place, was first, both being admirably arranged. After the usual presentation of prizes, kindly performed by Lady Evans on the lawn, Mr. A. Dean, for the Surrey County Council, gave a short address relating to gardening, for which, on the proposal of Mr. David Evans, a cordial vote of thanks

— Exhibiting Vegetables. — For a pretty, neat, compact method of showing vegetables I have seen none better than was found last week at the Ewell Show, where five lots of six kinds were set up in large punnets, or rather shallow white baskets, 12 inches over. It is a requirement of the schedule that the exhibits shall be so displayed, hence the result is uniformity in appearance, if not in quality. Again, the size of the punnets used checks the exhibiting of products of undue dimensions, which is an excellent result. The class being for gardeners capital exhibits were staged. Mr. H. Pedrick, gardener to Col. Norbury Pott, had for the season good Cauliflowers, Scarlet Runners, G. F. Wilson Peas, Perfection Tomatoes, Ashleaf Potatoes, and pretty white Marrows. Mr. Ayling, gardener to W. M. Walters, Esq., who came second, had capital Satisfaction Potatoes, Canadian Wonder Dwarf Beans and white Turnips.—A. D.

— AILANTUS GLANDULOSA IN AMERICA.— Superintendent W. R. Smith of the Washington Botanic Garden says that Ailantus glandulosa is of all trees the one for narrow streets. Its large foliaceous development keeps it vigorous and healthy. The only objection to it is the unpleasant fragrance of the flowers. This can be entirely avoided by treating the tree as a pollard, as is the custom in Paris. It never flowers because of the pruning. The law made by Congress against its being planted in Washington was owing to the influence, we believe, of a well written article by Mr. Downing. Don Piatt was, perhaps, the last to dare the law and plant one of these trees in the aristocratic quarter of Washington. His keen sarcasm, which found expression in his paper known as "The Capitol," prevented the authorities from interfering with him.—("Garden and Forest.")

—— SWEET LAVENDER.—The cry of "Sweet Lavender" heralds the close of the summer season, and old-fashioned housewives will be garnering their store of scented blossom to perfume linen presses and wardrobes, and for the more prosaic routing of the destructive moth. Lavender derived from the English plant, whose scientific name is Lavandula vera, has many medicinal properties, which make it valuable as a corrective adjunct to other medicines, while alone it is aromatic carminative, and stimulative. The oil distilled from the Lavender plant is valuable in hair lotions, and the following recipe, says the "Lady," will be found admirable to stimulate the growth of thin or weakly hair: -Oil of Lavender, 6 dr.; lard, melted with twenty drops oil of Nutmeg, 1 oz.; Cocoa butter, 5 dr. Lavender is highly antiseptic, and therefore invaluable in the sick room; but it must be the pure extract, and not the artificial product which now figures largely in perfumery, and is obtained from petroleum and other sources. Artificial perfumes have a heavier and less agreeable odour than the natural ones, however skilfully manipulated, and excessive use causes headache and dizziness; while the natural odour obtained from Lavender is most soothing in headache and lassitude. Very few people are aware of thevirtues of Lavender as a skin lotion and cosmetic. A little strong, good Lavender water, diluted with about an equal quantity of water, forms a valuable wash for the skin where the pores are enlarged or after exposure to the sun. The skin may also be bathed with a solution of Lavender water when heated or inflamed, and during severe bilious headaches, or in the agonies of mal de mer, much relief is obtained by bathing the throat, forehead, and temples with good Lavender water, while a spray is most refreshing to travellers by land and sea.

- STARCH FORMATION.—When a leaf is exposed to sunlight it is well known that among the earliest changes noticeable is the formation of starch; and, further, that this starch production is stopped by placing the leaf in the dark, so that if half of the surface of the leaf be exposed to the sun, and the other half be covered with opaque paper, the uncovered half will contain starch, while none will be formed in the covered portion, and that which it had previously will disappear. It had come almost to be an article of faith, says the "Gardeners Chronicle," that this starch formation was the primary and universal result in the process of "assimilation," which is consequent upon the exposure of the green material (chlorophyll) to light, and the elimination of oxygen. Working physiologists, indeed, were more cautious in their utterances than text-book writers and teachers. It now appears from the recent researches of Messrs. H. T. Brown and G. H. Morris, as presented to the Chemical Society in April last, that cane sugar is the first product (and not glucose, as had been by many supposed), and as this sugar is formed faster than it can be utilised, the excess is deposited in the form of starch. This reserve of starch is drawn upon when the light fails, the starch being then dissolved by a ferment, or "enzyme," known as diastase, which is secreted by the protoplasm of the cell in amount proportionate to the needs of the case, so that the formation of diastase is looked on as an effort to remedy the consequences of defective nutrition. The course of events in the process of assimilation appears to be, first, formation of soluble cane-sugar, then deposition of insoluble starch, followed by formation of diastase-ferment, which dissolves the starch and allows of its transmission in a fluid state, or as sugar, from the place at which it is stored to the place where it is used up in the processes of growth and activity, which demand supplies of nourishment for their fulfilment.

DIANTHUS CALLIZONUS.

THOUGH this beautiful alpine Pink was discovered nearly half a century ago it is still new and rare in gardens. It is a native of Transylvania, where it is found at an elevation of 6000 to 7500 feet. It has a certain resemblance to D. alpinus, but the flowers are half as large again, and altogether it is a finer and more robust plant.

The flowers are of a bright rose-purple with a darker zone speckled with white round the throat. The leaves are lanceolate and glaucous, like those of D. cæsius.

The plant forms dense tufts and flowers very freely. As it possesses a robust constitution, is quite hardy, and will thrive in almost any situation, it will no doubt soon become a common garden plant. It strikes freely from cuttings. It is certainly the finest alpine Pink at present in cultivation. The engraving (fig. 19) was prepared from a sketch of a plant growing in the Royal Gardens, Kew.—A. B.

HARDY FLOWERS IN MASSES.

ALTHOUGH an extensive collection of hardy flowering plants produces a bright and continuous display in the herbaceous border, yet when we see large masses of individual kinds by themselves we think

down the names of a few of the many interesting plants there to be found. Mr. Ladhams makes a point of adding to his collection all new or improved types of recently introduced kinds, which renders a visit all the more interesting.

all the more interesting.

Amongst the Campanula family the newer Platycodon grandiflora pumila Mariesi is superior to most other forms. This Japanese variety grows barely 2 feet high, and bears very large pure white blossoms, and is quite self-supporting. The pale bluc and rieh purple forms make a bold display in large masses. C. persicifolium album grandiflora has flowers fully twice the size of the old variety, and is therefore a decided improvement. C. latifolia maerantha has rieh purple flowers, quite the best of the type. That pretty, dwarf, free-flowering, double Sweet William—Dianthus barbatus magnificus—with its intensely deep crimson flower heads, deserves more attention than it receives at present. The yellow Foxglove, Digitalis aurea, is represented by one named grandiflora, and is receiving some attention, as Foxgloves of this colour with reasonable sized blooms are none too common. The older D. ferruginea has blooms

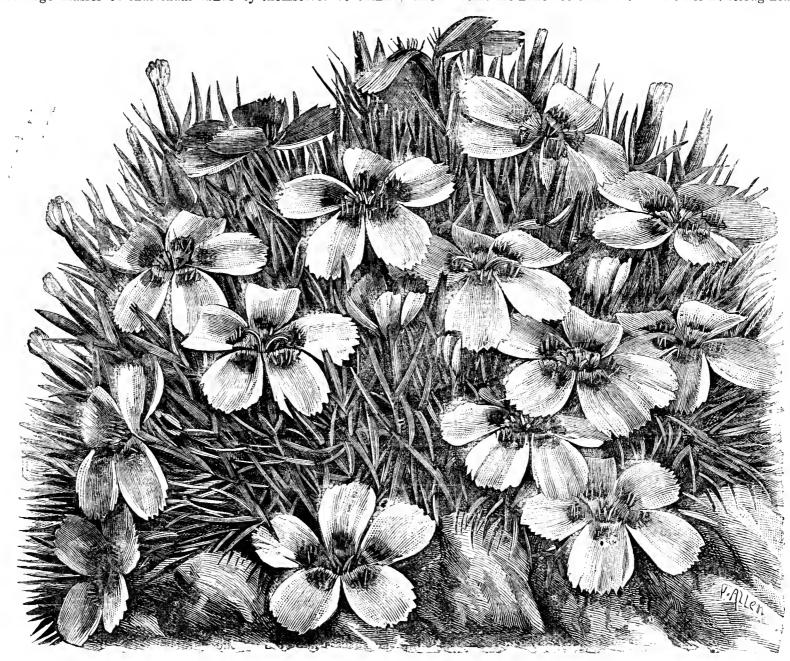


FIG. 19.—DIANTHUS CALLIZONUS.

they are even then more effective than when isolated perhaps in the mixed border. It is not, however, in private gardens that we must look for extra large elumps of any one particular kind, such as, for instance, a patch of Heuchera sanguinea 30 feet long and 3 feet wide, a mass of its gorgeous colour; space does not admit of this form of arrangement, even if the means did. Although half a dozen plants of this gem make a bold display in a favourable nook in the rockery or in the ordinary border, one cannot compare the effect with that of the larger mass.

A hasty look through the herbaceous department of the nursery of Mr. B. Ladhams, Shirley, near Southampton, who has devoted much time and space to this section of flower growing to meet the great demand caused by the increasing love for hardy flowering plants, gives one much insight into the many varieties and kinds now so largely cultivated as seen growing side by side. The beds are arranged parallel to each other in varying lengths, all 3 feet wide, for the sake of convenience in planting and attention. Much of the ground occupied for this purpose was once a huge gravel pit, and to see the shingle-like soil it is surprising how well the different plants thrive. In spite of the remarkably dry season a bright display has been maintained, showing well the holding character of the soil, which is kept well stirred, and thus prevents the evaporation of moisture to a great extent. For the benefit of readers of the Journal I jotted

far too small and rusty looking to be attractive. Agrostemma celirosea is particularly bright and showy. The rosc-coloured form of Veronica spicata is bright in a mass, growing from 1 to 2 feet high, and entirely self-supporting.

The Statice family receives a good deal of attention. The flowers are found so useful in a dry state for winter decoration, for if cut when fully developed they retain their natural colour for a couple of years. S. ineana nana is the best of the type, the large spreading heads of flower give such a variety in colour. Some especially deep in tint were being preserved for future use in hybridising. In the same way the Eryngiums are employed, amethystinum and giganteum varieties were being cut in masses. A grand patch of Erigeron aurantiacum was just over, another of E. philadelphicus was a sight to behold, growing only 1 foot high, and freely flowered; this is quite one of the best of the family. Dracocephalum virginianum album, sometimes called Physostegia, is worthy of a place in any collection large or small; its pure white flowers deserve to be appreciated. Gaillardias occupy much space; the grandiflora type is the more showy either when growing or in a cut state, but a stock of the pale yellow double-flowered Vivian Grey demands more than a passing notice. Plants of Aehillea The Pearl are to be seen advancing to the flowering stage. Anthericum liliastrum, with its tiny blossoms of pure white, contrasts well with its more showy

neighbours; this variety is by some preferred to the larger-bloomed A. L. major. Masses of the yellow Aquilegia chrysantha, a remarkably interesting plant, and perhaps still the best of the Columbine family, were quite charming. Asphodelus luteus and ramosus are showy and quaint. Astrantias are generally neglected plants in private gardens, but large batches of them are grown to meet the demand, as their merits are appreciated. By far the best of the perennial Cornflowers is the soft yellow variety ruthenica, the flowers being useful for cutting.

Chelone barbata, one of the most distinct and showy of hardy plants, is represented by spikes of bloom from 3 feet to 4 feet high. The merits of Chrysanthemums maximum and the later flowered variety latifolium are here thoroughly recognised, large batches of both are cultivated to meet the increasing demand. The present is not a good year for Delphiniums, the flower spikes being rather poor. Thousands of seedlings are raised annually, selected from approved strains, and these small plants withstood the unfavourable weather well. Dictamnus

fraxinella is a showy plant, not nearly enough grown.

Gypsophila paniculata is a plant growing in favour, it is so useful for cutting and mixing with other flowers. A very pretty dwarf growing white flowered Galega was noticeable, its compact habit rendering it worthy of culture. Huge masses of Helenium pumilum were in gorgeous array, the rich yellow flowers were so freely produced at this early date. Hyacinthus candicans was throwing up numerous flower spikes, the bulbs having withstood the sharp frost of the last winter quite unharmed. In heavy soil the bulbs refuse to live over one year with me. Linum campanulatum grandislorum has flowers like the old blue perennial variety in form, but much larger, and being yellow it is a striking plant, growing near 2 feet high. The drooping point of the pure white spikes of Lysimachia clethroides at once arrests attention of hardy plant lovers. This is of vigorous growth, a single root quickly spreading a long way. Michauxia campanulata is well worth attention, the bluish white, bell-shaped flowers are distinctly attractive. A very pretty early flowering and dwarf growing Phlox is Penge, the individual flowers being quite round, pure white, except the oculated eye, height 2 feet. The Evening Primroses, Œnothera riparia and speciosa, are charming plants, the former for the rockery, where its freely produced bright yellow blossoms are most conspicuous. The latter has large pure white flowers growing 2 feet high. The somewhat rare Onosma taurica appears to succeed well, its pure yellow, drop-like flowers are decidedly attractive. Poppies are extensively grown, especially noteworthy being pilosa, a dwarf growing variety with terra cotta coloured flowers

Mr. Ladhams devotes much time to the cultivation of border Pinks, having raised many seedlings, the best of which is Ernest Ladhams, certificated last year. He has crossed some with the ordinary type of Dianthus chinensis in the hope of producing richer colouring. Nelly, a Dianthus chinensis in the hope of producing richer colouring. Nelly, a clearly marked variety, is highly prized. This is one of the most deserving races of plants we have in the hardy plant department, because they come within the range of all persons.—È. MOLYNEUX.

LADY PAGET'S PLEA FOR VEGETARIANISM.

In promulgating the evangel of vegetarianism we shall scarcely be considered as betraying the interests of the readers of this paper. We have, therefore, much pleasure in reproducing from an interview published in the "Westminster Gazette" some of the opinions of Lady Augustus Paget, who throws herself into the cause with that wholeheartedness characteristic of women. Lady Paget is by birth a German, and perhaps much experience of German cookery may have the effect of causing a delicate stomach to incline to the more etherial food of Arcadia. Certainly there are acts entailed by the persistence in a carnivorous diet which shock the humaner sensibilities of the mind when the consideration of these acts is not deliberately ignored. If each of the radiant débutantes at a fashionable ball had helped to kill and cook the viands so delicately proffered to them by their cavaliers in the supper-room, we fancy that the wings of those gentlemen's imaginations would not soar so freely, nor would they accept all the glamour thrown over the function in the columns of the "Lady" or the "Gentlewoman." Romance is, however, a difficult plant to scotch, and thrives even amongst professional cooks and butchers. Such is the inconsistency of the human mind that doctors and nurses have their glorious illusions regarding the patients they are tending, and even the common hangman is capable of falling in love.

Lady Paget was apparently awakened to the general want of logic on the subject of flesh-eating by the description of the cruelties of the trans-Atlantic cattle trade. She overlooks, however, the difficulties which will have to be encountered from the absence of leather and fiddle-strings should the slaughter of animals ever be discontinued in deference to the prejudices of vegetarians. In the course of the interview she says, "I believe that vegetable diet has a decided action upon the mind. In a kind of way it dematerialises the mind. The grosser elements are kept in subjection and the spiritual rises predominant. A person troubled with a torpid mind ought at once to become a vegetarian. I have known many cases where it has been most beneficial. I believe, too, that a vegetable diet enables one to bear hardships and fatigue; this has been demonstrated very forcibly by the long-distance walk from Berlin to Vienna, in which vegetarians have triumphed so gloriously. Since I have abstained from eating flesh food I can climb hills with great ease and never get out of breath. Then, how convenient it is in travelling to be able to make a meal off a piece of bread and an Apple! It renders one so charmingly independent, and lifts a load of care off your mind to have no thought about cooks and hotel dinners. There is another little point, too, which may have great weight with some people -vegetarians have invariably bright, clear complexions; they have no need of cosmetics.

"I cannot emphasise too often that meat diet trammels and materialises our higher faculties. Vegetarians may be eccentric, they may be faddists; but they are invariably gentle, high-minded, well-disposed people. I believe that the practice of vegetarianism will play a most important part in refining the masses and rendering them less coarse and less brutal. In the olden days men ate great lumps of flesh almost raw; now we have developed cooking to an art which has robbed meat of its old repulsive grossness; and, in my opinion, the process of evolution will go on until we come to exclude it altogether from our diet. We are to eat in its place fruits, cereals, vegetables, butter, milk, cream, eggs, cheese, and wholemeal bread. There is one great difficulty in this country—you do not get sufficient fruit ripened in the sun. Look at the Italians; in their sunny clime they live upon fruit; and how healthy they are and how healthy they have been their teeth and a complexity. healthy they are, and how beautiful are their teeth and complexions! I have several little fancies about fruit. It ought to be eaten when freshly gathered, and if possible every person should pick for himself. I never believe that an Apple affords me the same nourishment if it is picked up by the gardener, sorted by the housekeeper, and so passed on to table through many hands. I believe that to get the vital principle of a fruit you must pick it from the tree with your own hands and eat it immediately. Part of its vital essences are lost if it is kept, or if it passes through the hands of others. Fruits are the only edibles we can eat and digest without cooking; everything else requires the aid of fire to make it palatable and wholesome. I believe that the movement in England is much impeded by the inadequate way in which the vegetables are cooked, and until this defect is thoroughly remedied, and a greater variety is introduced into the vegetarian bill of fare, there is not much prospect of extending it amongst the poorer classes, to whom it would be such a great boon.

"My country people, the Germans, are taking up vegetarianism very thoroughly on the ground of health. It was a German professor who first aroused me to interest in the subject, and it has been in German books that I have studied the question. These books are refreshing as mountain air; they are full of cold water, open windows, sun baths, air baths, swimming and gymnastics, everything on the simplest and most economical lines. Their chief object is to bring us back to a healthier and simpler mode of life. The German vegetarian books are full of excellent recipes for dishes of all kinds, suited to every time of the year, and to different countries, which is most important, for the new-fledged vegetarian always thinks he is going to die of hunger. It is certain that the giving up of animal food cures many illnesses which no medicines can touch. In affections of the heart it is often the only remedy. is not difficult to explain, when one reflects that, whilst the meat-eater's heart has seventy-two beats in the minute, the vegetarian's has only fifty-eight beats, being 20,000 beats less in the course of the twenty-four hours. Insomnia and nervousness are affected in the same way—there is less wear and more repose in the constitution. For diseases of the skin a vegetable diet does marvels. I work a good deal amongst the sick poor, and have been most successful in my treatment. I apply the simple remedies, such as nettle tea and camomile tea, and persuade my patients to live on vegetable fare and study ventilation and exercise. always stop their fat bacon. I believe it to be one of the most fruitful

sources of skin disease amongst the poor."

A SUMMER VISIT TO SENNOWE.

This, the beautiful seat of B. Le Neve Foster, Esq., J.P., has been previously alluded to. It is now becoming celebrated on account of the success achieved by the gardener Mr. Gilbert during the past two seasons as a grower and exhibitor of Chrysanthemums. Being in the seasons as a grower and exhibitor of Chrysanthemums. Being in the near neighbourhood a few days since I took the opportunity afforded to

call and see what are the prospects for the coming season.

Some 800 Chrysanthemums are being grown, and judging from present appearances Mr. Gilbert will again occupy an honourable position amongst front rank exhibitors. Most of the best new varieties of the season are included in the collection, and also many seedlings, some of which already show distinct and promising characteristics in habit of growth and in foliage. About fifty plants of the beautiful new white Japanese variety Mrs. B. Le Neve Foster give promise of producing grand flowers. The whole of the plants are remarkable for their dwarf sturdy habit, and the exceptionally stout leathery foliage. The principal distinctive features of the method of cultivation are giving small shifts in potting, so as to ensure eventually the whole ball of soil being well filled with roots; judicious watering, and abstaining from feeding until after the buds are "taken" and commence swelling.

The span-roofed house in which most of the Japanese varieties are

flowered contains trees that are now producing a magnificent crop of Peaches and Nectarines. It is estimated that there are from 1200 to 1300 fruits on the trees. The house is 49 feet long, 16 feet wide, and 10 feet high to the central ridge. Notwithstanding the excessively heavy crop of fruit the trees are developing plenty of good wood for another season's work, showing that their powers are not unduly taxed. It seems to me that the stimulants given to the Chrysanthemums standing thickly together upon the borders in the autumn serve usefully and efficiently to feed the Peach trees also, and this supports the theory that feeding the roots of fruit trees is best effected by supplies of liquid manufactors. by supplies of liquid manure in the autumn and winter.—W. K. W.



CHRYSANTHEMUM PROSPECTS.

In my opinion the Chrysanthemum season will not be a late one. Nearly all my plants showed the crown buds some fourteen days ago, and were not taken. The only variety in my collection that has behaved to me in the ordinary way this season is Boule d'Or (6 feet high); this showed the crown bud on August 5th, which of course I took. Japanese seem to have grown taller than usual. Mdlle. Lacroix is 8 feet high, Florence Davis 7 feet high, Etoile de Lyon 6 feet 6 inches, Gloire du Rocher 7 feet, Stanstead White 6 feet, Sunflower 6 feet, Avalanche 5 feet 6 inches, Viviand Morel 6 feet (after being cut down). In the case of the incurved some have grown exceptionally tall, notably Miss M. A. Haggas, Violet Tomlin, and Princess of Wales, all of which are over 7 feet at the present time. They had a plentiful supply of water during the excessively hot and dry weather. The incurves I have mentioned went 4 feet high before they made a natural break.— F. W. BUCKINGHAM, Tonbridge, Kent.

A SEASON which has thrown the gardening world out of gear must have more or less effect on the Chrysanthemum, and be the cause of corresponding anxiety to exhibitors of the Autumn Queen, emphasised at this crucial period of bud-taking: hence, I take it that notes in the Journal are looked for with more than ordinary interest, though growers in normal seasons to come may regard their notebooks of '93

more as a curiosity than a guide.

Here with 500 plants grown for large flowers, the wood is unusually short-jointed, and the foliage is all that one could desire. The second crown bud is the one I usually go for, but many showed that early in July, and in those cases we are right with a third crown. This obtains with Etoile de Lyon, E. Molyneux, and L. Boehmer, while Avalanche, Mons. Bernard, Mrs. Jameson, Mrs. Clarke, and Col. Smith should be right on the second crown, not yet prominent. Florence Davis, Stanstead White, and some few of Mrs. Hardy are the principal buds taken (on August 3rd) so far. These were pinched plants, and generally difficult to get out in time with us. Amongst incurves, Violet Tomlin, Miss Haggas, Mrs. Heale, and the Princess family generally are not affected by the season, but Jeanne d'Arc is now going for a third bud which I fear will be rather early, and many other incurves will have to be taken on terminals. Robert Cannell and Viviand Morell threw buds at every joint in the spring, and had to be cut to the base. They now have from three to five shoots 2 feet high, and should give a good bud. Amongst the leading varieties in each section some have been stopped or otherwise treated that whatever betides there will be a difference of time of opening in some plants of each variety, and if any lessons are to be learned this year, not the least important may be of having two strings to one's bow.

I trust the Editor will in this department be deluged with copious notes, if only to shut out those belligerent rosarians.—E. K., Dublin.

[We wonder what the rosarians will say about this proposition? We think we can find a fair field for both great floral parties to state their views on matters of current public interest. Let the notes come.]

CHRYSANTHEMUM LEAVES INFESTED WITH EELWORM.

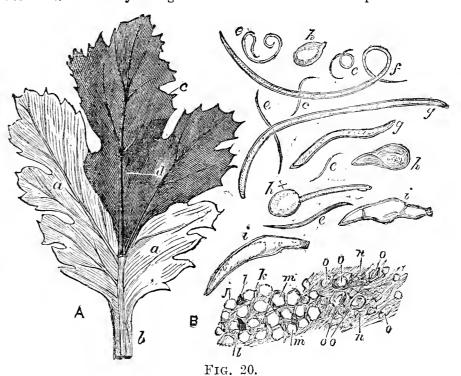
On examining the freshest of the leaves sent by "Chrysanthemum" it had the appearance shown at A, natural size. The lower part a, of the leaf and its footstalk b was found perfectly healthy, the texture thick and leathery, and the epidermis stout and elastic. The upper half c, represented in black, however, was discoloured dark brown or black on the upper surface, and clammy, whilst the under side of that part of the leaf was found to be green and apparently healthy. Tested microscopically, nothing was revealed externally beyond a stunted, swollen, distorted growth of the leaf hairs, on the upper discoloured surface. The stomata on the under side of the discoloured portion of the leaf were swollen, closed, and the hairs mere stumps. There could not be any doubt as to the disease being similar to that produced by water hanging on the leaves for a considerable time. This would have satisfied me at one time (and that not remote) that it was a case of disorganised tissue, the consequence of a bad condition of the soil and roots, but that day has gone for ever.

Taking the finest possible section through a diseased portion of the leaf, as shown by the white line at d, and placing that on edge on a glass slide, I was simply astonished to find an eelworm writhing amid the leaf hairs and forming itself into a "sailor's knot," which has so often been well figured by Mr. G. W. Smith, and others, that it is needless to repeat it here. On subjecting the section to an alcoholic solution the bodies as shown from $e \cdot i$, were disclosed. In e is seen the smaller forms of eelworms present; f, male; g, females; h, cysts or eggs; $h \times$, an undetermined body, probably a female emerging from the egg; i, leaf hairs distorted and broken off in making the section. These last are generally figured as females; such is not the case, but the eelworms probably emerge from the leaves through the leaf hairs, which they evidently convert into galls; anywise they are greatly distorted and

often lie almost flat on the discoloured portion of the leaf, and in the clammy substance among the hairs the eelworm may occasionally be found.

At B is shown a small section of the leaf tissue; j, cells invaded; k, eelworm; l, cysts; m, unattacked cells; n, cells and tissue completely destroyed by eelworms; o, eggs or cysts. The disease first appears as spots, these soon spread over the whole leaf until it withers. The change is more rapid after rain. Excessive wet favours the entrance of the eelworm into the leaf, for I deny that an eelworm can enter a plant by its root hairs, and it takes very little in any other way from the soil. Eelworms are found in root nodosities of Clover, Cucumbers, Melons, Tomatoes, and Vegetable Marrows, but there is no evidence that they can pass from root nodosities through the tissues of the plant to the leaf. That is a phase of the subject which remains as yet unexplained; yet the eelworm gets into the leaves of Carnations somehow, certainly not by the root nodosities, for there are none; nor are there any on Chrysanthemum roots, for they may be and usually are unattacked by eelworm. If the eelworm makes any attempt to ascend the stem internally it must do so by destroying the plant cells, and the stem becomes distorted and clammy externally, and the plants collapse suddenly.

There is no reason culturally for this attack, which is most virulent on the Princess family. Yet the plants are, as shown, infested with the eelworm. The species evidently is a distinct one, closer related to Heterodera radicola, $M\ddot{u}ller$, than to Tylenchus devastatrix, but of this there is doubt, and the leaves were too far gone to render "culture" desirable. The only thing to do with the leaves is to pick off those



diseased and burn them, then spray with Bordeaux mixture. This would prevent any further attack if it did not actually destroy the eelworms in the tissues, for a small portion of copper must be absorbed, and the slightest is fatal to eelworms as well as most other parasites.

Kainit is the only thing likely to benefit the plants at their roots, or a ley formed by steeping wood ashes in water for a few days, then pour off the supernatent liquor and water the plants with it. A quart of wood ashes to a gallon of water, not counting the water necessary to form the ashes into a paste, would be sufficiently strong, but it is more likely the eelworms infest the site upon which the plants are stood rather the soil in the pots. A pinch of kainit between the thumb and two forefingers sprinkled on the surface of each pot and washed in might be of benefit if the eelworms infest the roots. It, however, requires to be used with judgment, taking care not to give an overdose.—G. ABBEY.

IN OTHER LANDS.

A CORRESPONDENT writes:—After reading with pleasure, as I am sure others have done, the interesting notes on "Other Lands" in recent issues of the Journal, I am impelled to send a record of the journeyings of Mr. C. Napier Bell, abridged from a New Zealand paper, "The Christchurch Press," and which appears to well depict the characteristic features of a great and important colony. It is as follows:—

THE FAR WEST OF NEW SOUTH WALES.

Having seen enough of Sydney I took train on the western line in order to take a view of the interior as far as Bourke. Starting from Redfern station, for the first nine or ten miles there is a succession of towns forming the suburbs, these contain handsome houses and fine villas, surrounded with gardens and shade trees, in which one sees a strange mixture of tropical and temperate plants, the beautiful crimson Hibiscus, with Palms of different sorts among Roses, Hawthorn, Elm and Pine trees. At Parramatta is the junction of the line which goes to Newcastle and Brisbane, and beyond this the country is partly cultivated and partly in pasture, being covered with a beautiful sward of

grass; several pretty villages are passed, and the country is watered by many sluggish creeks of dirty brown water. There are also large patches of original bush. Crossing the Nepean river and the Emu Plains, we arrive at the foot of the Blue Mountains, thirty-seven miles from Sydney. The line ascends a spur of the hills, and when the train has climbed some 400 feet high there is a beautiful view of the Emu Plains and the great expanse of level country extending as far as the eye can reach towards the sea. In the distance the country looks as if covered with bush, ridge upon ridge, but near by it is seen to be cultivated and occupied with innumerable orchards of Orange, Lemon, Vines, and fields

of Maize, Lucerne, Sorghum, &c.
At Springwood we are at a height of 1200 feet, and the air is already fresh and cool; this is a pretty township, surrounded with clearings out of the forest, in which Oranges and Lemons are cultivated. As we rush through the woods we see cottages peeping through clearings; small farms here and there with Maize, Potatoes, Pumpkins, Melons, and Oranges, and we pass a picnic party, where hundreds of children are being feasted and amused in a little vale among the bush. At Wentworth Falls we are 2840 feet above the sea; here is a pretty village built on a small flat surrounded with deep gullies, with a fine view over a wooded country. To the south-west appears the town of Lawson, on the same level, two miles off, and a semicircular ridge enclosing a deep wooded valley shows the course the railway takes on top of the ridge from this town to that. Here we see trim orchards of Apricots, Peaches, Apples, &c., and grass fields and cottages all surrounded by the bush, And so on to Katoomba. This is a scattered village built on a commanding ridge jutting out towards the deep valley mentioned above; there are here some very grand hotels, as this is the favourite resort of Sydney people seeking to avoid the heats of summer; the elevation being 3450 feet, the air is delightfully fresh and cool, creeks and running water are seen everywhere, not brown and sluggish, as is usual in Australia; but clear, sparkling, briskly flowing creeks.

Beyond Lithgow we traverse a fine valley partly cultivated and partly covered with good pasture, here we saw very long trains loaded with coal and others with sheep; the valley with its village and cottages, its grassy uplands, gardens, and orchards, surrounded with dark wooded hills, makes a very pretty pass through a wooded, hilly district, and again open out a country of lovely hills and vales, covered with rich pasture and dotted over with scattered trees, making the park-like scenery so characteristic of Australia. Crossing the Macquarrie River we reach the town of Bathurst at 145 miles from Sydney, and 2150 feet This is a beautiful town built on the gently rising slopes above the sea. of the river with fine streets, shops, public buildings, and churches, and scattered all around it are villas, cottages, and mansions, surrounded by beautiful gardens. The valley is seven or eight miles wide, and is bounded by grassy rolling downs. This is a very fertile district. The river winds through this fine valley, its course marked by a Weeping

Willow, Poplar, and native trees.

Passing through fine grassy and cultivated country with several comfortable looking villages, we come to George's Plains, which consist of high wooded ridges, grassy uplands and vales, with a good deal of cultivation round scattered farm cottages. At 8 P.M. we arrive at Orange, 192 miles, and 2840 feet high. This is a flourishing town with several fine streets, in which are some good buildings, fine shops, large hotels, and two or three handsome churches. All the buildings are of brick, as are almost all the towns and villages I have seen in N.S.W. the prettiest country I have seen on this route; round about the town are many cottages and farm houses, and a few villas surrounded with lawns, gardens, and groves of trees. The country has apparently not been long cleared, as the fields are still encumbered with dead ringbarked Gum Trees; the air is deliciously fresh and cool, and the sky without a cloud.

Leaving Orange we pass through many miles of fine country, among orchards and fields of grass, Rape and Lucerne. All along the line within the railway fences there is a brilliant display of Sunflowers and Hollyhocks. We pass ten or twelve miles of dry rocky bush, then come again to park-like glades and rolling land, a sweetly pretty country, in this fresh, cool air and brilliant sunshine.

At Wellington we are getting down to the plains. This is a pretty village of good brick houses and, as usual, surrounded by cottages amidst groves of Acacia and Pepper tree; there are wooded hills surrounding a fine vale of rich grass, with some cultivation in Lucerne and other crops; the soil is dark red and appears very rich. After this we pass over to the Macquarie river, 180 feet wide, with the water standing in pools, separated by sandy beds, and then pass through scattered bush and wide grass fields, in which are many haystacks and a few farm the beautiful sweeping uplands are ploughed, showing the dark red soil, and there are many fine fields of deep green Lucerne. This is a beautiful part of the country, cottages are seen all along with verandahs densely shaded with Vines and Passion-flower; some have walks or bowers leading from the house door to the garden gate, covered over with Vines, and in the gardens are Sunflowers, Hollyhocks, Fig, Quince, Peach, Apricot and Mulberry trees. I saw, also, large patches of Pumpkins, Melons and Maize.

At Murrumbidgerie the monotony of the eternal Gum bush begins to to be relieved by groves of native Pines which grow tall and straight with a conical form like Noah's Ark trees, and this tree is said to indicate good soil, still there is no lack of Gum Trees; in fact, the great Eucalyptus family has taken possession of Australia, and nothing can dislodge it. One often hears of the danger of drought from disforesting a country; but Australia, the land of droughts, is all covered with bush or scrub of one kind or another.

At Dubbo, 278 miles from Sydney and 865 feet above the sea, we are on the great plains of the interior. The temperature is pleasantly warm, the sky is pale blue flecked with clouds, and a balmy breeze tempers the glaring sunshine.

ROYAL HORTICULTURAL SOCIETY.

AUGUST STH.

CONTRARY to expectations the first of the August exhibitions was a large and varied one, the holiday season failing to have the effect generally anticipated. The display was a marked advance on the last one.

FRUIT COMMITTEE.—Present: John Lee, Esq. (in the chair); Messrs. T. J. Saltmarsh. Joseph Cheal, Geo. Bunyard, J. Willard, Geo. Wythes, H. Balderson, F. Lane, George Taber, Jas. Hudson, Rev. W. Wilks

and Dr. Hogg.

Messrs. J. Veitch & Sons sent an admirable collection of hardy fruit comprising Apples, Pears, Plums, Raspberries, and Cherries. The Apples included fine examples of Winter Hawthornden, Frogmore Prolific, Lord Grosvenor, Stirling Castle, Cellini, Lord Suffield, Seaton House, Early Strawberry, and Domino. Amongst the Plums Sultan, Kirke's, Belgian Purple, Belle de Louvaine, and Early Transparent Gage were exceedingly good. A silver Knightian medal was recommended. The Apples, it should be noted, were from pyramids in the open ground. Mr. Nicholas, Castle Hill Gardens, South Molton, received a silver Banksian medal for a group of splendid Pine Apples which aroused the admiration of all present. Numerous Melons were staged. Three received awards of merit, and are referred to below. Messrs. Cheal & Sons, Crawley, sent a large and varied collection of Ornamental Gourds, and a splendid display of Apples, Pears, Crabs, and Plums. The Apples were large, handsome, and excellently coloured, Queen, Gladstone, Lady Sudeley, Peter the Great, and White Astrachan being very fine. There were seventy dishes in all, open ground fruit of the best quality (silver Banksian medal). Mr. Thomas, Royal Gardens, Windsor, contributed an excellent collection of Peaches and Nectarines representing the produce of outdoor trees, also two seedling Melons. The Peaches and Nectarines included Goshawk, Alexandra Noblesse, Stirling Castle, Premier, Violette Hâtive, Grosse Mignonne, Dr. Hogg, A Bec, Bellegarde, Téton de Venus, Pineapple, Elruge, Lord Napier, and many other varieties (silver Banksian medal). Messrs. G. Bunyard & Co. sent Pears Beurré Giffard, Précoce de Trévouf, and Petite Marguerite, also a dish of Lady Sudeley Apple exhibiting remarkably rich colour. The Apples were stated to have been grown in very poor land, and received a cultural commendation.

FLORAL COMMITTEE.—Present: W. Marshall, Esq. (in the chair); Messrs. John Fraser, John Laing, H. Herbst, Richard Dean, George Stevens, C. F. Bause, J. Jennings, H. B. May, Thos. Godfrey, Harry Turner, George Paul, William Bain, Chas. E. Shea, J. T. Bennett Poë, Thos. Baines, Henry Cannell, George Gordon, Peter Barr, and Robert Owen.

Mr. John Forbes, nurseryman, Hawick, Scotland, arranged a magnificent collection of Hollyhocks. Numerous varieties were shown, all the blooms being very double and of excellent shape. Amongst the best may be mentioned Cygnet, Miss Dawson, Walden Queen, Golden Drop, James Macdonald, Alba Superbissima, J. M. Lindsay, Excelsior, Conquest, Mrs. Edgar, Tecoma, Purple Prince and Earl of Breadalbane (silver Flora medal). The same exhibitor also staged Digitalis and Antirrhinums in variety, for which he was accorded a vote of thanks.

An excellent feature of the Show was the collection of hardy flowers staged by Messrs. E. D. Shuttleworth & Co., Peckham Rye, and Fleet, Hants. This exhibit included cut Roses, amongst the best of which were Fisher Holmes, Baroness Rothschild, Ulrich Brunner, Paul Neyron, and Charles Lefebvre. Perennial Phloxes, Gladioli, Lilium superbum, L. longiflorum, L. tigrinum plenum, Rudbeckia californica, Scabiosa caucasica grandiflora, Pentstemons, Asclepias tuberosa and Helenium pumilum (silver Banksian medal). Mr. C. Holden, 61, Warwick Road, pumilum (silver Banksian medal). Mr. C. Holden, 61, Warwick Road, Ealing, exhibited a fine group of foliage and flowering plants, including Coleus Distinction, Begonias, Ferns, Dracænas, and Palms (vote of thanks). Mr. H. J. Jones, Hither Green, Lewisham, sent a basket of Zonal Pelargonium Mrs. Wright, the plants in which were carrying very fine trusses. The same exhibitor also had a basket of Chrysanthamum Lady Fitzgrilliam in grand condition.

themum Lady Fitzwilliam in grand condition.

Mr. J. Hudson, Gunnersbury House Gardens, Acton, showed some magnificently flowered plants of Campanula pyramidalis and C. p. alba. This group produced a fine effect, which was enhanced by the edging of finely grown Aspleniums (silver-gilt Banksian medal). Messrs. Kelway and Son, Langport, Somerset, furnished almost the whole length of one side of the hall with blooms of Gaillardias, the best of which were James Kelway, Topaz, Hero, Oceola, Magenta King, and Splendidissima plena; Eryngium plenum, Helianthus Soleil d'Or, Veronica longifolia subsessilis, Amaryllis belladonna (Belladonna Lily), Achillea eupatoria, Chrysanthemum maximum, Solidago altissima, Delphiniums in variety, Centaurea montana rosea, Helenium pumilum, Dahlia serratipetala Duke of York, and a truly magnificent collection of Gladioli, of which Castro, Countess of Craven, Shakespeare, Duchess of Fife, Besler, Electra, Galatea, Hemon, Baroness Burdett Coutts, Jas. Payne, Mrs. D'Ombrain, Lord Hawke, Duke of Edinburgh, Jas. Wood, Leonard Kelway, Rev. H. H. D'Ombrain, Sir F. Bolton, John Warner, Mariana, Oriana, Duchess of York, Grover Cleveland, Mr. Fowler, J. C. Vaughan, Alfred Henderson, Marengo, and Mary Anderson were particularly striking. Several were honoured by the Committee, and are referred to below. The same firm also showed Cannas in good condition, amongst the best of which were Duke of

York, Comtesse de Morny, and Duchess of York (award of merit, see below). Silver-gilt Banksian medal. Messrs. Hy. Cannell & Son below). Silver-gilt Banksian medal. Messrs. Hy. Cannell & Son arranged a grand collection of double and single Begonias and Antirrhinums. Amongst the best of the double Begonias were Octavie, Mrs. G. Gurney, Sir Cecil Domville, Miss Baldwin, Mrs. Lette, Miss Ada Field, and Sir J. D. Hooker. The single blooms in this exhibit were arranged in sprays, each containing five blooms, and having Maidenhair Fern and Asparagus plumosus as a background, thus producing a novel and striking effect. The same firm also staged Chrysanthemums Golden Shah, Blushing Bride, Harvest Home, and Gustave Grunerwald (silver Flora medal). Messrs. John Laing & Son, Forest Hill, exhibited a group of stove and greenhouse flowering and foliage plants, including Caladiums Mrs. R. Veitch, Baron de Namore, Mercedes d'Argent, President de la Devansaye (award of merit, see below), and Reine de Denmark; Bertolonias Van Houtei, Comte de Kerchove, and Madame A. Van Goert: Caragusta andinalis. Adjentum macrophyllum Madame A. Van Geert; Caraguata cardinalis, Adiantum macrophyllum albo-striatum, Beaufortia speciosa, Saxifraga sarmentosa tricolor superba, Crotons Flamingo and Morti, Fuchsia Countess of Aberdeen, and Grevillea Banksi (first-class certificate, see below). Banksian medal.

Messrs. J. Cheal & Son, Lowfield Nurseries, Crawley, showed a collection of Sweet Peas, double, single and Cactus Dahlias. Amongst the best of the Cactus varieties were Ernest Cannell, Duke of Clarence, Black Prince, and W. Rayner (silver Banksian medal). Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, staged Lilium Batemani, L. Ukeyuri, Cactus Dahlia Ernest Glasse, C. D. Mrs. A. Peart, and Gaillardia Surprise. Mr. C. F. Bause, Morland Nursery, South Norwood, staged Croton Madame Ernest Bergman (see below), Caladium President de la Devansaye (see below), and Dracæna Alexander Laing (see below). Mr. Fred. Bull, Wormingford, Colchester, sent a box of Carnation Golden Nugget. Messrs. Dicksons, Limited. Chester, staged Cockscomb Sunrise. Nugget. Messrs. Dicksons, Limited, Chester, staged Cockscomb Sunrise,

Tropæolum Boule d'Or, Petunia Silver Queen.

Sir Trevor Lawrence, Bart., supported the afternoon meeting with a collection of Cannas, many of the varieties being extremely beautiful. Amongst them may be noted Sophie Buchner, Madame Crozy, Comte de Ganez, Michelet (see awards), Picturata, and Professor David. He also sent a number of Gladiolus Childsi varieties, noteworthy for the great size of the flowers, particularly Seedling No. 1, a huge Allamanda-like bloom. Mr. O'Brien showed Cyrtanthus McKenni, a fragrant little flower not often seen. Messrs. Wallace & Co. sent Lilium auratum Witlei and a variegated Arundo. Messrs. Dobbie & Co., Rothesay, had one of the most pleasing displays in the Show, a large bank of garden Carnations in bunches, and another of Sweet Peas. They had borne their long journey well, being in beautiful condition. Nearly all the best varieties were represented (silver Flora medal). Messrs. Paul and Son The Old Nurseries Charlest 2214 (1997). Son, The Old Nurseries, Cheshunt, contributed a large and beautiful mixed group, comprising Cannas Alphonse Bouvier, Comte de Ganez, Paul Sigrist, Miss S. Hill, and a number of seedlings from the open ground; several boxes of Roses, Begonia Lafayette, Phloxes, Liliums, and other hardy flowers (silver Flora medal). They also had a collection of cut and pot Roses, and two very fine baskets of Clethra speciosa and C. alnifolia. Lord Ashcombe received a cultural commendation for Bignonia grandiflora in splendid condition.

mendation for Bignonia grandiflora in splendid condition.

ORCHID COMMITTEE.—Pesent: Dr. Masters (in the chair); Messrs.

J. O'Brien, H. M. Pollett, T. Statter, Hugh Low, W. H. White, G. Hill,
S. Courtauld, Jas. Douglas. and F. Sander. The duties of the Committee
were light, the exhibits being comparatively few.

Mr. Thorne, gardener to Major Joicey, Sunningdale Park, sent a grand
piece of Vanda Sanderiana with eleven expanded flowers and one bud,
the flowers of great size, exhibiting this fine Orchid in its best character the flowers of great size, exhibiting this fine Orchid in its best character (cultural commendation). Flowers of Cattleya granulosa Scholfieldiana and Miltonia Joiccyana (see certificates) came from the same source. Mr. Stephens, gardener to W. J. Thompson, Esq., Walton Grange, Stone, Staffs, contributed Oncidium spiloptium, bought as O. St. Legerianum, and also a grand variety of Lælia tenebrosa, which is described under and also a grand variety of Lælia tenebrosa, which is described under certificated plants. Mr. Johnson, grower to T. Statter, Esq., Stand Hall, Manchester, was represented by Lælia Schilleriana var. Johnsoni. Messrs. J. Veitch & Sons, Chelsea, sent a new Lælia named Novelty which is referred to below. Earina suaveolens with its deliciously scented spikes came from the Glasnevin Botanical Gardens (botanical certificate).

Sir Trevor Lawrence, Bart., Burford Lodge, Dorking (grower, Mr. White) sent a small but very beautiful group, composed of Aërides Lawrencæ var. Sanderiana with four racemes heavily loaded with bloom, Miltonia spectabilis, Cattleya Blessensis, Lælia elegans Turneri Purple Prince, Lælia Philbrickiana, Schomburgkia Lyonsi, Cypripedium Harrisifroyæ (C. Harrisianum × C. Godefroyæ), C. æno-superbiens (see below), and Aganisia inoptera (botanical certificate). A silver Banksian medal was recommended. Messrs, Sander & Co. also had a very pleasing group, in which Cypripedium hybridum Youngianum, C. Macfarlanei, C. Maynardi, C. radiosum, Grobia Amherstiæ, Vanda Sanderiana, Aërides Ballantinganum aureum a splendid piece of A Sanderiana, Aërides Ballantineanum aureum, a splendid piece of A. Sanderiana, Grammatophyllum Fenzlianum, and Cypripedium Thayerianum (see below) were conspicuous. A silver Banksian medal was recommended. Mr. Chapman, grower to R. J. Measures, Esq., Cambridge Lodge, Camberwell, sent Masdevallia Lowi, which was certificated in 1890, Cypripedium Youngianum, and a form of C. Numa named superba.

CERTIFICATES AND AWARDS.

Melon Hero of Isleworth (Mr. Wythes) .- A cross between Wythes' Seedling and Syon House, a green-fleshed variety, very sweet, neat in shape, and well netted (award of mcrit).

Melon Royal Prince (Mr. W. Palmer, Cobden Villas, Andover) .- A cross between Triumph and Hero of Lockinge, a small evenly netted

yellow-fleshed variety, extremely sugary (award of merit).

Melon County Councillor (Mr. W. Palmer). — A cross between Triumph and Blenheim Orange, a small well-netted variety, sweet in flavour (award of merit).

Tritoma Osiris (Paul & Son, Cheshunt).—Remarkable for its distinct

orange yellow inflorescence (award of mcrit).

Phlox Etna (Paul & Son, Cheshunt).—A brilliant carmine variety

with a good head of bloom, and about 18 inches high (award of merit).

Liatris pycnostachya (Paul & Son, Cheshunt).—Some splendid spikes of this little known old plant were shown, the beautiful mauve heads being greatly admired. It was figured in the Journal of Horticulture some years ago (first-class certificate).

Canna Duchess of York (Kelway & Son).—A beautiful fancy variety,

pale yellow, blotched with deep red (award of merit).

Canna Capitaine de Suzzoni (Lemoine).—A fine variety, with clear yellow blooms profusely spotted with dull brownish red (award of merit).

Canna Gloire d'Empel (Vilmorin).—A grand flower, very rich deep scarlet in colour (award of merit).

Canna Lohengrin (Vilmorin, Andrieux & Co.).—A very distinct colour; it might almost be described as orange amber (award of

Canna Konigin Charlotte (Pfitzer).—A charming flower, with orange scarlet flowers, distinctly margined with clear yellow (award of merit). Canna Michelet (Sir Trevor Lawrence).—A good variety, with rich bright scarlet flowers (award of merit).

Montbretia crocosmæflora plena (Sir Trevor Lawrence).— A semi-double form, having orange yellow flowers (first-class certificate). Hollyhock Amaranth (Webb & Brand).—A rich, deep silvery rose

coloured bloom, of exceptional substance and shape (award of merit).

Gladiolus John Warren (Kelway & Son).—A variety with very large

flowers, and a fine spike, rich orange scarlet, with a few deeper flakes and a purple throat (award of merit).

Gladiolus Grover Cleveland (Kelway & Son).—A very distinct and beautiful variety, brilliant carmine with a faint cerise suffusion, and a white stripe along the centre of each segment (award of merit).

Gladiolus Alfred Henderson (Kelway & Son).—Bright vermilion,

very large flowers and grand spike (award of mcrit).

Gladiolus Duke of York (Kelway & Son).—Light rosy red, throat

pale with purplish flakes (award of merit).

Grevillea Banksi (J. Laing & Sons).—A very distinct and graceful species, of which perhaps the exhibitors will supply some particulars (first-class certificate).

Begonia semperflorens Vernon (J. Laing & Sons).—This bronzy hued variety is now fairly well known. It is a most effective and desirable plant, as much from the fine colour of the leaves as for the profusion of bright red flowers (award of merit).

Caladium President de la Devansaye (J. Laing & Sons and C. Bause). A beautiful variety with rich red foliage (award of merit).

Hedera helix tesselata (Miss Browning-Hall, Algiers).—A tesselated form of the old plant and very attractive (award of merit).

Dracæna Alexander Laing (C. Bause).—A variety with long slender leaves, deep purplish green edged with crimson (award of merit).

Croton Mdmc. Ernest Bergman (C. Bause).—A beautiful variety with

short, broad leaves, elegantly marbled with green, gold, and red (award of merit).

Lælia tenebrosa Walton Grange variety (W. J. Thompson).—A very fine variety, the flowers being of great size, sepals and petals butter yellow, lip white, throat deep crimson, altogether an imposing and beautiful form (first-class certificate).

Miltonia Joiceyana (Major Joicey).—A new form with pseudo-bulbs 4 to 6 inches long, and flowers borne in long racemes. The sepals and petals are dark brown with bars of light brownish yellow, lip very pale mauve, with a darker blotch at the base of the column (first-class certificate).

Lælia Novelty (J. Veitch & Sons).—A hybrid between L. elegans and L. Dayana, the former being the pollen parent. A small form with miniature flattened pseudo-bulbs, sepals and petals rich rosy mauve, lip

very deep rich velvety purplish crimson (award of merit).

Cypripedium ano-superbiens (Sir Trevor Lawrence). — A cross between C. ananthum and C. superbiens, a broad and somewhat impressive flower. The dorsal sepal is of considerable breadth and well rounded. The central area is green with rows of chocolate dots, the margin white with a rosy suffusion; petals broad and blunt, dull reddish brown with a few chocolate spots, lip same colour (award of merit).

Cypripedium Thayerianum (Sander & Co.) —A new hybrid secured by crossing C. Lawrenceanum and C. Boxalli atratum. It is a small very dark flower; lip chocolate with a green base, dorsal sepal dark burnished chocolate with a suffusion of green towards the apex, margin flushed with rose, petals dark chocolate, base greenish and with dark spots (award of merit).

THE LECTURE.

On Tuesday afternoon Mr. J. G. Baker, F.R.S., of Kew, read an excellent paper on Cannas, Mr. Bennett Poë presiding. The essay was essentially botanical, the essayist dissecting the flowers piece by piece and naming every fragment with the ease of a master. These Cannas, said Mr. Baker, were divided into four sections, three of which were so distinct that they had until recently been classed as separate genera, but owing to the ease with which they might be fertilised one with the other it was now generally acknowledged that they were but species of one genus. Cannas were introduced by Gerarde in the year 1596, the species being named indica. The Cannas were first taken in hand by hybridisers in the year 1840, at least it was in the year in which the results were first recorded. The leader in this great work was Mons. Since that year the advance in the quality of Cannas has been

steady throughout the whole of the time.

During the past twenty years the hybridists have, said the essayist, used the true Canna and the well known forms of iridiflora, the objects having been to secure fine bright coloured flowers of large size, and at the same time to retain the handsome characteristics of the foliage. The result of these improvements had been that the old true Cannas have been almost driven out of cultivation, the more showy later hybrids having practically superseded them. A short discussion was afterwards held, in which Mr. G. Paul took a prominent part, and then a vote of thanks having been accorded to Mr. Baker for his interesting discourse the meeting closed.

THE VALUE OF NITROGEN TO PLANTS.

PLANTS can use nitrogen in three different forms--viz.:-

(1), As nitrogen gas or uncombined nitrogen.

(2), In the form of ammonia. In the form of nitrates.

All plants cannot use nitrogen in any of these three forms equally well, but each form is found specially suited to certain kinds of plants, as will be noticed.

(a), NITROGEN GAS USED BY PLANTS.—Although we have nitrogen gas, or uncombined nitrogen, existing in the air in enormous quantities, still, the number and kinds of plants which can use the nitrogen of the air is not large. In general, those plants which are called leguminous, such as the Bean, Pea, Clover, Alfalfa, &c., can take uncombined, nitrogen from the air.

(b), NITROGEN OF AMMONIA USED BY PLANTS.—The leaves of some plants have the power of absorbing ammonia directly from the air and obtain nitrogen in this way. Some plants obtain nitrogen from

ammonium salts through the soil.

e), NITROGEN OF NITRATES USED BY PLANTS.—The largest part of the nitrogen which most plants obtain is taken up by their roots from the soil in the form of nitrates; that is, nitric acid combined with some metal, as sodium or potassium. As already stated, most of the nitrates used by plants are formed by changing into nitrates ammonia compounds and organic substances in the soil by the process called nitrification. Hence, nitrogen, in the form of nitrates, is the most available form for most plants; that is, it can be most readily taken up and used by plants.

RELATIONS OF NITROGEN TO FERTILISERS.

(d), Experiments have shown that nitrogen is essential to the growth of plants; that the quantities of nitrogen available as plant food are very small; that nitrogen is one of the first elements in the soil to be used up; that, of all the fertilising elements, nitrogen is and always has been the most expensive.

THE SPECIFIC ACTION OF NITROGEN UPON PLANTS.

(e), The influence of nitrogen in its various forms upon plant growth

is shown by at least three striking effects.

First.—The growth of stems and leaves is greatly promoted, while that of buds and flowers is retarded. Ordinarily, most plants, at a certain period of growth, cease to produce new branches and foliage, or to increase those already formed, and commence to produce flowers and fruits, whereby the species may be perpetuated. If a plant is provided with as much available nitrogen as it can use just at the time it begins to flower, the formation of flowers may be checked, while the activity of growth is transferred back to and renewed in stems and leaves, which take on a new vigour and multiply with remarkable luxuriance. Should flowers be produced under these circumstances they are sterile and produce no seed.

Second.—The effect of nitrogen upon plants is to deepen the colour of the foliage, which is a sign of increased vegetative activity and

health.

Third.—The effect of nitrogen is to increase in a very marked degree the relative proportion of nitrogen in the plants.

Loss of Nitrogen Compounds.

(f), Since ammonia compounds and nitrates dissolve easily in water, is there not danger of their being carried away in drainage water from

the upper soil out of reach of the plant?

Experiments have been made to settle the question, and results indicate that ammonia compounds are largely retained in the soil. Nitrates are apt to be washed out and lost in the case of bare fallow land; but when the soil is covered with vegetation there is little or no loss, for the reason that the roots of growing plants absorb nitrogen very readily. Some nitrogen is also lost by organic matter in the process of decay, escaping into the air as free nitrogen.

These losses of nitrogen are, to some extent, replaced naturally by means of the nitric acid and ammonia dissolved by the rain and dew, also by organic matter decaying at the surface of the soil, and by conversion of the free nitrogen of the air into some form which the plant can take up and use. These natural additions of nitrogen do not usually make good on the farm the losses, and in time the nitrogen becomes insufficient to produce paying crops without the addition of nitrogenous manures.—N. T. J. (in the "Agricultural Economist.")

HORTICULTURAL SHOWS.

SOUTHAMPTON.—AUGUST 5TH AND 7TH.

For some years past wet weather has characterised the summer Exhibition and Fête held annually under the auspices of the Royal Horticultural Society of Southampton, and the financial results have in consequence not always been of a satisfactory nature. men comprising the Council, however, have never been daunted, and notwithstanding the difficulties they have had to contend with in this respect, have each year managed to provide an Exhibition that is generally considered to be one of the best held in the South of England. That which took place in the grounds of the Society at Westwood Park on the above dates proved no exception to the rule as regards the exhibits. Those who are acquainted with the Great York Gala and the famous Shrewsbury Exhibition may form an idea as to what the Southampton Fête is in the south, although on rather a smaller scale. It is a flower show attended by numerous side attractions, which serve as valuable auxiliaries to the floral portion so far as inducing a large number of visitors is concerned. Fortunately fine weather prevailed on this occasion, and thousands of people visited the grounds.

Regarding the Exhibition, although the entries in some classes were not particularly numerous it was on the whole a grand show. In the

not particularly numerous, it was, on the whole, a grand show. In the opinion of the judges the exhibits were quite up to the standard, and in some instances were exceptionally fine. Specimen plants were exceedingly good despite the fact that such growers as Messrs. Cypher of Cheltenham, and A. Ocock, erstwhile gardener at Handcross Park, have apparently ceased to exhibit at Southampton. The plants shown by Mr. Jennings in the leading class attracted much attention, they being grand examples of cultural skill. The groups, usually a strong feature, were good, and the same may be said of the cut blooms. Fruit and vegetables were excellent, the bunches of Muscat of Alexandria shown by Mr. E. Molyneux being amongst the best we have seen this year. The arrangements were conducted in an efficient manner

by Mr. C. S. Fuidge, the energetic Secretary.

PLANTS AND GROUPS.

The principal class in the open section was for ten stove and greenhouse plants, five to be in bloom, and the remaining foliage specimens. Four exhibitors competed for the substantial prizes offered, and the leading award went to Mr. F. C. Jennings, gardener to W. Garton, Esq., Roselands, Woolston, for splendidly grown plants. Those in flower comprised Stephanotis floribunda, Clerodendron Balfourianum, Statice profusa, Allamanda nobilis and A. Hendersoni, the others including Crotons Warreni and Queen Victoria, well coloured and in exceptionally fine condition. Mr. T. Wilkins, gardener to Lady Theodora Guest, Inwood House, Hensbridge, was second, Bougainvillea glabra, Ixora Williamsi, and Croton Queen Victoria being well shown by this exhibitor. The third prize went to Mr. E. Wills, Shirley, and the fourth to Mr. N. Blandford. Mr. Jennings was again first in the class for six stove and greenhouse plants, showing Croton angustifolium (grand and well coloured), Allamanda nobilis, Dipladenia amabilis, Stephanotis floribunda, Dicksonia antarctica, and Kentia Fosteriana. Mr. W. Peel, gardener to Miss Todd, Sidford Lodge, Shirley, was a good second, Mr, E. Wills being third, and Mr. T. Williams fourth. The last named exhibited a magnificent plant of Cassia corymbosa loaded with blossoms. Mr. T. Hall, gardener to Samuel Montague, Esq., M.P., President of the Society, South Stoneham House, secured the premier award for six miscellancous plants, the best of which were Eucharis amazonica, well flowered; Latania borbonica, Cocos Weddelliana, and Allamanda Hendersoni. The second prize went to Mr. W. Peel for a collection of smaller plants.

The groups were good, and in the leading class the competition was very keen. Mr. Wilkins, however, proved the winner of the principal award, this exhibitor having arranged a charming exhibit. The plants were tastefully put together, and the whole produced a very fine effect. From a groundwork of Adiantum, fresh and green in appearance, rose graceful spikes of Celosias, Francoas, and other flowering plants, these being interspersed with Aralias, Crotons, Dracenas, and Caladiums, all richly coloured. Mr. E. Wills followed closely with a very fine arrangement, the third position being assigned to Mr. E. Carr, gardener to W. A. Gillet, Esq., Fair Oak Lodge, Bishopstoke; and the fourth to Mr. B. Ladhams, Shirley, for a compact state of the fourth to Mr. B. Ladhams, Shirley, for a compact group of miscellaneous plants. For a smaller group Mr. Peel secured the leading position, having a fine collection of plants well arranged. The background was composed of a large Palm and Humea elegans, and amongst the most noticeable plants were Crotons, Caladiums, Dracenas, Liliums, and Alocasias. Mr. T. Hall was second, Messrs. Langston Brothers, Burgess Street, Bassett, being third. Mrs. Kingsburg, Boreis Velley, had the best collection of pursery third. Mrs. Kingsbury, Bevois Valley, had the best collection of nursery stock; Mr. G. Windebank, Bevois Town, being second; and Mr. Ladhams third. In the amateurs' section the groups of plants were also well arranged, the principal prizewinners being Messrs. T. E. Chamberlain, F. M. Vokes, and H. O. Vokes.

Ferns were well shown in the open class. Mr. F. C. Jennings had the best six stove or greenhouse Ferns in Adiantum concinnum,

A. cardiochlæna, A. fragrantissimum, Davallia Mooreana, Microlepia hirta cristata (very fine), and Nephrolepis davallioides furcans. Mr. J. Annys, gardener to the Hon. Mrs. Eliote Yorke, Hamble Cliffe, was second; Mr. W. Peel third; and Mr. W. Carr fourth. Mr. N. Blandford, gardener to Mrs. Haselfoot, Moor Hill, West End, was first with six double Zonal Pelargoniums and the same number of single varieties. Mr. G. Windebank was second in both classes. Coleuses were finely shown, the best plants coming from Mr. T. Hall; Messrs. E. Carr and

J. Evans, gardener to Lady Ashburton, Melchet Court, following in order of their names. Mr. T. Hall secured the premier prize for six Petunias, staging well-grown plants. Mr. G. Busby, gardener to Col. F. Willan, Thorne Hill Park, had the best half dozen hardy Ferns, these including fine specimens of Osmunda regalis cristata, Onoelea sensibilis, Lastrea grandiceps, and Athryium f.-f. Elworthi. The leading award for six plants of Celosia pyramidalis went to Mr. R. West, gardener to H. J. Wigram, Esq., Northlands, Salisbury, Messrs.

E. Wills, and T. Hall following in the order given.

In the class for single specimens of stove or greenhouse plants the competition was very keen, and some grand exhibits were fortheoming. Mr. J. Amys secured the leading position for a plant in flower, staging a magnificent specimen of Allamanda Hendersoni. This was well trained and densely flowered, one of the best plants seen at any exhibition. Mr. Jennings followed, the third award going to Mr. E. Carr, both exhibitors showing Allamanda Hendersoni. Mr. Jennings was first with a single specimen of an ornamental foliage plant, having Croton Williamsi in splendid condition, clean and richly coloured. Mr. W. Peel was second with a grand plant of Croton angustifolium, the third prize going to Mr. J. Evans. Mr. Peel had the best six Mosses in pans. Mr. E. Carr was first with Gloxinias and table plants were best shown by Messes. Wills and Budd. Tuberous Begonias were only fairly good, the awards being taken by Messes. E. Wills, Wilkins, J. Hughes, J. Evans, and E. Carr in the respective classes. Orchids were not numerous nor exceptionally good. Mr. J. Evans was first with a single specimen, showing a form of Lælia purpurata well flowered. The second and third prizes in this class went to Messes. E. Wills and E. Carr, the former having a plant of Calanthe veratrifolia and the latter Lælia purpurata. Mr. N. Blandford gained the premier position with a small collection of Orchids tastefully arranged with Ferns, the other exhibitor being W. A. Gillett, Esq., Fair Oak Lodge.

CUT FLOWERS AND TABLE DECORATIONS.

This section formed an important feature in the Exhibition, and appeared to attract the larger number of visitors. Roses were not extensively shown, as could hardly be expected, but those staged were of excellent quality. Messrs. Keynes, Williams & Co., Salisbury, had a grand box of twenty-four blooms considering the time of year, and for which the first prize was awarded. The best flowers were La France, Alfred Colomb, Lady Mary Fitzwilliam, Horace Vernet, and The Bride. Messrs. Perkins & Co., Coventry, followed with a stand of fresh though smaller blooms. The class for twelve bunches of cut flowers was well contested. Mr. J. Budd, gardener to F. G. Dalgety, Esq., Lockerby Hall, Romsey, was awarded the first prize for a box of blooms tastefully arranged with Fern fronds. The most conspicuous in this stand were Clerodendron fallax, Ixora Williamsi, and Cattleya crispa. Mr. J. Evans was a close second, showing a box of very fine flowers. Mr. B. Ladhams, nurseryman, Shirley, was placed first for twelve varieties of hardy herbaceous cut flowers, Mr. N. Pritchard, Christ Church, following. Both exhibitors staged a bright collection of blooms, which were much admired. Mr. N. Pritchard also had some charming spikes of Gladioli in named varieties. Mr. R. West was third with herbaceous cut flowers. Messrs. Keynes, Williams & Co. were placed first with twelve Dahlias, amongst which R. T. Rawlings, Dazzler, Peacock, Duke of Fife, and Henry Bond were the best. Mr. R. West followed with good flowers, Mr. J. Evans being third. Matters were reversed in the class for Pompon Dahlias, Mr. West being first for twelve blooms, Messrs. Keynes Williams & Co. following. Cut Zonal Pelargoniums were best shown by Mr. N. Blandford in the class for single varieties, and Mr. West had the best double flowers. Mr. W. Batten, Old Basing, secured the leading prizes for six bunches of cut flowers and half a dozen Rose blooms.

The table decorations were simple and effective. For a table 8 feet by 4 feet dressed with flowers and foliage, Mr. Ladhams was placed first for a pretty arrangement, Mr. A. B. Hobby, Vadwell Road, followed in this class. The best epergne of flowers was also staged by Mr. Ladhams, Miss K. Goldring and Mrs. Kingsbury being second and third. Messrs. Perkins & Co., as is usual with them, secured the chief awards for bridal and hand bouquets in the open classes. Baskets of wild flowers and buttonhole bouquets were well shown by Miss K. E. Matthews, Miss Bauce, Miss Ladhams, Miss Chamberlain, Messrs.

B. Ladhams and A. G. Allsop.

FRUIT AND VEGETABLES.

As already remarked, these were well represented, and by some were considered to be the best that have been seen at Southampton. Grapes were splendidly shown in the classes for white and black varicties. Five competed for three bunches of white Grapes, but the Muscat of Alexandrias staged by Mr. E. Molyneux, Swanmore Park, Bishops Waltham, were by far the best. The bunches were large and of a handsome shape, the berries also being very fine, but a week or so would have given them a better tint and more finished appearance. However, they were the best Grapes in the Show, and merited the first prize awarded. Mr. H. W. Ward, Longford Castle, was second, also with Muscat of Alexandria, well finished, but a little smaller in bunch and berry than those exhibited by Mr. Molyneux. Mr. C. Warden, gardener to Sir F. H. Bathhurst, Clarendon Park, Salisbury, was third with fine bunches of Buckland Sweetwater. For three bunches of black Grapes Mr. A. Henbest was placed first for grandly finished Black Hamburghs. Mr. H. W. Ward was again second, and Mr. G. Inglefield, gardener to Sir J. W. Kelk, Bart., Tedworth House, third. Mr. J. Hughes secured the first prize for two bunches of white Grapes, Mr. Evans being second

and Mr. G. W. Taylor third. Four competed in the class for two bunches of black Grapes, and the prizes were taken by Messrs. G. Busby, J. Hughes, and J. Budd. Seven exhibitors competed for a single bunch of white Grapes, and also for one bunch of any black variety. In the former class Mr. E. Molyneux was again first with well finished Muscats, Messrs. H. W. Ward and C. Warden securing second and third prizes respectively. Mr. Henbest had the best single bunch of black Grapes, showing perfectly coloured Black Hamburghs. Mr. Ward followed with good Madresfield Court. Mr. C. Warden being third

followed with good Madresfield Court, Mr. C. Warden being third.

Although surpassed in Grapes, Mr. H. W. Ward secured a wellmerited honour in the class for six dishes of fruit, Pines excluded.
Seven exhibitors were forthcoming, and the competition was very keen.
Mr. Ward had richly coloured Dryden Nectarines, Brunswick Figs, Sea
Eagle Peach, Hero of Lockinge Melons, Muscat of Alexandria and
Black Hamburgh Grapes in excellent condition. Mr. A. J. Allsop was
second, and Mr. G. Sugfield third. The last named exhibitor had the
best half-dozen Peaches, Mr. Ward following with well-grown Sea
Eagle, and Mr. J. Hughes was third. Eight exhibitors competed in the
class just mentioned, and ten had Nectarines. Messrs. H. Drover and
Sons, Hillside Nursery, Ventnor, were placed first for grand fruits of
Pineapple. Mr. J. C. Jennings was seeond with the same variety richly
coloured. Melons were well shown by Messrs. H. W. Ward, C. Warden,
G. Amys, A. Henbest, G. Inglefield, and E. Molyneux, all of whom
secured prizes in two classes in order as their names are given. Mr. G.
Busby won with six dishes of fruit of outdoor growth, staging Morello
Cherries, Jargonelle Pears, Goliath Plums, Royal George Peach, Brown
Turkey Figs, and Irish Peach Apples, all in first-rate condition. Mr. J.
Budd was second, and Mr. A. Henbest, Crawley Court, Winchester,
third.

Vegetables were clean and of first-rate quality considering the exceptionally dry season. Mr. T. Wilkins secured the leading prize offered by Messrs. Sutton & Sons for a collection of vegetables. These comprised New Intermediate Carrots, Ponderosa Tomatoes, Duke of Albany Peas, Satisfaction Potatoes, Rousham Park Onion, and Cauliflowers. Mr. Wilkins also won the chief prize given by Messrs. Webb and Sons for a similar collection. Messrs. Inglefield and J. Hughes were second and third in this class. For the prizes offered for a collection of nine varieties eight exhibitors competed, and in each case the produce was of excellent quality. Mr. T. Wilkins here also maintained his reputation as being a vegetable grower as well as a plantsman by carrying away the first prize, the second and third awards going to Messrs. G. Inglefield and J. Hughes. Peas were well shown by Mr. H. W. Ward, and Beans by Mr. Inglefield. Mr. R. West staged Potatoes and Carrots in grand condition, and Mr. J. Budd was awarded the premier honour for twelve Onions from spring seed. Mr. J. Hughes had the best dozen autumn-sown Onions, staging fine heavy bulbs of Lemon Rocca. Mr. A. Henbest, out of fourteen competitors, secured the first prize for a brace of Cucumbers, showing perfect fruits of Improved Telegraph. Mr. B. Ladhams won with a dish of Tomatoes, Messrs. W. Colton being seeond, and Langston Bros. third, all staging good fruits. Vegetables and fruit were also well staged in the cottagers' classes.

MISCELLANEOUS.

Miscellaneous exhibits were not numerous. Messrs. Keynes, Williams & Co. had a box of Roses and a collection of new and recently introduced Dahlias. Certificates were awarded for Dahlias Valkyrie (Pompon), Ochroleuca, Duke of York, Duchess of Fifc, and Emperor of Germany, the last four being of the Cactus type. Messrs. Perkins & Co. had a new dark Dahlia named Matchless, and Mr. B. Ladhams staged a large collection of cut flowers, bright and interesting. Mrs. Kingsbury had a group of miscellaneous plants, as also had Mr. W. H. Rogers, Red Lodge Nursery, Southampton. Mr. Rogers likewise sent a splendid group of ornamental shrubs in pots.

EARL'S COURT.—AUGUST 9TH.

THE present Show was to consist mainly of flowering and foliage plants, and they were represented in such numbers as to somewhat overcrowd the tent, one or two of the exhibitors having to be content with a very modest amount of room. This was a direct contrast to the last show, when spacing out had to be resorted to. On that occasion Carnations and Picotees should have formed the most prominent feature, and their searcity consequent on the early season left the show somewhat thin. On this occasion hardy flowers were very strongly reprcsented and made a most beautiful display. Both amateurs and professionals showed them exceedingly well. They are not likely to be seen much better at any show this year. The plan of giving prizes for groups as well for the usual collections answered admirably, the competing exhibits being extremely beautiful, not less so certainly than the majority of the groups of greenhouse and stove plants which are seen at shows. The winning one was a very fine piece of work, material and arrangement being alike excellent. There was not much between the other two, but Mr. Such, notwithstanding a preponderance of Gaillaidias, was placed second. Messrs. Paul & Son had some particularly fine bunches in the class for them, and won most decisively. Better are rarely seen, but Mr. Cuthbertson made a wonderfully good display, considering that the flowers had been staged at Leicester before coming to London, and this, be it remembered, after a very long railway journey. Mr. Wythes is not very often found competing, but when he does enter the fray he gives a good account of himself, and on this oceasion he showed indoor and outdoor flowers and iruit very finely.

The open class for a group of flowering and foliage plants brought an

excellent one from Messrs. Laing & Sons, to which the first prize was deservedly awarded. Double and single Begonias, some well-coloured Crotons and Campanula pyramidalis stood out prominently in it, and the arrangement was very good. There was no competition. Mr. Howe, gardener to H. Tate, Esq., Streatham, was unopposed with a group of Crotons and Dracenas, but condition and cleanliness were so satisfactory that the premier award was made. In the amateurs' class for flowering and foliage plants Mr. Wythes, Syon House Gardens, won with a tasteful arrangement which would very well have borne a few more flowers, but the quality of the material was too good to be taken exception to. There was only one group of Liliums, and that came from Slough. Mr. Turner's plants were well flowered, and descreed the first prize.

Messrs. Paul & Sons, The Old Nurseries, Cheshunt, had a beautiful group of hardy flowers, and were placed first. Mr. Such was second, his Gaillardias showing up well. Messrs. Laing & Sons were third. corresponding class for amateurs Mr. Wythes was first, and Mr. Sage, gardener to Earl Dysart, second. Mcssrs. Paul & Son won with twentyfour bunches of hardy flowers, exhibiting material of first-rate quality. Liatris pycnostachya, Rudbeckia purpurea, Malva moschata, the Phloxes, and Montbretia crocosmæflora were very fine. Mr. M. Cuthbertson was second, also with excellent bunches, and Mr. Such third. In the amateurs' class for twelve bunches Mr. A. Newell, gardener to Sir E. Sanders, won with very good clusters. Mr. Sage was a close second, Mr. Wythes third, and Mr. E. Tickner, gardener to J. Watney, Esq., received

a third prize.

There was a class for a collection of hardy fruit (six dishes), and Mr. Wythes won with Morello Cherries—a capital dish—Royal George Peaches, Williams' Bon Chrêtien Pears, Pineapple Nectarines, Worcester Pearmain Apples, and Jefferson Plums. Mr. G. H. Sage was second

with good Jefferson Plums and Mulberries.

The miscellaneous exhibits comprised many which were at the Drill Hall the day before, and altogether formed a very fine feature of the Exhibition. Mr. Cuthbertson of Rothesay had a bright and well diversified collection of hardy flowers, which were wonderfully fresh considering that they had had a very long journey, and been shown at Leicester on Tuesday (silver medal). Mr. Forbes of Hawick had a very beautiful display of Hollyhocks, which are referred to in our report of the R.H.S.; also a fine display of Stocks, Antirrhinums, and Pentstemons. The two last named were very fine (silver-gilt medal). Messrs. Cheal & Son repeated their Drill Hall exhibit of Gourds, fruit, Sweet Peas, and Dahlias, and it attracted, as it deserved, considerable notice (two silver medals). Messrs. Barr & Son had a very large bank of hardy flowers, good material, well arranged (silver medal). A. McMillan had a box of very good Chrysanthemums (silver medal). Messrs. S. Spooner & Sons had some excellent dishes of Apples (silver medal). Mr. A. W. Young sent Gloxinias and Begonias (bronze medal). Messrs. Barron & Sons contributed an interesting collection of tree foliage, but had not room to display them to advantage (silver medal). Mr. J. Walker, Thame, gave a foretaste of the Dahlia season in some splendid Show and Fancy blooms (silver medal). Messrs. Kelway and Son had the grand collection of Gladioli, Gaillardias, and hardy flowers which attracted so much attention at the R.H.S. meeting (silver-gilt medal); and Mr. R. Nicholas had sent on from there his splendid Pine Apples (silver-gilt medal). Messrs. R. Cross & Sons exhibited sprayers and insecticides. Messrs. J. Laing & Son sent several plants for certificate, such as Begonia Vernon, Grevillea Banksi, Caraguata cardinalis, and Carnation Stanstead Beauty, very bright and good. Mr. T. Jannoch was represented by a neat bank of Lilies of the Valley, remarkable for the time of year (silver medal). Mr. T. A. Hester, gardener to W. G. Dawson, Esq., had a good collection of fruit, not for competition, and so had Mr. Rickwood, gardener to the Dowager Lady Freake, and Mr. Hoar, gardener to T. J. Cooper, Esq., each receiving a silver medal. Mr. J. Hudson, The Gardens, Gunnersbury House, had some splendid plants of Campanula pyramidalis. blue and white. Messrs. Paul & Son. Pine Apples (silver-gilt medal). Messrs. R. Cross & Sons exhiof Campanula pyramidalis, blue and white. Messrs. Paul & Son, Cheshunt, had beautiful boxes of Roses, for which a silver medal was awarded; and Miss Lilian Hudson displayed a charming table of floral decorations, receiving a silver-gilt medal.

TRADE CATALOGUES RECEIVED.

Wm. Bull, 536, King's Road, Chelsea, London, S.W.—Tuberous-rooted Plants and Bulbs.

W. Clibran & Son, Oldfield Nurseries, Altrincham.—Bulbs, &c. Dickson & Co., 1, Waterloo Place, Edinburgh.—Catalogue of Flower Roots, &c.

Dickson & Robinson, Manchester.—Catalogue of Bulbs and Roses. W. B. Hartland, Ard-cairn, Cork.—Catalogue of Daffodils.

Hogg & Wood, Coldstream.—Bulbous Roots.

Wm. Paul & Son, Waltham Cross.—Bulbs and Winter Flowers.

J. R. Pearson & Son, Chilwell Nurseries, Nottingham.—Bulbous Plants.

J. Peed & Sons, Roupell Park Nurseries, Norwood Road, S.E.-Bulbous Flower Roots.

William Sydenham, Tamworth, Staffordshire.—List of Fancy Exhibition Pansies.

Jas. Veitch & Sons, Royal Exotic Nursery, Chelsea. - Hyacinths and other Bulbous Roots.

B. S. Williams & Son, Upper Holloway, London. - Descriptive Catalogue of Bulbs, Fruit Trees, Roses, &c.



FRUIT FORCING.

Vines.—Early Houses.—Although the Vines have the wood ripe and some of the foliage is falling, there must not be any attempt at removing it nor to cut the laterals close in, as that would probably cause the principal buds to start. This must be prevented by removing the laterals by degrees and shortening some of the long shoots, reserving, however, some growth above the buds to which the Vines are to be pruned, the final pruning being deferred until the early part of September. Where the Vines are not satisfactory, the old surface soil should be removed and forked from amongst the roots, raising any that are deep and laying them in fresh material nearer the surface. Good calcareous loam or that containing a rather free admixture of small stones and grit, broken up roughly and well compacted about the roots, is the most suitable compost. If it be of a heavy nature add a sixth of old mortar rubbish; if light, a similar proportion of clayey marl, dried and pounded. Crushed or half-inch bones may be used discriminately say a bushel to cartload of loam, and a similar proportion of charcoal, and where the loam is very turfy add 7 lbs. of kainit and 14 lbs. of Thomas's phosphate to each cartload of loam. Give a moderate vertexing and the roots will push appearable adventitions and the roots will push appearable adventitions. watering and the roots will push, especially adventitious ones, from near the collar, into the new soil at once, and the Vines will start freely when the time arrives for doing so. If the drainage is defective and the whole of the soil has to be removed, perform the lifting expeditiously, and if the Vines are weak it is desirable to give a season's rest or crop very moderately.

Midseason Houses.—The Grapes colour rapidly this season, and though not so large in bunch or berry they are of high quality. Red spider has been very troublesome in some cases, but upon the whole Vines have flourished with the extra light and heat, especially Muscat of Alexandria, which has the Grapes better ripened and coloured than for some years past. Where the berries are ripe it will be necessary to employ a slight shade over the roof lights, with a double thickness of herring nets, to prevent black Grapes losing colour, and Foster's Seedling, Buckland Sweetwater, and similar varieties from having the berries browned. This, and some hexagon netting over the ventilators to exclude wasps and flies, will ensure the Grapes keeping in good

condition for a considerable time.

Where the Grapes are ripening copious supplies of water will be necessary; even outside borders may need applications, and the borders can be mulched with an inch or two of short material. If liquid manure is given it should be of a sustaining rather than stimulating nature, and moderate atmospheric moisture will be necessary for the benefit of the foliage. This can be secured by damping surfaces occasionally, and will not do any harm to the Grapes provided the ventilation is free and a circulation of air insured at night. A little fire heat will be advisable in case of dull and damp weather prevailing, but it need not be more than to secure 70° to 75° by day, and 60° to 65° at night, and admit of a circulation of air constantly, as it is stagnant air that conduces to spotting and cracking in the berries. Allow a fair spread of foliage over black Grapes, but keep that of the white varieties rather thin, not

allowing crowding in either case.

Late Houses.—When well grown Lady Downe's has a decided Muscat flavour, which is improved with keeping. This may be effected in any room from which frost and damp are excluded. Mrs. Pince is, perhaps, the worst of all Grapes to finish, and requires a good spread of foliage, with gentle warmth in the hot-water pipes, so as to secure a night temperature of 65°, and 70° to 75° by day, with a little air constantly, continuing this until the berries are thoroughly black and covered with blue bloom. It, however, loses colour quickly after being ripe, and is inclined to shrivel. Continue to afford full supplies of water until the Grapes are well advanced in colour, for most late Grapes take a long time to perfect thoroughly. All are best grown on the extension system. -that is, they require more room and a greater spread of wood. early and close stopping is always detrimental to the well-doing of late Grapes, and a good spread of foliage is essential. The foliage must be Grapes, and a good spread of foliage is essential. The foliage must be fully exposed to light and kept perfectly clean and healthy, some growth being made so as to keep the roots active, and overcropping avoided. The feeding must also commence early and be continued until the berries are at least coloured, not applying substances likely to taint the Grapes. The water will not do any harm if air is admitted freely. Maintain a constant circulation with a gentle warmth in the hot-water pipes to prevent moisture being condensed on the berries. Afford a temperature of 65° at night, 70° to 75° by day artificially, 80° to 90°. through the day from sun, and close sufficiently early to increase to 90° or 95°. Muscat of Alexandria and Canon Hall Muscat should have: 5° more all round.

Late Hamburghs.—These are more forward than usual, and are advanced towards colouring where the houses have been kept open day and night. This procedure should be continued as there is plenty of time to colour and finish these Grapes, and provided they are ripened in September they retain colour much better than those ripened in August. It will be necessary to place some wasp-proof material over the

ventilators, such as hexagon netting, for these insects are very numerous in some localities and voraciously devour the fruit, some before it is well coloured. Bottles half full of sweetened beer should be suspended outside, and bushels of wasps, bluebottle flies, and other predatory pests may be drowned in a short time.

THE KITCHEN GARDEN.

Celery.—Showery weather has been very favourable to the growth of Celery. In some instances, however, the rains have not been sufficiently heavy to well soak the soil close up to the plants, and this should at once be made good by means of the watering pot. Showery weather is the best time for applying liquid manures or for washing in soot and salt. Soot may be very freely dusted along the rows, but salt must be more sparingly used. Both are excellent manures, and good slug deterrents. Exhibition Celery should have a good soaking of liquid manure about once a week, and only a little soil in the form of a topdressing placed about the stems, the blanching being most cleanly effected by means of several folds of brown paper. Do not bind the latter to such an extent as to check the development of the hearts. About one-half of the leaves ought to be enclosed by the paper, and a month is not too much time to allow for perfect blanching.

For ordinary use the blanching may be effected by moulding up. Commence by clearing small leaves and suckers from the plants of white varieties, weeds also being drawn out. Then dress with soot or salt, or the two in mixture, and wash some of this down to the roots the same evening. Next morning chop down some of the soil from the sides, and distribute about 3 inches of this in the trench. While this is being done the outer stalks of the plants should be held or tied well together. In the course of a fortnight or three weeks the hearts will be advanced considerably, and the second moulding up may be given.

Avoid placing too much soil in the trench at one time. The final moulding up should be given about one month before the Celery is

required for use.

Celery Leaf Miner.—In some gardens the Celery is quite clear of this pest, and in others scarcely a leaf is free of them. A close look-out ought always to be kept for the first attack. This season the flies were unusually early at work among the plants, piercing the leaves and depositing the eggs, and unless all the grubs found eating their way between the two skins are destroyed the leaves will present a very ragged appearance. A free use of soot on and about the plants, applied when the leaves are damp, has a deterrent effect upon the newly hatched flies, driving them to seek fresh quarters, while if all the maggots found in the leaves are crushed between the finger and thumb not much harm will result.

Celeriac.—Celeriac, or Turnip-rooted Celery, ought ere this to have been planted on the level, ground previously well manured for and occupied by early Cauliflowers suiting it well without any further preparation beyond a good surface hoeing. What is wanted is a large, quickly grown, Turnip-like root, a firm rich root-run being the most likely to produce these. Keep the plants well supplied with water in dry weather, liquid manure or soot also doing good. The surface of the ground should be kept free of weeds. There should be no moulding up of Celeriac, the root only being eaten either as a vegetable or up of Celeriac, the root only being eaten either as a vegetable or salad.

Winter Spinach.—This crop is of so much importance that more that ordinary pains should be taken in producing it. It thrives best on rather high, free working, fairly rich ground, the plan of growing it on raised Asparagus-like beds answering well where the site is naturally damp and cold. The ground ought to have been manured and dug some time ago, forking it over lightly once since. If lime has not been given to the selected plot during the past five or six years well whiten the surface with newly slaked lime now and lightly stir in prior to sowing the seeds; no lime being needed then apply a dressing of soot. Draw shallow drills from 12 inches to 15 inches asunder. Moisten these drills if at all dry, and then sow the seed thinly. The Victoria or Monstrous Viroflay is the finest of all varieties, and varieties, and the sown a few long rows of either the round-seeded Summer or prickly-seeded Winter Spinach. Another sowing should be made a fortnight or three weeks later.

Late Kidney Beans.—In the autumn a few late Kidney Beans may prove acceptable. The plants are far from being hardy, but if the seeds are sown on somewhat high ground, where the plants can be protected during frosty nights, they may be preserved some time after the rest of either Runner or Kidney Beans have succumbed. Any of the early varieties and also Canadian Wonder are suitable for present sowing. Draw the drills 2 feet as under for the stronger growers, 18 inches being enough for the dwarf early forms, of which Sion House is still one of the best. If the drills are at all dry, water before sowing the seed thinly. Thin out the seedlings to about 6 inches asunder and mould up.

THE FLOWER GARDEN.

Bedding Antirrhinums.—The white bedding variety forms a very attractive bed, the flowering period being fully equal to that of the majority of other plants used. Several newer forms suitable for bedding have also been introduced. In order to have strong plants ready for planting early next season, and which only can be depended upon for a good effect, propagating should commence now. Short flowerless shoots, slipped off from old plants, will root readily in a cold frame or handlights at the foot of a north wall or other cool and not too dark position. Dibble three or four of the cuttings round the sides of 3-inch pots filled with gritty loamy soil, give a gentle watering, and keep close and shaded during the hottest part of the day till they are rooted. Some could be wintered in pots, and the rest planted in sheltered nursery beds.

Antirrhinums from Seed .- The white bedding and other named Antirrhinums come quite true from seed, and this is the readiest means of raising a large number of plants. Now is a better time for sowing than early next year, and this season's seed will germinate more strongly than older seed. Sow the seed thinly on the surface of previously moistened pans of light sandy soil and very lightly cover with fine soil. Cover with a square of glass and either moss or paper, and place in a cool frame or handlight at the foot of a north wall or fence. When the seedlings are large enough prick out in boxes of light soil. Being fairly hardy, some may be planted out in nursery beds and the rest be wintered in a cold frame. wintered in a cold frame.

Pentstemons.—These again are seldom very effective the same season they are propagated, but plants raised now from either cuttings or seed would do remarkably well next summer. Both cuttings and seeds should be treated exactly as advised in the case of Antirrhinums. Where hardier bedding plants are preferred to the more tender kinds, Pentstemons ought certainly to be given a place. Strong old plants are most suited to mixed borders, but late summer or autumn raised plants placed out early into large well prepared beds and lightly staked up would prove quite a feature in the display. A mixture of Pentstemons and Nicotiana affinis is both bold and pleasing. As many as are wanted should be wintered in cold frames or pits, as a very severe winter is sometimes fatal to most of the exposed plants.

Tuberous Begonias.—If short flowerless side shoots of these are made into cuttings dibbled rather thickly in page of bares of fire

made into cuttings, dibbled rather thickly in pans or boxes of fine sandy soil, set in the full sunshine and sheltered from heavy rains, the majority will strike root and form tiny tubers before the tops die down. Left where they are and stored in a dry cellar or shed where severe frosts cannot reach them, these small tubers will winter well and be very handy for bedding next season. Now is also a good time to sow seed with a view to having abundance of small tubers to make an early start with next season. Quite new seed will germinate very quickly and strongly, and this should be preferred, though last season's seed will not fail if sound at the time of sowing. Prepare several pans or boxes, by careful draining and filling up with fine light sandy soil. Make the surface very level and firm, but do not sand over, give a gentle watering, and about one hour later sow the seed thinly, quite on the surface, no covering over being attempted. Place in a cold frame on inverted pans or pots with a view to excluding worms, cover with squares of glass, and shade heavily. The soil must be kept uniformly moist, not by waterings, but rather by partial immersion in a tub or tank of water, the one thing to avoid being the disturbance of the germinating seed. The seedlings will not make much growth, but if undisturbed will form tubers near the size of Radish seed. Such, if kept plump till next March, will be available for growing into strong plants by the time they are wanted for the flower beds.

Chrysanthemums.—If there are any bad failures in the flower garden, and the late hot and dry weather proved very trying in many cases, some of these might be made good by either planting out or transplanting Madame Desgrange and Mrs. Hawkins. Both of these varieties are very sturdy and floriferous this season, and perhaps would do better service in the flower beds than under glass. If planted in a sloping direction, the tops well spread out, and lightly pegged or tied down, either variety would form a good groundwork for a few rather tall Cockscombs. A bed or beds thus filled would rank among the most

attractive feature in a garden.



APIARIAN NOTES.

AT THE MOORS.

Four weeks have passed since our bees were taken to the Heather, but, excepting two days when the sun shone at intervals from fifteen to thirty minutes, it never blessed us with its presence for more than five minutes at a time, dense black clouds with strong winds prevailing through the day, and often the nights were frosty, the grass having more the appearance of Christmas than July and August. Bees are doing no good, but the Heather is not past yet, and with a few fine days the honey might come into it and cheer the desponding hearts of many bee-keepers. Although the experience has been disappointing and provoking, I have had some valuable lessons.

In past years it was puzzling to know the cause of dead bees at the front of many of the hives. Sometimes this arose from fighting, the robbers being attracted by smelling the honey through openings in the hive left for ventilation or being badly made. The real and worst cause, however, is swarming. The bees of one swarm, often with many queens, divide themselves into clusters over a number of hives, and, entering them, slaughtering as often as not takes place; the queens escaping injury cause a swarm to issue and repeat the disaster over other hives. When the bees of a

swarm are well received and the weather is favourable the hives rise greatly in weight. When a stray queen enters another hive and is well received piping begins and continues until one or the other is deposed, or till a swarm issues, consequent of the two queens.

I have been several times asked "if I ever heard a laying queen pipe." I have, but once only, when there were none but herself in the hive. At the present time I have four laying queens piping, answering the call of the usurpers, and one has piped for two weeks. If bee-keepers become impressed with these facts, giving no heed whatever to the advice given on how to prevent swarming, they will find the work more enjoyable as well as profitable. In addition to the above cases, I have three hives that swarmed a month since. I excised all the royal cells at the proper time, yet others were raised and the operation had to be performed a second time, swarming being repeated, the cause in every case being a fertilised queen laying and in the hive at the same time as her rival sisters.—A LANARKSHIRE BEE-KEEPER.



*All correspondence should be directed either to "THE EDITOR" or to "THE PUBLISHER." Letters addressed to Dr. Hogg or members of the staff often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Bee subjects, and should never send more than two or three questions at once. All articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post, and we do not undertake to return rejected communications.

Border Carnations (Laing & Mather). — The box of blooms arrived as we were preparing for press. We can only say they are bright and beautiful. Lady Nina Balfour, blush pink, shows to advantage in good company by the breadth of petal, while the blooms diffuse refreshing fragrance.

Seedling Violas (W. Reid).—The flowers, as Violas often do, arrived with the petals curled. They appear to lack substance, and we should scarcely think the varieties possess any great commercial value, though others may be raised from them worth exhibiting at one of the leading Pansy and Viola shows.

Plants for Exportation (Quintero).—Fruit trees, Roses, and various kinds of plants are successfully transported over longer voyages than you mention by nurserymen who engage largely in an export trade, and they know the best time to send and the right methods of packing to adopt. A few losses must naturally be expected and duplicate plants ordered accordingly.

Fish Manure (F.C.).—The question you ask scarcely permits of a definite reply. Possibly the raw fish might give the best results in a dry season. We should prefer to invest in chemical manure obtained with the essential elements guaranteed, especially for Tomatoes and Vines. Why not, as you have an opportunity, determine the question by experiment? No other method is so good.

Irish Peach Apple (J. B.).—This Apple is more prone than many others to bear at the end of the branches, and it is not, as a rule, wise to shorten these after a sufficient number have been obtained for forming a bush or tree. Generally pruning should be limited to thinning out the least promising parts now to admit light and air to the remainder and thus improve them for bearing.

Fruit for Profit (An Enthusiast).—The Apple trees should have the ground to themselves as bushes or low standards, and 800 trees per acre is far too many as a permanency. They should be 12 feet apart, and that is 302 trees per acre. The trees of course could be planted in the first instance 6 feet apart, and at the end of six years every other row and tree could be transferred to other ground. Plums may be grown as standards with Gooseberries, Currants, and Raspberries between them, and they will bring in good returns so long as they are worth keeping—say a dozen years—then it is better to rely on the Plums alone. There is every reason to anticipate that the demand for fruit will increase, and first-class Apples are likely to realise a remunerative price for some time to come, but inferior fruit will be a drug in the market. Apples grown on the Paradise stock are usually preferable to those from trees on Crab. The produce per tree and consequently acre

depends on the distance, variety, soil, season, and management, so that no estimate can be given. "Profitable Fruit Growing" may perhaps be useful to you, and may be had from this office for 1s. 3d. by post.

Tomatoes Spotted (A. A. B.).—The specks on the fruit appeared to be caused by the fungus Cladosporium lycopersici, but on examining them we found no fungal bodics, and though the epidermal tissues are destroyed to the extent of the scabs, the cells beneath are large and singularly healthy. You will notice that the extremities of the plants, notably the younger leaves, are yellowish, that spots or blotches appear on the stems and older leaves, especially the leafstalks, and that the evil begins at the extremity of the plant and descends to the roots. The disease is called chlorosis, and is believed to be due to imperfect nutrition. It has been recommended to use dressings containing kainit, nitrate of soda, superphosphate, and iron sulphate, but little benefit has been derived from any of them after the disease has developed, and it is hardly likely that scabbing will be prevented by applications at the roots. We should like to see examples later in the season, with a view to affording further information.

"Blind" Chrysanthemums (W. Wells).—Many hundreds of plants have been injured this year by a small weevil-like creature lurking in the points and piercing the soft portion near the apex, thereby causing distortion and blindness. You appear to have caught the enemy at work, but the specimens you send are larger than any we have seen, and may or may not be a different species. At the present moment we have not examples of both forms for examination. The matter is, however, of small moment in comparison with finding the means of preventing the injury, and we know of more than one large collection of plants saved from "blindness" this year by lightly dressing them twice a week with tobacco powder. This is simple, and has proved effectual. Try it, and let us know the result in your case. We may add that the name of your insect is Systellonotus triguttatus, the winged form being males, the others females, and both, as you have found, remarkably active.

Proposed Vineries on Shale (Pitt Hill).—The shale being of the carboniferous formation, weathers, as you say, into a plastic clay, and naturally produces Heaths and Sedges, but it does not contain anything of a deleterious nature likely to injure Vine roots; indeed, it is doubtful if they would penetrate it. When burned, as you are no doubt aware, it forms excellent material for walks and drives. The bottom of the intended border should slope to a drain, being made firm and even, and that must have proper fall and outlet, which will be easily effected in your case, and will to some extent aërate the border as well as render stagnation from water impossible. This is a vital point, especially if you leave the clay in, which we should do, using 9 inches thickness of brickbats, and over these 3 inches thick of mortar rubbish from an old building, freed of pieces of wood; then the good loam and turf on top, well mixed with such additions of turfy loam as you may command to make a depth of about 30 inches of good soil. It would not be desirable to rely on the shale for drainage.

Insects Infesting Lettuce Roots (R. P.).—The insects belong to the family of aphides, and the group that lacks the two tubes so conspicuous in the others on the hinder segments of the back of the abdomen. There are two species hurtful to Lettuce—Pemphigus fuscifrons and P. lactucarius, the last being usually the more common and destructive, forming the fine cottony filaments secreted from the bodies of the insects, which line the cavities hollowed out of the soil between the roots, more plentifully than the other. It is difficult to propound a preventive, as the attack is not suspected until leaf-flagging indicates injury to the roots. Drenching the ground with soapsuds round the plants is beneficial, especially if half a pint of tobaceo juice is added to 10 gallons of soapsuds. The latter must not contain bleaching powder, but ordinary soapsuds from laundries, containing soap and soda only, are safe. Lime water is also obnoxious to the insects, using 1 lb. of quicklime to 3 gallons of water, stirring well, and then let stand two or three days, in which time pour off the clear water and soak the ground with it. After the Lettuces are cleared off give a good dressing of lime and soot, and dig in with a fork.

Propagating and Wintering Heliotropes (York).—The present is the exact time for establishing a stock of Heliotropes for flower beds next summer. Cuttings strike with great freedom in a close warm frame or case, temperature 60° to 70°. We take them from plants in the bods, choosing well-exposed growths, not too soft nor yet hard, but crisp when cut. The extreme tips are often too soft and are then removed, and if they produce flower buds these are cut off. They are inserted an inch or more apart in a firm layer of sifted sandy soil, surfaced with pure sand, on an unsifted loamy mixture, this a little more than half filling the pots, and the whole well watered before the cuttings are taken. These are made about 3 to 4 inches long, the lower half or a little more divested of leaves, the work of preparation, insertion, and removing them to close quarters being done quickly to avert any flagging of the leaves. A light sprinkling is given to settle the sand round the stems, and the requisite shading and moisture are provided to keep the leaves fresh. In the course of a few days they will remain fresh with less shading, and air and light in gradually increasing quantities must be admitted until the plants will endure full ventilation and bright sun, both of which are essential for hardening their tissues. With plenty of space available in a light house in which a winter temperature of about 55° could be maintained, we should establish a

sufficient number of the young plants separately in 4-inch pots, and these with good attention would be in splendid condition for bedding next season. Failing the requisite space we should insert five cuttings in $3\frac{1}{2}$ -inch pots and expect every one to grow, then winter the plants in these pots. Early in the year we should transfer them without division to $5\frac{1}{2}$ -inch pots, and they would afford abundance of cuttings for striking in heat in the spring, and these would make excellent plants by the end of May. From six pots of cuttings, and with suitable cultural conveniences, 300 plants could easily be raised by the time required for bedding out, and it would be no great task to have twice that number. It is to be remembered that Heliotropes cannot be kept healthy in cold greenhouses from which frost is only just excluded, and the temperature should rarely fall or not long remain below 50° in the winter.

Fungus on Her Majesty Rose (F. J.).—The disease on the Rose shoot is not orange fungus, for that is bright orange. The shoot of Her Majesty Rosc sent by you is infested with the ordinary Rose mildew, and forms a felt-like coat over the young wood, living on the outer surface of the eells of the infested parts. This stage of the fungus is known as Oïdium leucoconium; later, dark brown or black specks appear seated amid the felting and spring from the same arachnoid or web-like mycelium. These bodies are the "fruits" or resting stage of the fungus, and by these the parasite survives from year to year, for the spores of the first stage cannot survive the rigours of a severe winter except under glass, where the resting conceptacles are seldom produced, and the mildew is much easier destroyed or arrested in its growth. But the mildew infesting Roses under glass is a different species, and we should be obliged if anyone noticing blackish and roundish specks among the mildew on Rose trees under glass would forward specimen. The dark speck stage of the fungus on your Rose is scientifically called Sphærotheca pannosa, and in that form the fungus is practically indestructible. Remedial measures must be directed to subduing the mildew in its earliest stages. This Mr. Bardney effected under glass by syringing the trees with a softsoap solution occasionally, and it has been found equally efficacious outdoors. The syringing itself unseats the spores, and the potash of the softsoap destroys the mycelium, and renders the leaves for a time proof against the spores. About 1 oz. of softsoap to a gallon of boiling water, thoroughly dissolving, and when as cool as the hand can be borne in it for a minute, applied with a syringe, is effectual when taken in time, upon the first appearance of the disease. Another good remedy is to slake a pound of fresh quicklime in a copper, adding a pound of flowers of sulphur and a gallon of water, and boil for ten minutes, constantly stirring whilst it is boiling, then allowed to settle; the clear liquid is poured off and placed in a stone bottle, kept well corked in a dark place. The plants should be syringed with a 1 per cent. solution of this preparation—that is, half a pint to six and a quarter gallons of water.

Mealy Bug on Vines (A. J.).—By the means mentioned in our last issue the Grapes may be made passable for table—that is, those not coated with the filthy secretion of the insects and become black with fungus. It would be desirable to facilitate the clearing of the Vines as much as possible, for there is nothing you can well do until the crop is off. Immediately that is effected cut away all the laterals and as much of the young wood as can be spared—that is, shorten the bearing shoots to about six or eight leaves of their base, so that if fresh growth is made the pruning buds will not be started. Burn all the trimmings, and syringe the Vines thoroughly, wetting every part of the house, with a mixture of a wineglassful of petroleum to 4 gallons of water, the oil being forced into the water by driving a syringeful of the mixture into the vessel and the next over the Vines, and so on. The syringing is best done in the evening of a calm day, and the house closed. Repeat every other day for a week twice the following week and once a every other day for a week, twice the following week, and once a week afterwards until the leaves fall, collecting and burning them. Prune as soon as the leaves are all down, and burn the prunings. strip the Vines of any loose bark, not peeling them into the quick, and thoroughly wash with a solution of softsoap, 3 ozs. to a gallon of water, adding one teaspoonful of phenyle, mixing well, applying with a brush, and reaching well into every hole, angle, and erevice, taking care not to damage the buds. Thoroughly cleanse the house, the woodwork and ironwork with water, softsoap, and a brush, the glass with clean water, and limewash the walls. Remove the surface soil, and supply fresh loam in its place. If eare is taken not to introduce plants with mealy bug into the house, or it does not adjoin another in which plants are grown infested with it, we do not think you will be further troubled, but it is a good plan to syringe the house before starting the Vines with the petroleum mixture. If you cannot procure phenyle of a chemist, dissolve 3 ozs. of softsoap in a gallon of boiling water, pour into a 2-gallon stone bottle, add a wineglassful of petroleum, cork and churn, moving up and down or to and fro with the hands for fifteen minutes, then pour out a little and apply as before stated but and but the little and apply as before stated but and but a little and apply as before stated but at the little and apply as before stated but at the little and apply as before stated but at the little and apply as before stated but at the little and apply as before stated but at the little and apply as before stated but at the little and apply as before stated but at the little and apply as before stated but at the little and apply as before stated but at the little apply as the little apply as before stated but at the little apply apply as before stated but at the little apply apply as before stated but at the little apply apply as before stated but at the little apply apply apply apply as before stated but at the little apply app then pour out a little and apply as before stated, but not hotter than the hand can bear.

Names of Plants.—We only undertake to name species of plants, not varieties that have originated from seed and termed florists' flowers. Flowering specimens are necessary of flowering plants, and Fern fronds should bear sporcs. Specimens should arrive in a fresh state in firm boxes. Slightly damp moss, soft green grass or leaves form the best packing, dry wool the worst. Not more than six specimens can be named at once, and the numbers should be visible without untying the ligatures, it being often difficult to separate them when the paper is damp. (W. A.).—Hæmanthus coccineus.

COVENT GARDEN MARKET,-AUGUST 9TH.

Heavy supplies to hand with trade quiet.

FRUIT.

			s.		1			d.	s.	d.
Apples, per bushel	1	0	to 6	0		Grapes per lb	 0	9 1	to 2	-0
" Tasmauian, per case	0	0	0		Ì	Lemons, case			15	
" Nova Scotia, per					ł	Oranges, per 100	 4	0	9	0
barrel	0	0	0	0		Peaches, per doz	 1	6	8	0
Cherries, half sieve	0	0	0	0	1	Plums, per half sieve	 1	6	2	6
Filberts, per 100 lbs	30	0	35	0		St. Michael Pines, each	 2	0	5	0
Gooseberries, half sieve	0	0	0	0	-	Strawberries, per lb	 0	0	0	0
			7777	~		77.70				

VEGETABLES.

	в.	d.	s.	d.	s. d. s. d.
Asparagus, per bundle ()	0 to	0	0	Mustard and Cress, punnet 0 2 to 0 0
Beans, Kidney, per lb ()	3	0	4	Onions, bunch 0 3 0 5
Bect, Rcd, dozen	L	0	0	0	Parsley, dozen bunches 2 0 3 0
Carrots, bunch)	4	0	6	Parsnips, dozeu 1 0 0 0
Cauliflowers, dozen		0	3	0	Potatoes, per cwt 2 0 4 6
Celery, bundle		0	1	3	Salsafy, bundle 1 0 1 6
Coleworts, dozen bunches			4	0	Scorzouera, bundle 1 6 0 0
Oucumbers, dozen	Ĺ	6	3	0	Seakale, per basket 0 0 0 0
Eudive, dozeu	Ĺ	3	1	6	Shallots, per lb 0 3 0 0
Herbs, buuch)	3	Ō	0	Spiuach, bushel 8 0 0 0
Leeks, bunch)	2	0	Ō	Tomatoes, per lb 0 3 0 6
Lettuce, dozen		9	i	0	Turnips, bunch 0 4 0 6
Mushrooms, punnet (9	ī	Õ	

AVERAGE WHOLESALE PRICES.—CUT FLOWERS. Orchid Blooms in variety.

	s.	a_{ullet}	s.	Q.	(s.	u.	s.	a.
Arum Lilies, 12 blooms	2	0 to	4	0	Mignouette, 12 bunches	2	0	to 4	0
Asters (French), per bunch	0	9	1	3	Myosotis, dozen bunches	1	6	3	0
Bouvardias, bunch	0	6	1	0	Orchids, per dozen blcoms	3	0	12	6
Calceolaria, dozen bunches	4	0	6	0	Pelargouiums, 12 bunches	6	0	9	0
Carnations, 12 blooms	1	0	3	0	Pelargoniums, scarlet, doz.				
Carnatious, dozen bunches	4	0	8	0	bunches	3	0	6	0
Chrysanthemums, dozen					Primula (double) 12 sprays	0	9	1	6
bunches	4	0	6	0	Pyrethrum, dozen bunches	2	0	6	0
Cornflower, dozen bunches.	1	0	2	0	Roses (indoor), dozen	0	6	1	6
Eucharis, dozen	3	0	4	0	" Red, doz. bunches	4		8	0
Gardenias, per dozen	2	0	4	0	" Tea, white, dozen	1	0	2	0
Lilium laucifolium, dozen					, Yellow, dozen	2	0	4	0
blooms	1	6	3	0	Stocks, dozen bunches	4	0	8	0
Lilium longiflorum 12					Sweet Peas, doz. bunches	2	0	4	Q
blooms	2	0	4	0	Sweet Sultan, per dozen				
Maidenhair Fern, dozen					bunches	3	0		0
buuches	4	0	6	0	Tuberoses, 12 blooms	0	4	0	6
Marguerites, 12 bunches	2	0	4	0					

PLANTS IN POTS.



FARM ORCHARDS.

BARREN TREES.

Why are barren trees so often left uncared for, and old worn-out trees not cut down? Because the orchard has been regarded as a mere adjunct to the homestead, a handy enclosure for calves or a sick horse, or any casual animals—a useful paddock in point of fact, the rent of which is obtained from the grass growing under the trees rather than from the fruit upon them. If proof were wanted that it may be more—very much more than this—we might point to the Kent Cherry orchards, where the grazing is let to the resident tenant, and the fruit crop is sold for the landlord by annual auction to the highest bidder. The Cherry crop is so valuable, that though the land on which the trees grow is let, the right to the fruit is retained by the landlord, just as is the right to minerals. To him often enough the fruit is something like a gold mine. Would that the crop of an ordinary farm orchard

were so regarded by the tenant at whose disposal they are, for then no quarter would be given to barren trees, they would either be rendered fruitful or have to give place to other trees.

But we may be told that barrenness, or in other words crop failure, frequently occurs from the destruction of the blossom. It does, and yet this might often be prevented if only due thought were given to the provision of shelter when the trees are planted. A sheltering belt of Lombardy Poplar mixed with Austrian Pine, with an inner line of Myrobellan Plum is a necessity for every orchard at all exposed to wind from the north-east or south-west. It is these cross winds which play havor with the crop. The first in spring, when its icy breath destroys in a single blast the hope and promise of a year; the last in autumn, when the fruit is swept from the trees on the wings of a furious sou'-wester. Last year we were asked why a certain Apple tree had never had a crop of fruit during the eight years of the farmer's tenancy; yet we were told it was full of blossom every year. The tree was evidently in perfect health and full vigour, and root-pruning was our first thought. But a careful survey of the surroundings showed the possibility of cold cutting winds from the north-east past an angle of the farmhouse right on the tree. Our suggestion of an attempt to break the force of this wind by means of a wall screen during blossom time was acted upon this spring, with the gratifying result of a capital crop of fruit now.

Another cause of crop failure is undoubtedly attributable to the planting of so many sorts of Apple of a shy-fruiting habit, and of Pears unsuitable for the climate. "Fifteen years ago did I plant that Blenheim Pippin," said a worthy farmer to us when we were inspecting his orchard, "and it has never yet had a crop of fruit." Well, it is a grand Apple, and worth waiting a while for, but there is a limit to waiting, very much inside fifteen years; life is too short for that, and we should certainly have shortened the branches and re-grafted that barren tree with one or other of the bold and constant fruiters long ago. Too much stress cannot be placed upon the judicious selection of sorts, in doing this something more is required than the mere sight of a tree heavily laden with fruit. On the day before writing this article we saw three fine standard trees in an old orchard bearing a heavy crop of Blenheim Pippins, and we were told that this was the third consecutive heavy crop they had borne. Yet we dare not recommend it for small orchards, because it is notoriously a slow and often shy bearer, and there are plenty of sorts with as fine if not as handsome fruit which yield early and continuous crops. It is for this all-important reason that preference is given to such sorts for orchard planting as Keswick Codlin, Potts' Seedling, Ecklinville Seedling, Warner's King, Lemon Pippin, Golden Noble, Duchess of Oldenburg, Beauty of Kent, and Bramley's

All worthless sorts, barren or otherwise, should be got rid of, and in making arrangements for replanting at leaf-fall in autumn a few select sorts only should be planted. If the intention is to sell the fruit then about six sorts would be ample, planting several trees of each, and planting so well that there may be no doubt about the future of the trees. We shall probably have something more to say about sorts before planting time.

WORK ON THE HOME FARM.

The cutting of winter Oats and Rye has this year been quickly followed by the general harvest, which has not been seriously hindered by wet weather, though heavy showers of rain have been frequent, as the fresh green herbage of pastures everywhere shows plainly enough. Stubble Turnips, Trifolium incarnatum, and Italian Rye Grass are being sown exceptionally early, and second growths of Clover are much more abundant than the first growth was. Thin crops of late sown Oats had much better be used as green forage, or for silage, than be left late upon the ground to ripen. We have seen some fields of both Oats and Barley where the ripening is so uneven, that among Oats especially there must be a serious loss of corn before the grounds and Barley the grounds are serious loss of corn before the grounds are serious loss of corn before the grounds are serious loss of corn before the grounds. be a serious loss of corn before the crop is saved. It is practically two

crops, and if only required for home use would be turned to best account for silage, but we fear this is too much to hope for where ensilage has never been tried.

Root crops have improved wonderfully during the last two or three weeks. Seed which lay dormant in the soil during the drought sprung into growth of marvellous activity with the first heavy shower, and growth has continued with such rapidity that Mangolds, Swedes, Carrots, and White Turnips have rushed up so quickly that plant-thinning could hardly be got over fast enough. We have seen some thin crops, some half failures, but on the whole the root crop bids fair to be one of much greater abundance than at one time seemed possible. The drought has shown us many weak points in the water storage of several farms. This is an important matter which must have attention this autumn, both for the convenience of tenants and for the actual improvement of property. It is possible to accumulate enough water for summer requirements in most meadows by means of land-drains and ditches, as well as by a regular watercourse. It is simply a matter of soil excavation and in some instances of clay puddling for a dam.

THE FIELD VOLE AND ITS NATURAL ENEMIES.

THE Board of Agriculture, in view of the great injury committed by field voles (often spoken of as mice) in Scotland, have issued extracts from the report of the Committee that was appointed to investigate the subject. Illustrations are given of the short-tailed vole (Arvicola agrestis) and of the long tailed field mouse (Mus sylvaticus), as well as of their natural enemies the short-eared owl, kestrel, sparrowhawk, stoat, and weasel.

The Departmental Committee recommend that strict injunctions should be given by landowners that the birds mentioned should not be destroyed. Their presence in full numbers, though inadequate to avert an outbreak of voles, would undoubtedly tend to mitigate it, and as has been proved in the case of the short-eared owl, they have the faculty of multiplying abnormally in presence of an unusual supply of food. They are, at all events, most useful allies to man in combating attacks of ground vermin.

The Committee deprecate in the strongest manner possible the use of the pole-trap for the capture of hawks. Besides the inhumanity of this device, it is indiscriminate, and harmless owls, kestrels, and buzzards are just as likely to be taken by it as are the more mischievous species.

While admitting that it is hardly reasonable to expect that stoats should be allowed to multiply in game-coverts, or in the vicinity of pheasant coops, the Committee have no hesitation in recommending that weasels, which are persistent mouse hunters, and do little damage to game, should not be molested, at least in moorlands and hill pastures, where they can do little harm and much good.

PAMPHLET ON DOGS .- From Messrs. Spratt & Co., Bermondsey, we have received a copy of a pamphlet written for them by Mr. Gordon Stables, M.D., R.N., entitled "The Dog from Puppyhood to Age." It is excellently illustrated, and lovers of dogs will find in it a vast amount of useful information. The writer is widely known as an authority on this and kindred subjects, and his name may safely be taken as a criterion of merit. The price of the publication is 4d.

METEOROLOGICAL OBSERVATIONS.

CAMDEN SQUARE, LONDON.

Lat. 51° 32' 40" N.; Long. 0° 8' 0" W.; Altitude, 111 feet.

DATE.			9 A.M	•						
1893.	meter o, and Level.	Hygro	Hygrometer. Direction of soil perature. Temp.					Rain.		
July & August.	Barom at 32°, Sea Le	Dry.	Wet.	Wind.	at 1 foot.	Max.	Min.	In Sun.	On Grass.	
Sunday 30 Monday 31 Tuesday 1 Wednesday 2 Thursday 3 Friday 4 Saturday 5	Inchs. 29.868 29.883 29.998 29.855 29.870 29.734 29.858 29.867	deg. 62·3 60·1 59·9 65·0 64·2 64·5 64·1	deg. 58.0 53.7 53.6 58.7 59.2 60.1 56.9	N.W. W. N. W. S.W. S.W.	deg. 62·1 61·3 60·8 61·4 61·7 61·9 60·8	deg. 69·4 69·3 69·4 72·2 68·1 73·3 71·4	deg. 54.8 49.6 47.9 57.4 54.8 59.9 53.9	deg. 125*4 117*0 118*6 119*0 95*4 1*2*1 119*7	deg. 54·2 46·6 43·8 56·9 50·9 59·7 50·2	Inchs. 0.033 0.106 0.103 0.783

REMARKS.

30th.—Rain in small hours; much suushine during the day, but cloudy at times, and a heavy shower at 0.30 P.M.

1st.—Breezy and sunny, with cloudy intervals and occasional spots of rain.
1st.—Alternate cloud and sunshine, the latter greatly preponderating; rain after

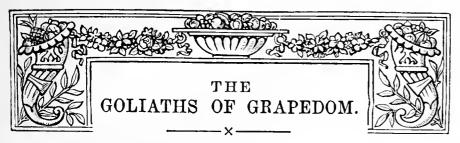
11 P.M.

2nd.—Rain till 4 A.M.; cloudy at times in morning; brilliant afternoon and evening.

3rd.—Generally overcast and windy; occasional gleams of sun; rain at night.

4th.—Rain till 3.3) A.M., then overcast till noon, followed by sunshine till 1.30 P.M.; thunder storms in afternoon with heavy rain 0.48 inch falling in twelve minutes at 3 P.M.

5th.—Brilliant from sunrise to 11.30 A.M., frequently cloudy after.
An unsettled week, with a rather heavy thunderstorm on the 4th. Temperature slightly below the average.—G. J. SYMONS.



T is not for the sake of Biblical comparison that the great Vines to which a passing reference is about to be made are described as the Goliaths of Grapedom. They are not dangerous monsters, calling for destruction from the sling of some horticultural David, but, on the contrary, are looked upon with admiration and pleasure as examples of cultural skill, and of the inherent vigour of the world-renowned fruit. Truly the Vine is a plant of generous strength and large endeavour, loving to stretch its limbs freely, and to forage unrestricted in the earth and in the air Circumstances compel its restriction in many places, but when unfettered and unconfined there are many remarkable examples of its capacities for self-development.

"Men like big things," said the late "Single-handed" in one of those communications which were the delight of Journal readers a few years ago, and in tones of gentle reproach he went on to deprecate the neglect which fell upon many small gems of the flower world through the attention devoted to larger objects. He did not make any direct reference to Vines, and probably did not have them in his mind when penning the lines from which I have. quoted. And indeed there would have been no grounds for using them as another illustration of the accuracy of his observations In the vast majority of cases in which Grapes are cultivated no attempt is made to strive for the production of giants, but rather a restrictive system is pursued in order to provide for the inclusion of a number of varieties, and it is only under exceptional circumstances that huge Vines are grown. Nevertheless, it would be beside the fact to deny that gardeners as a body take a deep interest in every specimen of extraordinary development. The man who only grows table Crotons does not withhold appreciation from 8 feet giants if they are satisfactory in health, cleanliness, and colour; nor does the kitchen gardener, whose Onions are only 8 to 10 ozs. weight, fail to inspect $2\frac{1}{2}$ -lb. examples with admiration when he sees them exhibited. Strange, therefore, would it be if, in the case of a fruit in which so much interest centres as the Grape, special attention were not paid to the wonderful Vines which are dotted here and there over the gardens of the country. They occupy a position which gives them prominence over those that are only of ordinary dimensions. They are, so to say, the reigning family of the Grape nation.

Journal readers have heard something about the great Vines at Manresa House Roehampton, Speddoch, and Cumberland Lodge, and now I should like to say a few words about another giant, not perhaps so remarkable in some respects as they, but still a noble and noteworthy example. This is the Black Hamburgh at Silwood Park, Ascot, the residence of Thomas Cordes, Esq. A recent note from his gardener, Mr. T. Grant, led to a visit, which I considered well repaid by an inspection of what is, without doubt, one of the finest Vines in the country. The respect that is promptly accorded to a man who claims to have read every number of the Journal for a quarter of a century is increased by a survey of the famous Vine under his charge. If any hypercritical person desired further proof of Mr. Grant's intelligence and discrimination than the fact noted, he would find it in a garden that is well managed in every way, and in a Vine that is not only of exceptional dimensions, but is in the best of health, and carrying a splendid crop of fruit.

The Silwood Vine occupies a lean-to house 128 feet long and

No. 686.-Vol. XXVII., THIRD SERIES.

12 feet wide, with a height at the back of 12 feet and at the front of 7 feet. The whole of the roof is covered with rods and laterals. In some respects the Vine resembles and in others differs from that at Roehampton. To begin with, the main stem is a much more prominent feature of it. There is a clear trunk over 6 feet high with a girth at its greatest circumference of 3 feet 2 inches. To imagine an orchard standard of such dimensions is easy enough, but for a Vine it is marvellous indeed. A small boy could have quite a comfortable climb up this wonderful stem, and if left to his own devices after reaching the top would find himself in a happy hunting ground after his own heart. It forks there into two large limbs, these branching in turn into smaller ones, the rods running right and left in a line with the back wall, and the fruiting growths trained from the upper part of them. Here is where the resemblance to the Manresa Vine comes in, for with it the same system is pursued. The laterals of the Silwood Vine, like those of its great rival, are not all trained regularly nearly at right angles with the rods, but many are laid in diagonally.

The Vine is not planted in the centre of the house, but about 70 feet from the door. Seven rods run the length of the house on this side, giving a total of 490 feet, and on the left 9 rods occupy the space, giving a total of 522 feet. Besides these there are young rods laid in, chiefly on the right hand side, where the old ones are thinnest, to the extent of quite 100 feet. The total length of rod may, therefore, be set down at 1112 feet. The foliage is large and healthy; indeed, considering the age of the Vine (about which more further on), the size of the leaves is surprising. And the crop? for after all that is of the greatest importance. It is in every way a fine one. The number of bunches is \$30, ranging in weight from half a pound to 3 lbs. There is a good sprinkling of 2 and 2½ lbs. bunches, and a fair calculation is that the clusters average 14 lb. throughout, or a total of 1037 lbs. in round figures. A noteworthy feature is the large size of the berries. Many of the bunches are quite fit for showing, colour and finish being excellent. It may be noted, too, that the variety is an exceptionally well flavoured one.

It will be conceded that, however the Silwood Vine may compare with the other giants of which we hear and read in dimensions, it would be difficult to find its superior in respect to fruiting. Remarkable indeed is the picture presented by its long lines of bunches, hundred upon hundred stretching overhead. Looking from one end they seem to close up at the other into one broad blue mass of fruit. They are striking to a degree without a doubt, but they open up reflections as to the reverse side of the shield. What a task the thinning of this house alone must be! Every cultural item is carried out as conscientiously with the giant Vine as with others carrying only a dozen bunches. It is in robust, vigorous health, the leaves stout, substantial, and free from insect enemies. The Vine may be pointed to with pride not only for its extraordinary size but for its splendid condition. A unique and interesting comparison could be secured by placing the Chinaman Chang, with his 8 feet 6 inches of stature, beside the huge Vine the next time he visits England. As he is reputed to have strong horticultural tastes he would doubtless enjoy the experience.

Questions may perhaps suggest themselves as to the age of the Vine, the character of the border, and other matters. The age is not definitely known, but is believed to be from 100 to 110 years. If this be so it is quite a veteran compared with the Vine raised and grown by Mr. Davis. Unfortunately, no record of its planting exists. It is true that many cottagers know its history, but unfortunately they all tell a different story, which is rather remarkable considering that there is no doubt in any case that each is telling the whole truth and nothing but the truth about the matter. At least six of them are prepared to swear positively that the Vine was planted by his grandfather—another very remarkable fact. One would think that some of these worthies had been

No. 2342.—Vol. LXXXIX., OLD SERIES.

trained by the continental guides whom Mark Twain has told us about in "The Innocents Abroad," several of whom sold him half of a sacred relic, and others the whole of it. Under the circumstances there is room for reasonable doubt as to the real age of the Vine, and that point must be passed over undecided.

Two facts seem to show that it was first planted in association with others. One of these is that the front wall is built with arches throughout, and the other that the Vine, as already mentioned, is not in the centre of the structure. Probably it originally had companions, and these were removed one by one when it was observed that the Black Hamburgh was bent on developing into something out of the common. It is planted inside, but there is no border either inside or out. Where the roots are feeding no man knows. There are none at the surface. Probably the majority have gone into the lower strata of gravel and sand, and betaken themselves in the direction of the lake which is a considerable distance away. There is a depth of about 4 feet of soil before coming to the gravel. It is light and sandy, but has been rendered more substantial by manurial additions From the front wall of the vinery to a wall opposite there is a distance of 88 feet. This ground was originally not cropped, and the wall left bare, the argument being that the vegetables and fruit trees would rob the Vinc; but as there was a choice assort. ment of Nettles, Docks, &c., when Mr. Grant took charge, and the Vine still lived, he thought he might just as well put in something useful. The walls are now covered with trees, the ground cropped with vegetables, and Tomatoes even grown on the front wall of the vinery. The Vine seems to go on better than ever. The ground has been manured very heavily for the vegetables, and the soil thus enriched, a course which few would find fault with. On another point, however, the present grower comes into direct conflict with the prevailing opinion, and that is in relation to the burying of animal carcases in the border. He believes in it and practises it, except that instead of planting dead donkeys he generally plants dead deer. Instances have been quoted of carcases being buried in borders and years afterwards not a root found near them. This is exactly contrary to the experience of the Silwood gardener. His observation has taught him, he says, that it is quite correct so long as the mass is putrid, but that when quite decomposed the roots do undoubtedly seek and feed upon it.

Somewhat lengthened reference has been made to the Silwood Vine because it has not been previously described, and not because it is advanced as the finest Vine in Britain. There are others which exceed it in dimensions, and which perhaps produce heavier crops. The Manresa Vine, for instance, fills a house 224 feet long and 11 feet wide, and is said to cover 3825 square feet of glass. It has seven rods running parallel with the wall, like the Silwood Vine but their aggregate length considerably exceeds that of the latter amounting to 1400 feet, as against the 1112 feet of the Ascot Goliath. If anything, however, the crop is a little lighter. The Roehampton Vine, which has again been a wonderful sight this year, has carried 706 bunches, weighing 940 lbs., Mr. Cordes' giant producing 1037 lbs., and it may be said that the crop from these two Vines is nearly $17\frac{3}{4}$ cwts. of excellent Grapes. The Manresa Vine is in admirable condition, being vigorous, healthy, and clean, with grand laterals well matured and giving the best promise for another season. Both it and the Silwood Vine are magnificent examples, of which the respective gardeners may be justly proud.

The Vine at Speddoch in Dumfriesshire, which formed the subject of an able communication in the Journal last summer, is another of the Goliaths of Grapedom. It fills a house 60 feet by 20 feet, and is trained vertically instead of horizontally. Its champion made no claim for its supremacy on the score of dimensions, and as he states that its girth at the ground just below its branches is 2 feet 4 inches as against the 3 feet 2 inches of the Silwood Vine, and the house is much smaller than that covering the latter, which in turn is smaller than the Roehampton structure,

such a claim could certainly not be substantiated. When he spoke of its crop, however, he had something quite different to say. The number of bunches was "considerably over 500." This, I might remark in passing, is a somewhat loose statement; surely there was no insuperable obstacle to their being counted. Then we were told that the smallest of them could not be much less than 2 lbs. in weight, while some of the largest weighed 4 or 5 lbs. and upwards. This is very remarkable for a Vine nearly a hundred years old. The total weight in 1891 was "considerably" (vague word) "over 1000 lbs., and it was estimated that the 1892 crop was going to exceed that by 200 lbs. If it did so, if 1200 lbs. of Grapes were actually cut from the Speddoch Vine, then beyond doubt it is more remarkable than either of the others in fruiting, and it must unquestionably be a splendid Vine.

Two other giants of the Grape world are the Cumberland Lodge Vine, which fills a house 138 feet long and 24 feet wide, and the Breadalbane one, which is said to cover 4275 superficial feet of roof space, and may thus be fairly awarded the palm as the largest Vine in the kingdom. I am tempted, in the absence of any personal knowledge of it and its cropping powers, to suggest that a few notes by someone who has seen it and secured statistics would be of great interest to readers of the Journal.—W. P. W.

BAD MELONS.

"IT will soon be time to ask what Melons are grown for," observed one of the judges at a show recently. He was suffering by a surfeit after tasting about twenty fruits, not one of them even second rate in quality and most of them positively offensive. Perhaps the adjudicator was not in the most amiable mood, and he certainly could not judge another class till he banished the horrid "after taste," which made him shudder, by taking a little brandy. Some of the fruits were in a state of semi-fermentation; one seemed to have a paraffin flavour, and the other tasted as if it had been pickled in salt. To say that several were no better than Turnips would be a libel on a good old vegetable. They were not half so pleasant to the taste as a tender slice of a crisp sweet Turnip.

"What are such Melons grown for?" The majority of them could not have been made palatable even with sugar and wine. Perhaps they were grown to "look well" on the table. Three of them were presentable, the remainder miserable enough in appearance; some not half a pound in weight, others innocent of netting; some "pitted" by the nibbling of thrips or other insects that had been trying them. In a word the fruits as a whole were not fit to be seen, could not be eaten, and were entirely out of place on the exhibition

table.

The majority of the fruits appeared to be the produce of starved or exhausted plants, and if foliage had been shown as well as the fruit the former would, perhaps, have been somewhat of a revelation. It is almost certain we should have seen small apologies for leaves, some more than half scorched, others approaching tinder. We might have expected to find hungry colonies of red spider and thrips that had extracted all the sweetness they could from the plants, leaving nothing for the fruits to render them eatable; and it may be that white fleecy masses of mealy bug would not have been absent. It is perfectly certain that no such bad fruits would have been produced by plants carrying stout, clean, healthy green foliage.

Scorching, crowding and starvation ruin Melons and render the fruits of the best varieties worthless. Under good management the plants are kept growing till the fruit is ripe, the leaves being neither specked nor shrivelled, but fresh, firm, and green. Inherently good varieties are then brought out in the highest condition while the fruits of relatively inferior sorts are made the best of, these, let it be said, not being half so bad as the best sorts are under

negligent management or erroneous methods of culture.

Melon growing appears to have come to such a pass that it is hard to find sufficient fruits in a class worthy of the prizes at almost any show. It is almost becoming a surprise, as it certainly is a treat, to find three Melons out of twenty of really first class quality, fleshy, juicy, and refreshing, with a delightful aroma. Is the Melon being spoiled by searchings for improvement and the production of "Heroes" to which some hybridizer hopes to immortalise his name? or is the cultivation—as in the case of Peaches on walls in scores of gardens—becoming a "lost art?" There is something wrong, radically and glaringly wrong, about this Melon question, but whether the fault is to be traced to that ubiquitous

rogue the "weather," to loose methods of culture, or to mongrel

varieties, remains to be discovered and admitted.

So generally low has the average quality of Melons fallen that I think I may challenge any person whose duty it has been to taste, say, a hundred Melons this year for the purpose of awarding prizes, if he can say that he has found ten out of that number worth taking home as a treat to his friends? This was not always so. Melons were even better in the old "dung bed" days than many are now from modern structures. I mean the fruits as represented at exhibitions, for we may hope that high-class Melons are grown which do not find their way to shows. With those we have nothing to do; but exhibited Melons are, for the time being, public property, and sent to be criticised. Under this, in the bulk, they fail. Few, indeed, are really good, some are moderate, and many bad—absolutely bad, and no other word can truthfully express their condition. What are they grown for? To what is this great degeneration to be attributed?—The Other Judge.

THE EARLY HISTORY OF THE PANSY.

WHEN Mr. James Simkins determined to bring out his Pansy book for the encouragement of amateur cultivators, he asked me to write a history of the florists' Pansy from its earliest stage of improvement from the wild Pansy of the field. I did so, to the best of my ability, in the first edition of the work, published in 1889, giving coloured illustrations of some of our first Pansies of more than half a century since. I also wished to place on record the fact that Mr. Thompson, then gardener to Lord Gambier, Iver, near Uxbridge, was the first to take the Pansy in hand, at the instigation of his employer and his daughter, who took to their gardener some plants of the wild Pansy found growing in the fields on the estate.

In a letter from a very able and esteemed correspondent of the Journal received by me, he refers to a conversation betwixt himself and Mr. Sweet, also one of your contributors, to the effect that Mr. Sweet has had conversations with old florists about Kilbarchan as to Pansies being grown in that locality as early as 1812 or 1813, and that the improvement in the Pansy might have been carried on simultaneously in England and Scotland. The date when Mr. Thompson first took the wild Pansy in hand was 1813 or 1814, and those who wish for the information I gave as to its earliest history can find it by referring back to Mr. Simkins's Pansy book, and for a history of the Fancy Pansy to the Journal of Horticulture for July 26th 1883, written by me

of Horticulture for July 26th, 1883, written by me.

In order to try and find out if our Scottish florists really took the Pansy in hand at the time Thompson did, I have searched through volumes of Harrison's "Floricultural Cabinet" from the first volume (1833), and others up to 1840, and although florists' flowers were thoroughly discussed and their treatment and culture given through the "Cabinet," I cannot anywhere find any information as to any Scottish florists having taken them in hand at that early period, or any record of any Scottish-raised varieties.

In the volume for 1833 (December number) coloured illustrations are given of the following Heartsease—viz., Sky Blue and Yellow, in form and size that of a small Viola; Allen's Queen Adelaide, and Appleby's William IV., in which there is the first approach to a "belting" or border on the edge of the three lower petals, but of very indifferent form and with a rayed centre. In the November number of the 1833 volume there is also a coloured plate showing Maid of Athens, Prince George (an exact counterpart of Violas Vernon Lee and Rob Roy), and Thompson's Favourite, a very novel flower, about as well shaped as Viola cornuta and but a trifle larger. Coloured illustrations of these are given in Simkins' book. In this volume there is a list of seventy-six varieties of Pansies in cultivation, the raisers' names so far as given being English florists—Allen, Bryce, Brown of Slough, Bunny of Stratford, Wheeler of Warminster, and Wilmer of Sunbury. Their places of abode are not given, but as I knew all personally in my early days I am able to give their places of business. In this list is to be found Lord Gambier, Thompson's Favourite, already alluded to, and others of Thompson's raising.

In the August number, 1834, there are also coloured plates of Lucy and Sir Walter Scott, the latter a yellow ground flower with dark top petals, with a fraction of belting in each lower petal, and a small blotch on each side of the eye in the side petals, the bottom petal being rayed up to this period. The flower is always alluded to as the Heartsease in the Floricultural Cabinet, but in the volume for 1835 I find the word Pansy first used. This was even then an old name, as Shakespeare makes Ophelia say in her mad scene, "There's Pansies, that's for thoughts," and it is well known that the word is derived from the French Pensée or thought. In this volume are coloured plates of Iver Beauty, golden yellow with a distinct wire edging of cœrulean blue, a flower about the size of

Violetta, the parent of the miniatums, and could it be obtained now would send my esteemed friend William Cuthbertson, of Dobbie & Co., into the regions of delight as an immense acquisition to our Fancy Violas, for I begin to think we shall soon have to make classes for them, selfs, fancies, miniatums, and hybrid Pansies, the latter of the Pansy type, but I am not going into that subject now.

In the 1835 volume there are also coloured illustrations of Royal Crimson, yellow with a margin or belting in the lower petals, with the top petals of brownish crimson, a distinct advance towards our belted show Pansies. Iver Beauty was in all probability one of Thompson's raising. In the same vol., June number, Rollison's Princess Victoria and Marsden's King William are

figured, but still of the Viola form and without blotch.

In the July number, vol. for 1836, an illustration is given of Barratt's Seedling, straw ground colour, with a regular belting and dark top petals, but with a rayed centre, and a nearer approach to our modern show Pansy. Other seedlings figured there also showed improved form with the more distinctive character of the modern show Pansy, and from this time the Pansy went ahead in improved form and size. Mr. Barratt was a well known nurseryman at Wakefield, Yorkshire. He took the Pansy in hand as well as the Dahlia, and his grand old Dahlia Vicar of Wakefield will be remembered by many an old florist.

In June and July, vol. for 1837, eight seedlings raised by the editor, Mr. Harrison, then the proprietor of the Downham Nurseries, Norfolk, are figured, and in some of these this improved form is maintained; but all with one exception with rayed centres—that is, without the defined blotch of dark colcur surrounding the eye—and in that instance the blotch was of very primitive form.

and in that instance the blotch was of very primitive form.

I may add here that in March, 1836, in reply to a correspondent for a list of forty best sorts, Mr. Mountjoy, a celebrated florist at that time near Ealing, London, gave a list which contained twenty-four of his own raising, for he was then celebrated for Pansies, ten of Thompson's raising, and the remainder by other raisers, but not one that I can trace as of Scottish origin.

In the vol. for 1837, in the May No., a brief review is given of "A History and Description of the Pansies Known at that Time," but unfortunately their history is not given in the review in question, but the reviewer stated that at that period there were more than 500 varieties in cultivation; so then as now, far too many must have been sent out as so-called decided improvements.

In the volume for 1840 there is a coloured illustration of Silverlock's Black Knight, a very dark self, which made an immense reputation, for the flower was the first greatly improved dark self known in its fine form, medium size, smoothness and substance. I was at that time in my teens, employed in a nursery in the South of England where we grew every variety of florists' flowers of any note, and I can readily hark back to many of the old Pansies I have enumerated, Silverlock's Black Knight has very often since, and up to the present time, been referred to by me as a grand acquisition in those days. It was introduced by Mr. Silverlock of Chichester, an old and esteemed nurseryman and florist, and the business is still in existence.

The first double Pansy is referred to in this volume, and was raised by an amateur, but in old Parkinson's "Paradisus Terrestris," published in 1629, a double Heartsease is mentioned. In Miller's "Gardeners' Dictionary," 1764, it is stated that "Heartsease or Pansies grow naturally in some parts of the northern counties of England, but are generally cultivated in gardens about

London."

To those who are not well acquainted with Pansies it will be as well to mention that the term "Show" Pansies applies to our old varieties, consisting of white, yellow, or dark selfs of circular form, or to flowers with a white or yellow body or ground colour with dark top petals, a distinct margin or belting in the three lower petals, with a dense well defined blotch about the eye. Fancy Pansies, or those of miscellaneous colours not conforming to the conditions recognised in the old "Show" varieties, but both strains are used for exhibition purposes. — WILLIAM DEAN, Birmingham.

CROWDED FRUIT TREES.

Symmetrical trees, models in shape, are useless unless they produce fine fruit. We are only too familiar with well-shaped trees that are a crowded mass, with not a fruit spur in the centre worthy of the name; they are pruned annually after a fashion, but they might as well be clipped-in with the shears. Trees of whatever description they may be, whether Pears, Apples, or Plums, should have the branches so disposed that light and air can have free-access to every leaf. This is the secret of thorough development, and by no other means can the most satisfactory results be obtained. This is the time to thin out to the desired

extent all overcrowded trees. Whether they are pyramids or bushes the branches should radiate from the stem at distances of not less than 18 inches. This is no waste of space, but on the contrary a gain of fruit, where a common-sense system of pruning is followed.

I have no objection to the fruit spurs advancing somewhat further than some cultivators allow, provided these spurs are judiciously thinned. No harm is done by leaving stubby fruiting shoots from 6 to 9 inches long, if they are shortened after the fruit has been gathered. This style of pruning must be followed if we are to have good crops of such Apples as Irish Peach and Warner's King, which invariably produce bold flowers and fine fruit on those growths; and leaving them will not crowd the trees if the main branches are sufficiently far apart. The chief guide in this matter should be the size to which the foliage attains when, as now, it is fully developed. Warner's King, Betty Geeson, Small's Admirable, and Hanwell Souring (a valuable Apple on the English Paradise stock) make large leaves, and should have more room between their branches than King of the Pippins, Irish Peach, and Cox's Orange Pippin. Exactly the same rule applies to Pears, Cherries, and Plums. The branches of Pitmaston Duchess Pear need more space than those of Winter Nelis; Oullins Golden Gage needs more room than Coe's Golden Drop, and the Bigarreau race than the Duke Cherries.

All who grasp the importance of having the branches of fruit trees a good distance asunder will not allow shoots that extend to be cut out afterwards. This is right, for allowing them to grow to be cut away perhaps two or three years later is so much wasted energy. Fruit trees are often ruined through being allowed to form a strong central lead, depriving other branches of support. If we are to grow fine fruit the heads of standard or bush trees must be kept open, first by the removal of the centre, and then an equal distribution of the branches, so that the lower will have an equal chance with those that naturally assume a more upright position. Small growths and cross branches must be kept out of the trees, so that light and air can reach every part to develop

the buds and colour the fruit.

If we glance at small fruit bushes we find too many of them in a deplorable condition. Gooseberries are allowed to form a thicket near the top, and there is not the slightest chance for fruit spurs to form beneath them. They have been spoiled by overcrowding from youth upwards. By a simple process of allowing main branches to extend a foot or so apart, shortening lateral growths upon them in summer, and cutting those back to two eyes in winter, the branches become clothed with spurs which yield fine fruit abundantly. Similar remarks apply to Red and White Currants. A dozen main branches are ample for producing magnificent bushes, these branches being formed by cutting back the shoots of young trees when planted, and again the second season. After this they may extend, and by summer and winter pruning will become wreathed with fruit. Black Currants are also, as a rule, much too crowded. Old fruiting wood should be cut out now to admit light and air freely to the young and sturdy growths to render them fruitful in character. Raspberries also suffer through a thicket of growths. The canes that have fruited should be removed forthwith, also the young growths thinned and secured against breakage.

Not only are fruit trees growing in the open crowded with wood, but most of those grown against walls have far too many branches or shoots. To allow the leaves to hang one over another is wrong, as they are then either weakened or spoiled, and so must the trees be in no very long time. Healthy fruitful trees and bushes cannot be produced by defective leafage, and where overcrowding is apparent the evil should be rectified at once.-

WM. BARDNEY.

SULPHATE OF COPPER AND PARIS GREEN MIXTURES AS FUNGICIDES AND INSECTICIDES.

WITHIN the recollection of what may be termed experienced cultivators, say of half a century's practice in the agri-horticultural field, the maladies incidental to cultivated plants have increased correspondingly with the enlarged cultures, and proportionate to the spread of commerce—the interchange of seeds, cuttings, and plants between all the countries of the world. Blights, moulds, and rusts are rifer; beetles, moths, and flies have become more numerous, their grubs and caterpillars increasedly vexatious to field and garden crops.

Fifty years ago the Potato disease, caused by the fungus (Phytophthora infestans), was unknown as such in this country, the French and German vineyards had not been materially plagued by Vine mildew (Oïdium Tuckeri), and brown rot (Peronospora viticola) did not greatly devastate European vine-

yards before 1878. Kent was not alarmed by the fungus—the Hop mildew (Spherotheca Castagnei)—before 1843. The Larch fungus (Peziza Willkommi) only became serious on Larches in Great Britain in 1875. Apple scab, caused by the fungus (Cladosporium or Fusicladium dendriticum) and scab, with cracking in Pears, caused by another form of the fungus (C. or F. d. pyrinum), was not noticed as remarkably destructive to the Apple and Pear crops in this country before 1844. The Onion mildew (Peronospora Schleideniana) has only been troublesome to market gardeners and seed growers within the last few years. This plague is believed to have been introduced to the Canary Isles from Bermuda, and found its way to this country by the interchange before alluded to. The "smut" of Wheat (Ustilago segetum) and "bunt" (Tilletia Caries) have not increased for the obvious reason that measures have been taken to prevent their recurrence by steeping the seed in sulphate of copper solutions. This is particularly worthy of the attention of cultivators.

With regard to insects, their increased prevalence is notable. It is right, however, to mention that Mr. T. A. Knight expressed his opinion at the beginning of the century, that insect infestations were oftener the cause of the failure of the fruit crops than were damage from spring frosts. Nevertheless, the caterpillars of the winter moth (Cheimatobia brumata) and other moths have defoliated fruit trees in many places within the last ten years where they were not particularly destructive before. The Hop aphis (Aphis or Phorodon humuli) within the half century has grown in blight to Hops so as to reduce the crop in some years from an average of 7 cwt. to 2 cwt. per acre, but the Hop growers abandoned the predisposed cause—the atmospheric rigmarole, and placed their hopes in science and energy, by which they have or may overcome the enemy. The Turnip fly (Haltica or Phyllotreta nemorum) "eats up" the Turnip crops in some seasons, Miss Ormerod calculating the direct loss caused by this pest in 1881 at more than half a million of money. Gooseberry and Currant sawfly (Nematus ribesi) larvæ, aided by the caterpillars of the magpie moth (Abraxas grossulariata), have maintained their infestations with recurrent virulency. Mustard beetles, the "Black Jack" (Phædon betulæ) had the best of in the Cambridgeshire and Lincolnshire Mustard fields in 1884, and often since. Cob Nut and Filbert trees have been visited in Kent by the larvæ of the March moth (Anisopteryx æscularia), this pest delighting in green Gooseberries and the tender fruits of Apple, Pear, and Plum trees. But the greatest plague of all that I have seen in the half century was that of the Oak leaf roller moth (Tortrix viridina) larvæ in 1888, when they defoliated most of the Oak trees in a wood of 100 acres, and left the garden and orchard fruitless. Rooks were the only benefactors by the invasion, but the cry in 1892 was "still they come"—the multitudinous hosts of caterpillars and in their wake the rooks.

What have the gardeners and farmers of this country done to prevent and repel fungal and insectal invasions? Ever since I can remember the market gardeners of this country collected and strewed road dust on their caterpillar-infested Gooseberry and Currant bushes. That is the foundation of the copper remedies it is mentioned by Herodotus, B.C. 484, as a practice of the Egyptians, but none of our learned scientists took up the subject until our brother cultivators across the Channel - the French vineyardists—used road dust mixed with verdigris to choke off marauders both fungal and insectal. Sulphur proved efficacious against mildew - our recipes for bisulphide of calcium, also sulphide of potassium remedies are due to the French, yet the advent of Peronospora viticola in 1878 caused the French savants to direct their attention to the use of sulphate of copper mixed with road dust, the effect upon the Vines thus treated being more or less satisfactory, and it led to the trial of sulphate of copper in solution as a remedy. M. Prillieux, in 1886, reported to the Société Nationale d'Agriculture de France that "the numerous experiments made that year demonstrated beyond doubt the efficacy of salts of copper in combating the Peronospora of the Vine." M. Prillieux also intimated in 1886 that two or three experiments were made on Potatoes attacked by the Potato mildew (Phytophthora infestans), the results in consequence of the unfavourable conditions not being decisive, but likely to prove effectual. M. Millordet and M. Gayon also pursued the copper remedy with considerable energy, those experts and M. Schlesing having shown that the conidia (the spores) of the Vine mildew did not germinate on leaves treated with a weak sulphate of copper solution, also that the spores of the Peronospora viticola could not or did not grow on the under sides of Vine leaves treated on their upper surface with sulphate of copper. Experiments that were carried out in various parts of France upon M. Prillieux's recommendation have—especially those of M. Aimé Girard in 1888, 1889, and 1890 - proved conclusively that sulphate of copper is as effectual against the Potato mildew as against the brown rot of

the Vine. Similar experiments carried out in Belgium, in America, and at the Cape of Good Hope have, the reports say, been

"favourable without exception."

In 1892 the Board of Agriculture published a "Report on Recent Experiments in Checking Potato Disease in the United Kingdom and Abroad," which has been reviewed favourably in the "Home Farm" part of the Journal of Horticulture. In this "Report" there is considerable difference in the results, some being highly satisfactory, and others "worse than the disease" on account of the damage to the crop and consequent depreciated yield. That is a point we will consider presently, but I wish to impress the fact on those anxious to save their crops from fungal attacks that there is no necessity to smother the leaves of the plants by coating them on their under sides with sulphate of copper. The spores of the Potato fungus enter the Potato leaves mainly by the stomates, therefore it has been concluded that the copper should be mainly placed there. This is a mistake, for M. Schlæsing's experiments show that the copper is retained by the cuticle of the leaves, and its retention by the upper surface of the leaves is sufficient to prevent the fungus from establishing itself upon the under sides, where it first invades the Potato plant, and finally descends to the tubers. This is important, because it renders applications the tubers. made after the disease has been established effective in staying the attack and considerably increasing the crop by preserving the vigour of the plants to a much later period than would be the case were they not treated. Copper, therefore, is a preventive and curative agent in the treatment of the Potato disease.

The reason why some mixtures of copper sulphate have proved innocuous to the foliage of Potatoes, whilst similar have done it considerable injury, is solely due to a proper or improper mixture being employed. If the mixture contains no free copper, and is not too strong, it will not do any harm whatever to the tenderest foliage, but if it comprise the least moiety of free copper it will blacken every leaf it is sprayed upon in degree corresponding to the amount. Chemists are remiss in not telling us all about this; perhaps they think everybody knows as much as they do, or that only they have the right to know anything of the why and wherefore. Every schoolboy will know all about these things shortly. A correspondent last year noted in the Journal of Horticulture that his preparation of Bordeaux mixture was brown in colour, which is not unlikely, as much of the so-called sulphate of copper is largely adulterated with iron sulphate, still he found it efficacious as a fungicide; hence I conclude, rightly or wrongly, that it contained next to none of sulphate of copper, otherwise it is impossible to account for its not laying the plants to which it were applied dead and prostrate, for the brown colour of a copper solution is a clear indication of its not being neutralised by the lime. Chemists have an infallible test for the free copper in a Bordeaux mixture, namely, ferrocyanide of potassium, and it was first mentioned by Dr. G. Patrigeon in the "Journal d'Agriculture," Prat. No. 54, page 701. Half an ounce of ferrocyanide of potassium is dissolved in 2 or 3 ozs. of water, placed in a bottle and kept corked. It is not poisonous, and is a solution of the commonly called "red prussiate of potash." When it is desired to test the Bordeaux mixture for free copper a few drops of this solution is added, and if the mixture contains the least quantity of free copper it immediately gives a brownish reaction. Such mixture is not safe to use upon any plant, for it will blacken Potato tops, Tomato leaves, every thing. If there be no reaction when the ferrocyanide solution is added, the mixture or solution contains no free copper, and is perfectly safe to apply to any plant, provided the dose is not too strong, for another reaction sets in afterwards; therefore, the mixture should not be kept several days, but must be used after it is prepared, according to the formula given, as soon as

The American Bordeaux mixture always differed from the European in containing one-third less lime than of sulphate of copper, whilst the majority of the latter consisted of equal proportions of sulphate of copper and lime, the per-centage being calculated by the sulphate of copper relative to the water used. The bouillie Bordelaise used in the experiments carried on by the Royal Agricultural Society of England for the Board of Agriculture in 1891 consisted of 20 lbs. of sulphate of copper, 10 lbs. of unslaked lime, and 100 gallons of water. M. Girard frequently used a 2 per cent. bouillie—that is, 20 lbs. of sulphate of copper and the same of lime to 100 gallons of water. M. Thienpont thinks a 2 per cent. bouillie better than one of 4 per cent., and strives to hit a happy medium between his and M. Girard's 3 per cent. recommendation by a $2\frac{1}{2}$ per cent. bouillie. M. Petermann tried a 1 per cent. mixture, and recommended a 2 per cent. one. The United States bouillie varied from a 2 to $2\frac{1}{2}$ per cent. of sulphate of copper. All have reference to the Potato disease.—

(To be continued.)

A DOUBLE MONTBRETIA.

MR. W. BAIN, gardener to Sir Trevor Lawrence, Bart., Burford Lodge, Dorking, placed a novelty before the Floral Committee of the R.H.S. on August 8th in the form of a double Montbretia croeosmæficra, and its value and distinctness were recognised by a first-class certificate. Sir Trevor had it from the Continent, but Mr. Bain is unable to give any information as to its origin. Strictly speaking the form is semi-double, but the flowers are well filled, and in colour they are bright orange yellow. This promises to be a valuable addition to a useful class of plants. None of the Montbretias at present receives the attention it deserves. M. Pottsi, M. crocosmæflora, and others are

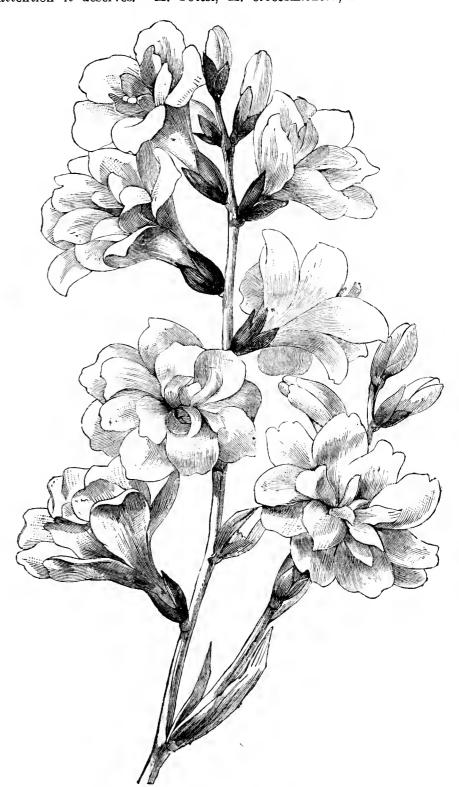


FIG. 21.—MONTBRETIA CROCOSMÆFLORA PLENA.

exceedingly useful from their free flowering nature, their distinct colours, their long period of beauty, and their ease of culture. The new variety which fig. 21 represents will serve a good purpose if it draws wider attention to the whole genus.

CADLAND PARK.

Among the many fine estates that are situated on the shores of the Solent Cadland Park stands out prominently. It is the seat of Andrew Drummond, Esq., of the well-known banking firm at Charing Cross, and is about three miles from the pretty village of Hythe, and seven miles by water and land from Southampton. To reach the mansion and gardens from the southern seaport town is a matter of taste for the visitor. Those who prefer a short but enjoyable sea trip can "cross the stream," as termed by the local "salts," by steamboat in about twenty minutes from Southampton to Hythe, starting from the town quay, which is within a short distance of the railway stations. On a fine

summer's day this is a pleasant ride. The other usual method of reaching Cadland from the point mentioned is by road, which constitutes a drive of at least seventeen miles through a charming district. The estate is a large one, perhaps the finest in that part of the country, and has a sea frontage of thirteen miles. Bordering on the New Forest it is only natural that the scenery is of a picturesque character; but it is almost impossible for anyone who has not seen it to form an adequate idea as to its beauty. It has been my lot to visit numerous parks and gardens from far beyond the borders to the south coast, but in no case have better views presented themselves than on this quiet southern resort. a plainly built though substantial edifice, having been restored in 1837, and is situated on a hill commanding a grand outlook. At the foot of the hill, or rather a series of hills, for the whole neighbourhood is of an undulating nature, lies the Solent, whose waters at the time of my visit were studded with yachts ready for the regatta. On the opposite shore stands the stately Netley Hospital, where thousands of British warriors have been invalided, and near by may be seen Netley Castle nestling amidst a clump of trees. The Hamble Cliffs and hills beyond complete a natural picture that can well hold its own with any in the country.

Time has wrought changes at Cadland Park, as it does elsewhere, and the gardens are now in charge of Mr. G. Garner, whose achievements in the Chrysanthemum world whilst at Amberwood, near Christchurch, are too well known to need further reference here. estimable and able gardener took up his abode here in April last, a busy season, and one generally sufficient to test the abilities of any man. Scarcely had he become settled than the proprietor of the estate, E. A. Drummond, Esq., died, the next heir being his eldest son, as before mentioned. This event, of course, brought slight changes, but the gardens being in excellent keeping are much as heretofore. "Fragrance in flowers and quality in fruit" is the motto at this grand establishment, and Mr. Garner continues to carry it out to a letter. In the houses strict attention is paid to the smallest detail, and as is usual in such cases, fruit of excellent quality is obtained. Peaches under glass are remarkably well grown, and notwithstanding the exceptionally dry season the trees are entirely free from thrips or red spider. This will be all the more astonishing when it is recorded that but little syringing is practised, a cool moist atmosphere obtained by constantly damping the floors being preferred. The Peach and Apricot houses are 270 feet long, lean-to structures, and have a south-eastern aspect. Trees are grown on the back wall and standards in the front, a path being between the two. The standard trees are noticeable for the large number of richly coloured fruit they carry, as well as for the healthy appearance. Of Peaches, Royal George, Sea Eagle, and Hale's Early are favourite varieties; and as regards Nectarines, Rivers' Orange, Improved Downton, Pineapple, and Spencer are most extensively grown. Apricots are trained similarly, there being standards as well as trees on the wall. Moorpark, Hemskirk, Large Red and Early are the favourite varieties. To fill in vacant space between the standard trees in these houses some plants of Sutton's Perfection, Abundance, Excelsior, and Favourite Tomatoes are trained, and these are carrying heavy crops of fine fruit.

Grapes are extensively cultivated, particularly Muscats, but owing to injudicious treatment on some former occasion, the Vines in one house are not in the best of health. To all appearances the Vines are young, are planted in very deep outside and inside borders, and the result is that shanking is prevalent to an undesirable extent. Garner noticed this defect on taking charge last spring, and after a summer's trial he has decided to take out the whole of the Vines in one house devoted to Muscats and plant fresh ones in an inside border of smaller dimensions. By adopting this method success will undoubtedly be ensured. The next vinery is a large one, in which Muscats and Alicantes are planted alternately. The latter are good, the bunches being large, and give promise of colouring well, but it has been decided to partition the structure to grow each kind by itself. It is observable here that a Vine of Muscat of Alexandria planted near a cold-water cistern does not thrive nearly so well as some of its neighbours. house composed of Black Hamburghs the Vines are healthy and bear good bunches of fruit. Some of the rods, however, are rather old, and young ones are being laid in as substitutes. The fourth vinery is also devoted to Muscat of Alexandria. The Vines are remarkably free from red spider and shanking, and moreover are producing a very fine The bunches are large in size and of a handsome shape, the same applying to the berries. Cool treatment is given, air being admitted at night, and obviously with good results. Syringing the Vines is not practised, and despite the prevalence of red spider this season not an insect can be seen on the leaves. If any signs of red spider were seen early in the scason the affected leaves were immediately sponged with softsoap and water, and hence the pest has been kept at bay. cases where shanking has appeared the Vines are induced to make all the growth they possibly can after the first pinching. This plan, evidently a good one, might with advantage be adopted by those who meet with similar difficulties. Melons are splendidly grown in pits as well as in a span-roofed house. In the latter structure the plants are carrying on an average five good fruits each, the varieties including Triumph, Sutton's A1, and Amberwood Beauty, a variety raised by Mr. Garner a few years ago. It is a handsome fruit, the result of a cross between Hero of Lockinge and Read's Scarlet, and ripens about a week carlier than the first-named variety. Cucumbers are also well grown, the plan being to sow the seed where the plants are required to grow. Strawberries are grown in pots, and about 6000 plants are standing in sunny positions to become thoroughly ripened. Contrary to the general rule, they are liberally supplied with liquid manure during the late summer and autumn, none being given in the spring whilst the fruit is ripening.

Hardy fruit forms a feature at Cadland, and at present the trees are carrying enormous crps. Figs in the open air are as plentiful as Apples are in some places, and the fruit ripens beautifully. A "Fig walk" is composed of trees planted against a wall originally, but now they form an arbour over a walk for a distance of 50 yards or so, the branches being supported by stakes. The trees are loaded with fruit of a good size and excellent flavour. Peaches on the open walls were badly blistered last spring, inasmuch as the trees are exposed to east winds. It is therefore proposed to plant choice Pears on this wall, and devote another more favourable to Peaches. This, if carried out, will be a decided improvement, and will result in the production of some fruit of the best quality. Pears on the walls are almost a failure this year, especially old trees, but standards are laden with fruit to such an extent that it has been necessary to support the branches. Marie Louise and Williams' Bon Chrêtien are especially heavy croppers here; no less than 4 bushels of fruit were picked from a medium-sized bush tree of the latter variety. Apples are fairly heavy, and the same may be said in regard to Plums, which are well represented on the walls. Coe's Golden Drop, Green Gage, Rivers' Early, Pond's Seedling, and Magnum Bonum are grown amongst other varieties. Some fine Quince trees are noticeable too, and a grand old Mulberry is producing a fine crop of fruit.

Besides fruit, the usual complement of vegetables and flowers are grown in the kitchen gardens, which are about 5 acres in extent and divided into walled-in sections. These all slope towards the south-east, and the soil being of a light nature, the drought has been severely felt here this summer. By assiduous work and judicious management, however, but few evil effects are now noticeable, and the crops are thriving amazingly. Perhaps one of the most striking features in this department is a row of Scarlet Runner Beans, which forms a division between the kitchen garden and a portion of the pleasure grounds. This row is 372 feet in length, and Beans have, it is stated, been grown in the same position for half a century. The plants this year, notwithstanding the drought, have made free growth and are yielding a good crop of This success is attributed to the fact that apart from the five cartloads of manure that were trenched into the soil in which the beans were planted early in June, copious supplies of water have been given when necessary. The little extra trouble thus involved, however, brought its reward, for whilst many are complaining of a shortness of beans, there is a plentiful supply at this establishment. Large breadths of Broccoli, Cauliflowers, Cabbages, Sprouting Broccoli, and Kale are grown, but no Seakale, inasmuch as abundance of this can be obtained from the seashore a short distance away. Asparagus thrives well and is grown on the level, the soil being as before mentioned light, and therefore suitable for this mode of culture.

In the plant houses the same cleanliness as characterises the outside departments may be observed, and every effort is made to keep up the supply of decorative plants and cut flowers. Near the entrance of the gardens, and close to the gardener's cottage, a large span-roofed greenhouse is situated in which numerous plants are grown. The roof on one side is covered with Jasmines, Heliotropes, Bougainvilleas, and the blue and white Plumbagos, P. capensis alba being especially fine. All these plants are grown similarly to Vines, being "spurred in" closely during This mode of treatment obviously suits them, for they are blossom. Cheshunt Hybrid, Niphetos, Gloire de Dijon, the winter. laden with blossom. Maréchal Niel, and other Roses are trained on the opposite side, and from these thousands of blooms are cut. Zonal Pelargoniums and from these thousands of blooms are cut. Azaleas are extensively cultivated for winter flowering, these plants being special favourites. Orchids find a place amongst the stove plants, and being healthy, will, no doubt, give a profusion of bloom later on. A number of plants of Calanthe vestita, C. Veitchi, and a piece of the beautiful Vanda teres deserves more than a passing notice. Dendrobiums, Lælias, Cœlogynes, Cattleyas, and Odontoglossums are well represented. Chrysanthemums will not be up to the Amberwood standard this year, inasmuch as when the present gardener took them in hand they were still in small pots, the stems nearly 2 feet in height, and growing on a manure bed. The plants were cut back and repotted, and being at the present time in a healthy condition, it is expected that a good supply of blooms suitable for cutting will be forthcoming. Next year we shall doubtless hear further of the Cadland Chrysanthemums, and it may not be too much to expect to see them figuring prominently upon the exhibition tables.

Conifers flourish luxuriantly in the grounds, and also in the extensive woods adjoining. Two remarkably fine Cedars are situated near the front of the house, and there are a few good specimens on the lawn. In a portion of the pleasure grounds near to the kitchen garden there is a splendid tree of the deciduous Cypress (Taxodium distichum), possibly the finest in the country. It is nearly 100 feet in height, and 14 feet in circumference at 4 feet from the ground. The flower garden proper presents a bright appearance, especially some pyramids of Zonal Pelargoniums, which, viewed from one end, appears as a hedge of blossom. Two beds, representing the Prince of Wales' Feathers, are exceedingly well done, one being filled with flowering, and the other with ornamental foliage plants. Beds of sweet-scented flowers are conspicuous, such plants as the Lemon-scented Verbena (Aloysia citriodora), Harrison's Musk, and scented-leaved Pelargoniums being employed. Roses are grown in great numbers, and the same applies to

Lily of the Valley and Carnations, the scented varieties of the last named being preferred. A grand plant, 9 or 10 feet in height, of Chamærops Fortunei, on the lawn, has stood the test of many winters, The broad stretches of green sward are in excellent condition, and the cleanliness which pervades the whole place reflects credit on Mr. Garner and his assistants.—C.

THE SPARROW AGAIN.

SOME few weeks ago we inserted several letters from, we may perhaps be permitted to say, sparrow friends and foes. We could not insert all that came to hand at that time, other subjects demanding a share of space; but as some of the communications were too good to waste they were placed aside till a convenient opportunity offered for their appearance, and now we bring up arrears.

MR. WITHERSPOON is fortunate in having sparrows of a specially good variety. He should do his level best to keep the breed pure, and make his sparrows companions and friends. He should entice them to stop at home by growing corn in a milch state, or he will rue the day when some of his birds go for their holiday, and bring back to their home some of the "scoundrel" kind, which are plentiful over all the horticultural earth.

I have in my garden a wire aviary, which contains, amongst other inhabitants, a white sparrow. The boughs of a Plum tree extend over the wirework of the aviary, and all the blossoms that fall through are eagerly snapped up by this sparrow. If he had his liberty I have not the least doubt but what he would do the same as Mr. Raillem's

sparrows, and might be shot.

Sparrows that have not previously started an establishment of their own feed their young at first on aphides, flies, and caterpillars; but they soon degenerate, and find that their young are quite as easily reared on the soft food provided for young chickens, and with the exception of now and again chasing a white butterfly, give up all the trouble and difficulty of collecting insects of any kind.

On the outskirts of this town (Lewes), and the first year I have ever known such a thing to occur, the jackdaws stripped the Cherry trees of all the fruit; in other years the starling has been the guilty party, and the rooks ate the Green Peas out of the pods in a wholesale way.-

J. H. VERRALL.

THE sparrow is becoming lower in my estimation daily. The rascals were lately caught ruining a row of Sweet Peas by pulling off the flowers. On mentioning this to the owner of the Peas he said, "Yes; they also kill my bees and eat them."

We have had many instances of the injury done by them in this country. Let us have a glimpse over the report of the American Ornithologist to the Department of Agriculture. This is his opinion :-

"The English sparrow (Passer domesticus) is a hardy, prolific, and aggressive bird, possessed of much intelligence and more than ordinary cunning. It is domestic and gregarious in habit, and takes advantage of the protection afforded by the proximity to man, thus escaping nearly all the enemies which check the abundance of our native birds. Its fecundity is amazing; it hatches from five to six broods in a season, with from four to six young in a brood. We take the sparrow as an

"1. The sparrow as an enemy of our native birds. "Of all the native birds which habitually make their homes near the abodes of man, the martin is the only species which is able to hold its own against the sparrows; and numerous instances are on record where even the martin has been beaten and forced to abandon its former nesting place by these belligerent aliens, some of the martins having their eyes picked out. Dr. B. Harry Warren writes:—'Our native birds have rapidly and steadily diminished in numbers since the sparrow came. Former plentiful residents are rare. Even transient visitants and migrants have been so pressed by the usurper that they now seem to avoid certain parts as plague-stricken spots.

"2. The sparrow as an enemy to gardeners and fruit growers.

"In addition to the indirect injury thus brought about by depriving our gardens and orchards of the protection afforded them by our insectivorous birds, the sparrow causes a positive and direct loss to our agricultural industries, amounting in the aggregate to not less than several millions of dollars per annum. The ravages done by the sparrow affect almost every crop produced by the farmer, fruit grower, and gardener, and extend over the entire year. Indeed, it is safe to say that ii now exerts a more marked effect upon the agricultural interest of America than any other species of birds, and its unprecedented increase and spread, taken in connection with the extent of its ravages in certain districts, may be regarded with grave apprehension. In the early spring it prevents the growth of a vast number of fruit by eating the germ from the fruit-buds of trees and bushes. The Peach, Pear, Plum, Cherry, Apple, Apricot, and Currant suffer most. The birds eat Green Peas as fast as they grow. They peck Apples, Peaches, and Grapes, causing them to decay upon the trees. Sparrows are worse than all the Apple

"3. The sparrow as an enemy to Grape culture.

"The Grape industry, which is one of rapidly increasing consequences in America, encounters in the sparrow an enemy second only to the phylloxera and certain fungus growths. Already in some parts of the East it has become such a scourge that Grape culture can no longer be carried on with profit, it being necessary to enclose the ripened clusters in paper bags to insure their protection. They have ruined the Grape crop almost wholly where unprotected.

4. The sparrow as an enemy to grain growers.

"Annoying and injurious as the sparrow is to the fruit grower and vegetable gardener, the loss it inflicts on the producer of cereals is even greater. Though for its permanent residence it prefers populous localities and places of abundant traffic and commotion, still, in anticipation of the harvest season, it gathers in enormous flocks, and leaving the cities and towns, moves off into the surrounding country to feed upon the ripening grain. Its consumption and waste of corn, Wheat, Rye, Oats, Barley, and Buckwheat in many parts of the country is enormous. It feeds upon the kernel when it is in the soft milky state, as well as when it has matured and hardened, and in fields of ripe grain it scatters upon the ground even more than it consumes. Instances have been reported where in the place of a full and fair crop only the straw remained to be gathered.

5. Failure of the sparrow as an insect destroyer.

"The sparrow was brought to America in the belief that it was an insectivorous bird, and with the expectation that it would devour the caterpillars which destroy the foliage of the Elm and other shade trees in the streets and parks. The utter futility of this hope has been demonstrated over and over again in cities and larger towns which are overrun with birds and caterpillars.

"Miss Eleanor A. Ormerod, in her Ninth Report on 'Injurious Insects and Common Farm Pests,' states that the sparrows drive off swallows and martins, thus permitting a great increase in flies and insects destructive in the garden and orchard. Miss Ormerod cites a case in which the destruction of the sparrow and the consequent reappearance of swallows and martins resulted in the abolishment of the insect pest.

"Mr. J. H. Gurney, junr., a well-known ornithologist, says:—1 think the sparrows do enough harm to warrant everybody to destroy them. Say one-fifth of good to four-fifths of harm is about what they do, take the country all over, though at certain times and places they do nothing but harm. I have striven to say what I could in their favour, being

naturally a lover of birds.

The destructive habits of the sparrow in Bermuda, Cuba, England, Germany, Austria, Russia, India, and Egypt, are too well known to require more than passing observations. In England alone the damage it causes has been estimated at not less than 3,850,000 dols. per annum; and in Australia the loss is much greater, as seen in the evidences collected and published by the Australian Government, that in the short space of ten days the sparrows took a ton and a half of Grapes.

What does J. Witherspoon say about these "clouds of witnesses?"-

DAVIES DUFFRYN.

AT page 484 last volume, Mr. Harrison Weir seems to think I regard the sparrow as harmless to the buds of Currants and Gooseberries. It is not the case. I am perfectly cognisant of the mischief they do in that respect; but although I have not observed them destroy Croci, I do not dispute the statements of others on the point. Mr. Harrison Weindoubts if sparrows or other birds will "eat various kinds of caterpillars." Mr. Harrison Weir Here they eat the much-detested Gooseberry caterpillar, which few birds touch, as well as the leaf rollers and other sorts. If I read and interpret his article correctly in regard to the feeding of birds, hc agrees with me on a very important point in the discussion. I know of many of the good and bad habits of the sparrow. My object in taking up the subject was to learn from others whether the good did not counterbalance the evil hc is guilty of .-- W. J. B.

MAN as the lord of creation was told to replenish the carth and subdue it, also to have dominion amongst other things over the fowls of the air. If we remember those two words "replenish" and "subduc," we shall find in them authority to remove whatever may stand in the way of man's progress in the march of civilisation, including sparrows. Fifty years ago there were more birds of prey than now to keep them in subjection.—WILLIAM SMITH.

PLATYCODON OR CAMPANULA.

THE note by "A. D." in the Journal of Horticulture of August 3rd, page 102, on these plants, and the excellent illustration on page 103, under the name of Campanula grandiflora Maricsi, lends emphasis to the remark of your correspondent, "Not very appreciable, if indeed is there any distinction between the Platycodons and Campanula grandiflora and its varieties. Possibly the distinction is found only in name, and if there be none, then the diverse appellations are misleading."

P. grandiflorum and C. grandiflora are synonymous, and much confusion is caused by the use of both names. Alphonse de Candolle is the authority for the genus Platycodon, the name of which is derived from platys, broad, and hodon, a bell, on account of the shape of the flowers. I am not acquainted with the reasons which induced De Candolle to separate the Platycodons from the Campanulas; but the most distinctive feature from the garden point of view is the inflated appearance and flattened top (I mean flat relatively to the other Campanulas) of the Platycodons. This has given rise to the popular name of "Balloon Flower." The only advantage from a flower grower's standpoint of a separation of the plants is that it is difficult to persuade the public that Campanula grandis and C. grandiflora are distinct plants in every way.

Referring to C. grandiflora Mariesi, it may be of interest to add that this beautiful variety was introduced by Mr. Maries, a brother of the nurseryman of that name at Lytham in Lancashire; and that a pure white form identical with it except in colour has been raised in Italy, and was offered for sale this year. I am not aware, however, that it has been offered by any of our British nurserymen. A white form should be of much value and beauty, and it is to be hoped that it will not be long absent from our gardens.—S. Arnott.

[Mr. E. Molyneux refers to a pure white form of Japanese, not Italian origin, on page 127, but describes the plant as growing nearly 2 feet high. Mr. George Paul's plant was quite dwarf, about 6 inches in height.]

KNOWSLEY HALL.

Knowsley Hall, the principal seat of Lord Derby, is situated about six miles from Liverpool. The beautiful park is well wooded, and is very extensive. From an architectural point of view the mansion calls for very little comment. It is very plain, with the exception of a portion which has lately been restored. Of the garden, Mr. Harrison, the head gardener, stated that it was in no sense a show place; but a hurried run through some time ago very soon made me attach little importance to my courteous guide's remark, for there was much that would have done credit to any exhibition table, even though such a large demand is made upon the garden's resources. Excellent shelter is provided by splendid plantations of trees; and even if this did not p ove sufficient, the garden is entirely walled in, so that cutting winds are quite unknown. The walls are of red bricks, and everywhere filled with the choicest of Cherries, Pears, Apricots, and Plums, which are carefully trained and give a good return for the skilled labour bestowed on them, judging by the splendid crops.

bestowed on them, judging by the splendid crops.

The first house entered was a lean-to vinery newly planted, the Vines showing every promise of building up stout canes. Then we passed through a large Peach house, from which a good crop had been gathered, on to the Alicante house where some splendid bunches were colouring very well. We next entered the Black Hamburgh house, from which part of the crop had been gathered; but there was sufficient evidence in the bunches remaining to show what excellent well coloured bunches the house had contained. The Muscat house, which is in two divisions, contained what I unhesitatingly say, as finely finished and as even bunches as anyone could wish to see, and not a trace of shanking was noticeable. Another large house planted with Alicantes, Lady Downe's, and Trebbiano presented a grand sight, not only for the heavy crops the Vines were carrying, but for the extra quality of both bunch and berry. These Vines had for the greater portion been layered, a system of which Mr. Harrison is much in favour.

The Plum house was next entered. Some trees are in large pots, and others planted out, and in each case they were carrying a good crop of fruit. What struck me most was the healthy foliage, and, what is not often seen, quite free from any curl in the leaf. No wonder that good crops result from such excellent management. These Plums fruit year after year, and seem likely to yet do many years' service. The varieties most grown are Kirke's, Jefferson, Coe's Golden Drop, Reine Claude, Victoria, Prince of Wales, Ickworth Impératrice, and M'Lachlan's Gage, the latter being highly prized. Peaches and Nectarines carrying heavy crops are grown on the back wall of the Plum house. The Fig trees were also abundantly cropped, being the leading varieties—Negro Largo, Brown Turkey, and White Marseilles. The same remark as to a crop will also answer for the Cherry house; 3500 Strawberries are grown in pots, and they were looking their best. As an early variety John Ruskin had been tried, but was not very satisfactory. Waterloo for late work is grand, and there are very few places where it is grown so well as at Knowsley. The plants are layered in their fruiting pots, and are equal in every way to those which are previously layered in

A greenhouse and stove were beautifully furnished with a choice collection of flowering and foliage plants in the best of health. In the cool Orchid house the plants were in admirable condition, and Asparagus deflexus planted alternately with A. plumosus nanus, and covering the back wall, produced a chaste effect. One special feature is the culture of the Amaryllis, and one might go many miles before meeting with such a collection as is seen at Knowsley. They number over seventy varieties, hundreds of plants, and of different ages. They have been raised by Mr. Harrison, the result of crossings between Messrs. Williams' and Veitch's best varieties. Tomatoes and Melons are well grown. Knowsley Favourite is a popular Melon, and a good one judging from the handsome fruits the plants were carrying. A number of Solanums, with some excellent Poinsettias and Centropogon Lucyanum, and other winter flowering plants, were looking healthy. A large new conservatory, built entirely of teak wood, is nearing completion, and will prove of great service in accommodating the large Palms which arc so much needed, and which were in the old structure completely cramped for want of head room.

Outside, the Stock Princess Alice, a pure white variety and much superior to the old variety, was a picture in itself, and there is certain to be a great future for it. Vegetables of every description are grown in the best manner, and the fruit room was a model of what such a structure ought to be. At the Hall business is getting settled down again since the new Earl's return from Canada. Improvements in the

gardens are certain to take place, for many of the houses are very old fashioned, and there will be a much heavier demand in consequence of the larger family to provide for. Mr. Harrison is not only a thorough practitioner, but a good botanist, also an authority on British plants, and he rendered my visit to Knowsley both pleasurable and instructive.—R. P. R.



NATIONAL ROSE SOCIETY.

THE "manifesto," as Mr. Grahame humourously calls the explanatory note recently issued by the Secretaries of the N.R.S., was, it is scarcely necessary to say, in no way intended as a "counterblast" or "jeu d'esprit." It is really wonderful what a number of diverse and interesting titles such a harmless production can have called forth. It simply contained two statements necessary to the understanding of his circular and which should by rights have been mentioned in it. Mr. Grahame accuses the Secretaries of being dilatory; he, however, forgets that his circular only reached them after the middle of the week, and that the "manifesto" in question appeared in the Journal of Horticulture of the next, and that consequently no earlier answer to it was possible.—E. M., Berkhamsted.

ERNEST METZ.

Rose growers generally will do well to note and act upon the valuable hint of the very high authority of Mr. Benjamin R. Cant re Ernest Metz. He might have gone farther back than the last six years for so good a Tea Rose. As a flower it is capable of being as splendid as any Tea grown, whilst the constitution and strong free growth are considerably better than any of them that have as grand flowers. It is even better out of doors than under glass. I have grown it both ways in numbers every year since it was first sent out.—S. S.

Rose Jottings.

To strengthen Mr. H. Dunkin's note on striking Tea Rose cuttings I may mention that last autumn I cut off the top of a Souvenir d'un Ami in a pot, and as the portion cut off was straight and had the label attached to it, I stuck it in at the side of the pot, no further care being taken of it, it rooted and has bloomed several times.

Like Mr. B. R. Cant I was surprised at our friend "D., Deal's" rather disparaging note on Ernest Metz. I humbly second Mr. B. R. Cant's opinion of its excellence. As I write a lovely bloom is near me, and it runs a chance of equalling in my esteem both Catherine Mermet and her daughter The Bride. What can one say more? If Mr. B. R. Cant had in his mind the recent election, it seemed to me, viewing it perhaps somewhat critically, rather misleading. I cannot but think these three Roses would be nearly equal—in fact like the Irishman, who, when asked if he was badly off, replied that if there was another person in the world worse off than himself they must be "about aiquil." It will be hard, I fancy, to separate these three Roses in a Tea Rose election another year, and Mr. B. R. Cant's "certificate of merit" is, in my view, most worthily bestowed. Whether Waban will dispute the "pride of place" with the trio remains for the future to settle, but it promises well.

DID the last Rose that graced Mr. D. R. Williamson's study table leave him a thorny memento? In my innocence I have always thought that par excellence the queen of flowers gave us the most lengthy return for benefits bestowed. Now Mr. Williamson, writing of the Viola, says, "I hope my enthusiasm has not carried me away; but, in the special direction of durability, can as much be asserted of any other flower?" and then he goes on to compare Roses, and talks of "their" seasons being of "short duration." Granted that the duration of beauty in each separate bloom, as he remarks, is "marvellously short lived," still in some Tea blooms it has lasted sufficiently long to allow of exhibition at three consecutive shows. I presume, however, that Mr. Williamson means that the duration of the blooming period is short; but surely we Rose maniacs, if you will, are not in error when we assert that, given favourable conditions, the duration of bloom with our favourites is acarcely equalled by any other flower. With the help of glass it is possible to have Tea blooms in spite of wintry blasts or mantle of snow, and even on some of the highest land in Somersetshire I have picked buds of Safrano in February in the open in a warm corner; and once, an exceptional winter certainly, I picked a bunch of Gloire de Dijon buds, some beautifully formed, on New Year's Day, on a wall facing the north! Take our ordinary seasons out of doors and some of our Roses begin to give us stray blooms in April, and continue in some variety to the end of October and perhaps even later. This is fairly constant blooming. I agree heartily with Mr. A. Hill Gray and say the true perpetuals are the Teas.

Compliments to "E. K., Dublin," we do not intend to be shut out. Let him take care we don't scratch him, and a Chrysanthemum cannot retaliate.—Y. B. A. Z.



EVENTS OF THE WEEK.—The coming week will not be a particularly busy one for metropolitan horticulturists. On Friday and Saturday, August 18th and 19th, the National Co-operative Festival will be held at the Crystal Palace, and on Wednesday and Thursday, August 23rd and 24th, there will be an exhibition of flowers and fruit at the Gardening and Forestry Exhibition. The Devon and Exeter Horticultural Society's Show will be held on Friday, August 18th. On Wednesday, August 23rd, the Shrewsbury Floral Fête and the Harpenden Horticultural Society's Show will be held, and on Thursday, August 24th, is the Basingstoke Show, and on August 24th and 25th the annual Show at Weymouth will be held.

- THE WEATHER IN LONDON.—For several days the weather has been oppressively hot, the temperature ranging between 80° and 90°, while on several nights it has not fallen below 70°. The heat appears to have been more enervating than at any previous time during a memorably hot year.
- A Well-won Honour.—The Queen has conferred the honour of knighthood upon Dr. Joseph Henry Gilbert, F.R.S., who has been associated for more than fifty years with Sir J. B. Lawes in the agricultural experiments conducted at Rothamsted.
- GARDENING APPOINTMENTS.—Mr. William Dancer succeeds Mr. C. Smith as head gardener to Major A. C. Little, Rystan House, Tetbury, Gloucestershire. Mr. C. Boatwright, gardener to the late Mr. E. Covell, Beckenham Place, has been appointed gardener to J. L. Bucknell, Esq., Langley Court, Beckenham.
- WHO PLANTED THE HAMPTON COURT VINE?—A statement having appeared in the "Standard" that the old Vinc at Hampton Court was planted in 1763 by Lancelot Brown (otherwise known as "Capability"), a Hampstead correspondent thus writes :- "I only know that I have always heard my late father say that the great Vine at Hampton Court was planted by an ancestor of his whose name was Robinson, and who most certainly was at Hampton Court, and that George III. presented him on the occasion with a snuff-box, which said box my father always treasured, and which I have and value. It is tortoiseshell, inlaid with silver, and very pretty. Oddly enough, it is only about three weeks since I was speaking to a cousin about the great Vine, and I said, 'Well, you know an ancestor of ours, a Mr. Robinson, planted that Vine, and I have the snuff-box that George III. gave him when he planted it.' The reply was, 'Yes, I have always understood from my father (he was own cousin to my father, and one of his names was Robinson) that such was the case,' and the remark was made that I ought to have the fact engraved on the box." From remarks in another column it will be seen that the grandfathers of some half-dozen persons are claimed as the planters of the Silwood Vine. We have seen it stated that an ancestor of Mr. Thomas Laxton planted the Hampton Court Vine.
- TUNBRIDGE WELLS AND TONBRIDGE GARDENERS' ASSO-CIATION.—The members of this Society, conducted by Mr. D. Cornwell, paid a visit to Messrs. Cannell & Sons, Swanley, on Wednesday, Aug. 9th. The company, numbering upwards of sixty, were conducted over the nursery, and many remarks of a laudatory character were let fall respecting the magnificence of the Begonias, the brightness and diversity of colouring displayed amongst the Zonal Pelargoniums, the curios in the houses devoted to Cactaceous plants, the large and beautiful collection of the now almost forgotten Verbena, and the varied hues seen in the houses of Fuchsias. From thence they went to inspect the nurseries of Mr. Phillip Ladds, round which they were very kindly conducted by Mr. Ladds, jun. Here delight was largely intermingled with astonishment at the magnitude of the operations carried on with such striking success. In the afternoon Messrs. Cannells' Eynsford Nurseries and Seed Farms were visited, afterwards journeying to the Eynsford Show, which was, very fortunately for them, being held on that day. There can be no doubt that a most enjoyable and instructive day was spent, and the thanks accorded to Mr. Cannell were hearty and sincere, nor were they undeserved, for that gentleman had been indefatigable in his exertions to make things pleasant, and admirably he succeeded.—H. W.

- FRUIT CROPS IN THE MIDLANDS.—"Observer" writes:— "So far as I can see the fruit crops in the midland counties are fairly good, and in some cases much beyond the average. Apples appear to be very plentiful, and are selling at nominal prices in local markets. Plums are plentiful, and it is with difficulty that small growers can dispose of them at remunerative prices, especially the ordinary varieties. Pears are not quite so abundant, these apparently having failed to set well"
- One dry season in the sixties Runner Beans in this neighbourhood were a complete failure, although growing strong from watering and mulching. Noticing a row in a cottage garden bearing a very heavy crop I asked the cotter how he managed his Beans. "Water them overhead, master, in the evening to set them." I did not water mine overhead but syringed them, and had plenty of Beans, and I have often since then stopped the flowers failing off by simply syringing in the evening. I am doing so now and have plenty of Beans.—Jas. Hamilton, Byrkley Gardens.
- JARGONELLE PEAR.—One of the finest and handsomest trees of this excellent early Pear I have seen was in a small cottage garden at Chessington, Surrey, very recently. The tree is probably fifty years old, very tall, remarkably well proportioned, a perfect natural standard pyramid, in the most complete health, and carrying a grand crop of fine fruit. On the upper boughs they hung literally like ropes of Onions. Autumn Bergamot, there called the "Bergamy," and Beurré Capiaumont were also fruiting wonderfully. The district seems to be specially a favourable one for Pears.—A. D.
- —— APPLE SHEPHERD'S SEEDLING.—I found this Apple represented by large old trees growing in a Surrey village the other day. Dr. Hogg, I observe, states in the "Fruit Manual" that it is identical with Alfriston. Finding it under the first appellation had led me to conclude that it was of local origin; but of course Alfriston has a national reputation. Owing to the height of the trees, and the fact that because of the drought the fruits were not of the usual size, it was difficult to determine what it was; but I daresay Dr. Hogg is right, especially as the variety is mentioned in the locality in question as a good cropper and keeper.—D.
- Cucumber Peerless.—When I was recently at the Swiss Nursery, Farnham, and looked through several houses of Cucumbers of various kinds, the fruits hanging for seed in such great quantities I thought a photograph of the houses would have been regarded as imaginary. The last house Mr. Mortimer took me into was filled with Pecrless, as sent out by Messrs. Sutton & Sons, although certificated under the name of Success. Certainly was the simile, "thou hast kept the good wine until now" here most applicable. The long fruits were of the most perfect form, wonderfully handsome, and I think for length and beauty difficult to surpass. It is a variety, however, that, in spite of the abundance of fruit, seeds most sparingly.—A. D.
- AGRICULTURAL FERTILIZERS AND FEEDING STUFFS.—The House of Commons Grand Committee on Trade have concluded their revision of the Fertilizers and Feeding Stuffs Bill, introduced by the Minister for Agriculture (Mr. H. Gardner). Sir J. Gorst presided. It was agreed that County Councils should be empowered to appoint officers to take on behalf of buyers samples for analysis of the products dealt with by the measure. It was resolved that any person fraudulently tampering with such samples should be liable to six months' imprisonment, and that the Board of Agriculture itself, as well as other parties mentioned in the measure, might prosecute under it. The Bill as amended was ordered to be reported.
- -- INTERNATIONAL EXHIBITION OF FRUIT CULTURE. -- We have been requested to draw the attention of the fruit growers to an International Exhibition, to be held by the Russian Society of Fruit Culture, under the patronage of the Czar, at St. Petersburg, in the autumn of 1894, with the object of showing the present condition of the cultivation of fruit and vege abics, of viticulture, of the cultivation of various special plants, and the manufacture of their products. The Exhibition will comprise the following sections:-1, Fresh fruit; 2, fresh vegetables; 3, dried fruit and vegetables, preserved or treated by other processes; 4, wine, cider, perry, and other fruit beverages; 5, Hops and medical herbs; 6, secds; 7, fruit trees and bushes; 8, horticultural implements and appliances, and technicality of production; 9, literary, scientific, and educational accessories, collections, plans, &c. Applications for further information should be addressed to the offices of the International Exhibition of Fruit Culture, 1894, Imperial Agricultural Museum, Fontanka, 10, St. Petersburg.

- BOTTESFORD HORTICULTURAL SOCIETY. Like many other horticultural societies, the members of above held their annual Exhibition on August 7th. It was a successful gathering, there being upwards of 600 entries in the classes for fruit, flowers, and vegetables. In every section the exhibits were of good quality and reflected credit upon the respective growers.
- EARLY APRICOTS.—Mr. B. G. Jenkins, West Dulwich, S.E., writes:—"I enclose three or four fruits from an Apricot tree I have growing on an open standard in my garden. The tree, which has not had the slightest attention, is carrying upwards of 600 fruits, all in good condition." [Shipley's Apricot is the name of the fruits our correspondent sends, the colouring and flavour of which are alike excellent.]
- HAILSTONES IN LINCOLNSHIRE.—A correspondent writes:—
 "A heavy thunderstorm prevailed in South Lincolnshire on Thursday morning, August 10th, during which hailstones of an enormous size fell. At Grantham some pieces of ice as large and as square as ordinary lump sugar were picked up. Much damage has been done in the neighbourhood to glass houses, and Apples and Pears are injured in some gardens."
- MELON INGESTRE HYBRID.—Last week in visiting the gardens at Ingestre, where fruits of all kinds are so well grown, I was much impressed with the new Melon Mr. Gilman has raised by crossing Hero of Lockinge with Countess, the result being a new variety of great excellence. The constitution of the plant is strong, and it is a free setter. The fruit is beautifully netted, of a bright golden yellow colour, skin thin, and shows no tendency to crack; flesh greenish white, and flavour of the highest type. In one house containing eight plants there were from thirty to forty ripe fruits, averaging from 3 to 5 lbs. each. This Melon was awarded a certificate of merit at the meeting of the Royal Horticultural Society, May the 9th.—ROBERT COCK, F.R.H.S.
- GRAND YORKSHIRE GALA.—At the general meeting of the guarantors and life members of the above held last week, the recommendation of the Council that the sum of £251 be handed over to the York charities was approved. The sum of £175 was added to the reserve fund, bringing it up to £2000, and the remaining balance carried forward to next year's account. The following grants were made:—York County Hospital, £50; the Dispensary, £50; Blue and Grey Coat Schools, £30; Bootham Asylum, £25; Yorkshire Society's School, London, £21; the Industrial Schools, £20; Wilberforce School for the Blind, £10; the Penitentiary, £10; the Invalid Kitchen, £10; the Nurses' Home, £10; Girls' Friendly Society, £10; Society for the Prevention of Cruelty to Children, £5; total, £251.
- JAM SHARPERS .- Some revelations made in the columns of "Food and Sanitation" seem to show that some of the smaller jam manufactories in London are badly in want of inspection by the public health officers. Good jam can be, and is, sold at a very low price, but some of the jam eaten by the poor is made of disgusting ingredients. The other day several tons of fruit, described as in a revolting state, were seized at one factory in North London. It included three vanloads of tinned Pine Apples, quite rotten, and some tons of Gooseberries, Apples, Oranges, and other fruits, as well as a lot of Onions and Walnuts, mostly putrid. A strange find was a quantity of Plum stones, dirty, as if gathered in the streets. There can be little doubt that these were intended to be mixed with so-called Plum jam, which is not made of Plums at all, but of Marrows, Apples, and other vegetable matter in a more or less useless condition. In some instances poisonous colourings are used to give the manufactured article an attractive appearance.
- GOLDEN RATHRIPE PEACH .- Mr. E. Trollope writes from Coombe Park, Reading: -- "I send a sample of Peaches gathered from a south wall, outdoors, labelled Golden Rathripe. It is a variety which I think is not generally grown, but appears to do remarkably well here. It is a good cropper, one of the finest-looking Peaches, and the flavour is much liked. We have had a wonderful crop of fruit of all kinds this year, Apricots and Plums especially. We face due south, and everything was quite a month earlier than I ever knew it." [We think the name of the Peach is incorrect, yet although the Golden Rathripe may be regarded as one of the best of the yellow-fleshed American Peaches in quality, it cannot be compared with our best established varieties. We have known more than one instance of Golden Rathripe being removed from Peach houses as disappointing after occupying valuable space for years. It may possibly be better in favourable positions outdoors, and especially, perhaps, during a season like the present one. Tastes also vary, and there may be palates to which these pasty yellow-fleshed Peaches are agreeable. The one sent is the clingstone, Pavie Jaune.]

- NELUMBIUM SPECIOSUM NUCIFERUM.—This very scarce plant, the Sacred Bean of Egypt, so rarely seen in flower, is now in bloom in one of the stoves at the Royal Gardens, Frogmore, and was an object of great interest to the Birmingham Gardeners' Association on the occasion of their recent visit. It is a tall growing species, with large bold foliage, and the flowers pure white and deliciously fragrant. It is growing in a pan of water.
- THE annual report of the ROYAL BOTANIC GARDEN, CAL-CUTTA, of which Lieut-Colonel G. King, F.R.S., is Superintendent, has been issued. From it we learn from "Nature" that all the efforts to introduce the cultivation of the Japanese Paper Mulberry have failed. As the Superintendent points out, this Mulberry yields a beautiful fibre, which is naturally so white that it requires very little bleaching, hence it seems a pity that no wealthy landowner has taken up its cultivation on a large scale.
- GRANTHAM AND DISTRICT HORTICULTURAL SOCIETY.—
 The first annual Exhibition of the above Society was held at Grantham on Monday, August 7th. Upwards of eighty classes were provided, and on the whole these were well filled, the exhibits being of excellent quality. Messrs. J. R. Pearson & Sons, Chilwell Nurseries, Beeston, Notts, sent some splendid floral designs and bouquets. Messrs. J. W. Brown & Sons, Grantham and Stamford, also sent miscellaneous exhibits, as likewise did Lord Brownlow, Sir Hugh Cholmeley, Sir J. Thorold, and others.
- Torquay District Gardeners' Association.—The first annual excursion of the above Society took the form of a visit to Taunton Show on the 10th inst. The party, consisting of eighty members, left Torquay by special train, arriving at Taunton soon after 10 A.M. Luncheon was partaken of at the George Hotel, Mr. W. B. Smale presiding. In addition to visiting the Show several of the party inspected Mr. W. H. Fowler's Chrysanthemums at Claremont, and admired the splendid condition of the plants. Taunton Castle was also visited, and the party returned home well satisfied with their day's enjoyment.
- Turning Natural Advantages to Account,—Professor Massey of the North Carolina Experimental Station writes that he can see no reason why the cultivation of vegetables under glass should not be profitable in the Southern States at points where quick transportation northward is possible. "If Boston growers can force Cucumbers at a profit by using double sashes and heavy coal bills, why could not this be done better still in North Carolina, with cheaper houses and half the expense for fuel? If Lettuce is grown at a profit with fire heat, and sent from Boston to Washington, why should not a man in North Carolina grow it at a profit when he can raise equally good Lettuce in a simple cold frame?" These remarks are suggestive, and have wide application.
- Painted Fruits.—The "Evening News" says the ingenuity of the "bird faker" who could hide russet coats under all the hues of the rainbow is being applied by Parisians in another sphere. Ingenious fruit dealers have invented a way of colouring their wares in order to improve their market value. They stain ordinary Oranges a deep red, making them look like Mandarins, which fetch much higher prices. They also tint Pine Apples to make them look more attractive, and dye the common white Strawberries a lovely red. Melons are now being treated in a similar way, and tinted a fine orange, their flavour being increased by injecting an essence of Melon. The latest development of this business is in connection with Pears, which are dyed red for a third of their size, and blue below, thus presenting the national colours when peeled. These are said to be in some demand for dessert fruit on account of their novelty.
- .-- THE NEW YORK FRUIT MARKET.—The "Garden and Forest' says -"Cherries from California seem as beautiful and abundant as they were two months ago. The varieties, Royal Anne and Black Republican, are the popular favourites. Congress Pears are coming from the same State and cost a little more than the Bartletts and Howells. Crawford's and Hale's Early are the principal varieties of Peaches which are now coming from the Pacific coast. Plums are still abundant and cheap. From the Southern States Le Conte Pears are coming of rather lower than ordinary quality. Peaches from the far southern points are becoming rare, and those from Maryland and Delaware are taking their places, and are of fair quality for early varieties. Raspberries are practically out of the market. Astrachan and Sweet Bough Apples are 1.75 dols. a barrel. Pocono Mountain Huckleberries are twelve cents, a quart. Good Gooseberries are worth two dols, a bushel. Florida continues to send Delaware Grapes and some choice Grape fruit."

- THE BIRMINGHAM GARDENERS' ASSOCIATION. - A large number of members (236) of this Association visited Windsor Castle and Frogmore Gardens on the 14th inst. They were met at the Windsor Station by Mr. Thomas, and conducted by him through the State apartments, the Terrace garden, the Albert Memorial Chapel, St. George's Chapel, and the stables. At the dinner held at the Town Hall a hearty vote of thanks was accorded to Mr. Thomas for his great kindness, also to the Rev. Canon Dalton for kindly volunteering to conduct the party through the chapels, and explaining features of interest. The famous Vine at Cumberland Lodge was subsequently inspected, and found in admirable condition, many of the bunches on the young growths being of good size and quality. The 300-acre lake Virginia Water was a great treat, and the Shaw Farm much admired. Frogmore Gardens, with their high standard of excellence, were a pleasure to see. A "grand outing" was the universal verdict, and unstinted praise was accorded to Mr. Thomas for having given so much time and personal attention to details the whole day through.

- EYNSFORD SHOW.—The Eynsford Cottage Gardeners' Mutual Improvement Society held their annual Show in Lullingstone Park by the kind permission of Sir William Hart-Dyke, M.P., the display of flowers and vegetables being a highly creditable one. Interest was without doubt chiefly centred in the special prizes offered by Messrs. Henry Cannell & Sons, Swanley and Eynsford, for a collection of vegetables grown from their seeds, to consist of six Tomatoes, six Carrots, a dish of thirty pods of Peas, four Cabbages, a dish of nine round and one of nine kidney Potatoes, three Cauliflowers, six Beetroots, three Marrows, six Turnips, thirty pods of Scarlet Runners, and nine Onions, spring sown. With the prize in this class, which was open to the various Kentish Amateurs' Societies, a silk sash was given having on it the words "Champion Vegetable Grower of Kent" in raised silk characters, also given by Messrs. Cannell. Six collections were staged, the Milton-near-Sittingbourne Society being adjudged the victors by the narrow majority of three points, Eynsford, the holders during the last year, being placed second, and the Kemsing and Otford Society a very close third. Amongst the best produce in the Milton stand were Tomatoes, Carrots, Onions, Turnips, and Scarlet Runners; the Eynsford stand being strongest with Potatoes, Peas, Onions, Cabbages, and Cauliflowers. The sash will be competed for again next year, when the competition will, it is expected, be even stronger, and the result will be looked forward to with eagerness in the county.—H. W.

- THE DINNER CONTEST AT CARSHALTON. - The Wallington Herald thus refers to this contest: - "It was evident that considerable thought had been bestowed on the subject, and that many of the dinners had not been prepared until the way in which the money should be spent had been arranged over and over again. It was noticeable that hardly any two had chosen the same joint of meat, or had prepared it in exactly the same way. Some had first made soup from the meat before cooking it, to appear on the table, others had roasted or boiled, whilst still others had had recourse to the satisfying and nutritious meat pie. The highest number of marks were awarded to Mrs. Smee (not a competitor), who had thus arranged her menu, and divided the money allowed her: Two mackerel 4d., meat pie, 9½d., Potatoes ¾d., Beans 2d., bread 1d., sweets 3d., cheese $\frac{1}{2}$ d., butter $\frac{1}{2}$ d., and vinegar and spice ½d., total 1s. 9¾d. The first prize was awarded to Mrs. Stevens of West Street, Carshalton, who had thus spent her money: Soup from beef, flavouring 1d., pressed beef 9d., Beet, Parsley, and glazing 1½d., Beans 3d., Potatoes 2d., bread 1d., Plum tart 4d., custard 1½d. Mrs. Barr took second prize, her dinner consisting of breast of mutton 11d., Potatoes 2d., Vegetable Marrow 1d., Cabbage 1d., pudding (milk rizine) 1½d., bread and butter 1½d., Apple pie 3d., cheese 1d., Lettuce ½d., and herb beer ½d., she being the only competitor who had made any allowance for the wants of thirsty Nature. Other competitors were equally ingenious, and there can be no question that this new departure has given many a bothered housewife a few ideas of what can be done with a small sum of money by the exercise of a little thought and care. It is, however, but fair to say that a good deal of doubt was expressed by many of the visitors as to the possibility of purchasing in an ordinary way the quantity of meat specified in many of the exhibits at anything like the amounts placed opposite to them, even if the purchases were delayed until the butchers were anxious to sell. Of course the value of the competition is altogether lost if there are any doubts as to the bona fides of the prices alleged to have been given, and therefore it would be well, if the class is repeated next year, if some sort of a certificate were to be required from the competitors showing that the purchases had been made in the open market, at the prices then current, and that the tradesmen had not been told what they were for."

ABOUT 150 members of the SCOTTISH ARBORICULTURAL SOCIETY have been spending a week in the south of England. After inspecting Burnham Beeches, Windsor, Cliveden, the New Forest, and Kew their tour closed on Saturday with a visit to the Gardening and Forestry Exhibition at Earl's Court. Mr. H. E. Milner, the Chairman of the Exhibition, in an excellent speech at the luncheon, thanked the Scottish Society for spreading throughout the world a knowledge of the best methods of cultivating trees. Mr. Malcolm Dunn, in responding, remarked that they had seen much to avoid in forestry, yet something good and worth remembering, not the least being generous hospitality. The Forestry exhibits were subsequently inspected and explained by Professor Curtis of Downton College. The visitors then eooled themselves at Captain Boyton's Water Show.

- THE JAPANESE APPLE.—Referring to the "Forest Flora of Japan" in the "Garden and Forest," "G. S. S." says :- "Of true Apple trees there is apparently only a single indigenous species in Japan, the Pyrus Toringo of Siebold. This is the tree which is often cultivated in American and European gardens as Pyrus Malus floribunda, Pyrus microcarpa, Pyrus Parkmani, Pyrus Halleana, Pyrus Sicboldi, and Pyrus Ringo. It is a common and widely distributed plant in Japan, growing from the sea-level in Yezo to elevations of several thousand feet in central Hondo, usually in moist ground in the neighbourhood of streams. Sometimes it is a low bush, but more often a tree 15 to 30 feet in height, with a short stout trunk and spreading branches. The leaves are exceedingly variable, and on the same plant are often oblong, rounded or acute at the apex, or broadly ovate or more or less deeply three-lobed. The fruit, which, like that of the Siberian Pyrus baccata, loses the calyx before it is fully ripe, resembles a Pea in size and shape, and in colour varies from bright scarlet to yellow. In early spring Pyrus Toringo is one of the most beautiful of the trees found in our gardens, where it is perfectly hardy, and covers itself every year with fragrant pink or red single or semi-double flowers."

- ROYAL BOTANIC SOCIETY OF LONDON. - The fifty-fourth anniversary meeting of this Society has been held at the Gardens, Regent's Park, Mr. Charles Brinsley Marlay in the chair. The Dake of Teck was re-elected President, and Mr. H. Lindsay Antrobus Treasurer, for the ensuing year. From the annual report it appeared that the number of new Fellows elected was nearly the same as last year. The various exhibitions and fêtes had been successfully carried out, the exhibits both in number and quality being above the average. That of the evening fête especially had been the largest since it was instituted twenty-two years ago. The scientific work of the Society had rather increased than otherwise. Nearly 700 students of science, art, and medicine had received free orders of admission of from one to three months during the year, and the facilities offered to schools, classes, and scientific societies generally had been largely taken advantage of. Among new clients in this branch might be noted many of the students studying botany in the London Board Schools. The special plants successfully cultivated for the first time included specimens of the Mangrove, Rhizophora, and an ant habitation plant from Torres Straits. Within the spiny tuberous root of this plant numbers of the common red garden ant have made a home, to the apparent benefit of both. The meeting closed with a unanimous vote of thanks to the

- KINETON FLOWER SHOW. -- Notwithstanding the drought of early summer the present season seems to be an unusually good one for the production of late Potatoes. At the above-named Show, which was held on the 10th inst., Potatoes were a remarkable feature, the tubers being characterised by great size, good form, and perfectly clear skins. It is rare indeed to see such splendid examples of good culture exhibited at local shows, and the inhabitants of the district deserve great credit for their cultural achievement. In the non-competing classes, Mr. J. Garner, gardener to E. Cassell, Esq., exhibited a fine collection of fruit, containing Black Hamburgh and Foster's Seedling Grapes, both of which were noteworthy for their beautiful colour. Mr. F. Perkins of the Leamington Nurseries staged an excellent and effective group of plants. The Show was held in the delightful grounds of Lord Willoughby de Broke, whose gardens were thrown open to the public during the afternoon and evening, when large numbers of visitors enjoyed a pleasant stroll around them. In the flower garden I noticed fine beds of Begonias and Tropæolum Mrs. Clibran; the latter is evidently an acquisition, destined to become universally popular. Chrysanthemums were also looking wonderfully well, but the erown buds had shown several weeks in advance of their usual time, and were therefore removed.—H. D.

LÆLIA TENEBROSA WALTON GRANGE VARIETY.

A VERY beautiful and noteworthy Orchid was exhibited at the last meeting of the Royal Horticultural Society by Mr. Stevens, gardener to W. J. Thompson, Esq., Walton Grange, Stone, Staffs. It was a form of Lælia tenebrosa with yellow sepals and petals, and attracted a good deal of attention and admiration from the orchidists present. It is without doubt a fine and imposing variety, the flowers being of considerable size and the colouring harmonious. The sepals and petals are clear butter yellow, the lip white, the throat deep crimson. A first class certificate was awarded, and fig. 22 represents the form. Mr. Stevens informs us that the flowers came on the current year's growth from an imported piece

FIG. 22.—LÆLIA TENEBROSA, WALTON GRANGE VARIETY.

that was purchased early this year—a fact which should be a further encouragement to those who buy importations mainly in the hope of something unexpected and valuable appearing amongst them.

THE SUMMER MANAGEMENT OF WALL FRUIT TREES.

THE first important step to be taken in the building up of the healthy fruitful fruit tree is to give it adequate root room, needful drainage, and suitable soil, following with a skilful manipulation and distribution of the summer growths, and keeping them in a clean condition. The latter essential is not so much a question of time as it is a want of prompt action. Assuming that young trees were duly planted on the lines indicated soon after the fall of the leaf last autumn, and that in training the shoots to the trellis or wall in the spring no hard and fast cutting back method of procedure was practised, but on the contrary, the five, seven, nine or a dozen growths of the previous year were spread out widely and evenly apart over the space allotted to each tree, there will be ample room for laying in sufficient shoots of the current year's growth.

The summer management of fruit trees consists in keeping them in a healthy growing condition at the roots as well as above ground. If the soil is dry about the roots, as is generally the case with wall trees, even in the winter months, no amount of manipulating and syringing of the branches and leaves will bring about the same results that would be obtained from trees growing in moist soil.

Root and branch must be kept in a healthy state from the time the first sign of growth appears, that is, the soil should be kept uniformly moist about the roots, top growth being judiciously disbudded and pinched, and kept free from the attacks of insects. Aphis and red spider speedily make serious inroads on the leaves if not promptly dealt with. A solution of clear water and tobacco juice at the rate of 1 quart of the latter to 4 gallons of the former applied with the syringe to the trees affected with green or black fly in the afternoon after the sun has gone off the trees, in the case of trees on south and

west walls, will not only rid them of the insects then on the trees, but, as a rule, will render the foliage distasteful to future attacks. Peach trees being well washed with clean water from the garden engine every bright afternoon during the summer and carly autumn months will prevent them being attacked by red spider.

Where Peach and Nectarine trees have not been properly disbudded earlier in the season no time should be lost in reducing the number of young growths, retaining those nearest to their bases to produce fruit next year. Lay them in between the shoots from which they proceed with small twigs—say at 3 inches apart, afterwards pinching out all foreright shoots or secondary growths as they appear. Remove the points from any extra vigorous young shoots at about 2 feet, so as to direct the flow of sap into the weaker, and thereby conduce to an even growth in the tree. Apricots, Pears, Plums, Apples, and Sweet Cherries should have the leading young shoots trained in position to cover the wall space, pinching at 2 feet or so for the purpose indicated, and stop-

ping the foreright growths or breastwood at about six leaves from their origin. Morello Cherries should be treated the same as Peach and Nectarine trees. A judicious course of pinching and stopping of the shoots being pursued during the summer months tends to the plumping of wood buds, the formation of spurs or fruit buds, and a promotion of balance of growth in the trees operated on. It also tends to the swelling of the crop to greater dimensions than would otherwise be attained, and prevents the forces of the trees being wasted, as is the case when breastwood 15 to 24 inches long is allowed to grow before being cut back in autumn, as is too often the case. Figs may be treated in the manner recom-mended for Peaches, only the shoots should be given more room to develop. All young retained growths should be secured to the wall or trellis in due time, leaving room in the shreds or ties for the enlargement of growth.—H. W. WARD.

SWEET PEAS.

LAST summer, in the course of some remarks on Sweet Peas. I referred to the bad germinating quality of Englishsaved seeds of the previous year. If anything last autumn proved even more disastrous, so that those only who were judicious in their treatment of the seed are likely to have had a satisfactory growth. The weakly appearance of the seeds of several varieties impressed me so unfavourably that I sowed none in

the open ground, but took the precaution to sow the seeds thickly among light sandy soil in ordinary cutting boxes, from whence in due time the young plants were transplanted into the garden. have quite 150 yards of Sweet Peas, the plants having been raised as above, and every foot of the lines is covered with healthy flowering plants. In practice the operation is not so absorbent of labour as might appear. When the seedlings had grown 6 inches in height they were planted in the following manner:—After a line had been stretched along the ground a cutting was made with a spade to a depth sufficient to allow the roots to be spread out therein. Then while one man put the plants in their places another followed with a spade and filled in the soil. All earth was shaken off the roots before being planted. According to sort each plant was from 2 to 6 inches apart. A few Spruce Fir branches were placed on each side of the row of plants, these forming an efficient protection until longer sticks were required to support the lengthened growths. New varieties, and a few intended for seed-producing purposes were brought forward in small pots. These were planted at a foot to $2\frac{1}{2}$ feet apart. I am hopeful of obtaining a supply of good seeds from these specially treated plants; always, however, entertaining a dread that sparrows and finches may leave but few.

I have sometimes heard it remarked that the improved forms of Sweet Peas when compared with common strains are not so telling as garden flowers. Possibly that is so. As cut flowers, however, there can be no doubt as to the immense superiority of the former, and with regard to effect in mass that is very much a matter of opinion. It is the same in reference to new sorts. I have heard the beauty of Venus disparaged by one person while another upheld it as a charming flower; so also with Countess of Radnor. The same diversity of taste is apparent in present day Carnations, more especially in those peculiarly tinted forms which are sent over by French and German cultivators.

I thought I would like to test the value of a selected number of Sweet Peas commercially. The variety most "run on," in the words of the salesman, is Mrs. Gladstone, but Her Majesty is also good. These two varieties are also very floriferous, the latter, owing to the large size

of the individual blooms, bulking well. When the new white form, almost rivalling Her Majesty in size, is sent out by Mr. Eckford no variety ought to be more profitable. Blanche Burpee is the name of this variety, and growers would do well to note its advent. Mrs. Gladstone has a formidable rival in Blushing Beauty, a variety not quite so floriferous, but with much larger flowers and of a softer more sating shade. Of crimson forms I still like Cardinal. Firefly has a larger bloom, but perhaps hardly so bright. Lady Penzance is excellent, and other good ones that I like not already named are Mrs. Eckford, Orange Prince, Captain of the Blues, and Royal Robe.—B.

MR. LAXTON AND HIS WORK.

THE name of "Laxton" is so familiar to readers of horticultural literature all the world over that a portrait of the raiser of more new vegetables of sterling worth than probably any other man of his time, and also of several Strawberries and flowers, cannot fail to be acceptable

to the great body of amateur and professional cultivators.

Mr. T. Laxton commenced his experiments in hybridisation as an amusement about the year 1865, and on 7th July, 1868, he obtained his first certificate from the R.H.S. for the Pea Supreme, raised by crossing the old Sugar Pea (having an enormous pod, but few seeds) with Ne Plus Ultra. This was followed by Alpha, certificated on August 2nd, 1869. At the same time he took the Zonal Pelargonium in hand, raising Jewell, certificated in 1871, and Emily Laxton, one of the first semidouble scarlets. He also raised the first double white, named in honour of the late Jean Sisley. Continuing his work among Peas he next produced William I., Dr. Hogg, Marvel, Omega, Fillbasket, and G. F. Wilson.

Roses were not overlooked, his first being named Chas. Darwin, followed by Anne Laxton, Emily Laxton, Dr. Hogg and Mrs. Laxton, all purchased and sent out by Messrs. G. Paul & Son, Cheshunt. Princess Louise, Duchess of Bedford and Mrs. Harry Turner were also raised by Mr. Laxton. He still continued his experiments with Peas, and corresponded with the late Mr. Charles Darwin on the cross-

fertilization of the Leguminosæ.

Mr. Laxton removed to Bedford in January 1878, and took trial and experimental grounds at Girtford, devoting his whole life and energy to the work he had always so much at heart. His next certificate, gained in 1879, was for Minimum Pea, a dwarf only 6 inches high; then followed John Bull, William Hurst, Evolution and Charmer. He also at the same time gave attention to Potatoes, raising by cross-fertilization Reward, Bouncer and Beds Hero, and selected the valuable white extensively grown by market gardeners as well as many others. Sweet Peas attracted his notice, and he raised the Invincible Carmine (still one of the brightest scarlets) followed by Invincible Blue, the nearest approach then to a blue Sweet Pea, but time would not allow of his continuing this branch, which he relinquished in favour of Strawberries.

His first raised at Girtford was King of Earlies, followed by Captain and the now world-renowned Noble. This, unlike nearly all his other seedlings, was not an artificial hybrid, but a natural one from Forman's Excelsior, probably fecundated by bee agency with the strong growing American variety, Kerr's Prolific. He sowed the seeds from an exceedingly fine fruit, as he believed in the deterioration of a stock through saving seed, as is often done after all the best pickings have been taken. Tomatoes were also treated by him with success Lexton's been taken. Tomatoes were also treated by him with success, Laxton's Open Air being still considered one of the best. Onions were not overlooked, and Laxton's Sandy Prize was the result of his endeavours for improvement. Then followed more Strawberries, Latest of All, A. F. Barron, Commander, Jubilee and White Knight. Potatoes still had a share of the labours, the recently certificated Early Laxton, (Sharpe's Victor × Ashleaf), being an improvement on both, and likely to be largely grown both in private and market cardons.

to be largely grown both in private and market gardens.

Peas were still a factor, Walton Hero, Earliest of All, Early William (the early selection of William the First), Alderman, Oracle, then the fine "Gradus," which he considered his greatest achievement (Earliest of All & Duke of Alberty), producing rode as early as the former with of All × Duke of Albany), producing pods as early as the former with the size of the latter. It was only distributed last year by the raiser in conjunction with Messrs. Harrison of Leicester. The Brassica tribe did not claim much of Mr. Laxton's attention, but Chou de Bedford was raised by him from the Chouve Tronchuda.

Unfortunately, Mr. Laxton was taken away when his work was likely to gain for him some pecuniary recompense for the time and money expended in producing his novelties. His great aim was to produce something better and distinct from existing varieties. Nearly everything raised was the result of careful selection and trial after artificial cross-fertilisation, not, as in so many instances, the mere selection from some well-known variety. He always advocated the careful selection and seeding from the best and strongest flowers or fruits. He never hybridised two weakly growing varieties. He also firmly believed in seed-saving from the earliest seed to produce earlier strains, and in this he was particularly successful—as, for instance, in the selection of William the First Pea, which gave him a strain called Early William, distinctly in advance of the existing stock.

Runner Beans.—The Czar, the largest white-flowered Runner; Girtford Giant, a cross between Czar and the Old Scarlet; and the new Titan (Czar × Girtford Giant) are evidences of his success in this direction. Laxton's Open Air Cucumber was obtained from the outdoor

Ridge × Telegraph, and produces in good seasons very handsome smooth fruits in the open. Much as Mr. Laxton has done he has left much uncompleted, and as he often remarked a man in his profession ought to have three lifetimes to see his work through. His last Strawberry Royal Sovereign, from King of the Earlies × Noble, he considers the best he has yet introduced, being only distributed this season.

Mr. Laxton was for many years a Fellow of the Royal Horticultural Society, and served on the Fruit Committee. He was also formerly a Fellow of the Linnean Society. He wrote articles for horticultural journals both at home and in America till his health failed, thirty years of incessant work at his life hobby leaving him enfectled. He leaves a widow and three daughters not, we are sorry to hear, too well provided for, and also four sons, by two of whom, William and Edward, the business will be continued. Mr. Laxton was an affectionate husband, indulgent parent, and a modest, unassuming, genial man. He was born at Tinwell, near Stamford, in 1830, and died on the date mentioned last



FIG. 23.—MR. THOMAS LAXTON.

week. His remains were interred in the Bedford Cemetery, numerou wreaths being placed on the bier by relatives and friends.

The above is an imperfect record of Mr. Laxton's work, but it suffices to show that his name will long have a place in the annals of

PERMIT me as an old correspondent to express the surprise and deep regret with which I saw the announcement of the death of my dear friend Mr. Thomas Laxton of the Experimental Nursery, Bedford. It was only the other day seemingly that I had an interesting letter from him, making some inquiries about hybrid Tomatoes, Peas, and new varieties of Potatoes specially suited for Ireland, he had asked me to try and report on for him. It is quite a shock to think he is no more. I am sure I express the voice of thousands of my countrymen and women in wishing that long may the memory of so good a man be kept green. If a subscription list is opened with that object I shall be pleased to forward my cheque.—W. J. MURPHY, Clonmel.

WINTER GREENS CLUBBING.

I AM afraid clubbing will be pretty general in winter greens especially Brussels Sprouts and Broccoli. The plants here are in robust health, having grown freely, but they now show signs of distress in places, flagging under a very hot sun. It is getting late now to put out young plants, but something must be done or great loss among the plants will result. I only know of one remedy for plants already affected, and that is to make the ground firm around each plant by thoroughly treading the soil down with the feet, afterwards earthing the plants up the same as Potatoes are earthed in spring. The plants will soon make fresh roots higher up the stem than previously, and take possession of the additional soil afforded them.

This has been an exceptionally dry scason, making the work of growing good Peas and Cauliflowers very difficult, especially in dry soils. If it is difficult to raise these two crops, it is also the plants which are

to supply the needs of the winter months. It is during the time when the plants are in the seed beds - June and July - that clubbing is helped on by sowing the winter greens too soon, and allowing them to remain in the seed beds longer than is good for them. This is not the only cause. Planting year after year on the same ground with no intermediate crop will conduce to clubbing. A change of ground is not always to be had, so that extra attention should be paid to the plants in their young stage of growth. It is very well to select a warm south border for sowing the summer vegetables which are required for early use, but I think it is preferable to make the seed beds for the winter greens in the open garden, and use great care in sowing the seeds, by first taking off 2 inches of surface soil, then well soaking the ground with water, sowing the seeds upon the damp soil, and finally covering with the dry earth which was first taken off, and not watering afterwards. If the seeds be good, germination will be quick and thorough.

While the seedlings are in a very young state is a most critical time for them, as the fly will work havoc in the beds if not guarded against, even after the two rough leaves have appeared. Upon the first appearance of the fly an old herring net should be laid lightly over the bed and eased off the plants every two days. A little anthracite coal ash and soot mixed and dusted over the plants early in the morning while they are wet with dew, will soon overcome the fly, but the herring net itself is distasteful to them. If the plants are not sown too early and placed out before a check to growth occurs, clubbing will be lessened. Where time and space affords transplanting in a young state

is advisable.—G. GARNER, Cadland Park Gardens.

VIOLAS.

THE early part of this year proved a most propitious time for the Viola, and brought it very prominently to the front as a spring decorative plant, and but for the tropical heat of the summer, and the terrible plague of aphis in so many places, 1893 would have been a record year for Violas. Mr. Williamson's remarks last week, page 120, lead me to say a few words, not in criticism, for he does not in the slightest degree attempt to dogmatise, but pleasantly draws attention to the Viola as a charming bedding plant, as it undoubtedly is. I heartily thank him for giving good assistance in still further advocating its value, for it has taken many years to get the plant popular. Of his kindly reference to

myself I am fully sensible.

Only a few days since I was at Umberslade Hall, Warwickshire, where masses of that grandest of all white Violas, Countess of Hopetoun, was in full beauty, planted out in April last in good soil in beds in the flower garden; the plants were robust and simply a mass of fine flowers. My old variety, raised about fourteen or fifteen years since, Dean's True Blue, even now far away the very best blue Viola in cultivation, was just as fine in every way as Countess of Hopetoun, and masses of flower. Both are compact sturdy growers, of the same habit and height, and are very early and continuous bloomers. Countess of Wharncliffe, alluded to by Mr. Williamson, was sent out a few years since. It was raised by Mr. Simpson at Wortley Hall near Sheffield; and it has been reintroduced from a Preston firm under the name of Lord Fitzgerald. This is also similar in habit to the Countess of Hopetoun, but is of a more snowy white colour, and does not open flat as in others; still it is a very effective, free-blooming variety. We have a host of new whites-Sylvia, White Duchess, White Flag, and others some, too, closely like the Countess, but none so good or so valuable.

Those on the look out for sterling varieties for bedding will do well to go in largely for Mrs. Charles Turner, blue purple; William Neil, soft rosy pink; The Mearns, rosy violet with light top petals; Duchess of Fife, white and cream with bright brown margin; Bullion, a grand yellow; The Queen, or Ardwell Gem, pale yellow; Wonder, light yellow; Lady Amory, rich violet with dark top petals; Bridesmaid, very pale primrose. These are only a few of the very fine bedders. We are getting a host of new sorts, many of them great rubbish, but some of exceeding beauty, especially for exhibition, but as valued bedders we must have good habit, telling distinct self colours, floriferousness, good constitution, and early and continuous bloomers.—WM. DEAN, Birmingham.

WASPS.

It should be well understood that some of the remedies advocated for the destruction of these pests, such as cyanide of potassium and advertised wasp destroyers, are most dangerous poisons. The former has a deadly vapour and should only be used with the greatest caution: with the latter, the poisoning of fruit freely exposed is advocated, a most undesirable state of things and only to be resorted to at the last

It is plain that destruction of the nests is the proper way of extermination, but first "catch your hare." It is not everyone who can readily find all the nests about the place even when they are quite When I was a boy, the account in one of Mayne Reid's works of the bee hunters of North America led me to try the same way of finding wasps' nests. Shortly, it consists of watching the direction of flight from two or more spots at a little distance from the infested places, and thus getting converging lines which should lead to the nests. One soon gets accustomed to recognising a wasp from other insects by its flight even some way off. A low place in a hedge will soon give you some lines of flight, which should be followed up; and likely banks and hedges should of course also be examined in the sunshine.

When the nest is found, gas tar seems to me to be far away the best, simplest, quickest, and least dangerous of all modes of destruction. You pour a little down the hole at night, and the nest is destroyed—no fire and no poison—time and trouble practically nil. For pendent nests, the simplest plan seems a shot from a gun at close quarters—blank cartridge will do. Go at night, have your shot, blow it to atoms, and retreat speedily.

At a certain public school, where the boys are freely allowed out into the country, the taking of wasps' nests became a popular diversion; and, before long, pressed by the emulation which is so strong a feature with English lads, it came to be reckoned a shame to take them otherwise than in broad daylight, and with any other weapons besides green boughs and spades. Of course the boys got stung sometimes, but where was the fun if there was no danger? To such a pitch was this chivalrous spirit carried that, on one occasion finding and digging out a small and weak nest, it was decided to carry it home and place it in a convenient and secluded hole where it would not be meddled with, till t was strong enough to defend itself: and this was actually done! Rather absurd, but they were only boys-and young Englishmen!-W. R. RAILLEM.

BARFORD HILL.

THE residence of C. A. S. Ryland, Esq., occupies a delightful position on the summit of one of the many undulating hills for which the varied scenery of Warwickshire is justly famed. Starting from the county town a three-miles drive over a broad level road brings us to the quaint Roman bridge which spans the Avon, and gives access to the pleasant village of Barford, where gay window-boxes, well kept cottage gardens, teeming with brightly coloured flowers, speak volumes for the taste and industry of the inhabitants, and afford a striking example of the rivalry created and the good work done by cottage garden societies, for the excellent condition of these wayside gardens must be attributed in a great measure to the thriving horticultural society of which Barford boasts, and which, thanks to the liberality of the owner of Barford Hill is well supported. Thus far on our journey we have pursued a straight and even course, neither turning to the right nor the left, except to give a passing or a backward glance to some special object of attraction which anon caught our eyes as they turned in rapid succession to the right or to the left. Thus we sped on pleasantly enough till it suddenly dawned upon us that too great a regard for the main road and its diversions had caused us to leave behind the gardens we intended to visit. The turn we should have taken was, however, yet in sight; it was reached again in a few minutes, and we began to pursue an upward course over a road which rises by a series of erratic gradients to the top of Barford Hill. Here we find the entrance to the gardens close at hand, and Mr. R. Jones, the able and energetic gardener, on the spot to welcome us. On entering the kitchen garden the first object to arrest attention was a bed of summer flowering Chrysanthemums, which even thus early (July 28th) were aglow with their golden flowers. Précocité and Flora were the varieties principally grown. Marigolds, Asters, Lobelias, and many fine seedling Verbenas occupied an adjoining border, which faces the gardener's pleasant and commodious residence, at the opposite end of which is a charming verandah entwined with a rich profusion of creepers, a mass of the fine purple coloured flowers of Clematis Jackmanni producing a striking effect.

We next proceed between an avenue of bush Chrysanthemums, which are arranged around the sides of the walks; they are fine plants in splendid health, and will undoubtedly make a beautiful display during the autumn months, as there are 500 of them grown in the bush form; but more of Chrysanthemums anon, when we come to the plants

which are grown for supplying large blooms.

Apple and Pear trees, trained in pyramidal form, are planted a few feet from the edges of the walk. Nearly all of these are this year carrying heavy crops, notably two fine trees of Pitmaston Duchess Pear, which have numbers of very large fruits. Mr. Jones attributes his success to the practice of keeping the branches thinly disposed. In a newly made kitchen garden a long avenue of standard Apples, Pears, and Plums have been planted; these have made capital growth, and give promise of supplying abundance of choice fruit in a few years, as the most approved varieties have been selected. Apricots on walls have very heavy crops, a general experience in the neighbourhood. Large quantities of vegetables are required, and every effort is being made to meet the demand, which is maintained at present under somewhat adverse circumstances, as the soil is cold and heavy. Plenty of rough strawy manure is, however, dug into all vacant quarters during the autumn months, when the land is thrown up roughly, so that the action of the frost may pulverise it. This course of treatment will assuredly soon work a great improvement in the mechanical condition of the surface soil, which is already rich in chemical constituents. Splendid rows of Runner Beans, fine heads of Cabbage, heavy solid bulbs of Onions, and sturdy Beet all attest that the soil is productive, notwithstanding the fact that much difficulty is experienced in working it in the spring and establishing young crops. I noticed several rows of Windsor Castle Potato were being grown, and was curious to see a sample of the tubers. On lifting several roots these proved to be wonderfully even in size, having every appearance of a good table variety, for which purpose Mr. Jones speaks highly of it. Beauty, as well as utility, is studied in the kitchen gardens at Barford Hill. walks are formed of grass kept closely cut, and bordered on each side with herbaceous plants and annuals, which at the time of my visit were wonderfully effective. Double Zinnias and East Lothian Stocks were

especially good; the latter are sown early in the spring, and the majority of them flowered during the ensuing summer.

Glass structures are numerous and arranged in a somewhat scattered form in various parts of the kitchen garden. In the range which we first enter the houses have three-quarter span roofs. and finish these structures are admirable. There is, however, one drawback in connection with them—the framework is of iron, and those who have had experience with glass houses of this description are well aware what great watchfulness and care are necessary in the matter of ventilation and damping to counteract the great fluctuation in temperature for which hothouses constructed of similar materials are noted. It may therefore be readily understood that they do not find favour at Barford Hill, especially after the recent tropical weather. In the stove we found a clean healthy collection of plants of the right size for decorative purposes, for which they are in great demand. The central bed was occupied principally with Palms and Crotons, the latter being well coloured. C. Weismani, angustifolius, Chelsoni, Victoria, Disraeli, Thompsoni, and many other varieties were well represented, the wall of the bed being completely covered with a trailing mass of Panicum variegatum, while on the roof a thinly trained plant of Bougain-villea glabra bore imposing panicles of rose-coloured bracts, a useful shelf on the back wall being filled with Calanthes and other plants. The vineries are not numerous, being only two in number. Considering the Vines in these are old, an additional house or two in this department would be a great advantage, as without the loss of a crop it is a difficult matter to plant young Vines. An inside border has, however, been made, and some young Vines recently planted, which will next year be cut down to within a few inches of the soil. Mr. Jones, being an old "Floors Castle" man, may be depended upon to do the best that can be done under the circumstances. The old Vines are carrying a heavy crop of excellent Grapes just the right size in bunch for table use. Gros Colman, Gros Guillaume, Black Hamburgh, Buckland Sweetwater, and Muscat all growing in one house. At the end of the range is a lofty conservatory, where many good specimens of Pelargoniums, Fuehsias, and miscellaneous plants were growing. In this house the bulk of the Chrysanthemums are flowered; although some of the plants must necessarily be at a great distance from the glass, it is on the whole a capital place for them, being a light airy structure, just such a one as Mr. Molyneux would have liked for his plants of Madame C. Audiguier when he used to grow them 12 feet high. Near by we enter a capital range of Peach houses, the trees being trained on a curved trellis in the front, others occupying the back wall. Fine fruits of Royal George Peach and Victoria Nectarine were still hanging in one division. In the others the trees were clean, healthy and vigorous. Several good span-roofed plant houses have recently been built. In one of these we found a splendid collection of seedling tuberous Begonias, the plants were well grown sturdy examples, and made a fine display. One variety in particular was noted for its enormous well shaped flowers, and with judicious hybridising should prove the parent of a splendid race of

A start has been made with Orchids, a couple of houses being principally devoted to them. The majority of the plants are small, having only recently been obtained, but they are clean and healthy, appearing to be quite at home in their abode. A well-marked variety of Oncidium Krameri was in full beauty, as were several good spikes of flower among the Odontoglossums. The collection will in a short time be a good one, as choice species and varieties are being continually added to it, while those already obtained are making good progress. Another range of houses is devoted to the growth of Melons, Pines, Ferns, with batches of Cyclamen growing on shelves near the glass, a cool structure adjoining being used for forwarding plants just coming into flower preparatory to being taken to the mansion or conservatory proper. Near here are plenty of useful pits in which Cyclamen, Primulas, and Cinerarias are in capital condition. Zonal Pelargoniums and Bouvardias are grown extensively for winter flowering. These were looking remarkably well, and will prove quite a sheet anchor during the dull season. Much more might be said on this subject, but I must pass onward, as there are other things to tell of.

Chrysanthemums, of which 850 are grown on the large bloom principle, demand notice: As we approach them it is not difficult to see that our guide is a Chrysanthemum enthusiast. The light kindles in his eye, and his countenance is aglow with animation as we obtain a full view of his "Chrysanthemum field," for indeed such it A splendid position in a wide open spot has been selected for them. The plants are arranged in rows running east and west, with some 4 or 5 feet of space between each row. Every facility is thus given for attending to the wants of each plant, and also for thoroughly examining them. This we proceeded to do. Passing along every row of plants we carefully note their condition, looking out for old favourites, and generally finding them as well as nearly all the new ones of proved mcrit. G. C. Sehwabc, Viscountess Hambledon, Mohawk, Col. W. B. Smith, Lord Brooke, Middleton Clark, and Beauty of Exmouth are represented by several good plants. All are in capital health, and are remarkable for the firm, hard growth made; there is no approach to grossness, and the leaves are as thick and leathery as it is possible to have them. They are now taking on that bronzy tint which is a sure indication of ripeness consequent upon exposure. Like many other cultivators this year Mr. Jones finds the crown buds formed too early. In nearly all instances they have therefore been removed and successional ones promise to come quite soon enough. Many men, especially gardeners, have a knack of showing visitors the best last. Such was our experience

in this instance. Good as the plants already seen were, the last row surpassed all others. Etoile de Lyon and Miss Lilian Bird were the varieties which held the post of honour. These were exceptionally strong, yet hard, and without doubt well ripened, and I fancy it will be difficult to meet with better plants. With a lingering look we leave them to hasten to the pleasure grounds before the shades of evening fall.

Around the outskirts we follow a pretty winding walk, and wend our way among some artistically arranged rockwork containing Yueeas, Ferns, and other suitable plants. Catching a pretty glimpse of parklike seenery, we cross the green sward, near large beds of vigorous Roses, and wend our way to the terrace around the mansion. Below we have a series of oblong beds planted chiefly with Pelargoniums, Lobelias, and Pyrethrums. Black Douglas is a bronze tricolor very popular here, where it grows and colours wonderfully well. One unique bed was filled with this variety and edged with a broad band of Manglesi. Others were masses of rose, pink, or scarlet provided with suitable edgings. Near the eentre of this line of beds were two grand Golden Yews, perfect specimens some 10 or 12 feet high. The whole of the pleasure gardens were in fine trim, tidiness and good order being apparent on every hand. Following the terrace walk we pass to the conservatory adjoining the mansion. Here a fine plant of Taesonia Van-Volxemi covers the roof, the shoots being allowed to drop loosely from it, must have a fine effect when in flower. Palms and other fine-foliaged plants luxuriate in the central bed, while a good selection of flowering plants brighten up the side stages.

We now retrace our steps to the terrace walk in order to take a lingering view of the fine seene before us. Our eyes first rest upon the brightly coloured flower beds beneath, then wander to the cool refreshing green of a distant belt of trees; this belt is broken in its outline, and between the serried lines shine the bright waters of Shakespeare's "flowing Avon." From the water to the tree tops the space widens, as if to give a clearer view of the stately tower of St. Mary's church at Warwiek. Still another glimpse of the Avon is seen in the opposite direction, and all around the beauty of the undulating ground defies my power of description; but it requires no great gift of imagination to arouse the inward conviction that for quiet home-like beauty the seene before us will not be easily surpassed. Both "the Squire" and Mrs. Smith-Ryland are ardent lovers of horticulture, who take great interest in their gardens, and provide with a liberal hand the means for keeping them in good condition, and in Mr. R. Jones they have an active and intelligent gardener, whose heart is in his work, and who thoroughly appreciates the liberality of his employers.—H. D.

APPLES FROM THE HIMALAYAS—HEAVY RAINFALL.

I send you two Apples for the favour of naming. I purchased Dr. Hogg's "Fruit Manual," and I have been trying to name my Apples by it, but I have not been very successful. Perhaps English Apples vary a little when grown here, as our elimate on the Himalayas is different from yours. Our elevation is 6500 feet. Last year we had no rain from February to July. This year during the cold weather (from the end of January to the beginning of March) 15 feet of snow fell. All the spring and till the 18th June rain constantly fell. At this time the monsoon commenced, and the fall was:—

June .. 18 19 20 21 22 23 24 25 26 27 28 29 30 Inches.. 0'84 3'62 1'56 1'17 0'06 3'24 0'92 0'18 0'53 2'97 2'13 1'23 1'26

The two Apples I send have not had much sun to colour them. In ordinary years they are much redder. Are they both the same? They look so, but all on one tree have the stalks short and on the other the stalks are long. The first tree is a compact grower and the other is a straggling one. If you could name these for me it would help me in working with Dr. Hogg's book.—Angus Campbell.

[We regret very much that the two Apples arrived in a completely rotten state; in fact, a shapeless mass, with not a vestige of character left to guide us in their identification. If the stalks of the fruit from one tree are short, and the other long, and the trees are markedly dissimilar in habit, the varieties may be regarded as distinct.

The chief external fixed characters to be noted in seeking for the names of fruit are:—Stalks, short or long, stout or thin, inserted in deep or shallow depressions; eye, large or small, open or closed, with broad or narrow segments, flat or erect, set in a deep or shallow, smooth or plaited, basin. Yet we have many specimens sent to us without stalks, and the eyes spoiled by pinning the numbers in them. The size, shape, colour, and peculiar markings of the fruit have also to be observed, but these are, so to say, moveable factors as influenced by climate or other disturbing cause.

The internal characters to be noted are the position of the dried stamens in the tube—namely, marginal, median, or basal; the tube itself as to form—conical or funnel shaped; and the carpels or core. Illustrations of all these distinctive marks are given in the "Fruit Manual," and they become clearer by study and comparison with dissected fruits:

Our readers, and they are many, who are interested in the question of rainfall, which they earefully ascertain, will note the Himalayan downpour represented by 19.61 inches on thirteen days in June, no loss than 6.86 inches falling on two days, but it will be observed there was no rain from February to July, but there was plenty of snow in March. We must not consider our climate, with all its drawbacks, the worst in the world.



BATLEY AND DISTRICT CHRYSANTHEMUM SOCIETY.

WE have received the schedule of the forthcoming show of this Society, to be held on November 11th. In the principal open class for twenty-four Chrysanthemum blooms, twelve incurved and twelve Japanese, in not less than nine varieties of each, a first prize of £5 is offered, to which will be added the Society's silver cup, value £6 6s., also the National Chrysanthemum Society's silver medal. Mr. Allen Hall, 4, High Street, Batley, is the Secretary.

HONOURS FOR A CHRYSANTHEMUM RAISER.

The readers of the Journal of Horticulture are, no doubt, aware that on the Continent it is customary for the Governments of various countries to recognise special service in horticulture by conferring decorations upon those who are considered worthy. Many eminent French, Belgian, and other nurserymen have been the recipients of the Legion of Honour, the Order of Leopold, and the Merité Agricole, without naming other orders less familiar here. Notwithstanding the enormous advantages that must have accrued to French horticulture by the labours of such Chrysanthemum specialists as MM. Délaux, Louis Lacroix, De Reydellet, Dr. Audiguier, and M. Boucharlat, whose efforts have so materially advanced the cause of Chrysanthemum culture throughout Europe and America, we do not remember ever yet seeing any announcement of their work being rewarded in this way. It is pleasing, however, to record that M. Ernest Calvat, a raiser of quite modern times, has just been appointed a Chevalier of the Order of the Merité Agricole. M. Calvat's seedlings have been shown in England with conspicuous success during the past two or three years, and are, it will be remembered, chiefly characterised by their heavy massive blooms of the Japanese incurved type. He is the only French exhibitor that has successfully obtained first-class certificates of the National Chrysanthemum Society, and he is to be congratulated on having so soon won distinction in a way that is dear to the heart of every Frenchman.

CHRYSANTHEMUMS IN NEW ZEALAND.

A CORRESPONDENT writing from Christchurch (N.Z.) reports that the frozen blooms sent out to the Wellington Horticultural Society by the N.C.S. have recently been exhibited at Christchurch also. He adds that the lovers of Chrysanthemums have good reason to be proud of the steady progress that is being made in the cultivation of that flower in the colony. The localities where the leading growers are to be found are Auckland, Napier, Wellington, Nelson, Christchurch, Timaru and Dunedin, and besides these places there are other districts in which attempts are being made to encourage and extend a taste for the cultivation of this popular favourite.

In Christchurch alone there are several very able cultivators who have demonstrated by the excellence of their exhibits that they thoroughly understand the art of the big bloom method. Most of these, however, are amateurs who, being employed in shops and offices during the day, find an enjoyable recreation in growing the Queen of Autumn as a hobby and relief from business cares. The trade generally have not yet found time enough to devote themselves to this phase of Chrysanthemum culture, but are contented to stage mixed exhibits at the shows. Among new varieties Viviand Morel, R. Kingston and W. Tricker have excited most attention and been much admired. The Christchurch Chrysanthemum Show, held May 11th and 12th last, was a remarkably good one in spite of the extremely unfavourable weather that preceded it. In fact all over the Australasian colonies the weather just previous to the Chrysanthemum season seems to have been exceptionably wet. In various parts of New Zealand there are growers busily engaged in raising new seedlings, and we have no doubt but that something will be heard of them here in England before very long.

AMERICAN CHRYSANTHEMUM SOCIETY.

WE have not hitherto been able to record much concerning the progress of this Society, for its chief work seems to have been confined to the registration of the names of new varieties. Founded about four years ago, there has never to our knowledge been any show held under its auspices, and we were beginning to wonder whether it had ceased to exist. A friendly correspondent in the States has, however, just sent us a little pamphlet, entitled "Report of the Committee on Classification of Chrysanthemums before the American Chrysanthemum Society," which shows very clearly that the Society is attempting a useful work. The report is practically a catalogue of the varieties grown in the States drawn up in a form that has no doubt been suggested by the catalogue of the National Chrysanthemum Society of London. There are select lists wholly devoted to American secdlings and importations, together with an A.B.C. list at the end of the work. The catalogue is neatly printed and contains thirty-seven pages, and does not state upon it whether it is for sale or only for private circulation among the Society's members.

YOKOHAMA GARDENERS' ASSOCIATION.

This Association, which is a purely commercial body, have issued an illustrated catalogue this year of fruits, shrubs, and flowers. Among the

coloured illustrations are seven of new Chrysanthemums. They are fairly well executed, but the types of flowers depicted do not differ in any essential points from those already in cultivation here.—P.

CHRYSANTHEMUMS-BUD FORMATION.

JUDGING from the notes which are weekly appearing in the Journal Chrysanthemum growers and exhibitors are evidently much concerned over the abnormally early appearance of crown buds. The cry seems to come generally from growers in the south, and I feel certain that those living in the midland or northern counties will this year have a great advantage over their southern friends in the production of blooms for exhibiting at the earlier shows. During ordinary seasons I find crown buds show themselves fully a fortnight later in this district than they do in Wilts or Hampshire, and during a season like the present the one advantage thus gained is great indeed, for provided crown buds are taken at the right time the flowers resulting therefrom generally win when pitted against others from terminal buds, excepting the cases of special varieties.

I have comparatively few buds appearing too early this year. Violet Tomlin, Miss Haggas, Mons. Bahuant, Princess of Wales, Prince Alfred, and Lord Wolseley from autumn-struck plants showed their first crown buds about July 25th, while spring-struck plants are (August 12th) showing them now. The former were removed, the latter are being taken. Several plants of the Queen family showed buds during the first week in August; they were, however, exceptions of the bulk of our plants, the buds are now visible, and they could scarcely have appeared at a more opportune time. Many of these plants were not struck till the last week in January. They are now from 4 to 5 feet in height, the stems being very thick and hard at the base. It seems to me that this spring propagation is a point which will in the future receive great attention, as its effect in delaying the formation of crown buds is a matter of vital importance to Chrysanthemum growers, especially in the case of early varieties when grown in the south of England. If those who send notes on this subject to the Journal will record the difference noted between autumn and spring-struck plants, their contributions will be extremely valuable.

Turning to Japanese varieties. It is curious to note that Boule d'Or showed buds about the usual time, during the first five days of August. Etoile de Lyon from autumn-struck plants, July 22nd; from cuttings inserted at the end of January, buds showed from August 1st to 10th. Mrs. F. Jameson, W. W. Coles, from autumn-struck plants, showed buds July 29th. Viviand Morel, from cuttings put in at the end of January, showed buds about the same date, a few of these were taken, the others removed. W. H. Lincoln, F. Davis, Sunflower, W. Tricker, and Mrs. E. Beckett, from cuttings inserted at the same time, preceding variety showed buds from the 1st to the 12th of August. Avalanche is the only Japanese variety which, with me, produced the whole of the crown buds too early to be taken. On plants of many other varieties not specially mentioned crown buds are now daily becoming visible, and by the 20th of August I hope to have every bud taken. Unless we are favoured with an exceptionally warm autumn I believe the buds taken on the dates above given will produce the finest flowers for exhibiting during the first three weeks of November.—H. Dunkin, Castle Gardens, Warwiek.

NOTES FROM BRISTOL.

(Continued from page 123.)

HENBURY HILL.

THESE gardens are in charge of Mr. Thomas Smith, one of the most genial and practical of gardeners. Mr. Smith has acquired quite a local fame for his Tuberous Begonias, which after years of careful selection and cross-fertilisation is now equal to almost any of the best trade collections. His ideas, however, do not bind him to any hard and fast rnle as to form and character in either plant or bloom. Equal pleasure is derived from the drooping as from erect standing bloom, and his standard of excellence do not lead him to discard all but smooth petalled flowers. He is fond of form and variety.

In the stove are healthy plants in variety, and among them I noticed some promising seedling Crotons. A batch of Adiantum farleyense, occupying a moist corner, seems quite at home, and furnish a good groundwork for displaying Calanthes in flower to the best advantage. Orchids share a portion of this house, Cypripedium Sedeni being represented by a good healthy plant which had just finished blooming. Dendrobiums in variety, Phalænopsis, one plant of P. amabilis having a spike of flowers now open, with other species and varieties too numerous to mention. Of Freesias there were a good batch of very dwarf plants, which will make a good display later on. Mignonette in the same house is a partial failure, the first time for eighteen years, this being attributable partly to a change in their autumn quarters, this and other instances convincing Mr. Smith that plants have a partiality for certain positions. Mr. Smith is an adept with Mignonette, one standard sort which has been in cultivation now some few years being raised by him.

Eucharis plants standing over a tank of warm water in another house have flowered three or four times during the past twelve months, and at one time these were so badly infested with mite that drastic measures had to be adopted to stamp it out. The leaves were cut away and the outer skin of the bulbs removed and thoroughly washed with warm soapy water. Following this they were placed in the pots they now occupy, and plunged at once into a hotbed, and from that time no mite

has been seen, and their health and vigour now is all that could be desired. In the fernery are some interesting plants, but so many of the deciduous varieties being just now at their worst, a good estimate of the summer beauties of the house could scarcely be formed. Some plants of Lastrea lepida, Adiantum reniforme, Asplenium viviparum, and Nephrolepis pectinatus struck me as being very distinct and useful for decorative work, the latter particularly so when occupying small pots. Bouvardias are splendidly grown at Henbury Hill, large bushes in 8-inch pots still flowering freely, and have done so since the autumn. Carnations are grown in goodly numbers, and a local seedling named Cleeve Hill Beauty is much prized for its free blooming habit, bright rosy coloured and shapely blooms, and good constitution. These are planted out in summer, lifted and potted again in autumn, a system These that secures fine plants and abundance of blooms for cutting. The popular Miss Jolliffe has a fitting companion in La Niege, a dwarf growing white variety of much the same habit and size of flower.

Good Grapes have been grown for some years in these gardens, and the promise of future crops is most assuring. One house is filled with a single Vine of Black Hamburgh, which is many years old, but few young ones could excel it in its large and finely coloured bunches annually produced, or its healthy and vigorous growth. Peaches are thinly trained, Mr. Smith believing in having just sufficient wood to secure a good crop and no more, this rule being notable both indoors and out. It would be better if such a practice was more common in gardens, for then the trees would get the benefit of sunshine and air to mature the current growth with greater certainty.

In the vegetable garden is a good breadth of winter Spinach in two varieties Sutton's New Long Standing and the ordinary prickly. The superiority of the new one was clearly demonstrated by the stouter and much larger leaves, and is less injured by frost. This, when better known, should become a standard sort both for summer and winter growth. Late Queen and Sutton's Bouquet were among the hardiest of the Broccoli, neither of these apparently having suffered by the late severe weather. The early winter sorts were nearly all killed.

MALMAINS, FRENCHAY.

This is the residence of Captain Belfield, and where plants, Ferns, and Orchids are so well grown by the able gardener in charge, Mr. W. Rye. The collection of some fifty plants of Todeas superba and pellucida are such that can be found probably nowhere in the kingdom. They are magnificent, and beyond all power of description. The heads measure 5 or 6 feet in diameter, and many of the root stems stand 3 feet above the large pots in which they are grown. They were, I believe, collected and brought home by Captain Belfield himself some years since, and their present condition is such that must give him immense satisfaction. Every plant is in the best of health, yet during the late severe weather frost enveloped their fronds in ice on many occasions, and no attempt is made to prevent such an occurrence; one half of the house, which was added some few years since, having no hotwater pipes, and a 3-inch flow and return is insufficient to keep out frost in the older division of the house. During the summer the roof is heavily shaded, and the plants receive a syringing once or twice a day, so that the fronds are kept uniformly moist. Very rarely is water needed at the roots, or rather applied to the soil, the dense moisture prevailing at all times sustain them perfectly.

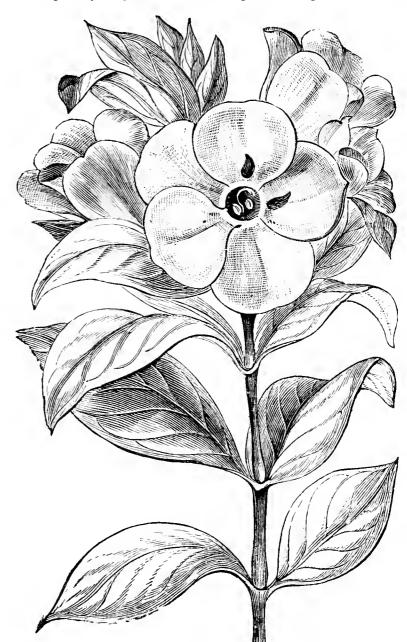
In the tall Palm and Fern house adjoining are many fine specimens, some of these, too, like the Todeas, having been brought home by Capt. Belfield. Cyathea dealbata stands some 14 feet in height. Cyathea medullaris and Alsophila excelsa, too, are stately specimens. Arcca sapida is a truly grand plant, reaching, I should say, 18 feet in height. The Date Palm, Phœnix dactylifera, Chamærops excelsa, and Kentia Fosteriana adding to the tropical forest-like aspect of this noble structure. Some tall Tree Fcrn stems are clothed with the creeping rhizomes of the Davallia canariense, which in summer must have a pretty effect. In the stoves are many fine specimens of Anthuriums Andreanum, Ferierense, and crystallinum, Crotons, Stephanotis, Allamanda nobilis, a fine plant; Clerodendron Balfourianum, Bougainvillea glabra, and Eucharis. These last named do uncommonly well, and are seldom out of bloom. They are growing in wide but somewhat shallow pots, which seem to suit them admirably, as do also the house and treatment they

Orchids are grown in large numbers and variety, and is another feature of these gardens. Cymbidium arvense had several spikes of its sweetly scented and curiously coloured spikes. Epidendrum fragrans, too, was furnished with some spikes of their highly interesting and pretty flowers. Nepenthes Mastersiana and Hookeriana were growing well in suspended baskets, and had several of their quaint pitchers of Dendrobium speciosum was just opening its pretty yellow and spotted flowers on semi-drooping spikes. This is a noble plant, which, when in full bloom, must be very striking. D. Pierardi will be later on a sheet of blossom, several strong plants being suspended from the roof. Calanthe Veitchi has been, and still are, remarkably fine; and Cypripedium insigne and Maulei fill several large pans. A strong piece of Cypripedium lævigatum was noticeable, as also was another healthy one of C. porphyreum. Cœlogynes are numerous and well furnished with plenty of strong flower spikes. Cattleya citrina on blocks does particularly well. C. Mendelli, C. Mossiæ, Lælia anceps, and L. purpurata, Odontoglossums grande, citrosmum, and C. roseum, Vandas, Angræcum sesquipedale, Aerides, Brassia verrucosa, and hosts of others furnish a constant supply of bloom in varying quantities at all

Grapes and Peaches are well grown, the latter gaining the leading prizes at local shows, which is the best proof of the skilled attention given. Outdoor fruits are limited in extent, and the same may be said also of vegetables, but sufficient are grown to meet the demands of the house. The place generally reflects much credit on Capt. Belfield, who is a keen horticulturist, and on his gardener for its excellent keeping .-- W. S.

BARLERIAS.

A SCOTTISH correspondent wishes to know something about Barlerias, which he has not seen mentioned in the Journal. They have all the same been mentioned. They are tropical shrubs, B. Gibsoni being perhaps one of the most useful for decorative purposes. The figure shows a flower spray. It is a next branching shrub, attaining a height of several feet; but handsome well furnished plants some 2 or more feet high may be grown from cuttings in a single season; and as



TIG. 24.—BARLERIA GIBSONI.

these not only bloom freer than old plants, but produce the finest flowers, there is no advantage in keeping the old ones. The leaves are upwards of 3 inches long, ovate-lanceolate and acuminate, deep green above, glaucous below, and somewhat coriaceous in texture. Flowers funnel-shaped, produced in terminal and axillary spikes near the ends of the branches; lobes spreading, colour pale purple, the two upper lobes having a dark purple blotch in the centre. It flowers in midwinter. Native of Central India.

PROPORTIONAL PRIZEGIVING.

HAVING for a long time been contending, and, I think, almost alone, in favour of the principle of awarding prizes at flower shows in proportion to the respective merits of the selected exhibits, I took very much interest in the class, the first, I think, of its kind, set apart at the recent Carshalton Show, in which the principle of proportional prize-giving was adopted. Now I find from your report of the particular class—nine kinds of vegetables—that the difference between the first and fourth of the selected entries was covered by only four points, whilst the first was so near to the second as to be only half a point better, and the third was but one point below the second. Practically the difference of the four lots were about 1, 2, 3, and 4 per cent., mere

trifles indeed. But then these trivial differences in merit are really great ones when the old system of prizegiving is practised. Here was a sum of £5 set apart for the class to be divided into four prizes. Ordinarily the prizes would have been 40s., 30s., 20s., and 10s.; the second prize being 25 per cent. less than the first, the third prize 33 less than the second, the fourth 50 per cent. less than the third, and 75 per cent. less than the first. Now, as the points of the selected four when most carefully judged stood at $54\frac{1}{2}$, 54, 53, and $51\frac{1}{2}$, can anyone assert with any degree of justice that under the ordinary method of giving prizes the merits of these four collections would have been fairly dealt with? It would be too absurd to say so. I should very much like to learn how the £5 were ultimately apportioned; but having regard to relative merits, as shown by the pointing, I make the amounts to befirst, 28s.; second, 27s.; third, 25s.; and fourth, 20s.—A. DEAN.

Other prizes were awarded for collections in which there was a greater falling off in points, but the particulars given below were not previously obtained. At the first pointing two of the collections were equal, and it was only on a second rigid examination that a slight difference could be discovered. The system is a just one, but its general adoption would necessitate an increase in the number of judges at most, if not all, shows.]

COLLECTIONS OF VEGETABLES.

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1st Prizc	• • •		$54\frac{1}{2}$ points	• • •	• • •	O	18	10
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3rd "	•••	•••	$53\frac{1}{2}$,,	•••	•••			6
4th ,,	• • •	• • •	$51\frac{1}{2}$,,	•••				10
5th ,,	•••	• • •	45 ,,	•••	• • •	0		
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-G. W. CUMMINS.

WOODHATCH, REIGATE.

BEING at South Park, Reigate, the other day, and close to the beautiful place of the Treasurer of the Gardeners' Orphan Fund, Mr. T. B. Haywood, I gladly availed myself of a kind invitation from Mr. Salter, the esteemed gardener, and a spare couple of hours, to visit these grounds. Their great feature to me is found in the remarkable neatness, the very high order of keeping, to use a common term, found in every direction. I think I have never seen a tidier garden, or one in which order so thoroughly prevails. That may to some extent be due to abundance of help. I do not know, but certainly very much also is due to the excellent training in these elements of garden excellence Mr. Salter has had. I do not propose to outline or describe the place except to say that a large portion of it is very close home and compact, especially so is that the case with the glass department. But such parts as vegetables, Potatoes, and hardy fruit are in different places, and some of them remote. Even the Roses, of which there are many grown, are close to the farm, some distance from the house, but then it has been needful to find for them there a soil that is suitable for their requirements.

Two special kinds of plants are grown at Woodhatch in great quantities. These are Orchids and Chrysanthemums, both wonderfully Mr. Salter took me through house after house, each devoted to Dendrobiums, Odontoglossums, Cattleyas, and so on in their respective sections, all in the most admirable condition, clean beyond description, and the plants in perfect health. Perhaps it is not at all difficult to manage Orchids well when you have plenty of good houses and assistance, but I have seen many very much bungle at it all the same, and have been very glad to get away from them. It is far different at Woodhatch, where, whilst just now few of the plants are blooming, it is a rich treat to look through the houses, but in the spring it must be indeed a delight. Then out in the open there is a wondrous lot of Chrysanthemums. Mr. Salter has a thousand plants of many sorts in every section, and it is not possible to withhold a warm tribute of praise for their splendid condition. The Reigate district has considerable fame for the production of high class Chrysanthemums, due to some extent perhaps to the excellent locality, but chiefly, of course, to skill attained through frequent severe competition at local shows; and even Woodhatch finds formidable competitors at Great Doods, where Mr. Brown practises so well, and in Messrs. Riches, Bailey, Hayter, and others. How like the shepherd who so well indicates the members of his flock by their faces does Mr. Salter point out the Morels, the Smiths, the Queens, the Avalanches or Sunflowers and numbers of others by their leaves alone. Every one is known, and a beautiful study does this class of plant knowledge present. There are no insects on the plants, and no rustiness about leaf or pot. not be easy to detect that the plants had been watered, and but that they were properly moist, as all over the area on which they stand, a fine rake is run and footsteps obliterated after cach watering.

In one long lean-to house there is a brilliant lot of double and single Begonias, and in another similar house a fine collection of bush Fuchsias. On the back wall of both houses is a fine lot of Peaches and Nectarines, doing capitally. There is in one of the double Begonias a sort of departure from the normal type, as the flowers have much the shape and form of a Cactus Dahlia. Anything which looks like a break from the big rotund type of flowers may well be regarded with interest. The chief Tomato grown here is Hepper's Goliath, a very old variety

relatively, but at Woodhatch it is a truly enormous cropper. The fruits of the largest arc rather sutured, the smaller ones of excellent form, but the crop could not be excelled. The plants, trained up under a sloping roof, are planted in a somewhat narrow shallow bed of soil, whilst root room seems conducive to coarse growth and certainly the finest fruit crops are got from very limited soil beds. The newer forms of the now popular Streptocarpus are grown here in Mr. Salter has been intercrossing to secure, and with much success, finer blooms. Some, too, arc of rich hues of colour, whilst now so beautiful it is very obvious that there is still great room for the production of greater variation in colour of the flowers.

A lovely Antirrhinum, yellow and red, a wonderful bloomer, is a striking feature in the open borders. All kinds of hardy plants are well grown, and indeed they are greatly encouraged here, where so much of glass does not by any means produce insensibility to the beauties of hardy outdoor plants. The crop on Apple, Pear, and other fruit trees is a heavy one, but tomtits and wasps are giving great trouble. The district is one essentially favourable to fruit production, but it is evident that where there is practical knowledge of tree

requirements, by far the best results are secured.—A. D.

HORTICULTURAL SHOWS.

LEICESTER.

THE annual Show was again held in the Abbey Park on the 8th inst. and as usual attracted an enormous crowd of people. Upwards of 12,000 generally attend, and this year that number must have been much exceeded. Horticulture is encouraged very much by the Corporation, especially among the working classes. One striking evidence of this may be seen in the large number of allotment gardens close to One striking evidence of the town. Another is the beautiful Park where the Show is held yearly, the profits of which are devoted to its maintenance; and not the least of all is the gratifying sight of the garden produce in the cottagers' tent, many of whom would stand a good chance in the professionals' class. The flower beds and park generally looked remarkably well, but one could easily see Mr. Burn has had some hard work this hot, dry season, the whole of the soil being mud from the river, which is not a

good staple for a dry season like the present.

The groups of plants were arranged in the centre of the new show house, a recent addition to the park, the cost of which was defrayed by the flower shows, and amounted to £700. This is a famous place for Chrysanthemums in the winter, of which a fine lot were in preparation near at hand, and looked very promising. The first prize for a group of plants was awarded to Mr. J. Smith, gardener to Mr. S. Bennett, who had clean well-grown examples of Crotons, Drackenas, Alocasias, and Chrysanthemums, lightened by good plants of Eulalia japonica variegata. Second, Mr. G. Barry, gardener to Mr. H. Snow, whose group was rather heavier in appearance. Third, Mr. W. Calvert, gardener to Mr. G. Oliver, the arrangement being better than No. 2, but the plants not so Zonal Pelargoniums lined the sides of this house in conjunction with Begonias and other plants, making an effective display. A novelty in the shape of three bouquets immersed in water under glass shades attracted attention, as exhibited by Mr. H. Smith. The specimen stove and greenhouse plants were arranged in an adjoining house. Mr. W. S. Bolton, gardener to W. Billson, Esq., was awarded the first prize for good specimens, including Allamanda Hendersoni, Plumbago capensis, Bougainvillea glabra, and others. Second, Mr. W. Calvert. For six exotic Ferns Mr. J. Smith was first, showing a fine Adiantum farleyense, Davallia canariensis, D. Mooreana, among other good specimens.

The fruit classes were keenly contested. The first prize for a collection of eight dishes was won by Mr. Goodacre, gardener to the Earl of Harrington, Elvaston Castle. The fruit was good and well staged. Black Hamburgh Grapes were fine in colour and bunch. Muscat of Alexandria good, as was the Madresfield Court. An excellent Queen Pine, Best of All Melon, Nectarines, Peaches, and Apricots completed the collection. Second, Mr. McIndoe, who showed fine fruit, but not so fresh in appearance. His collection contained fine bunches of Black Hamburgh Grapes, a large bunch of Bananas, and very fine Pitmaston Duchess Pears. Third, Mr. J. Read, Bretby Park. In the collection of four dishes there was a very strong competition. Mr. Goodacre was again placed first, showing very fine Muscat Hamburgh Grapes, a Melon, Nectarines, and Peaches. Second, Mr. W. H. Divers, who lost a few points with Grapes, but was much in advance with Peaches and Nectarines. Third, Mr. McVinish. Fourth, Mr. McIndoe.

Grapes, Muscat of Alexandria, first, Mr. McVinish, good bunches, fairly coloured; second, Mr. McIndoe. For any other white Grape, Mr. Reed was first, showing Cannon Hall, good in bunch and berry, but deficient in colour. Black Hamburghs, Mr. McVinish, good in all points; second Mr. I Cooloure with good hamburghs and hamburghs. deficient in colour. Black Hamburghs, first, Mr. McVinish, good in all points; second, Mr. J. Goodacre, with good bunches, not so perfect in colour. For any other black, Mr. W. Messenger was a good first with Gros Maroc, grand berries and well coloured; second, Mr. W. G. Adams. Peaches, first, Mr. W. H. Divers with Crimson Galande, fine in size and colour; second, Mr. McIndoe; third, Mr. McVinish. Nectarines, first, Mr. W. H. Divers with a fine dish of Dryden; second, Mr. J. H. Goodacre; third, Mr. J. McIndoe. Apples were a large class, and some very fine examples were shown; small fruits and Plums also brought a large number of entries large number of entries.

There was strong competition in the open class for a collection of twelve kinds of vegetables. No less than nine lots were staged, and all good. Mr. Garraway, Bath, took first with a superb collection cortaining Conference Tomatoes, Telegraph Cucumbers, Eclipse Cauliflower, White Spanish Onion, James' Intermediate Carrot, White Plume Celery, Garraway's Surprise Runner Beans, a splendid dish, Telephone Peas, Snowdrop and Masterpiece Potatoes, White Stone Turnip, Pen-y-Byd Marrow, the whole neatly set up with Parsley and coloured Carrot leaves. Mr. McVinish was second, Mr. R. Shaw third. The single dishes of vegetables were strongly contested in most instances, the quality of the exhibits being remarkably good for the season.

A large number of Roses were staged. In the class for thirty-six blooms Messrs. Cocker won the first prize with highly coloured flowers; second, Messrs. Croll, Dundee; third, Messrs. Harkness & Son, Bedalc. With twenty-four varieties the prizes went to the same exhibitors in the same order. For twelve of one variety Messrs. Cocker were first with Horace Vernet, Messrs. Harness second with Mrs. J. Laing. Wreaths and bouquets made a very interesting show, Messrs. Perkins taking the chief prizes, Mr. Woodcock also securing a good share.

Among exhibits not for competition, Messrs. Laing of Forest Hill staged a fine group of new and interesting plants, and very fine Begonias. A new Carnation attracted much attention in this collection. It is called Stanstead Surprise, and was awarded a first-class certificate. Saxifraga sarmentosa variegata, Sibthorpia variegata, Begonia Arthur Malet, Campylobotrys Ghiesbrieghti variegata were among the most noticeable plants in this group, which was awarded a gold medal. Messrs. Williams of Holloway had a fine group of plants, which also received a gold medal, and contained many choice Orchids and ornamental foliage plants, among which Cattleya Dowiana. Cypripedium Morganæ, Sarracenia purpurea, Sonerilas, Crotons, and Nepenthes were especially noticeable, the whole forming a very interesting exhibit.

Messrs. Cuthbertson of Rothesay staged a splendid collection of hardy herbaceous cut flowers, which worthily received a silver-gilt medal at the hands of the judges, the same firm also taking first prize for twelve varieties of herbaceous flowers. Mr. Forbes of Hawick sent six stands of border Carnations, many of the varieties being new, and all of them were very much admired; a silver medal was awarded. Mr. W. Barron showed an interesting and instructive collection of cut shoots from hardy ornamental trees and shrubs, and Mr. J. Crawford of Coddington Hall Gardens sent a fine collection of hardy fruits.

A new class, open to market growers only, brought some capital tables of useful plants, just the sort to encourage for a town like Leicester, as useful for window and room decoration. The cottagers' exhibits made a good show in themselves, especially in vegetables, and it is very gratifying to see such a great interest taken in horticulture by the people of Leicester.

FRUIT AND VEGETABLES AT THE TAUNTON SHOW.

The show of fruit on the 10th inst. was even better in some respects than usual, this being strong commendation. Six persons competed with a collection of eight varieties, the first prize going to Mr. W. Iggulden, gardener to the Earl of Cork, Marston House, Frome, who had very well finished stands of three bunches of Muscat of Alexandria and Madresfield Court Grapes, a good Hero of Lockinge Melon, Bellegarde Peaches, Pineapple Nectarines, Moor Park Apricots, Williams' Bon Chrêtien Pears, and Jefferson Plums, all in excellent condition. Mr. J. Lloyd, gardener to Vincent Stuckey, Esq., Langport, was a very close second, the Black Hamburgh and Muscat of Alexandria Grapes, seedling Melon, and Pineapple Nectarines in this collection being very good. Mr. A. Crossman, gardener to J. Brutton, Esq., Yeovil, was third, his front dishes being remarkably good. Mr. Iggulden was also first with four dishes, having well-coloured Madresfield Court Grape, Golden Gem Melon, Bellegarde Peaches, and Elruge Nectarines. Mr. Lloyd was again second, and Mr. Crossman third, two other good collections being shown.

Mr. Iggulden was well first in the class for Black Hamburgh Grapes, the only fault being smallness of berries. Mr. W. Crossman, gardener to Captain Dick, was second, and Mr. D. Hobby, gardener to Sir J. Ponsonby Fane, third. In the any other black class Mr. H. W. Ward, gardener to the Earl of Radnor, was first with Madresfield Court in good condition; Mr. Iggulden being a close second with the same variety, and Mr. Lloyd third. The best Muscat of Alexandria were shown by Mr. Iggulden, Mr. Lloyd being a good second, and Mr. Ward third. With any other white variety Mr. F. Crossman took the lead with very good Buckland Sweetwater, Mr. Ward following very closely with the same variety the third prize going to Mr. A. Crossman

good Buckland Sweetwater, Mr. Ward following very closely with the same variety, the third prize going to Mr. A. Crossman.

Melons were not numerously shown. The Rev. W. S. Cotter, Yeovil, was first with a very good fruit of Hero of Lockinge, Mr. Iggulden following with Golden Gem at its best, Mr. Ward being third. The best dish of Peaches, apparently Crawford's Exquisite, was shown by Mr. J. Reed, gardener to F. J. L. Parsons, Esq.; Mr. S. Kidley, gardener to W. S. Hall, Esq., being a good second. Very fine indeed were the fruits of Pineapple that gained Mr. A. Crossman the first prize for Nectarines, Mr. J. Webber, gardener to G. F. Luttrell, Esq., being a good second with the same variety. Messrs. Webber and Iggulden were the prizewinners with Apricots, and with Pears Messrs. D. Hobby and S. Tottle were successful. Messrs. Iggulden, W. Greedy, W. Uttermere, T. Every, Smith, F. Crossman, and Webber were also prizewinners in other fruit classes.

Vegetables.—Taunton shows are always noted for the quantity and excellence of the vegetables shown, but on this occasion they were more plentiful than usual, and the quality evidently had not been impaired by the dryness and heat of the summer—cottagers, as well as private gardeners, staging grand produce. The best collection of eight varieties

was shown by Mr. T. Wilkins, gardener to Lady Ivor Guest, Henstride, who had very fine Autumn Giant Cauliflowers, Giant White Celery, Excelsior Onions, Intermediate Carrots, Ponderosa Tomatoes, Satisfaction Potatocs, Ne Plus Ultra Runner Beans, and Autocrat Peas. Mr. H. Copp, gardener to W. E. Erle Drax, Sherborne, was a very close second, and Mr. T. Evry, Bath, third. Mr. Copp was first in the class for a collection of vegetables, the prizes for which were provided by Messrs. Jarman & Co., Chard, Mr. Wilkins being second, and Mr. A. Crossman third. Mr. Copp also took the first of the prizes provided by Messrs. Sutton & Sons, Mr. Mitchell, gardener to G. T. C. Grove, Esq., being a good second, and Mr. A. Crossman third. Mr. Garraway, Bath, took the first of Messrs. Webb & Sons' prizes, Mr. H. F. Manley being second. Classes were also provided for all kinds of vegetables, the competition being remarkably keen throughout.

[The report of the plants and flowers has not reached us. It has

been presumably lost in the post.]

A GOOSEBERRY SHOW.

THE annual Gooseberry Show was held at the Sitwell Arms, Wall Street, Ripley, on Saturday last. The berries were weighed by Mr. Joseph Eyre, of Codnor. Mr. James Taylor acted as Secretary. The Show was a complete success, and some magnificent fruit was exhibited. The following is a list of the prizetakers:—

PREMIER.

John Barlow, Bobby			• • •	•••	dwts.	grs 1
•		T PRI	75			
	TEWAR'				26	1
J. Langton, Lord Des		•••	• • •	•••	23	18
G. Walters, Leveller	 L.L	•••	•••	• • •	$\frac{20}{20}$	$\frac{10}{12}$
C. Vernon, Great Bo	DDY	• • •	•••	•••		
J. Grainger, Transpa		•••	•••	•••	25	10
	• • •	• • •	• • •	•••	25	12
	• • •	• • •	• • •	•••	21	4
I. Smith, British Oal	ζ	•••	•••	•••	18	23
	• • •	• • •	•••	• • •	17	0
J. Caulton, Dr. Morle		• • •	• • •	• • •	21	$\frac{23}{2}$
G. Thorpe, Thatcher	• • •	• • •	•••	• • •	15	0
J. Hamilton, Jerry	• • •	• • •	• • •	•••	16	18
T. Nicholson, Antag	onist	• • •	• • •	• • •	18	15
G. Lowe, Drill	•••			•••	16	0
T. Machin, Diadem	•••	•••	•••	•••	16	0
*	SECON	D RU	N.			
C. Vernon, Ringer					25	11
G. Walters, Bobby	•••				24	9
J. Grainger, Lord De					24	0
J. Langton. Bobby		•••			$\overline{23}$	17
J. Wathey, Bobby	•••	•••	•••	•••	$\overline{23}$	_ <u>8</u>
G. Thorpe, Transpar	on t	•••	•••	•••	$\frac{1}{2}$	8
T Cardton Robby		•••	•••	•••	$\frac{23}{23}$	8
J. Gaulton, Bobby	•••	•••	•••	•••	$\frac{20}{22}$	$\ddot{3}$
J. Taylor, Bobby	•••	•••	• • •	•••	$\frac{22}{21}$	21
G. Lowe, Bobby	• • •	•••	• • •	•••	$\frac{21}{22}$	$\frac{21}{22}$
J. Barlow, Bobby		•••	•••	•••	20	20
I. Smith, Antagonist		•••	•••	•••		5
T. Machin, Transpar	ent	• • •	•••	•••	19	
J. Clee, Dan's Mistal	ce .	•••	• • •	•••	20	18
J. Whysall, Dan's M	istake	•••	•••	•••	17	0
J. Hambleton, High	Sherif	Ť	• • •	• • •	15	0
T. Machin, Lizzie	•••	• • •	•••	• • •	13	1
BES	T BEAT	ren B	ERRY.			
J. Langton, Bobby	•••	•••		•••	24	17
		INS.				
J. Langton, Stockwe		A41174			36	5
T Toplor Lade Owte	nn	•••		•••	$3\overline{2}$	9
J. Taylor, Lady Orto		• • •		•••	27	4
J. Barlow, Bobby	•••	• • •	•••	•••	2.	1



HARDY FRUIT GARDEN.

Peaches and Nectarines.—The full exposure of the fruits to the light is essential. Leaves unduly shading the fruit draw on one side, so that the latter may receive every benefit possible from the admittance of light, air, and sunshine. Without these colouring of the fruit is imperfect, the proper flavour is not developed, and the whole finish unsatisfactory. Earwigs are liable to attack ripening fruits. Trapping with the hollow stems of bean stalks or narrow crumpled lengths of brown paper are good methods of reducing their numbers, if each morning the traps are examined, and the insects caught in them blown out and destroyed. Protect the fruit from birds by hanging nets in front of the trees. They might be arranged at the base so as to catch any falling fruits, but it is desirable to gather ripe specimens before they detach themselves from the trees, choosing a period when they are perfectly dry.

Late Peaches.—Continue to syringe the foliage of trees with the fruit still green. Rapid evaporation from the foliage tends to exhaust

the nourishment available. Refreshment given regularly with a syringe or garden engine is conducive to cleanliness and a prevention of red spider, also an aid to the steady development of the fruit. Adequate root moisture, too, must not be overlooked, giving stimulating assistance only up to the period of the first signs of fruit showing colour, not after, clear water only being used during ripening if moisture is needed.

Ripening Peach and Nectarine Wood.—Nothing superfluous should be allowed to remain on the trees which will tend to retard the necessary hardening of the future bearing shoots. The earliest trees from which fruit has been gathered must have the bearing shoots cut out at once, training in the succession shoots at suitable distances apart. Remove any that are likely to crowd the rest. Attend diligently to the cleanliness of the trees, red spider being perhaps the most insidious pest that attacks the leaves at this period of the year. Frequent syringings with soapsuds or soap dissolved in water at the rate of 2 ozs. to the gallon will destroy the pests and prevent their reappearance if regularly applied. Gishurst compound and other insecticides may be used instead if preferred. Such faith, however, is placed in the efficacy of the various insecticides to destroy pests which prey upon trees that insects are allowed to attain a strong foothold before means are applied to destroy them. In the case of red spider this is a very dangerous plan, as the mischief they are able to inflict upon the foliage of Peach and other trees is irreparable. It is, therefore, important to make war with red spider upon its first appearance. Serious attacks of this insect cause premature ripening of the wood, the leaves as a result falling considerably earlier than they should instead of being retained to the very latest period to assist in feeding and plumping the buds. Clear water, forcibly applied to reach the under as well as the upper surfaces of the leaves, is a ready means of maintaining the trees in health, attention also being paid to moistening the borders. Dryness at the roots is very frequently the cause of attacks of red spider in the first instance.

Treatment of Gross Growing and Weakly Trees.-Trees that are rather weak in growth and lack vigour may be improved by applying stimulants to the roots judiciously, while those growing too strongly must be gradually checked by withholding water and exposing every shoot fully to sunshine and air. In some cases root-pruning will be necessary shortly, or lifting and replanting, the latter method being the best means of regulating the growth in young trees.

Early Apples and Pears. — Early Apples, such as the Red Astrachan, Joaneting, Devonshire Quarrenden, Irish Peach, and Mr. Gladstone, will as they ripen require gathering. Jargonelle Pears are unusually fine in many districts this year, especially where the fruits have been thinned. The reduction to two or three on a spur has resulted in examples being developed above the average size, but where clusters of more have been left the individual fruits are as a rule under the average size. The fitness of fruit for gathering is known generally by the footstalks parting readily from the spurs, or when sound fruits begin to fall of their own accord. A cool period of the day, when the fruit is dry, is the best time for gathering, exercising special care in the handling of choice and increase well as in solver. special care in the handling of choice specimens, as well as in selecting the precise time for securing fruit in the best condition. Some, if gathered too soon, are watery; others, allowed to hang too long, being mealy, a musky disagreeable flavour being apparent, which is not Remove all fruit bored by maggots, whether ready for gathering or not.

Removing Dead Wood from Fruit Trees.—The present is an opportune time for cutting out dead shoots, twigs, or branches in all forms of fruit trees. Such wood can now be easily distinguished, and in the case of wall trees it often appears very conspicuous, as evidenced by dying branches of Plums, Apricots, and Cherries. Remove them at once back to their point of origin, training in their place the healthy adjoining branches.

Morello Cherries .- Thin out the wood in crowded trees to admit plenty of light and air to the shoots retained. It is not necessary to tie shoots closely in at present, that is securing them their full length to the wall or trellis. The extremities will ripen better by being allowed to hang free, the lower parts being fully secured. Ripe fruit required to hang protect with netting.

FRUIT FORCING.

Peaches and Nectarines.—Earliest Forced Houses.—The leaves are now beginning to fall, and this takes place far more gradually with early forced trees than later in the season. The trees being exposed as advised by the removal of the roof lights, there will not be need to assist their falling, as the wind will do it most effectually. Allow them to remain until they part from the trees readily, clearing them away as they fall. Avoid a dry condition of the border, as this may cause the blossom buds to drop when they should be swelling. Excessive moisture at the roots is frequently the cause of premature growth, which should be guarded against, but it is not desirable to replace the roof lights unless the weather is excessively wet. Early forced trees require little pruning, for they do not make strong growth, and have a larger percentage of single blossom buds than those started in spring under more favourble conditions, hence in pruning it is not so desirable to cut back the bearing wood unless of excessive length, and in that case it must be to a wood bud, to insure growth for attracting sap to the fruits. little pruning will be needed provided disbudding has been properly attended to and no more shoots laid in than are necessary to take the place of the current year's bearing shoots and to renew worn-out growths, as well as to provide for the proper extension of the trees.

Early forced trees are seldom too vigorous after they have been

subjected to the process a few years, but generally become so enfeebled as to need the removal of the weak growths, which, though plentifully furnished with fruit buds, are undesirable from their affording smaller fruit than is furnished by the better fed and more vigorous growths. Such trees should have the old soil carefully removed from amongst the roots, and fresh turfy loam, to which has been added a bushel of wood ashes to a cartload, supplied, firming it well, and giving a good watering. Lift any trees that grow too vigorously, shorten the long and bare roots, and lay the more fibrous ones nearer the surface, making the soil firm. These operations require to be performed as soon as the leaves are mature, and before they fall from the trees, yet not before they give indications of doing so.

Succession Houses .- As the trees are cleared of fruit cut out all the current year's bearing wood, not being extensions, and thin all the growths where too crowded. Syringe as is necessary to keep down red spider, or promptly apply an insecticide. Keeping the borders duly supplied with water or liquid manure will greatly assist weakly trees. Ventilate the houses to the fullest extent unless the wood is not ripening, in which case ventilating freely at night and keeping the house rather close in the daytime ripening will be induced. Any young trees that are too vigorous should have a trench taken out about one-third the height of the tree from the stem and the roots cut, filling the trench again firmly.

Late Houses.—The wood should be laid in thinner than is customary with trees in earlier houses, so as to secure the thorough solidification of the growths; then the buds will become perfect, and matter be stored in the adjacent wood for the support of the blossoms and embryo fruit in the coming season. As gross growths tend to impoverish the weaker by drawing to them an undue amount of sap, and prevent an equal distribution of vigour, they must be stopped, or preferably removed altogether. Keep the trees free from red spider by forcible syringings until the fruit gives indications of ripening. The borders should be well supplied with water or liquid manure, and be mulched about an inch thick with short partially decayed manure.

Making New Borders.—If any planting of trees in new houses, or replacing of old by young trees is contemplated, material for making the border should be procured, so that the work may be executed with despatch, and the borders made so as to have time to settle somewhat before the trees are planted. Strong turfy loam, with enough small stones and grit to allow water to percolate through it, is the best, especially that off calcareous formations. The loam should be strong rather than light. Strong clay soils are not good unless they contain a large per-centage of small stones and grit. Where the soil lacks calcareous matter, a goodly admixture of lime rubbish to heavy and of clayey marl

to light loams will improve them.

New borders must have efficient drainage. If the bottom of the border is unfavourable it should be concreted 6 inches thick, gravel, coarse and fine together, with a third of lime made into a mortar-like mass, put in so as to slope to a drain of 3-inch tiles, having a proper fall When the concrete has hardened 9 to 12 inches of drainage and outlet. should be provided, placing the roughest at the bottom and the finest at the top. Cover the drainage with turves grass side downwards, and if a layer 3 inches thick of old mortar rubbish or chalk broken to the size of road metal is added, the roots will seldom pass through this into the strata beneath. Instead of making the border all at once a 4 feet width is ample for a couple of years, and the openings in the front wall to let the roots out should be bricked up so as to insure the occupation of the inside border before they pass into the outside. Loose bricks or dry walls will do for holding up the soil of the borders. The border need not exceed 30 inches and should not be less than 24 inches deep. The compost should be neither wet nor dry, and be put together firmly. The border ought to be made ready for planting by the end of

In respect of varieties and structures it is best to have few of the first and the latter of moderate size, so that those which ripen about the same time con be grown together. The structures for early forcing should face south, lean-to's or three-quarter span-roofed houses being much the best if well ventilated and efficiently heated. For very early forcing Alexander, Early Louise, and Waterloo Peaches, with Advance and Early Rivers Nectarines are suitable. The Peach first named is somewhat liable to cast its buds, chiefly from over-maturity, as the buds on the spurs or stopped shoots are far less prone to be cast than those on the first made wood. For second early houses Hale's Early Alfred and A Bec Peaches; Nectarines, Darwin, Goldoni, and Lord Napier; for succession, Stirling Castle and Royal George Peaches, the two best forcing varieties with Elruge and Dryden Nectarines, unsurpassed for comprise and guality. These cannot well be forced to ripen before the cropping and quality. These cannot well be forced to ripen before the end of May or early in June, then they carry plenty of colour. For midseason, houses D. Harry, Country of Colour. midseason houses, Dr. Hogg, Grosse Mignonne, Goshawk, Dymond, Noblesse, Bellegarde, and Belle Beauce Peaches; Nectarines, Improved Downton, Stanwick Elruge, Rivers' Orange, and Pineapple. Late houses. Barrington, Exquisite, Princess of Wales, Gladstone, Sea Eagle, Walburton Admirable, and Golden Eagle Peaches. Nectarines, Newton, Milton, Spencer, and Victoria.

For an unheated house or wall case-Waterloo or Early Louise, Hale's Early or A Bec, Early Alfred or Rivers' Early York, Dagmar or Dr. Hogg, Crimson Galande or Magdala, Royal George or Grosse Mignonne, Belle Beauce or Goshawk, Dymond or Noblesse, Bellegarde or Barrington, Gladstone or Princess of Wales, Walburton Admirable or Lady Palmerston, Sea Eagle or Golden Eagle. Nectarines to succeed each other in an unheated house—Early Rivers, Lord Napier, Darwin, Elruge, Byron, Dryden, Violette Hâtive, Pineapple, Spencer, Newton, Milton and Victoria

Trees of Peaches and Nectarines for planting in houses are best after two or three, or even four or more years trained to walls or in cool houses, and they transplant with complete success provided they have been duly lifted, so as to move with abundance of fibrous roots. Failing these an early selection should be made of trees in nurseries, choosing the best furnished, most evenly balanced, clean and healthy, and with medium sized short-jointed wood. If carefully lifted when the wood becomes firm and the leaves are parting from the trees and planted without delay, they will experience little check, and, being bearing trees, some fruit may be taken the first year.

Cucumbers.—Houses that are to be used for supplying fruit at Christmas—the plants having been raised from a sowing made about the 10th of the month—should now be cleared, so that the needful cleaning, repairs, or painting may be done thoroughly before the house is wanted. Pot the plants as they require it, growing them in full light, and support them with sticks. They should be grown without stopping, rubbing off side shoots as they appear to the height of the trellis.

rubbing off side shoots as they appear to the height of the trellis.

The autumn fruiting plants should be encouraged to make strong growth by earthing betimes, not making large additions, but enough each time to cover the protruding roots, taking care to have the soil warm and moist. Afford plenty of water, but avoid excessive supplies and dri'olets. Syringe at 3 to 3.30 P.M., damping in the morning, noon, and before nightfall in bright weather. Maintain a night temperature of 65° to 70°, 70° to 75° by day artificially, and keep it through the day at 80° to 90° from sun heat, closing sufficiently early to rise to 90°, 95°, or 100°. Train the growths 9 to 12 inches apart—that is, the side shoots—and stop them at about 12 to 15 inches growth to give the needful fruiting and furnishing wood. Remove all fruit as well as male blossoms as they appear, so as to get the plants strong, the early part of September being sufficiently early to allow fruits to swell for cutting at the end of the month. By cropping lightly at first a good supply can be had later in November and December.

Plants in bearing will require attention in thinning old growths, removing bad leaves, stopping at a joint beyond the show of fruit, to maintain a succession. Plants in frames will be restored to vigour by a good thinning out of the old shoots and the addition of a little fresh loam, giving a moderate watering, and a sprinkling on bright afternoons, closing at about 3 P.M. With liming and the protection of mats over the lights Cucumbers will be produced for a lengthened period.



APIARIAN NOTES.

ARE BEES WILD ANIMALS?

Decision has been given in the Sheriff Court, Perth, in an action in which David Harris, farmer, Aberbothrie, Alyth, sued Robert Elder, farmer, Burnhead, Alyth, for delivery of a swarm of bees belonging to pursuer, which on June 5th last swarmed from pursuer's hive, and were followed by him to defender's place, where they alighted and were retained by him. The Sheriff held that bees in a wild state were the property of the person who could get possession of them. The defender was not entitled to open his door to give entrance to the pursuer to take possession of the bees. He therefore assoilzied the defender, but allowed no expenses.

The above decision by the Perth Sheriff seems to me to be of an extraordinary nature, and contrary to precedent, use, and wont, the latter in Scotland being constituted law. In previous actions it was always held that if the owner of a swarm of bees did not lose sight of them he could enter any premises and secure them by paying all damages, once lost sight of they belonged to any person

who found them, which I think reasonable and just.

Bees are certainly not wild animals in the proper sense, not more so than poultry, pigeons, &c., or the ferrets of the squire or gamekeeper which, according to the above decision, any person may take them wherever found. People should not find anything and keep it. According to an unrescinded law in Scotland all found property is to be handed over to the Baron Bailie, and to a recent law to the police. Had I been the judge I would have acted a Solomon's part and given the owner of the bees his property. The case is one for bee associations to take up, and either get the law amended or administer it according to justice as it was intended.

AT THE MOORS.

The weather has since the 7th taken a turn for the better, and bees are gathering Heather honey quickly. Hives that were almost at starvation point are gaining weight rapidly, and with a few days more fine promises to be the best honey season since 1859.

QUEENLESS HIVE.

A correspondent, "F. J. W.," writes on this subject, and asks for advice. His hive may not be queenless, and it would therefore

be risky to introduce a valuable queen to it. He should try it first with a piece of brood comb containing eggs and larvæ; if queenless it will raise a queen. Any dealer will supply a queen. I obtain all my imported queens, Punics excepted, from Messrs. George Neighbour & Sons, 127, High Holborn, London. Punics can be had from Mr. J. Hewitt, Cambridge Street, Sheffield. If the bees start queen cells by removing the piece of brood the hive will be in a fit condition to receive an imported queen. Nature's book is the best to study, assisted by the Journal of Horticulture, and 7d. sent to Col. Bennett, 50, Gordon Street, Glasgow, will secure an essay on bees by post.—A LANARKSHIRE BEE-KEEPER.

TRADE CATALOGUES RECEIVED.

Messrs. Ellwanger & Barry, Mount Hope Nurseries, Rochester, U.S.A.—Strawberries, Dutch Bulbs, &c.

Osman & Co., 132 and 134, Commercial Street, London.—Illustrated Catalogue of Horticultural Sundries.
Sutton & Sons, Reading.—Illustrated Bulb Catalogue for 1893.



*All correspondence should be directed either to "THE EDITOR" or to "THE PUBLISHER." Letters addressed to Dr. Hogg or members of the staff often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Bee subjects, and should never send more than two or three questions at once. All articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post, and we do not undertake to return rejected communications.

Melon.—A correspondent whose letter has been mislaid, has sent a Melon desiring our opinion on the fruit. It is very good in appearance, but we are sorry to say quite inferior in quality, and one taste was more than enough. Our correspondent will have no difficulty in recognizing this reply as applying to his fruit.

Thrips Under Glass and Outdoors (E. H.).—There are many species of thrips, and so much alike as to render it difficult to distinguish them from each other. One of the most hurtful is that infesting plants under glass, and this species is also often found outdoors in hot seasons. It is called Heliothrips hemorrhoidalis, and cannot survive the winter outdoors. The most common thrips outdoors is the small black variety. The insects are found on many plants, especially in dry seasons, also in flowers, which they more or less malform. It is called H. minutissima.

Sabbatia campestris (A. B.).—The plant to which you doubtless refer is Sabbatia campestris. This is one of the showiest of our hardy outdoor annuals, and is a native of the open prairies of Arkansas and Red River, where, although not very plentiful, the effect of its deep rose lilac-coloured flowers is quite dazzling when seen through the long grass. It grows from 6 inches to a foot high, with slightly winged stem, branching habit; leaves ovate, amplexicaule, acutc, nerved; flowers nearly 2 inches in diameter, each of the variable segments being marked with a five-rayed greenish-yellow star, having an irregular white margin. It grows well in ordinary garden soil. S. campestris has often been confounded with the Chironia trinerva of Ceylon, and, although agreeing in artificial character, the colour of the flower and the ovate leaves distinguish it clearly enough for all practical purposes.

Winter's Bark (H. B.).—You wish to "know something about Winter's Bark." This is the produce of a small tree (Drymis Winteri) allied to the Magnolias, and is occasionally seen in botanic gardens or choice collections of plants in this country. The bark is a stimulant aromatic tonic, and may be used for similar purposes as cinnamon and Canella alba, for the latter of which it is sometimes substituted. Its odour is that of pepper and basil, and its flavour of a burning acridity adhering to the throat. It is said to be good in scurvy, vomiting, and paralysis, and it is also used for tanning. It was first brought to England from the Straits of Magellan in 1579 by Captain Winter, who went out with Sir Francis Drake in his voyage round the world. He found it very useful to his ship's crew both as a substitute for other spices and as a cure for scurvy. The leaves with other herbs are said to have been used successfully in fomentations, and half a drachm of the bark boiled with some carminative seeds promoted perspiration and relieved those suffering from scurvy. Other species of Drymis, as granatensis and axillaris, possess the same properties, and the fruit of Tasmannia aromatica is used as pepper by the settlers of Australia.

Improving Light Soil—Pear Leaves Browned (F. M. M.).—
If the clay can be dried and smashed into small particles it could be the better incorporated with the light soil of your garden, and would undoubtedly improve it. We have not found raw lumps of much immediate advantage. Clay sufficiently burned to be easily pulverised is especially valuable for mixing with light soil for fruit trees, and indeed all kinds of crops. The Pear leaves have the appearance of an attack by slug-worms, but they have not cleared away, as usual, the whole of the soft substance of the leaf, so that the veins and the skin of the lower side are all that remain; indeed, the leaf surface is almost entire, but discoloured, and there are only traces of slug-worm attack here and there on the upper surface. This may be due to the unusual hardness of the epidermal tissues. It is remarkable, however, that there is not further indications of such attacks. There is no trace of fungal affection, and we think the discolouration of the leaves is due to the slug-worm, the pest having collapsed in its early stages, but not before it had injured the leaves.

The White Beam Tree (A. F.).—No doubt you refer to the Pyrus Aria of botanists, and which is commonly known as the White Beam Tree, in reference to the white under surface of the leaves. It is a native of Britain, chiefly in the mountainous districts on limestone soils. Its fruit is acid and astringent, but is not disagreeable to eat when in a state of incipient decay, like the Medlar. When dried and reduced to powder it has been converted into a sort of bread during times of scarcity both in France and Sweden; and when fermented it forms a beer, or, by distillation, a powerful spirit. It is greedily eaten by birds, for which reason the trees are ordered to be preserved in French forests, that the number of birds may be increased, in order to keep down the insects. The fruit also furnishes food to squirrels, and when it drops, deer and the hedgehog eat it with avidity. The wood is very hard, of a fine close grain, yellowish white, and susceptible of a high polish. It may be stained of any colour, and is much used in making handles of knives and forks, wooden spoons, and for musical instruments, and various articles of turneryware.

Liliums Unsatisfactory (E. W.).—The buds are destroyed by the same cause as the leaves, but some of the buds have had their stalks gnawed by a weevil, which would probably be found by examining the plants at night with a lantern. The discoloured leaves are due to bacteria generally, but there are traces of another infection, viz., that of a fungus, which is certainly not the cause, but the consequence of the diseased tissues, for it only lives on those which have been disorganised by the bacteria. This parasite is embedded in the cells and sets up a ferment, completely destroying them and leaving its spores attached to the walls of the cells. The fungus comes after the bacterial attack, and is confined mainly to the upper surface of the leaves, as in attacks by eelworm. We were unable to identify the species, which is different to the micro-organism producing wet rot in Potatoes, and the ferment is very much less. The fungus germs are those of Polyactis cana. Try spraying with Bordeaux mixture early another season to prevent the We suspect the plants which had been grown to a height of 18 inches under glass before being planted out in May would receive a check, as their tissues would be necessarily tender, and any injury, though not perceived at the time, would render them liable to parasitic attack.

Tomato Leaves Diseased (W. D.).—The yellow spots in the leaves indicate the abstraction of the contents of the cells by the mycelium of a fungus (Phytophthora infestans), and its "fruits" are just emerging from the under side of the leaves. They are as yet immature on the yellowish parts, while those on the brown portions have been developed and the spores scattered. The best thing to do is to remove all the leaves or leaflets exhibiting yellow spots and burn them, also every part that has become brown or black, then spray the plants with Bordeaux mixture prepared as follows: sulphate of copper 4 ozs., powdered, dissolving in a vessel by itself in 3½ gallons of water, then slake 4 ozs. of quicklime (quite fresh) in another vessel, and form into a thin limewash with water, and pour it through a hair sieve slowly into the vessel containing the copper solution, adding enough water to make 7½ gallons altogether. To make sure that this will not injure the plants drop a few drops of ferrocyanide of potassium into the Eordeaux mixture after it has been well stirred, and if it turns brown it will injure the plants, but if it remain a clear celestial blue it is perfectly safe. It should be used as soon as made, not letting it stand for several hours. Any fruits near ripening should be cut, and then spray the plants in every part, repeating in the course of a week or ten days. The mixture may be kept from the fruit by wrapping it in oilskin before spraying, removing it afterwards. This makes safety doubly sure as regards danger in using the fruit from the adherent copper. Maintain a dry atmosphere with free ventilation.

Names of Fruits.—Notice.—Special attention is directed to the following decision, the object of which is to discourage the growth of inferior and promote the culture of superior varieties. In consequence of the large number of worthless Apples and Pears sent to this office to be named, it has been decided to name only specimens and varieties of approved merit, and to reject the inferior, which are not worth sending or growing. The names and addresses of senders of fruit to be named must in all cases be enclosed with the specimens, whether letters referring to the fruit are sent by post or not. The names are not necessarily required for publication, initials sufficing for that. Only six specimens can be named at once, and any beyond that number cannot be preserved. (Lover of Fruit).—Pears—1, Jargonelle; 2, Not ripe,

probably Louise Bonne of Jersey. (George Pennill).—4, Beurré Clairgeau; 5, Williams' Bon Chrêtien; 6, Windsor. The Apples are deformed or defective, and cannot be identified. (G. C.).—As has been many times stated, Plums cannot be named without portions of young wood with leaves accompany the fruit. (W. G. J.).—The Apple is either a local seedling or a continental variety, and has no recognised name on our list. (H. D.).—The Plum is probably Pond's Seedling, but young shoots with leaves are necessary for satisfactory identification. (W. S. Payne).—16, Allen's Everlasting; 48, Longville's Kernel; 60, Whorle Pippin; 71, Golden Reinette. (A. H. Lawrence).—1, Lord Suffield; 2, Perhaps Gloria Mundi distorted; 3, Possibly a small Domino; 4 and 5, New Hawthornden; 6, Winter Majetin. (J. T. Dare).—You ought to have informed us if the flowers of the Nectarine are large or small. If they are small it is Stanwick Elruge. (H. M.).—The Pear is a good example of Williams' Bon Chrêtien. The Apple cannot be identified.

Names of Plants.—We only undertake to name species of plants, not varieties that have originated from seed and termed florists' flowers. Flowering specimens are necessary of flowering plants, and Fern fronds should bear spores. Specimens should arrive in a fresh state in firm boxes. Slightly damp moss, soft green grass or leaves form the best packing, dry wool the worst. Not more than six specimens can be named at once, and the numbers should be visible without untying the ligatures, it being often difficult to separate them when the paper is damp. (Π . E. M.).—The specimen arrived in a very defective state. It is possibly Dimorphanthus mandchuricus, which sometimes produces leaves 4 feet to 5 feet. Very ornamental in shrubberies. (G. F. S.).—Monarda didyma (Bergamot). (G. A.).—The specimens are quite insufficient for identification. The habits of such plants should be clearly described, and better examples packed to arrive in a fresh state for purposes of nomenclature. (C. F.).—Enothera macrocarpa. (G. A).—1, Davallia canariensis; 2, D. decora; 3, Acrophorus affine; 4, Adiantum Weigandi; 5, A. elegans; 6, Cornus sanguineus.

COVENT GARDEN MARKET .-- AUGUST 16TH.

Large supplies, readily changing hands at low rates.

	FRUIT.	,
Apples, per bushel 1 ,, Tasmauian, per case 0 ,, Nova Scotia, brl. 0 Cherries, half sieve 0 Cobs	0 0 0 Oranges, per 100 0 0 0 Peaches, per doz	d. s. d. 0 9 to 2 0 10 0 15 0 0 0 0 0 1 6 8 0 1 6 2 6 2 0 5 0 0 0 0
	VEGETABLES.	
Asparagus, per bundle 0 Beaus, Kiduey, per lb. 0 Beet, Red, dozeu 1 Carrots, buuch 0 Cauliflowers, dozen 2 Celery, bundle 1 Coleworts, dozen bunches 2 Cucumbers, dozen 1 Endive, dozen 1 Herbs. bunch 0 Leeks, bunch 0 Lettuce, dozen 0 Mushrooms, punuet 0	d. s. d. 0 to 0 0 0 3 0 4 Onions, bunch 0 0 0 Parsley, dozen bunches 4 0 6 Parsnips, dozen 0 1 3 Potatoes, per cwt. 0 4 0 Scorzonera, bundle 3 1 6 Saksafy, per lbs. 3 0 0 Spinach, bushel 2 0 0 Tomatoes, per lb. 9 1 0 Turnips, bunch	0 3 0 5 2 0 3 0 1 0 0 0 2 0 4 6 1 0 1 6

AVERAGE WHOLESALE PRICES.—OUT FLOWERS. Orchid Blooms in variety.

Arum Lilies, 12 blooms Asters (Freuch), per bunch " (English) doz. behes. Bouvardias, bunch Carnations, 12 blooms Carnations, dozen bunches Chrysanthemums, dozen bunches Chrysanthemums, doz. bls. Cornflower, dozen bunches. Eucharis, dozeu Gardenias, per dozen Lilium lancifolium, dozen blooms Lilium longiflornm 12 blooms Maidenhair Fern, dozen	2 0 3 0 0 4 4 1 1 1 2	9 0 6 6 0 0 0 0 6 0	1 5 1 2 8 6 2 2 4 4	0	Marguerites, 12 bunches Mignonette, 12 bunches Myosotis, dozen bunches Orchids, per dozen bleoms Pelargoniums, 12 bunches Pelargoniums, scarlet, doz. bunches Primula (double) 12 sprays Pyrethrum, dozen bunches Roses (indoor), dozeu ,, Red, doz. bunches ,, Tea, white, dozen ,, Yellow, dozen Stocks, dozen bunches Sweet Peas, doz. bunches Sweet Sultan, per dozen bunches	2 2 1 3 6 3 0 2 0 4 1 2 4 2	0 6 0 0 6 0 6 0 0 0	to 4 4 3 12 9 6 1 6 1 6 2 4 8 4	0 6 0 0 0 0 0 0 0
	4	0	6	0		3	0 4	4 0	0 6

PLANTS IN POTS.

	S.	d.	s.	d.	s. d. s.	d.
Arbor Vitæ (golden) dozen		0 to			Hydrangea, per dozen 12 0 to 24	0
Aspidistra, per dozen		0	36	0	Ivy Gerauiums 4 0 6	0
Aspidistra, specimen plant	5	0	10	6	Lilium lancifolium per doz. 12 0 18	0
Balsams, per dozen		O	6	0	Lilium Harrissi, per dozen 12 0 24	0
Campanula, per dozen	9	υ	18	U	Lobelia, per doz 3 0 6	0
Dracæna terminalis, per					Lycopodiums, per dozen 3 0 4	0
dozen	18	0	42	0	Marguerite Daisy, dozen 6 0 12	0
Dracæna viridis, dozen	9	0	24	0	Mignonette, per doz 4 0 6	0
Euonymus, var., dozen	6	0	18	0	Myrtles, dozen 6 0 9	0
Evergreens in var., dozen	6	0	24	0	Palms, in var each 1 0 15	0
Ferns. in variety, dozen	4	0	18	0	" (specimens) 21 0 63	0
Ferns (small) per hundred	4	0	6	0	Pelargoniums, per dozen 6 0 12	0
Ficus elastica, cach	1	6	7	6		0
Foliage plants, var., each	2	0			Petunia, per dozeu 6 0 9	0
Fuchsia, per dozen	5	0	9	0	Rhodanthe, per dozen 4 0 6	0



AUTUMN TILLAGE.

Of the many lessons of the great drought, most important of all was that of the primary value of deep and thorough autumn tillage. Without it many a farmer's hands have been tied, a seed bed was an impossibility. Why? Because his heavy land was not ploughed till after it became saturated by the heavy rainfall of an exceptionally wet February. The wet furrows were then exposed to the drought which set in early in March, sun and wind then drying them so quickly that the clods were impervious to any implement - roller, cultivator, or harrow made no impression upon them, and Lent went by with out a field being sown with corn. Even where matters were not quite so bad, the soil being crushed sufficiently to admit of the sowing of both corn and root crops, much of the seed lay dormant week after week, the plants coming in patches. When rain at length fell, growth sprung up from the dormant seed, with the result of many a cornfield in July having patches and strips of ripening corn alternating with others quite green and in full growth.

Where the land had thorough tillage last autumn, and was left for winter well drained, clean, thrown up into ridges, and with perfect mechanical divisions, it broke down under the harrows into an excellent seed bed-sweet, mellow, moist, and light as ashes. In the second, or early in the third, month of the year sowing went on with a rapidity and finish impossible under a less perfect system of cultivation. Seed germination followed quickly and evenly, up came a full strong plant, growth went on without serious check or hindrance from drought, on to such early maturity of the corn, that very much of it was in shock or stook a month before the usual time of harvest. Roots, too, have thriven equally well, and timely intelligent farming stands triumphant. The year for it is crowned with plenty, for be very sure that hand-in-hand with such energetic tillage goes an equally sensible systematic storage of the soil with plant

Drainage, mechanical division, cleanliness, autumn tillage, sustained fertility, carefully selected seed, timely sowing, these are the watchwords of the successful farmer. The guiding principles of his practice, they affect all he does. He is successful not only because of them, but also, and very much also, because they are combined with sound judgment, and powers of discrimination, which enable him to apportion his cropping and modify his practice whenever it becomes necessary or advantageous to do so.

This autumn a golden opportunity has come to him in the early harvest. The clearance of the corn from the land so early in August will enable him to have the stubbles quite clean before plough and subsoiler are at work. His land is so free and open that the broadshare can be used at once to slightly pare the surface, so that perennial weeds may be got together by the harrows which follow and be burnt. Soil that is crude, hard, and heavy cannot be pared so easily; it is usually so hard after harvest that neither plough nor broadshare will enter it till it is softened by heavy autumnal showers, and so precious time is wasted and the opportunity for thorough tillage lost. There should be time this autumn for doing something to correct the crudeness of heavy land. Gas lime has been used with excellent effect upon the Essex clays. When applied in autumn it acts mechanically upon the soil, stimulates latent fertility; but it ought never to be used instead of manure. Rather apply it, or lime fresh from the kiln, early in autumn, and sow chemical in orchards and elsewhere, which stock frequently reject, may be made

manure with the corn, roots, or other crops in spring. As a rule, lime may be used advantageously once in six years at the rate of 60 to 100 bushels per acre. One of our finest crops of Wheat was on land which, when it came into our hands, was in a very foul, inert condi ion. It had a summer fallow, was cross-ploughed deeply several times, was dressed with fresh kiln lime during these ploughings, then well manured just before the Wheat sowings. This was a case of necessity as regards the fallow, because the land was so very foul. Coal ashes, slag from smelting furnaces, and burnt clay are also excellent for opening up the land. In mining districts there are immense heaps of slag-enough for the land of a wide district, but which is seldom if ever turned to account for such a purpose.

WORK ON THE HOME FARM.

Since writing our last note thunder storms, with a heavy downpour of rain, have been frequent, but there has been nothing worthy of the name of wet weather, and harvest work has gone on with despatch. On some farms the whole of the corn is in stack, and the ploughs are at work upon the stubbles. First of all such weeds as Couch Grass, Coltsfoot, Thistles, Docks, and Ononis or Rest Harrow must be destroyed, then ploughing follows at once, cultivators, horse hoes, harrows, and ploughs all being in full swing, so as to have the soil cleaned, broken up deeply, turned over by cross-ploughing two or three times according to the weather, and at the last turn all that is left for the spring sowing is thrown into high ridges by the double-breasted plough.

Have all land intended for autumn sowing with Wheat, Rye, and Winter Oats ready for the corn drill by the end of the month in order that the sowing may be done early in September. The seed will go in quickly and well then, but if the sowing is put off till October it may have to wait for fine weather till spring. Get in the corn then in September, so as to do the work in the best way, and have a full strong plant. Sow no Wheat on inferior land, only on the best mixed soil; select good seed, and apply manure through the drill with the seed half hundredweight sulphate of ammonia, quarter hundredweight steamed bone flour, and quarter hundredweight superphosphate per acre. This very moderate dressing is to get a sturdy plant before winter, and is followed early in spring with $1\frac{1}{4}$ cwt. nitrate of soda, quarter hundred-weight steamed bone flour, half hundredweight superphosphate, and half hundredweight muriate of potash where necessary.

It may appear somewhat premature to mention this matter while harvest is still in full swing, but it is not. The common fault is to relax efforts after harvest, just when all in our power should be done to push on autumn work, and get as forward as possible before wet October comes. Now is the time for strenuous effort. Strive to be well beforehand with all farm work, but especially with field work, which is so dependant upon the weather. Very pleasant is the feeling when the land is locked up by frost and snow that it was so tilled in the autumn.

BOARD OF AGRICULTURE AND ENSILAGE.

In view of the exceptional circumstances resulting from the drought of the spring and summer of this year, the Board of Agriculture consider it desirable to circulate information concerning the use of ensilage processes, and their value in providing winter and spring keep for stock.

The general impression prevailing upon the subject of ensilage is that it is only serviceable in wct seasons when they cannot be properly made. But there are not a few agriculturists who make silage regularly either in silos, or in stacks, or in clamps every year, and speak highly of its value for feeding purposes.

The wet summer of 1888 gave a great temporary stimulus to ensilage, which was encouraged by the discovery that good silage could be made in stacks and clamps by a comparatively cheap and simple process. This year attention will be again very generally directed to ensilage in consequence of the unprecedented scarcity of grass and Clovers for hay, and the failure of the ordinary crops for winter food caused by drought.

MATERIALS SUITABLE FOR SILAGE.

It may in some cases, it is believed, be too late to make hay of Lucerne, second cuts of Clover, Sainfoin, and grass, as well as of Italian Rye Grass, grass and Clover mixtures, and other crops sown when the drought ceased. All of these crops that can be spared from the immediate requirements of the farm stock may be advantageously made into silage. They should be allowed to stand as late as the weather will permit, for although it is acknowledged to be best to cut such crops as grass and Clover for silage when in flower, the object must be to get the greatest possible bulk of material at this crisis.

Every particle of herbage upon farms should be cut for silage. Even weeds, sedge, and rushes should be utilized. Nettles have been successfully employed. The outsides of fields and the sides of hedges and other waste places should be brushed and the brushings ensiled. The leaves of some kinds of trees may also be ensiled. If the material is too coarse for actual silage it will be useful for topping up the silos, stacks, or clamps. Coarse grass in meadows, pastures, and under trees

into eatable silage. Hop bines should be ensiled directly the hops have been picked, while the sap is fresh. Maize and Sorghum saccharatum are valuable ensilage materials.

PREPARATION OF MATERIALS.

Grass, Clovers, Oats, Rye, Lucerne, Vetches, &c., require no preparation. They are simply mown as closely as possible and carted to the silo, stack, or clamp, and put in, or on, and compressed as tightly as possible that the air may not penetrate between the layers. Hop-bines should be carted directly the hops have been picked, and much pressure applied to them. Where silos are available it would be well to cut hop-bines with the bine cutter used to cut them for manure, or they may be put into stacks or clamps whole, or cut into long lengths with this machine. Maize and Sorghum are usually chaffed in fairly large lengths when put into silos. Maize ensiled whole in stacks or clamps turns out well if properly managed, even though the stalks are very large and thick.

Special machines may be obtained for chaffing silage materials, and elevators for stacking them.

METHODS OF ENSILAGE.

Since the publication of the Summary of Replies to Questions on Silos and Ensilage in Great Britain by the Agricultural Department in 1885 (C.-4536), and the Reports of the Ensilage Commission (H. C.-308 of 1885 and H. C.—119 of 1886), there have been very important changes in the methods of ensilage. At that time the only mode of making silage was to put it into silos, or pits,—receptacles with sides of brick, stone, or concrete. These were often too expensive for tenant farmers. Here and there, however, heads of barns, out-houses, and other buildings were converted into silos at a small cost. On large holdings it would be necessary to have these in various parts of the farm as the carting of green forage long distances would be very costly. But since the inexpensive and simple stack and clamp systems have been introduced, regular pit-silos have not materially increased in numbers.

SILOS.

Existing silos will naturally be made full use of in this emergency, and buildings that can be readily and economically converted may be made into temporary silos, as the silo system has certain advantages. There is generally not quite so much waste as in stacks and clamps, and it is easier to keep out air.

To get sweet silage the silo should be filled somewhat slowly to obtain a temperature of from 130° to 160°, which neutralises the acid fermentation. If the temperature falls much below this, sour silage is

produced.

When silos are filled they are pressed down by machinery, or pressure is given by weights of various kinds that may be convenient, such as earth, bricks, stones upon planks and boards. Machinery for pressing has been patented by several manufacturers.

SILAGE STACKS.

In the wet weather of 1888, as it was impossible to make hay, attention was directed to the most inexpensive modes of making silage, and silage stacks of various shapes and sizes were bastily constructed in all parts of the country. Where ordinary care was taken the result was generally satisfactory, and the experience of practical men in later years warrants the recommendation of the adoption of the stack system at the present crisis.

Silage stacks are made in the same way as ordinary haystacks. The materials are carted and stacked either in circular, square, or oblong stacks. It is important to have great and regular pressure, which may be adjusted, or adjusts itself, as the mass shrinks. If this is obtainable, the materials may be put together as quickly as may be convenient. There are several patented methods of pressing, as by chain pressure, hydraulic presses, and lever appliances. Before pressing

the material should be carefully levelled.

Silage stacks may also be made without special machinery. In this case the material cannot be put together so quickly, and every part must be most carefully and firmly trodden, especially that near the ontsides. Poles may be pitched at the corners and sides of the stack, and braced together at the top to guide the stackmakers. A framework of four large planks may be made round the poles and drawn up as the stack progresses by pulleys fastened to each end of the bracing at the top. This will keep the stack in shape, and allow the outsides to be well trodden down. The boards may be used to cover the stack when made, and heavily weighted with bricks, stones, or other weighty substances. The whole must be covered with straw or other covering to keep out the wet.

A well-known pioneer of the ensilage movement has given up silos and makes silage now entirely in round stacks. They are built slowly, and not pressed nor weighted until complete. Rough grasses or weeds are used to top up, and a layer of these is put at the bottom. The snrface is trodden down, and sand or earth is laid on the top to a depth of about 6 inches. A trench is dug round the stack if the surface drainage is not good, the earth from this serving to cover the silage. "No mode of compression has been found so good," this gentleman writes "as earth or sand; it follows the ensilage down much better writes, "as earth or sand; it follows the ensilage down much better than any other mode of weighting. A little attention is necessary for a day or two, to see that it goes down without cracking. In building the stack it should be kept full in the middle, in order that it may finish convex." He also recommends the use of a mixture consisting of a layer of one load of Oats, Peas, Beans, Vetches, and Italian Rye Grass,

alternating with a layer of two cartloads of meadow grass, the whole being cut or chaffed before being ensiled.

Dry earth may be spread either directly on the silage or on intervening sheets of Willesden paper. In this case no other covering will be required.

Materials for silage-stack-making should be used whole as a rulc, and carted at once after cutting. Hop bines and other coarse material may be chaffed advantageously in longish lengths with a hop-bine

SILAGE CLAMPS.

These are simple and inexpensive receptacles of the green crops enumerated above. They are advocated by practical men as most valuable, especially in times of emergency, and some stock-owners who

have silos prefer to adopt clamps.

They may be made on slightly sloping ground by stumping out the required size, the length exceeding the breadth, and carting material for silage within this area. The carts must be drawn on and over the heap precisely as when a manure mixen is made, and tipped where material is required to fill up. They must be drawn as closely to the sides as possible so as to give pressure there. When the middle has risen too high for further carting the sloping ends are cut off and the material thrown on to the clamp, and levelled, and firmly trodden in. The outsides may be pared off, and the material treated in the same way. Then dry earth should be laid evenly upon the clamp, to a depth of 8-10 inches, either with or without an intervening layer of rough herbage, bracken, or leaves.

On dry soils a trench may be dug 3 feet deep, and of length and width according to the quantity of material. This may be packed tightly into the trench by the carts being led over it. A heavy roller drawn over the mass will help to consolidate it. The soil from the trench can be used for covering and weighting the clamp. Practical men say that the material cannot be too juicy and even wet to make good silage by

this process.

Old pits for chalking land, so numerous in chalk soil districts, form capital receptacles for silage. The carts should be led over the mass, which must be finally left in a somewhat conical form, and covered with earth to a depth of from 10 to 12 inches.

Where earth is used as a covering for silage stacks or clamps occasional inspection is necessary, as the earth sinks with the silage, and

cracks are sometimes formed which must be filled up.

THE USE AND VALUE OF SILAGE.

Many stock-owners and cow-keepers make silage regularly and use it as a valuable addition to ordinary food for stock. In one instance an owner of forty-five dairy cows has for some years kept his cows almost entirely upon silage made in stacks, with an allowance of oil cake. There is much other testimony as to its value for feeding milch cows as well as breeding ewes. For fatting beasts it has been proved that well-made silage is at least of equal value with hay, and for lean stock of all kinds it may be used as a complete substitute for either hay or roots. Farm

horses will do well on properly made silage.

It can be given either by itself, either cut or whole, or it can be chaffed with straw or hay. In the exceptional condition of the scarcity of hay and the shortness of the straw of all crops, there will be little of these to spare for cutting into chaff, and silage may be given alone, and must prove of inestimable value for supplying the quantities of bulky food that are absolutely essential for the digestion of ruminants and to

keep them in health.

METEOROLOGICAL OBSERVATIONS.

CAMDEN SQUARE, LONDON.

Lat. 51° 32′ 40" N.; Long. 0° 8′ 0" W.; Altitude, 111 feet.

DATE.			9 A.M] 1	٠				
1893.	arometer 32°, and	Hygro	meter.	Direc-	Temp.	Shade Tem- perature.		Radia Tempe	Rain,	
August.	Baro at 32 Sea	Dry.	Wet.	Wind.	at 1 foot.	Max.	Min.	In Sun.	On Grass.	
Monday Tuesday Wednesday Thursday Friday 1	Inchs. 6 30·135 7 30·085 8 30·153 9 30·083 0 29·931 1 30·115 2 30·098	61·1 65·0 72·2 73·1 72·1 70·7 68·1	deg. 55.4 60.4 62.2 65.1 65.8 63.9 65.4	N.E. S.W. S. S.E. S.E. S.W.	deg. 60·2 59·9 61·2 62·7 64·1 65·0 65·9	deg. 70.9 78.0 84.9 83.0 82.6 81.7 79.8	deg. 47-2 56-1 54-2 60-0 63-9 61-8 63-3	deg. 96·9 126·0 125·1 121·9 123·9 1.9·2 126·2	deg. 43·3 54·0 50·0 53·1 58·6 57·3 60·3	0.010 0.077

REMARKS.

6th.—Brilliant from sunrise to 9 A.M., then hazy; generally overcast in afternoon

6th.—Brilliant from sunrise to 9 A.M., then hazy; generally overcast in afternoon with occasional spots of rain.

7th.—Overcast till nearly 11 A.M., bright and warm after.

8th.—Generally sunny, but not clear.

9th.—Almost cloudless throughout; much distant lightning in evening and night.

10th.—Much distant lightning and some thunder and rain in the small hours; hazy and oppressive in morning; clear and hot after noon.

11th.—Bright sunshine throughout.

12th.—Rain from 3 A.M. to 4 A.M.; overcast morning with drizzle at 10 A.M. sunny afternoon and evening.

A sultry week with frequent, haze and calm air. Temperature about 6° above the

A sultry week with frequent haze and calm air. Temperature about 6° above the average, the minima in shade being higher than in any other week of the year.—G J. SYMONS.



MEMORABLE to the public generally, and by no class more than the gardening community, will be the remarkable heat of August of the present year. An unbroken term of eleven days, in which the shade temperature was upwards of 80°, and on several days over 90°, with a night minimum of seldom less than 70°, is an occurrence so rare as to demand permanent record. Thursday last, the 17th inst., was one of the hottest days known in the vicinity of the metropolis. The returns vary somewhat from different localities, due in part no doubt to the positions occupied by thermometers, and perhaps in greater part to the variations of instruments from the standard of accuracy. The readings at Greenwich we may, however, expect to be correct, and we are informed that at Greenwich the temperature in the sun reached 146.2° on Friday last, and in the shade 95.1° This, it is authoritatively stated, has not been exceeded in August during the last fifty years, although it was equalled on August 11th, 1884, and it has only been exceeded twice at Greenwich during the last half century, the readings being 96.6°, July 22nd, 1868; and 97.1°, July 15th, 1881. As the minimum night temperature was 72°, the mean daily temperature of August 17th has therefore apparently not been exceeded since authentic records have been kept. In the Royal Horticultural Society's Gardens, Chiswick, on Thursday in the "hot week" the shade thermometer registered 95°, and examiners of the trials of Onions and Potatoes were bravely (?) discharging their duties beneath the shade of umbrellas.

Lives have been lost through the excessive heat, and more no doubt would have been but for those splendid institutions—public hospitals—in which many persons who were stricken found refuge and relief. Much loss has been incurred by the destruction of perishable food, including fruit and vegetables. We have seen it announced that it is not at all uncommon for 5 or 6 tons of produce to be destroyed weekly in Covent Garden during hot weather, but that amount was greatly exceeded during the late abnormal heat. Large quantities were spoiled on arrival, and had to be forthwith carted away, and sent down the river in barges for use as manure. Only those consigners who were alive to the importance of not keeping fruit till it was fully ripe before packing could rely on the produce being saleable a few hours after exposure in the market. One of the most common errors of the inexperienced is to wait a day or more too long with their fruit, and then not being sufficiently careful in excluding bruised or blemished specimens. A very few of these will render the bulk comparatively useless, and especially when the fruit is as ripe as it should be, no allowance being made for its changing on the way —a change that may amount to destruction.

The heat and drought have had a most exhausting effect on vegetation. In some parts of Surrey, where little rain has fallen, thunder showers having gone elsewhere during July, we have recently seen large Elm trees as if seared with fire and hedgerows shrivelled, no green leaves to be seen. In many gardens the time of the workers has been almost exclusively devoted to watering in the hope of keeping shrubs alive, and many large Rhododendrons have perished. Lawns and walks are littered with leaves as in October, and where no sweeping has been done the ground is thickly covered, few being left on many trees and

none of them green. Should a warm moist autumn follow, a second growth on trees, shrubs, and fruit bushes is by no means improbable. Where the drought has been the most severe and prolonged the greatest difficulty has been experienced in maintaining the vegetable supply and keeping flower beds and borders presentable. This could not be done in the absence of deep rich soil and mulching, supplemented by such waterings as could be given by exhausted men.

Fruits of all kinds have ripened before their time, and are generally smaller than usual, also drier, but not too dry for the voracious wasps, which have had most of the best on many trees that could not be protected. The effect of the heat has been seen in the ripening of Apricots on open orchard standards. We had small but excellent fruits from such a tree grown at Dulwich a fortnight ago, and it is worthy of record that 33 bushels of ripe Apricots have been gathered from twenty-four trees grown quite in the open in the market grounds of Mr. Smith of Chiswick, and sold to Mr. Beach, the famous jam manufacturer at Brentford, for 11s. a bushel. This is an extraordinary yield of the ripe Apricots from open standard trees early in August, and could not be produced in other than an abnormally hot and dry summer. The variety was the Royal.

Perhaps no better index of the condition of garden crops generally at the present time could be afforded than by the National Co-operative Vegetable, Fruit, and Flower Show that was held at the Crystal Palace last Saturday. It should be said, however, that the magnitude of the display rendered it necessary to arrange and judge the vegetables on the previous day, Friday. Mr. E. O. Greening, the Managing Director of the Association, appeared proud of the display, as well he might be, although there was a falling off in the number of exhibits in the industrial or cottagers' section, for while the decrease in this section was small, the increase in the entries of professional gardeners, notably for fruit, was very much larger. Last year the workers' entries numbered for vegetables 1525, this year they fell to 1202; but in the professional classes they rose from 502 to 627. In fruit the workmen's entries last year were 154, this year 240; the increase in the professional classes being from 111 to 198. Altogether the entries of the workers in vegetables, fruit, plants, and flowers were 2539, and of the professionals 1388. Mr. Greening in his interesting opening address suggested that the weather had been more cruel to cottagers and allotment holders than to gardeners. These latter had deeper, richer soil, and the lesson should not be lost. Thorough culture tells always, but never so effectively as during a dry exhausting season. The Director thought he might claim for the Show the honour of being the largest of the kind in Britain, as he certainly might. It will be safe to say its equal has not been seen in Europe, and we have yet to learn that an exhibition of garden produce of the same character and magnitude has been provided in the land of great things—America—produce largely grown by cottagers and the industrial population. It may be said, as affording a tangible idea of the extent of the display, that a length of 1100 yards of tabling was requisite for staging the exhibits. These were shown in 245 classes, including seven for honey, and one for farm produce.

Vegetables, fruit, and flowers came from widely distant parts of the country, and the show may fairly be regarded as a national one, not in name alone but in fact. Let it be said at once that it was a credit to the nation, and more especially in the vegetable department, as representing the cultural work of the industrial population. Not the name of a prizewinner will be given here, for if we give one we must give scores, and no one would be the better for the list. All personalities shall remain obscure, and their work alone alluded to. There need be then no fear of free criticism touching tender susceptibilities. It has to be said that the vegetables of the industrial classes, cottagers, and artisans, were decidedly better as a whole than were those staged by

gardeners. The winner of the leading prize collection in the professional class may not be expected to acquicsce in this; but there was not one dish of his produce that could not have been easily beaten by a dish of the same kind in the cottagers' classes. His vegetables were too large. A critical on-looker described them as "clumsy." They represented unremitting cultural attention, no doubt, but also represented waste in labour and material. It is not suggested that those in other collections were better, for they were not. We had large and coarse on the one hand, and small and coarse, or inferior, on the other. Surely all the best vegetable judges know that too much weight is attached to mere size, and yet few appear to have the moral courage to place quality first, as it always should be for vegetables that are supposed to be grown for the dining tables of the affluent who desire to have such vegetables of the highest possible quality. Cottagers' vegetables may be permissibly larger, as bulk is a point of moment; but even then it should not be at the expense of good quality.

It was observable in most of the cottagers' classes that the largest Onions, Marrows, Beet, Kidney Beans, Carrots, and indeed nearly all other vegetables, did not obtain the highest prizes. High quality with useful size appeared to be what the judges had in mind in determining the relative merits of the cottagers' produce. This should always be so, or coarseness and waste will be encouraged as is the case now in gardeners' classes. Prizes are regularly awarded to vegetables that no first-class cook would accept for a first-class dinner. No one who knows what a firstclass dinner is can deny that assertion, yet the absurdity of honouring the unwieldy and unacceptable, as judged by the final and conclusive test, is perpetuated. A gardener who has to supply the best that can be grown for a nobleman's table remarked the other day that he thought the time had arrived when a limit should be placed to size, and that no vegetables should exceed certain stipulated dimensions. There is something in the idea, and perhaps in time he or others may put it into shape by suggesting a maximum size for vegetables grown by gardeners for the tables of their employers. It would result in the staging of produce of much higher quality than is now seen at shows, and to which leading prizes are awarded.

But while the workers led the way by the excellence of their produce in the vegetable classes, the gardeners, as may be expected, were far in advance with fruit, though excellent specimens and dishes were staged in both sections. Cooking Apples were especially fine, and sixteen growers competed in one class. Dessert Apples and Pears were also good. The Apples were of fair size and finely coloured. Pears were mainly represented by Williams' Bon Chrêtien, or, as it was frequently named, "William." Amongst the Grapes Alicantes were the best, though good bunches of Muscat of Alexandria were shown. Plums were finely exhibited both in the culinary and dessert classes. Amongst the Peaches Sea Eagle was perhaps the finest, though there were other very good fruits. Melons were not a particularly good feature, nor were small fruits, the Show being too late for them this early season. Brightness and sweetness were imparted by flowers of various kinds and in bewildering numbers, and altogether the Show in its entirety was a wonderful one considering the season.

The exhibits afforded practical and conclusive testimony of the great and growing interest that is taken in gardening by the community. The excellence of the products also denoted skill in cultivation and the exercise of thought and persevering work in bringing them together in such generally good condition. The Show was a credit to all, organizers and exhibitors. Co-operation in production is evidently growing. Whether anything like equal progress can be made by co-operation in distribution remains to be seen. Mr. Greening and his able associates have done much in one direction, and it is conceivable they can do something in the other, tending to the more profitable disposal of crops to the producers

without any prejudice to consumers, but on the contrary to their advantage.

Always on the look out for something new and good, Mr. Greening said "next year he should like to carry out a novel idea of his own, if he could only get the Judges to work with him, and that was to show in the centre of the Palace a model of a town garden, as it often was, with its bricks and pots, old kettles, and dead cats, and the other rubbish strewn within its boundaries, and to place side by side with it a town garden such as it might be by the aid of co operation and the improved resources and knowledge of working men." If the great organiser can find the means and the Crystal Palace Company find a suitable space in the grounds, real gardens could be formed of the nature suggested that would be interesting, instructive, and attractive (without the cats), but an attempt to carry out the idea in the Palace would, it is feared, result in a burlesque, though no doubt something of a sensational nature might be provided—if there is room.

COLOUR IN PEACHES AND NECTARINES.

UNDOUBTEDLY this has been a very good season for the colouring of the above fruits. Some varieties naturally put on a higher colour even during the dullest seasons than do others. Whether for market purposes or for home dessert the colour of the fruit has a good deal to do with its acceptance, and affects its value There is no fruit more tempting to the palate than materially. a highly coloured Peach; but it is to show how to get high colour in them during a comparatively dull summer that these notes are written. Sunshine is not the only factor which is required. Light is most essential. Exposure to light, air, and sunshine is generally advised, and often practised when the fruits have had the final thinning, and about the size of large Walnuts. But I maintain that this full exposure should take place earlier than at the stoning stage. The finishing of the fruit properly should be studied at the time of planting. A good distance—at least 15 inches from the glass—is the proper position in which to train the branches in the front part of the structure, and when trees are planted and trained upon the back walls those in front should be so disposed as not to obstruct the light from them. The trees must be kept healthy from the beginning, not fed so as to make them gross, but brought into good bearing condition as soon as possible—the result of a well-maintained state of the borders and thoroughly ripened wood.

Setting the fruit is a very important point to consider. Those flowers which are on the upper side of the trellis, in the case of trees growing at the front and those which stand well forward on the back wall trees, should be attended to, whether setting be accomplished by means of the syringe, camel's-hair pencil, or shaking the trees. The aim should be to get a good set of fruit well exposed to the light, and then there will be a fair prospect of having colour in the fruit. The crimson is not put on during the last stages of growth only, but is begun much earlier. I like to see the young Peaches well browned by the time they have stoned; this betokens that deep crimson colour which it is so desirable to obtain. If left till later, just as the last swelling begins before the leaves are put on one side, the fruit, through the sudden exposure, is liable to scald, because being grown in semi-darkness the skin is tender, and unable to bear the sun's rays without injury. Having trees in good health, the foliage kept free from red spider, early exposure of the fruits to sun, light, and air, even in the dullest of our summers fairly well coloured Peaches and Nectarines may be obtained.—G. Garner.

ORIGIN OF THE BISMARCK APPLE.

As a misconception appears to exist in England as to the origin of the Apple "Prince Bismarck," I beg to give you the following details concerning this splendid fruit, as I was present at the monthly meeting of the Horticultural Society of Victoria, held in the Athenaum, Collins Street, Melbourne, where it was exhibited for the first time by a Mr. Clarkson, nurseryman, Carisbrook, and named by the Seedling Fruit Committee in June, 1873:—

At our gardens we kept a register of seedling fruits of merit raised in the Colony that came under the notice of the Committee, when we were under the control of the Horticultural Society of Victoria, and the practice is continued now that the gardens are under the control of the Government, and managed by a Board of Horticulture. Some of the gentlemen composing this Board were

members of the Seedling Fruit Committee of the Horticultural Society when this Apple was named. I enclose a copy of a form that is forwarded to raisers of seedling fruits, which they are requested to fill in and return, when it is again entered into a permanent book, and open to anyone interested in the raising of seedlings. The form will show all the details in connection with this Apple.

I have taken this plan to prevent any further claims being made by any of the other colonies, as I observe in the "Fruit Manual" edition 1884, page 181, it is stated that it was raised in the province of Canterbury, New Zealand, and was sent home to Mr. McIndoe, gardener to Sir Joseph Pease, Bart., Hutton Hall,

Guisborough, and again in the Gardener's Chronicle, February 18th, 1893, where a notice, also a figure of the Apple, appears as grown by Messrs. Bunyard & Co., of Maidstone, who say it is of Tasmanian origin; whilst Messrs. Rivers & Son attribute it to New Zealand. As both statements are incorrect, which can be testified by the Register, I would feel extremely grateful if you can set the matter at rest when an opportunity occurs to give the correct history of this Apple. I also enclose herewith a photograph of Apple "Prince Bismarck," taken by one of the students at the gardens from a fair sized specimen.—Geo. Nellson, Curator, Royal Henticultural Cardon, Richmond Bank, Rumber Melbergue, Victoria Horticultural Gardens, Richmond Park, Burnley, Melbourne, Victoria, Australia, July 10th, 1893.

[COPY AS TAKEN FROM THE REGISTER KEPT AT THE GARDENS.]

ROYAL HORTICULTURAL SOCIETY OF VICTORIA.-REGISTER OF SEEDLING FRUITS RAISED IN VICTORIA.

Apple, exhibited by B. Clarkson, Carisbrook, Victoria, June Meeting, 1873.

	Particulars,	REMARKS.
Kind of Fruit, for example, Apple, Pear, &c. Name of Raiser Locality where raised Date of Sowing If artificially crossed (or chance seedling) Parentage (if known) Date of fruiting, first time Season of Ripening Size (small, medium, or large) Shape (description must depend upon kind of fruit) Skin (whether rough or smooth, ribbed, &c.) Colour of Skin Core (characteristics of—large or small, &c.) Flesh (colour, consistency, &c., &c.) Quality (first, second, or third class) Use (dessert, cooking, cider, drying, &c.) Stalk (short, long, stout, or slender, bent or straight, how inserted) Stalk Basin (large or small, deep or shallow) Eye Basin (large or small, plain or plaited, broad or narrow) Segments (long or short, closed or open, reflexed, pointed, &c., &c.) Pips (large or small)	Apple. Carisbrook, Victoria. Uncertain. Chance seedling. Not known. 1864. Late autumn. Large. Oblate, ribbed towards the crown. Smooth. Yellow striped with crimson, often in some localities covered all Small. [over with deep crimson. White, juicy. First. Cooking. About 1 inch, slender. Deep, wide, lined with russet. Deep, angular basin. Closed, flat. Medium.	The name given to this Apple by the Seed- ling Fruit Committee of the Horticultural Society of Victoria in June, 1873, was Prince Bismarck. A chance seedling found growing on Harrison's Hill dig- gings, amongst the mullock heaps; it was one of a dozen found growing, and was transplanted into my garden by Messis. Walters and Shulty. my prede-
Stone (large or small) Kernel (bitter or sweet) Suture (term applies to Plums, Peaches, &c.) Flowers (particulars as to size, colour, &c.) Habit of Tree (whether spreading or upright, &c.) Constitution of Tree (robust or otherwise) Foliage (large or small, and of what colour, &c.) Date when and where first fruited By whom named (if at all) To what disease liable (if any)	Spreading. Robust. Large light green. 1864, Park Farm, Carisbrook. Named by the Seedling Fruit Committee of the Horticultural Woolly aphis. [Society of Victoria, 1873.	cessors. I was on the place at the time in 1862. Mr. B. Clarkson, of Smoky Gully, got grafts from me. (Signed) FREDK. FRICKE. Witness to Signature, HENRY BEILBY.

The above is a true and correct copy of what appears in the permanent register of seedling fruits kept at the Royal Horticultural Gardens.

SULPHATE OF COPPER AND PARIS GREEN MIXTURES AS FUNGICIDES AND INSECTICIDES.

(Concluded from page 143.)

Now, assuming that we can procure pure sulphate of copper, and prepare with it a one-sixth strength of Bordeaux mixture or bouillie Bordelaise, there is an end henceforth to all cavils over the copper treatment, for the quantity required is so small as not likely to poison the soil, nor in any way prove detrimental to the welfare of animals or mankind. Remember the solution of copper sulphate must be a pure celestial blue, the lime lily white and good. When mixed—the sulphate of copper solution and the limewash—the mixture should abide beautifully blue after a few drops of ferrocyanide of potassium solution are added. The Bordeaux mixture, prepared according to the formula given on page 173 of the Journal of Horticulture, March 2nd, has proved perfectly safe to apply to Vines and a preventive of black rot caused by the fungus Læstadia Bidwelli (Ell.). It may, therefore, be concluded that it is equally safe to apply to all fruit trees or plants subject to fungoid diseases, and as likely to prove as efficacious as a preventive and curative of blight, mould, and rusts peculiar to other plants as to those of Vines. For convenience the formula for the minim Bordeaux mixture may be repeated:—1, for small growers, or indoor operations; 2, for large growers, or for using over vegetable crops in the garden, allotment, or field.

1.—MINIM BORDEAUX MIXTURE.

Sulphate of copper ... 4 ounces Lime (freshly burned) unslaked ... 4 ounces Water $7\frac{1}{2}$ gallons ... ••• • • • ...

2.—MINIM BORDEAUX MIXTURE.

... 1 lb. Sulphate of copper Lime (freshly burned) unslaked ... 60 gallons • • • ...

Dissolve the copper sulphate in one vessel—crystals may be placed in a bag, but powdered soonest dissolves-and slake the lime in another, forming into a thin whitewash; when cool pour into the copper solution slowly through a hair sieve; stir well, test, and if all right the mixture is ready for use. Note.—The mixture must be used without delay; it will not do to prepare it overnight, or keep it a day or two. This applies to all Bordeaux mixtures, for the neutralising effect of the lime only lasts a few hours, after which the mixture will blacken the foliage of plants, being as disastrous as simple sulphate of copper solution, that not being safe to use over tender foliage and fruit at a greater strength than 1 lb. of sulphate of copper to 800 gallons of water.

The Bordeaux mixtures above given should always be used when the foliage is dry, preferably in the afternoon, but always so early as to become dry before the dew descends, and invariably by means of a spraying machine. A handy sprayer, on similar principles to the Malbec bellows, is a desiderata for amateurs. Every garden ought to have a M. Vermorel Knapsack pump "Eclair." Allotment holders may club together and purchase one in fact there another to be one or more in every village let out at -in fact, there ought to be one or more in every village let out at a reasonable charge. Any intelligent labourer can use it.

The uses to which the Bordeaux mixture may be put are prevention and cure of all fungal infestations on crops. examples must suffice.

1, Onion crops.—There is money in this crop, only keep it from the Onion mildew (Peronospora Schleideniana). The plants for seed should be sprayed about the third week in May, and again early in June. Plants for bulbing must be sprayed just as the bulbs begin to form, and repeat three weeks afterwards.

2, Cereal crops.—Corn mildew (Puccinia graminis), about which we know very little more than Felice Fontana published in the year 1767, and certainly no more than resulted from the movement set on foot by Sir Joseph Banks in 1804, the harvest that year being alarmingly blighted, and given in pamphlet, with capital illustrations, by M. F. Bauer. Without setting the Berberry theory aside, we may just look the simple fact in the face that "rust" always appears conspicuously on the blades of cereals towards the end of May or early in June, and in localities where there are no Berberry bushes for miles around. Spray the cereal crops, especially Wheat, the end of April or early in May in the south, later in the north, and repeat in a fortnight or three weeks. Remember that the "rust" attacks the "grass," and that is fosterer of the grain.

3, Potato Crops.—Spray these, each row on both sides, up one side and down the other, the first week in July, again the third week in July, and a third time the second week in August. Early varieties left for seed will only require one, second early two, and

late crops three dressings.

Arsenate of copper, called Scheele's green, after its discoverer, a celebrated chemist, "his own instructor" at Upsal in 1773, attained some repute as an insecticide on the Continent long before Paris green, alias emerald green. Schweinforth green was employed in America, but did not become popular on account of its poisonous nature. It was first used as a destroyer of black fly on Beans, the Bean aphis (Aphis rumicis) being "hard" to kill, and became famous in America through being found effectual in saving the crop of Potatoes from the Potato or Colorado Beetle (Doryphora decemlineata). Then it came into use as a remedy against the canker worm, Codlin moth, and other insects destructive to fruit trees in America, and during the past five years in this country against larvæ eating the foliage and blossom of fruit trees. about Paris green as a remedy for caterpillar infections will be found in the last ten volumes of the Journal of Horticulture. There is one thing about Paris green that I cannot understand namely, a coat of it on foliage or growths will not kill sucking insects-aphides, chermes, and red spider; why house flies have to imbibe very little of the stuff (arsenic) smeared on "fly papers" before death ensues. Of course aphides and chermes are fixed, or provided with a skin that throws off the mixture intended for their destruction; the fact being that the Paris green mixture never is interposed between their suckers and the epidermis-or is their immunity due to their never being reached by the spray? Spray upwards for to reach aphides on the under sides of the leaves, and what happens then? The Paris green mixture kills red spider, the Ivy and Gooseberry acari (Bryobia speciosa), gall mites also, only get it on the buds before they enter them, or on the leaves in advance of their becoming snug in the galls.

It is not, however, about mixtures that contain a little of everything in the hope of killing something, but of Paris green as a combined fungicide and insecticide that I desire to draw

attention.

Orchardists in America and in this country have found that where Paris green has been used for the prevention and destruction of insects that the scab fungus (Cladosporium dentriticum) has not plagued Apples and Pears. In Paris green we have copper, 32:11 per cent., for funguses, and arsenic, 28:56 per cent., with carbon, 6:09 per cent., for insects or their larvæ. Here we have all that is required to kill every parasite preying on crops above ground. That is the thing—spray our cereal crops with Paris green, 1 lb. of the paste to 200 gallons of water, adding enough lime to make it correspond to skim milk, at the latest time it may be used in May with the Strawsonizer. Turnips can be done the same way, and the "fly" will not eat more than one meal afterwards. Later applications can be made with the knapsack pump Eclair, which will serve for all garden and allotment requirements. The lime must be fresh slaked, and when cool added to the Paris green mixture slowly through a hair sieve, stirring the mixture whilst the limewash is being added. The object of the lime is twofold. 1, To admit of the better application of the mixture; 2, cause the mixture to adhere better and longer to the plants. Instead of the lime 4 lbs. of flour may be added to the mixture to retain the poison on the foliage, but it is not equal to the lime, which serves other useful purposes, the chief being absolute safety to the foliage from the copper of the arsenite—Paris green—and it suffices if the Paris green mixture has enough lime stirred in to render it slightly Care must be taken not to use it over vegetable crops that will be required for table before the parts dressed have been allowed time to be washed clean by rains, and the "paste" only should be employed for the mixture, dry Paris green being not only difficult to mix but dangerous to handle.

Experiments in the treatment of Apple scab were carried on by Prof. E. S. Goff with Paris green mixture in 1891, and though several other fungicides and insecticides were tried it proved "more efficient

in preventing scab and more effective against insects than any of the other preparations used singly or combined." This is good news -too good almost—only it is confirmed by all who have used Paris green mixture in two or three consecutive years. Spraying, therefore, is a paying concern, for it is better to prevent than to provide a cure for fungal and insect plagues. Fruit trees are beset by other fungoid growths besides scab on Apples and cracking in Pears. Mildew often attacks Apple blossom and its young leaves, the fungus (Oïdium farinosa) preventing the young fruit swelling and crippling the growths. When a crop of fruit appears certain caterpillars emerge—not borne on the wings of east winds—from The Codlin moth deposits its eggs at or near the eye of Apples and Pears before they turn down, and many other depredators commence their attacks as soon as the buds, foliage, blossoms, and fruit are sufficiently advanced for their food. The duty of every cultivator is to place a barrier between the spoilers and the object aimed at. Paris green paste, 1 lb. to 320 gallons of water, is generally strong enough to use over Apple trees just after the petals fall, as the foliage is then tenderer than that of Pear trees. Cob Nuts and Filberts, 1 lb. of Paris green to 265 gallons of water, sufficing for the latter while the foliage is young. Plum and Damson trees, Currant and Gooseberry bushes bear the mixture full strength, Paris green 1 lb. to 200 gallons of water, with sufficient fresh made limewash added to give it a slightly milky appearance, from the first, and all the foliage after it is fully developed. At the strength last named it should be sprayed on trees liable to fungoid or insectal parasites by the time the buds commence swelling in spring, say at the end of March, earlier or later by a week according to the season, and it ought not to be used after the flowers expand, on account of the bees, as well as being dangerous to the fructi-fying organs. This is a precautionary measure, but not the least important of the series. The second spraying should take place directly the fruit is set and commences to swell, say the first or second week in June for Apples, but be guided by the condition of the trees and the infestation, for in case of a severe and early attack of caterpillars it may be desirable to spray the trees just before the flowers open, otherwise the pests devour, the flowerseverything, and repeat the spraying directly the petals have fallen. This will only be required in exceptional years of caterpillar infections. Usually four sprayings are sufficient—that is, the two before mentioned—1, at the end of March; 2, early in June, and a third a fortnight after the second, with a final one the second week in July. The latter spray may interfere with the early Apples and Pears, therefore cultivators must exercise their judgment and discretion, for it must be understood that no fruit treated with an arsenical or copper preparation is safe to eat until it has been washed by rain.

Raspberries are the most susceptible of damage from copper or arsenite mixtures. Paris green mixture must not be used on them at a greater strength than advised for the tender foliage of the Apple tree. They have many enemies, which may be accounted for from the fact that the latter are allowed to have their "own sweet will" on Raspberry plants. The "minim" Bordeaux mixture may be employed safely against fungal pests, which are not particularly troublesome in this country; but foliage biting and eating creatures are best destroyed by Paris green mixture not stronger than for Apples, and not applying it later than the full-sized flower buds appear.

Strawberry plants are sometimes plagued by blight caused by a fungus (Oïdium Balsami, a stage only in the development of some Erysiphe). The plants subject to the attacks of the parasite may be sprayed with the "minim" Bordeaux mixture just before or when the flowers show colour, and repeat directly the fruits are set; but it is rare that more than one treatment is necessary. If Paris green mixture is used it must not be stronger than advised for Apples trees, and not be applied later than the first "peep" of white blossom in the trusses.—G. Abbey.

THE VALUE OF TREES.

Though it looks as if Brother Jonathan threatened to take possession ultimately of these happy islands with his corn, his beef, his millionaires, his redeemed Irish patriots, and his "notions" generally, it is scarcely likely that we shall ever introduce the American festival "Arbor Day" into the British calendar. The four national holidays in the United States are, "The Glorious Fourth of July," "Washington's Birthday," "Decoration Day," and "Arbor Day." "Decoration Day" is that consecrated to the embellishing of the graves of those who fell on both sides during the Civil War of 1861-65; "Arbor Day" is that on which old and young go out in parties and plant whole districts of barren public land with infant timber. In our own colonies similar conditions have suggested the adoption of so reasonable a custom, and

"Arbor Day," or possibly "Arbour Day," may yet become a

recognised festival with old and young in Australia.

This wholesale method of regenerating waste lands is eminently characteristic of a practical and pushing age, and the consideration of it naturally leads to the consideration of the work which has been effected more slowly by prescient individuals among the fore-fathers of the English-speaking people. Although Old England was in parts bountifully clothed by Nature with forest, there are many districts now presenting a charming panorama of wood, of field, and of lawn, which four hundred years ago more resembled those wastes our emigrant kinsmen are seeking to reclaim abroad. From the descriptions given by foreign travellers of England during the sixteenth century it would seem as if much of it was spongy, waste, and open where now the landscape delights the eye of the visitor in whom familiarity has not bred indifference. This transformation slowly effected here is being reproduced as though by magic in other parts of the globe, where a warmer sun often working upon an irrigated soil develops vegetation with almost twice the rapidity it does in England. We have heard of the wonders worked by the Mormons at Salt Lake, and these have been more than repeated by the settlers at Fresno and Los Angeles in California, and at Christchurch in New Zealand.

Our Queen had already reigned fourteen years when the Canterbury Pilgrims pitched their tents upon the verge of the great open moorlands extending for hundreds of miles at the foot of the New Zealand Alps. It was an immense prairie land, as large as Piedmont, covered with nothing but coarse tussock grass, and lying between the ocean and a wall of snow-capped mountains. In summer it was often scourged by a sirocco bearing a simoom from end to end without encountering a tree to check its sterilising influence. Now, for a radius of thirty miles around the Cathedral of Christchurch, the landscape is as fresh and green as that of Essex, beset with Willows, Poplars, Acacias, and Eucalypti, and enclosing dairy farms as fine as those of Holland. Anyone who had gone to sleep in England and awoke in a drag on the way to the "New Zealand Cup" at Lincoln outside Christchurch, in November, would merely imagine he had been transported to another part of England. Year by year the mantle of vegetation heightens, until the day will come when to the inhabitants near the sea the view of the distant mountain ranges will become invisible except by ascending

the Cathedral spire.

Such is the magical effect which the hand of man can produce by erecting a shelter of timber against the influences of unrestricted nature. But the beneficial influences of planting are not confined to fostering moisture upon dry prairie lands or even to stopping the pernicious drifting of sand-dunes as has been done so successfully on the "Landes" of Western France. The ameliorative effect of trees upon soil is far from being fully realized. The effect of certain trees, such as the Eucalyptus, is medicinal and curative on certain miasmatous land, as we see in the reclamation which is being made of the Italian Campagna; and even in our sour boggy soils the most curiously opposite effects can be produced. Planting acts in a variety of ways. It makes a dry and shifting soil stable and moist by intercepting sun heat and breaking the wind. It makes a sodden soil warmer and sweeter by absorbing much of the moisture and preventing the refrigerating effect caused by the impact of cold and drying winds. Indeed if the right kind of tree can be discovered there seems to be scarcely any complaint of the soil which planting cannot do something to cure, and we cannot but admire the good sense and public spirit of the United States where the question of afforestation is made a matter of national conscience

and national co-operation. It is not generally known that in wet climates barrenness of the land is often due to baneful fungoid growths, which tend to keep it in a condition of bog. It has been noticed in the more northerly parts of Great Britain that often where a shelter of trees has been opposed to the winds striking upon a sodden sterile soil, the outer portion on which the full brunt of the attacks falls becomes covered with a mossy or lichenous growth, which curiously enough is absent on the interior trees where one would more naturally expect it. This would seem to indicate that such plantations operate as a kind of sieve or strainer of the spawn borne by the winds, and this theory is borne out by the fact that as the trees grow up the land behind the trees loses its mossy or boggy nature, and becomes capable of bearing crops and grasses. Land robbed of its shelter and left exposed to the winds, even when laid down in pasture, has been known to deteriorate rapidly, while that which was sheltered while lying fallow recovered much of its productive power. This shows that in cold and wet climates the action of trees can be as beneficial as it is in lands where it is hot and dry. Indeed, it is marvellous to reflect upon the possibilities which still lie before the human race in this matter, and of the transformation which will surely pass over the face of much of the earth, hitherto regarded as melancholy and useless.-M. H.

MR. M. DAVIS.

HAVING in view the doubts that have been expressed relative to the planters of some of the "Goliaths of Grapedom," and the various claims advanced for tracing the origin of the Vines to the ancestors of present day writers, we have decided that posterity shall know who the raiser of at least one famous Vine was, also to show what manner of man he is some thirty years after he inserted the cutting.

Mr. M. Davis is undeniably the raiser of the magnificent Vine at Manresa House, Roehampton, and has pruned and trained it throughout its career. So far as we know there is no man living who can look on a similar achievement. The mere size of the Vine is something to be proud of, but add to this its fine character and splendid condition, then public recognition of Mr. Davis' work becomes almost a duty. We have certainly great pleasure in giving honour to whom honour is justly due in this case. Thirty years of unremitting attention and cultural skill have made the Vine what it is to-day—a veritable



FIG. 25.—MR. M. DAVIS.

giant in the vigour of youth that produces Grapes of first-class quality, and would produce far more if pressure was resorted to. When in full bearing there is no finer sight in Grape culture to be seen near London, and nothing more creditable to any gardener.

We do not appear to have any honours for disposal in this country for a lifetime of work so well done in the form in which it is represented in this Vine, but honours galore have been distributed for products that bear no comparison with this cultural work of Mr. Davis. So far as we know the Manresa Vine stands alone as the finest in the world raised and tended by one man from the beginning until now. Mr. Davis is a successful grower of all kinds of fruit, and as intelligent and courteous as he is able. Though a very real worker, he is one of Nature's gentlemen, and we have not heard of one visitor out of many return from Manresa gardens and express anything but high approval of the man and his work. Mr. Davis is an excellent type of a British gardener.

NOTES BY THE WAY.

A WEEK or two ago I expatiated mildly over the attractions of East Grinstead, a pleasant little town on the Surrey side of Sussex, and said a few words about one of its gardens. If I were to content myself with that a second visit could not be paid without apprehension, for there is that wholesome rivalry amongst the various gardeners in the district which does so much to keep up a high standard of work. "And why?" each might say; "haven't I a right to be talked about as well as So-and-so?" Dear sirs all, you have the same claim, and shall have the same attention, but one at a time, please; let us go to work methodically. I chatted on the first occasion about pleasant Oakleigh with its fruit

cage, and now I cross the road to make a jotting or two about Brockhurst, the charming place of Mr. Murchison, where gardener Simmons gives a welcome and a good account of himself to gardening visitors.

It would be far from easy to find a place with gardens more undulating than these. I have a lively recollection of climbing some steepish banks at Abberley side by side with Mr. Arthur Young some few years ago, and I thought then that a course of athletic training would not be amiss for helping one to get about in comfort. It is very much the same—if anything, a little more so—at Brockhurst. It is really all climbing, not quite of the lope and alpenstock sort, but still fairly steep, and what it lacks in this respect it makes up for in quantity. There are banks and slopes whichever way you turn. All this, though it may be somewhat tiring to those who have not been dieted and sweated and bustled about as though they were going in for a university boat race, gives very unusual features and presents aspects of considerable charm. There is a sameness about level ground as there is about smooth water, and one appreciates an uneven surface as he does the foam-tipped swell on broad ocean expanses—always providing there is no sea-sickness about.

The house is a long, somewhat low informal structure. I do not know what style it is in, for the difference between the Gothic and Renaissance is about the extent, I grieve to say, of my architectural knowledge. But I do know that it is handsome, cool and inviting. There is nearly as much difference between houses as there is between gardens, some being massive, formal and cold, with a frowning and gloomy aspect, such as are fitted by a setting of clipped Yews and the like; others rambling, natural, and comfortable looking, with which an undulating garden surface, luxuriant shrubs and bright mixed borders at once associate themselves in the mind. Mr. Murchison's house is one of the latter type, and a more charming country residence is not easily imagined. It is a home, not a mansion. The conservatory attached is lofty, spacious and cool, being heavily draped with green creeper growths, and softened with the filmy humidity of Ferns, but not devoid of brightness, either, for well grown flowering plants are sufficiently represented to prevent any suspicion of sombreness. I have never entered a more attractive conservatory, and Mr. Simmons may be pardoned if he feels somewhat proud of it, but he is one of those modest men who hide their feelings from the vulgar gaze, and so I cannot say what his sentiments thereon may be.

The residence faces north and south. I am a little dubious as to which would be styled the front, but accord that honour to the broad sweep of windows and entrances looking upon the southern hills. A beautiful view may be had from them, one of the most delightful without a doubt in the county. There is absolutely nothing to obstruct it. The garden sinks away below the walls in many a grassy terrace and steep declivity, and beyond it stretch the fields and woods, which melt away at the base of the wolds. It must present a charming spectacle of soft tender pastoral beauty in the glow of early morning, not less pleasing than the mellow aspect of meadow and forest when the heat of the day is upon the country side. I did not see it under either condition, but under the tearful mantle of a heavy and protracted rainstorm; but it is there, and no exaggeration of imagination is needed to invest it with features of beauty, reposefulness, and charm.

Mr. Simmons will, I feel sure, forgive me for not going into details of his excellent flower gardening under the circumstances. I must sorrowfully admit that it is not within my scope to recall from memory every bed in every place I enter-would that it were. And as to notes, why they would have presented much the aspect of the tear-punctured missives which writers of love stories have familiarised us with, even to the extent of being undecipherable, had I attempted to take them in the pelting storm. It was worthy work of its kind, particularly the subtropical beds, which linger with me as exceptionally well arranged and admirably furnished examples. Nor were the conditions favourable for noting down the names and altitudes of the many good Conifers with which the grounds were studded, or for a description of the shrubs overhanging the lake. Personal wishes are as nothing when the rain falls with that tropical luxuriance and steadfastness which make umbrellas more sighed for than lead pencils, and mackintoshes more desirable than notebooks. I am not prepared to say that the drops were as large as eggs, which is the sort of thing Clark Russell tells us about in those wonderful sea stories of his, but the rain fell long and with a waspish persistency. I must sum up the gardens and grounds by saying that they have been most judiciously laid out and planted, and are a not unworthy reward for the thought and care which both master and man have bestowed upon them.

There is not a great amount of glass at Brockhurst. One would expect rather more from a place of its size. This, however, only affects a writer in that it leaves him less to say than he would otherwise have at his command. What space there is is made the most of. The Peaches and Nectarines were eloquent with the language of health, foliage, and abundant fruit. The main plant house was as full of fine, strong, clean, and healthy material as it could be comfortably packed with; indeed, the thought strikes me that there must have been as much ingenuity exercised to get the plants in as skill to grow them so well. To be sure it is a hard thing to throw healthy plants away. A gardener no more likes to do it than parents do to cast their children out upon the world.

Amongst various good things in one of the houses I noticed a batch of a Carnation much thought of locally, named Pope's Seedling. It is a very floriferous tree with lemon, rose-flaked flowers, but I am told often throws selfs. It appears to be a very useful variety worth seeing in other parts.

Brockhurst boasts a well-stocked kitchen garden and a noble array of fruit trees, but as the concentrated iniquities of a score of shower baths had done their worst upon us by the time we got amongst them, we were fain to hurry through. The place is in good order all over, and if the gardener is as satisfied with his handiwork as he might justly be, he is far from being a discontented man. All the soft water there was about moved neighbour Dunn, who was one of the saturated ones present, to dilate on his favourite theory of the value of rain water and the absolute worthlessness of hard. The young Oakleigh gardener is as smart and promising a man as I know, but he really has most eccentric ideas in respect to water. According to him a nice strong solution of arsenic would be about as nourishing to a plant as hard water. A medical gentleman with a strong antipathy to alcohol recently propounded the statement that there is about the same amount of support in the bite of a mad dog as there is in a glass of stout. Mr. Dunn gives hard water about an equal value for plants. Of course he does not forget to let loose a deluge of arguments on the head of anyone who questions his theory. What does he say to putting some of them in print?

It would be bad for town gardeners if hard water were as injurious to plants as some of our friends assert. What, I wonder, would the many earnest and persevering amateurs do whose plants never receive any except hard water, and in a season like the present, too? Gardening for them would be a more troubled pastime than it is now, and it is already full enough of difficulties and drawbacks.—W. P. W.

SCARLET RUNNER BEANS NOT SETTING.

I HAVE read with much interest what has recently appeared in the *Journal* on this subject, and I desire to take this opportunity of thanking all those correspondents who have kindly replied to my inquiry (page 80). There is, however, so much differing among the doctors that I am yet at a loss how to decide; still, I am thankful for the information contained in their communications.

In my letter I naturally connected the scarcity of humble bees with the scarcity of Beans, having read at some time that their presence was necessary in order to secure a crop of red Clover seed, but now that I have observed more closely the way they work at Bean flowers, I do not think they are instrumental in the "pollination." The proboscis is directed to the very base of the corolla, and not towards the reproductive organs. On the other hand, I cannot agree with those who consider these insects injurious to the organs or the embryo Beans, for I have known seasons that it was next to an impossibility to find a flower whose calyx was not pierced by them, yet Beans were abundant.

One writer thinks that the earlier blooms failed to set owing to the excessive heat and atmospheric dryness. Granted, but why was there not a change for the better, say in a week after the rain came, and the consequent lowering of temperature? Whereas my Beans did not begin to set until the 31st of July. This improvement continued for about ten days, when the flowers began falling again to some extent. During that period we have had a good downpour, and to all appearance the weather was perfect. A neighbour living a mile distant called my attention to this circumstance, when we at once proceeded to examine my own Beans, and found it even so.

I agree with Mr. Abbey that drought and poverty will cause the flowers to drop wholesale. Probably I have not grown so many crops of Beans as he has, but I have grown about thirty, and I have never before failed to get a fair amount of pods by copious waterings. Indeed, I had come to regard the Bean crop as a certainty if plenty of water could be given.

Among other causes advanced are over-luxuriance, growing in enclosed spaces, thrips and other insects infesting the plants. With regard to the two former reasons, it appears from the writers on page 106, and from my own inquiries and observations in this neighbourhood, that no matter what the treatment, position, or state of the fertility of the soil, the results are pretty much alike. I certainly found a few yellow thrips in some of the flowers I examined, but not enough, I think, to do any serious damage, and even if it were so I cannot account for their sudden disappearance about the end of the month, which we must suppose took place, thus allowing the organs to fulfil their functions.—T. S., Bristol.

THREE DAYS' HOLIDAY IN THE ISLE OF WIGHT.

ARRIVING at Ryde I went by train to Shanklin, distance ten miles, and near the Chine who should I meet but our old gardening friend, Mr. C. Orchard, manager of the Bembridge Hotel and gardens. With him was Mr. W. Drover of Fareham, well known as one of the leading Chrysanthemum growers. We adjourned to the Chine Hotel for lunch, and I soon found these gentlemen were on business, having to act as judges at the Shanklin Horticultural Show, held in the beautiful grounds of Ryleston, kindly lent by Mons. Spartali. At the outset I must say of all the local shows I ever attended I never was in such charming grounds and scenery. The grounds stand well up on the cliffs and overlook the

Chine Pier, the Spa Hotel, the splendid sands, on which you can walk to Sandown, some five miles, the beautiful white cliffs, distance about twelve miles, and the coast as far as the eye can see. I am told that on

a elear day one can see Brighton.

Passing to the tents I was very much interested in the exhibits. One tent was well filled with stove and greenhouse plants, including Palms, Zonal Pelargoniums, Ferns, Coleuses, Fuchsias, and very fine specimens of Araucaria excelsa, well feathered and clean, some of the finest I ever saw. The fruit tent most noticeable for the Grapes, Melons, Peaches; the Nectarines the finest seen this season. The cut flowers were good for the season, Show and Fancy Dahlias, Marigolds, Roses, Asters, ladies' sprays, and bouquets. The vegetable tent for professional gardeners contained good Celery, Cauliflowers, Tomatoes, autumn and spring Onions. The cottagers' tent was well filled. I notice by the schedule that no less than 120 classes in all are provided. Great eredit is due to the Honorary Secretary, Mr. A. Carter, and to the Committee for the efficient manner in which everything was carried out. I remained till the evening, when a promenade concert took place, and the grounds were lit up by fairy lamps. I enjoyed the concert with Mr. C. Orchard, who left me to go to Bembridge, and I went on to Ventnor, distance four miles, to prepare for the next day.

The following day I walked from the esplanade on the cliffs to Steephill Bay, which is a charming walk. On the right under the hill is Steephill Castle, late the county residence of Dudley Hamburgh, Esq. Following my walk I come to the Ventnor Hospital, which was opened by the Queen. This is a splendid block of buildings with about 12 acres of pleasure grounds attached and overlooking the sea. Still continuing my walk, I came through Bank End Farm, which is one of the prettiest and most compact farms under the undercliff. The front of the house is eovered with Roses, and of a mild scason Roses have been picked at Christmas. Mr. Truelove is now the occupier of the farm, and many years ago was the gardener and steward to the Hon. Mrs. Dudley Pelham of St. Lawrence. I then get in the high road, and walk along the undercliff, and come to the pretty church of St. Lawrence. This old ehurch is one of the smallest in England, which every visitor to the island ought to see. The gates being open, I walked round the little churchyard, when I saw on some of the tombstones names that took my memory back to my boyhood. I pass on for about half a mile, and then return for Ventnor, passing the new ehurch of St. Lawrence, which stands on high ground overlooking the sea. I then get to the Hon. Mrs. Dudley Pelham's gardener's lodge.

I introduced myself to the gardener, and was received by every courtesy. I found he was gathering Figs, which one could pick by the bushel. The kitchen garden lays well up under the Down, the extent being about 4 aeres. Apple, Pear, and Pium trees were broken down by the heavy crops. Wasps are very troublesome, and Mr. Norton, the gardener, showed me two great bottles he had emptied that morning going through the plant houses. I see plants are grown mostly for conservatory decoration, and they are remarkably clean. Vineries contain Black Hamburghs, Muscat, and Alicantes, which were well done. The Black Hamburghs were well finished, and had extra sized berries. Tomatoes and Melons are also finely grown. Chrysanthemums on the eut-back system look well. In the pleasure grounds Roses are well done here, having secured many first prizes at the Undercliff Shows. The grounds looked neat, and the beds very gay. Among the most noticeable were the beds of Henry Jacoby Pelargonium, the best I have seen this season. Many people have no idea what the Island gardeners have to contend with to get their manure and things carried to the places required. They have to hand-cart everything, which makes labour very hard. I leave my friend and return him many thanks, and arrive back to Ventnor for dinner and tea, highly pleased with my walk, and finish out my evening on the pier.

My last day I took a walk early in the morning, and found Mr. Sheath, the gardener to Mis. Mitchell, at Macrocarpa Gardens, Undereliff, near Ventnor, among his Begonias, which he has the finest selection of seedlings in the Island. Some of the blooms measure 6 inches over, of perfect form. Mr. Sheath tells me he started with Messrs. Cannell's strain, and keeps on improving both double and single. I pass on to a fine house of Black Hamburgh Grapes and Buckland Sweetwater, which are well finished. The stove plant houses contain some very fine specimen Crotons, Eucharis, Tree Ferns, Bougainvillea, and Stephanotis. Plants are largely grown for decoration to supply a charming conservatory attached to the house, overlooking the sea. The grounds are not very extensive, nor is the kitchen garden; but everything looked neat, and a credit to the gardener.

My next walk was to Messrs. H. Drover & Sons' nurseries. The Hillside nurseries are mostly devoted to cut blooms, and the grounds very neatly laid out. Mr. H. Drover was foreman and manager at the Lower Grounds, Aston Park, near Birmingham, for many years. Most noticeable were some very fine Cyclamens, double Primulas, and pot Roses. The St. Boniface Nurseries are eomposed of fruit houses, which are devoted to Black Hamburghs, Muscats, Buckland Sweetwater, and Alicantes. There are two long ranges of houses 125 feet, one being filled with Peaches and Pineapple Neetarines. These are well done and clean. The other part of the ground is filled with a good selection of vegetables to supply the shop, which is managed by the son. I must say these houses are built under the Down, and the soil looks nothing but hard rock and chalk. The view from these nurseries is the best I have seen, and if any gardener has the privilege of a three days' holiday I should advise him to take the same route, as I am sure the gentlemen I have mentioned would be pleased to see him. I return back by the

train to the pier head for the boat to Southsea Pier, where I stop two hours, finally securing a train at Portsmouth Station, and arrive home safely, feeling better for my holiday.—A LOVER OF SCENERY AND GARDENS.



MR. LAXTON AND HIS WORK AMONG ROSES.

UNDER the above heading a writer in your issue of August 17th enumerates the Roses raised by the late Mr. Laxton, and states "Roses were not overlooked, his first being named Charles Darwin, followed by Annie Laxton," and the article goes on to say that Duchess of Bedford was also raised by him. May I be permitted to point out that Annie Laxton is an 1869 Rose, and Charles Darwin came out in 1879, ten years later? Also may I say that Duchess of Bedford was raised by a neighbour of mine, Mr. Postans of Brentwood, and not by Mr. Laxton?—J. H. P.

NATIONAL ROSE SOCIETY.

In reply to Mr. Mawley I beg to say that my private circular was sent out on the 21st and 22nd July, and I repeat that the Secretaries were amongst the very first to receive it. Their public reply was in the Journal of the 3rd August. The objection to such a reply is in the fact that it is never advisable nor necessary to make a public question of shortcomings in the management or working of any society, but as the Secretaries think otherwise they must take the consequences of the subject being discussed in the gardening Press. Mr. Mawley, more hibernico, says "by rights" I should have entered into certain personal explanations in my circular. I purposely avoided any personal attitude in that paper so as to show no bias whatever. As I have already said, the result of the inquiry is satisfactory both in the character and number of replies.—Charles J. Grahame, Brightstone, I. Wight.

IN MEMORIAM-DEATH OF THE REV. J. M. FULLER.

ALTHOUGH not occupying a very prominent position in the horticultural world, there are many, especially amongst the members of the National Rose Society, who will hear of Mr. Fuller's death with the deepest regret. At his delightful vicarage at Bexley Mr. and Mrs. Fuller for many years successfully cultivated the Rose, and were frequent exhibitors at the local shows in the neighbourhood, and also at the National Society's shows. Indeed, of one of the shows in the neighbourhood, my fellow judge used to say—in sporting phrase—'Mrs. Fuller first, and the rest nowhere.' Mr. Fuller was a constant attendant at the meetings of the Committee of the N.R.S., and for some years had been one of its Vice-Presidents, in which capacity he frequently took the chair. He always performed these duties with the utmost courtesy and in the most businesslike manner.

Mr. Fuller was an erudite scholar and an active clergyman. He was kind and genial in his ways, and there is a large circle of friends who will greatly miss him, and in the N.R.S. it will be difficult to replace one who by his courtesy and geniality was ever welcomed.--D., Deal.

THE FRAGRANCE OF ROSES.

In my recent contribution to the Journal upon this special subject I unconsciously omitted the names of two highly fragrant Roses which should most assuredly have been included in my selection, viz., Caroline Testout and Viscountess Folkestone; the latter one of the most successful productions of the late Mr. Bennet, who should rank hereafter as one of the greatest rosarians England has produced. I much regret that his Roses were not more universally appreciated during his lifetime; but there can be no question that they have risen very high in popular estimation since his death. That such splendid acquisitions as Her Majesty, Mrs. John Laing, Lady Mary Fitzwilliam, and Grace Darling, most of which are exceedingly fragrant, are steadily increasing in popularity is a fact which must be sufficiently manifest to every earnest student of contemporary horticultural literature. Mrs. John Laing already ranks as one of the four leading Hybrid Perpetuals; but I think that Marie Baumann for perfect sweetness and faultless form, likewise I may add for matchless productiveness, should be assigned the premier place.

With what your contributor "Y. B. A. Z." says on page 146 of the value of Tea Roses as almost perpetual bloomers I thoroughly agree. Thanks to such admirable varieties as Souvenir de S. A. Prince, Belle Lyonnaise, L'Ideal, Gloire de Dijon, Cheshunt Hybrid, Gustave Regis, and Etoile de Lyon, I have been blessed with a constant succession of beautiful blooms from the end of April till the present time. One of my favourite Tea Roses is Perle des Jardins. I would esteem it one of our finest varieties, but for its very remarkable formation, by reason of which it does not open well. I may state that my recent incidental reference to the evanescence of Roses (in my Viola article, page 120), was concerned chiefly with certain utterly unsatisfactory and absolutely disappointing Hybrid Perpetuals of no value whatever, which should I think be relegated without mercy to the regions of oblivion; otherwise they should be denominated in the catalogues "Fine Weather

Varieties," and I think it should also be mentioned by their raisers

that they must be very carefully shaded from the sun.

I am glad to find so eminent a rosarian as Mr. Benjamin R. Cant, of Colchester, vindicating the supreme merit of Ernest Metz, a Rose which has a great future before it, if I have not deceived myself regarding its claims. Souvenir de S. A. Prince is another exquisite variety which has not yet received adequate recognition. Why it should be regarded as inferior to The Bride, I cannot conceive; for it is unquestionably a purer white Tea than its rival, and in other respects it is at least equally impressive.

I have been informed by the correspondent to whom I have referred, that exhibitors as a rule do not attach any importance to the presence or absence of fragrance in a Rose. Such, however, is manifestly not the opinion of Mr. Cranston of Hereford, who was first with Alfred Colomb at the National Rose Show. "Every Rose" he affirms (in his book) "should have fragrance;" and I think that his verdict should be regarded as decisive. Unquestionably there are many magnificent Roses, for the most part descended from Baroness Rothschild, which are incolorous; powerthaloss I adhere to may original theory that the are inodorous; nevertheless I adhere to my original theory that the absence of this attribute is, even in such instances, a serious limitation. -DAVID R. WILLIAMSON.

HORTICULTURE IN SOUTH AFRICA.

WE extract the following, written by a visitor, from the catalogue of Messrs. W. & C. Gowie, as it indicates horticultural progress in our

African empire:

This firm of seed and plant merchants, Grahamstown, has within the past few years secured a reputation throughout South Africa, and in the coming impetus to the fruit industry will take a great part. Mr. W. Gowie is a standing example of what may be accomplished by enterprise and unflagging industry out of small beginnings. He commenced his career as horticulturist by the purchase of an old garden of about two acres. This he completely trenched, converting it into rich ground for the growing of Roses and other flowers, all his work being distinguished by complete thoroughness. Then as demands upon him grew he leased a part of Oatlands Park Estate, and last year he and his brother, who joined him as a business partner, became proprietors of that estate, which occupies a large portion of the western slope of the basin wherein Grahamstown is cradled. Long may they enjoy the fruits of their enterprise. Oatlands Park is 1200 acres in extent. It embraces the whole of a well-wooded valley, and contains a variety of fine natural and ornamental scenery. Each slope of the valley is thickly covered with Mimosa trees and thick bushes, while the bed of the valley holds two or three large dams, overshadowed by large forest trees, and that portion of the stream not required for irrigation flows into a shallow basin, from the centre of which springs a cluster of tall Poplars. A long line of Gum Trees marks the boundary on the town side, and on the slope, opposite the house, a small space is reserved for the town. This is known as Prince Alfred's Park, the Duke of Edinburgh when a lad having, on a visit to the town, planted an Oak on that spot. That was when Oatlands was the property of Sir Walter Currie, a great sportsman and warrior, who formed that fine corps the original F.A.M. Police. The foreground in the illustration was at that time wild land, and some years later Sir Walter introduced therein the first pair of ostriches ever kept in a domestic state in the colony. No one of the many hundreds who saw those birds, however, dreamt of the use to which they could be put, and no effort was made to breed them for their feathers.

Now where the ostriches built their nests a garden glows in all the beauty of its Roses and budding fruit trees. Messrs. Gowie Brothers have, however, only as yet worked one corner of their fine estatz—that nearest the town—where they have some 30 acres completely trenched and well covered with flowers, ornamental trees and shrubs, and thou-

sands of young fruit trees.

In the foreground is a field of mixed Roses, thousands in number, from which, during the season, large numbers are despatched by rail and post to all parts of the country. The Rose thrives well in South Africa, and 1 saw many a small plain iron house in Kimberley and Johannesburg redeemed from ugliness by magnificent Roses. Beyond this glowing field of white and red there is on the right a smooth lawn interspersed with ornamental trees, and above that the glass houses for propagating, potting, including the Fern house, wherein is one of the finest and most beautiful collection of African and foreign Ferns I have seen, all flourishing splendidly, and most of them in demand for the adornment and beautifying of ladies' boudoirs. Out in the open near the signpost were trees of the English Hawthorn in bloom and rare plants usually found in hothouses, but here thriving in the open, one of them covered with a mass of white and scarlet bloom. Beyond to the left is the fruit nursery, where are some 15,000 young fruit trecs, comprising Orange, 30 varieties of Pear, 20 of Peach, 36 of Apple, 6 of Nectarine, 10 of Apricot, besides Almonds, Walnuts, and Medlars. Herc were 1400 grafts of Orange trees three and four years old, raised from the pip, and then budded or grafted, Mr. W. Gowie having completely mastered this art. Of course he has noticed the gradual growth of the export trade in fruit, and is turning his attention to trees which will produce the best crops for the London market, and has made a start with 2000 Apples, the "Late Bloomer," which yields a beautiful dark red fruit of fine flavour. There is no blight about the trees, they were clean, healthy, and just bent upon doing their work in the world by producing fruit.

There had been a great demand on Mr. Gowie for Orange trees, and he had almost sold out the whole of his stock of three and four year old trees, many of them going to Capetown, where a few years back the Australian bug had destroyed thousands of trees. I may remark that an enemy has been found to the Dorthesia in the ladybird insect, and at Uitenhage one gentleman has bred these insects with the laudable object of supplying them to owners of Orange groves threatened by the bug. In a few months the ladybirds will clear out the pest, lock, stock, and barrel, old and young, and then, having eaten the enemy, they settle the danger which might arise from a plague of ladybirds by eating each other.

THE PLATYCODONS.

My note on page 145 was written before I had seen Mr. E. Molyneux's article, or I would have referred to it at the time. I have no doubt the plant referred to by your esteemed contributor is the white variety of P. grandiflorum, and not the new white form, which is a seedling from P. Mariesi and is said to be exactly like the parent except

seedling from P. Mariesi and is said to be exactly like the parent except in colour. It was offered by Hillebrand and Bredemeier of Pallanza under the name of "P. Mariesi album," and in the catalogue is said to attain a height of "15 to 20 centimetres," (equalling about 6 to 8 inches).

For garden purposes the Platycodons may be divided into P. autumnalis, growing sometimes to nearly 3 feet in height, and flowering later than the others; this is blue. P. grandiflorum, sometimes 2 feet in height, although generally dwarfer. Of this there are the following forms—single blue, double blue, single white, and double following forms—single blue, double blue, single white and double white. P. g. nobilis with large pale blue flowers, and P. g. striatum, with striped flowers, are named in some continental catalogues, but I have never met with them in cultivation.

P. Mariesi will generally be found growing about 9 inches in height, and the form exhibited by Messrs. Paul appears to be an extremely dwarf one for the plant as grown in this country. Mr. Paul is quite correct in saying that P. Mariesi is from Japan. In the "Dictionary of Gardening," P. autumnalis is considered synonymous with P. grandiflorum, which is given as growing from 6 to 12 inches in height (?) P. Mariesi is given as a form of P. grandiflorum. The Platycodons are still occasionally met with under Schröder's name of Wahlenbergia .-S. ARNOTT.

PLATYCODON GRANDIFLORUM MARIESI.

In my notice of this plant on page 127 a mistake has crept in, which I attribute to transcribing my notes. The white form of P. g. Mariesi is a scarce plant growing not more than 6 inches high. P. grandiflora alba is the variety to which I alluded as growing nearly 2 feet high.—E. MOLYNEUX.

PLATYCODON MARIESI ALBA.

I BEG to enclose a plant of the Platycodon Mariesi alba mentioned by Mr. Molyneux in his notes on page 127 of Journal, which was also referred to on page 146, as being very scarce in England. I happen to have a few dozen plants which flowered well with me this year. The plant I send was cut quite close to the ground.—B. LADHAMS, Shirley.

[The specimen was 6 inches in height and appeared to have been flowering freely.]

ROYAL HORTICULTURAL SOCIETY.

SCIENTIFIC COMMITTEE.—At the last meeting of the Scientific Committee of the Royal Horticultural Society, D. Morris, Esq., C.M.G., occupied the chair.

Anthracnose (Sphaceloma ampelinum).—Specimens of Grapes from a garden near Dorking were exhibited suffering from this disease. Mr. G. Massee, of Kew, who determined the disease, stated that the Vines were affected by "a mild form of Anthracnose," which is caused by a fungus called Sphaceloma ampelinum, De Bary ("Bot. Zeit.," 1873). The fruit of the fungus is developed during the winter, hence before this period all diseased portions should be removed, and furthermore such portions should be cut well back, as the mycelium is perennial, and works backwards from the young shoots which it first attacks.

The Chairman stated that no one knew until a few weeks ago that this terrible Vine disease was in England; but now it was reported from an Edinburgh garden as well as from Dorking. In America the disease was most deadly, and it was also the source of much trouble on the Continent. Notwithstanding the above statement, it is possible that the disease has been lingering for at least two or three years in this country, as Mr. R. D. Blackmore, of Teddington, called attention to it at the Grape Conference held at Chiswick in September, 1890. In the "Journal of the Royal Horticultural Society," vol. xiii., p. 49, Mr. Blackmore said a disease which attacked his Vines, "resembled Anthracnose," although the symptoms were not quite identical. The tip of the shoot is first attacked, and the crinkles of the unexpanded loss which becomes of a dirty washlesther colour and loss its nelluleaf, which becomes of a dirty wash-leather colour, and loses its pellucidity; then the leaves that are expanded further down the shoot become cupped and concave on the lower side, convex on the upper, and lose their grailing. All the shoot becomes dull, and its crispness is gone; and if pinched it indents without breaking. The disease, unless checked at the outset, descends the stem very quickly, runs into the older wood, and destroys the Vine." The specimen submitted to the Committee had the canes, fruitstalks, and berries affected with dark brownish blotches and goods while the leaves were of a dull arraigh brownish blotches and spots, while the leaves were of a dull greyish tint, shaded here and there with brown on the under surface. As a remedy it was suggested that Vines suspected of the disease should be dusted with sulphur in the spring time, and later on a mixture of sulphur and lime should be applied judiciously. In some places on the Continent a wash of sulphate of iron is used for the stems. Any Vines now suffering badly from "anthracnose" should be immediately

destroyed by fire to prevent the disease spreading. It may be mentioned that Mr. Blackmore ("Journal Royal Horticultural Society") plunged an infected shoot into a can of strong liquid manure; and this arrested the evil, and after two or three such dippings sound growth was renewed. The manure should be undiluted and strong.

renewed. The manure should be undiluted and strong.

Primula Poissoni.—Mr. G. F. Wilson exhibited a plant with several flower-scapes, one of which bore six whorls of purple flowers.



EVENTS OF THE WEEK.—Apart from the four days' Show which opens at the Agricultural Hall, Islington, under the auspices of the Royal Horticultural Society, on Tuesday, August 29th, but few events of horticultural interest will take place in the metropolis during the ensuing week. A further reference to the Exhibition is given in another paragraph on this page.

- THE WEATHER IN LONDON.—After the abnormal heat of last week a change in the temperature has been generally welcomed. As mentioned in the leading article of this issue, 95° were recorded at Greenwich Observatory in the shade on Friday last; but on Saturday the thermometer fell to 75° in the metropolis. A little rain fell on Monday morning and also on Tuesday afternoon. Wednesday opened showery, and at the time of going to press the weather appears unsettled.
- AGRICULTURAL HALL SHOW.—On Tuesday, August 29th, the great Show of plants, flowers, fruits, and horticultural sundries will be opened at the Agricultural Hall, Islington, by the Royal Horticultural Society, and will remain open to the public until the night of September 1st. The members of the Fruit, Floral, and Orchid Committees will meet on the 29th inst. at 11 A.M. precisely, but will be admitted at the Barford Street entrance as early as ten o'clock. They are particularly requested to wear the badges given out at the last Temple Show, and to have their Fellows' pass or tickets with them. We are requested to state that as the catalogue of the Show must go to press on Monday, it is hoped that all exhibitors will have given particulars as to their exhibits by that day to the Superintendent of the R.H.S. Gardens, Chiswick, as otherwise they cannot possibly appear in the catalogue.
- Lady Bird Tomato.—Although I knew this to be in many respects an excellent Tomato, I was quite unaware until I saw it recently growing in a house at Messrs. H. Cannell & Sons' Eynsford Nursery what an extraordinary cropper it was. Growing here by the side of such sterling varieties as Cannell's Perfection, Ham Green Favourite, and Hackwood Park Prolific, it completely eclipsed them as regards weight of crop. The fruits are, however, not of such good shape as either Perfection or Ham Green, though they are equally as rich in colour. The growth made by Lady Bird is far stouter and more robust looking than any of the others, and the crop must have been at least twice as heavy. I am surprised that more is not heard of this Tomato, as to my mind it is one of the finest that has been introduced during the past three or four years. It was figured in the Journal for January 5th, 1893, at page 15.—H. W.
- MELON BLENHEIM ORANGE.—Now there are so many varieties annually introduced the value of this high-class Melon appears to be overlooked, but I am yet inclined to think that it ranks foremost in its section for all-round properties—namely, handsome shape and fine netting, high quality, good constitution, and free setting. I have a recollection of the fine fruits grown by Mr. Iggulden at Marston House some few years since on the extension system of training, many of them weighing 6 lbs. and upwards each. Cut from plants in full foliage they were unbeaten in the best competition. At Heywood its value seems to be fully appreciated, for calling there recently I saw one house devoted exclusively to this variety, the fruits averaging from 2 to 3 lbs. each. The plants were placed about 1 foot or so apart, and kept to single stems; and although this particular house is a small one, over forty fruits were swelling, and furnished with the perfect net so characteristic of the variety. It is good for growing in frames in summer under restricted treatment, but to see it in its best condition it should be grown on a trellised roof of a heated structure.—W. S., Rood Ashton.

- —— AN ANNUAL OUTING.—The employés of Messrs. William Cutbush & Son of Highgate, London, N., and Barnet, Herts, held their outing on Saturday, August 19th, on which occasion they went to Hastings, where an enjoyable day was spent.
- VINES IN FRANCE.—On account of the intense heat at Medoc and Bordeaux the Vines, says a correspondent, have become completely ripe during the past week. At the Château Margaux the Grapes are already being gathered. It is estimated that the heat has spoilt 25 per cent. of the vintage, which, in spite of this loss, remains unusually large.
- —— PINK ERNEST LADHAMS.—I send a few blooms of new perpetual-flowering Pink Ernest Ladhams, which is now as full of buds and blossom as in spring. I have never been without bloom since it was raised four years since, and it forces admirably. A recent storm has somewhat damaged the blooms, as the plants are growing quite in the open.—B. Ladhams, Shirley. [A beautiful border Pink with large fragrant blossoms.]
- TENDER AND TRUE RUNNER BEAN.—The public ought to be greatly indebted to Messrs. Sutton & Sons for the introduction of this splendid novelty. The seed resembles the ordinary French Bean. Canadian Wonder sown at the same time is all over. Tender and True is covered to a height of 4 feet with well shaped pods about the size of those of Canadian Wonder, and is likely to continue cropping until frost cuts it down. This Bean is likely to be much heard of in the near future.—R.
- A New Cactus Dahlia.—At the South of Scotland Horticultural Society's Show at Dumfries on 15th and 16th inst., Messrs. Dobbie and Co. of Rothesay exhibited a new Cactus Dahlia named Ivanhoe. It is the first of a new type, being single and having sharply pointed, somewhat twisted petals. The colour is a beautiful rose, and for decorative purposes it will certainly be much in demand. Ivanhoe is a charming novelty, and was greatly admired.—S. A.
- —— SIDALCEA PEDATA.—This was the most striking plant in an exhibit of hardy herbaceous flowers by Mr. Lister of Rothesay at the same Show. It is a beautiful Malva-like flower of a pretty blush pink colour. I can find no reference to this plant, but was informed that it grew about 3 feet in height. For exhibition purposes it looks as if it would be invaluable.—S. A.
- —— CARNATION LADY NINA BALFOUR.—This new Carnation was exhibited with a number of others by Laing & Mather of Kelso. They were arranged in bunches with their own foliage. Lady Nina Balfour is undoubtedly a beautiful flower of a most attractive pink colour, and if it possesses the qualities claimed for it by the firm distributing it will soon be widely grown. A bright scarlet self named Dundas Scarlet in the same exhibit pleased me very much.—S. A.
- HARDY FLOWERS AT DUMFRIES SHOW.—At this Show on 15th and 16th inst. six exhibitors competed for the prize for twenty-four spikes or bunches of hardy herbaceous plants. The first prize was awarded to Mr. J. Harper, gardener to Mrs. Maxwell-Witham of Kirkconnell, with a good collection, arranged in a most effective manner. Among the most noteworthy plants was the larger and better of the two forms of Rudbeckia or Echinacea purpurea. The second went to Mr. J. Wilson, gardener to J. Davidson, Esq., Summerville, who had perhaps more variety, but must have lost several points for arrangement. Third Mr. W. Carruthers, gardener to Capt. Stewart of Shambellie. In the class for six spikes the prizes went to Mr. W. Edgar, an amateur, and Mr. W. Carruthers.—S. Arnott.
- A NEW AGRICULTURAL COLLEGE,—The Kent County Council have completed the arrangements by which they propose to extend their scheme of technical education, by the establishment, jointly with the Surrey County Council, of an Agricultural College at Wye. The idea is to provide a centre for agricultural science and practical instruction, at which not only will instruction be given to resident and non-resident scholars, but from its professional staff will be drawn lecturers to visit the towns and villages of Kent and Surrey, while the College itself will become a seat of scientific research and examination of soils, manures, seeds, and products. The acquisition of the premises at Wyc was at the suggestion of the Earl of Winchilsea. The government of the College is vested in Lord Winchilsea, as Hcreditary Governor, nine representatives of the Kent County Council, six of the Surrey County Council, two of the Universities of Oxford and Cambridge one of the Royal Agricultural Society, and one of the Bath and West of England Society and Southern Counties Association.

— AMERICAN HORTICULTURAL JOURNALISM.—Our excellent transatlantic contemporary, *The American Florist*, keeps in the front rank of horticultural journalism "on the other side." Special issues are the order of the day, the "Convention and Columbian Souvenir" number being the latest achievement in this direction. This number is replete with illustrations, for besides some charming views of the horticultural exhibits at the Chicago Exhibition, no less than 416 portraits of horticulturists are given.

"IGGULDEN'S ANTIRRHINUM."—For a mass of pure white flowers for bedding I know of nothing to equal Iggulden's Antirrhinum. It has been in bloom the whole of the season, and appears likely to continue all the summer. It is important to keep the spikes of sced-pods cut off, not minding the sacrifice of two or three flowers and buds at the top; indeed, the plants are more even and compact after this operation, as a number of shorter spikes are ready to open their numerous flowers. I believe the variety is fairly well "fixed," so a stock may be raised from seed. I prefer, however, to insert cuttings in the autumn, wintering them in a cold frame, or, in other words, treat them like Calceolarias.—T. S.

— ALLAMANDA WILLIAMSI.—As an exhibition plant, this recent introduction of Messrs. B. S. Williams & Son must shortly take a high position. Darker in foliage and stem than most varieties at present in cultivation, a grand habit, and flowers stout in texture of a pleasing medium shade of ochre, it is particularly acceptable, not only for exhibition, but to supply cut blooms for decorative work. The plant is of upright growth, and in some instances stakes are not even required for support. Strong shoots taken with a hecl early in the season, and grown in 4-inch pots, make pretty little plants for grouping. As showing its floriferousness, I saw, a few days ago, a plant, 9 inches in height, grown to a single stem, and only in a 3-inch pot, which had a perfect head of growth bearing nine fully developed flowers.—R. P. R.

— HARDY FLOWERS AT EYNSFORD.—Those who are interested in hardy flowers would find that a day spent on Messrs. H. Cannell and Sons' seed farms at Eynsford highly enjoyable. Visitors are received and treated with the utmost courtesy, and a sight will be shown that is not, at any rate by Londoners like myself, to be seen every day. Here will be found large beds of the fragrant Alyssum maritimum, the gaudy Antirrhinum, and the more lowly, though not by any means less beautiful, Viola. Thousands of Asters are throwing up good sized flowers which present a very charming appearance, the colours being massed in a tasteful style. The soil on which these plants are growing is of a very light chalky nature, nevertheless they are doing admirably, and this after a dry season, is proof of the skill and unremitting attention to which Mr. Robert Cannell subjects them.—H.

— Blandford Horticultural Society.—In brilliant weather the above Society held its first annual Show on Thursday, the 17th inst., in the beautiful grounds of Bryanstone Park, the seat of the Right Hon. Viscount Portman, K.G., and the Society is to be congratulated on the success it attained. Mr. Allsopp secured the premier award with a very fine group tastefully arranged. Mr. Perkins, Milton Abbey, also exhibited a grand group of plants. Sir W. Marriott (gardener, Mr. Denny) sent a splendid group of stove and greenhouse plants, including some Orehids, amongst which was the chaste Catasetum Bungerothi (not for competition). Fruit was well shown in all classes, the principal prizetakers being Messrs. Martin, Allsopp, Perkins, Elsworth. Vegetables were well shown, Mr. Allsopp again winning the first prize. Amateurs and cottagers came out remarkably well, their exhibits being very fine. Mr. Pritchard of Christchurch showed a collection of herbaceous plants in flower, which added greatly to the beauty of the Show.—Visitor.

THE WAKEFIELD PANTON SOCIETY.—At the recent meeting of this Society, Mr. H. Gill of Leeds, son of Mr. Gill, one of the Vice-Presidents, read an extremely interesting and practical paper on "The Tulip." The author this year carried off first prize in the Maiden Growers' class at the Manchester Show of the Royal National Tulip Society, and also came in second for the silver medal in the open class. In his paper, Mr. H. Gill observed that as it was not the season for Tulips he could not illustrate his remarks by specimens, still as this was the time for those who intended to begin the cultivation of this beautiful flower, perhaps he could give them a few hints which would be valuable. He then dealt with the raising of seedlings, the preparation of the beds, and traced the steps necessary to secure success in the development of the bulbs, noticing the practice followed by the principal growers, and the points he had found of special importance in his own experience.

THE INTRODUCTION OF FOREIGN PLANTS.—"Garden and Forest" sums up a column of comments and quotations on and from some recent articles in "Garden Flora" as follows:—It would be difficult to compute with accuracy the total number of foreign plants now grown in northern Europe, every year adding, of course, largely to the enormous total. But to give some idea of what this total now may be we may quote Professor Kraus's statement that, while some 1500 flowering plants are believed to be natives of England, Sweet's "Hortus Britannicus" names as growing there in 1830 some 32,000 species. This means that even sixty-three years ago, before the prolific labours of the last two generations of explorers and importers, more than twenty-two plants had been introduced by man into England for one with which Nature had there supplied him.

- MONTBRETIA CROCOSMÆFLORA FLORE-PLENO.-The above named new plant, figured in your last issue, was raised and sent out by the well-known French hybridist, Monsieur Victor Lemoine of Nancy, from whom I received it towards end of last year. The first two flowers which opened on my plant were quite single, but those which expanded afterwards had all a double row of petals, so that the flowers can only be considered as semi-double, an additional proof of which is that several of them are now setting seed, which a fully double flower would hardly do. The flowers are very short-lived, each of them remaining open not more than a day and a half, so that those at the bottom of the spray usually closed before those at the top commenced to expand. This plant is interesting more as the first of a new race with double flowers than from its own individual merits, and considering what really fine and beautiful things Mons. Lemoine has already given us in this family, he may reasonably be expected to produce in the near future much better and more fully double flowers than those of the plant now under notice.—W. E. GUMBLETON.

- GRAPES AND TOMATOES AT SWANLEY.—It would doubtless astonish many people, as it did me, to see the Vines growing at Mr. Ladds' nurseries, from which Grapes are sent to the various markets for ten months in the year. House after house had been cleared of Black Hamburgh, and at the time of my visit Mr. Ladds was about to commence cutting Black Alicantes, than which I have never seen a finer crop. The bunches were of good size, and the finish of the berries left little to be desired. In one house, 500 feet long by about 18 feet wide, it was estimated that between 4 and 5 tons of Grapes were hanging. There were six houses of this size, all stocked with the same variety, and coming in in succession. No bunches are removed from the Vines, they been made to carry all they produce, and, despite the tax this must put upon their energies, good health meets the eye in every direction. One span-roofed structure, 700 feet long, is planted with Gros Colman, and the weight of Grapes must be enormous. The berries and bunches are of good size and finish, and the canes are cropped from within 18 inches or 2 feet of the border, right up to the ridge. This house alone is worth a visit to see, but it would not be all that Mr. Ladds, jun., could show. Tomatoes may be seen by the thousand, planted out in the borders of long low span-roofed structures. Roses, too, are cut here by the thousand every week, and this during the whole of the year.—NOMAD.

- KNIGHTON HORTICULTURAL SHOW.—The second annual Show was held in the grounds of R. Toller, Esq., Clarendon Park, August 17th, and as regards the exhibits must be considered a success. Vegetables in the amateurs' and cottagers' classes were excellent, and plants and cut flowers were also very creditable. There were a number of special prizes, which were very keenly contested, given by tradesmen. But perhaps the special prizes given by some of the members of the Committee are most worthy of emulation. They were confined to the children of the schools in the neighbourhood for bouquets and baskets of wild flowers to be arranged in the presence of the Committee, also for window plants grown by themselves. Mr. Wm. Bell, the Hon. Secretary of the Leicester Chrysanthemum Society, has taken great interest in these classes. He visited the schools at intervals during the summer and instructed the children in plant growing, and has thus instilled in the minds of the children a love for gardening, which we hope may be a pleasure and profit to them in after years. All these classes were very keenly contested by the children, and some of the exhibits were meritorious. Five groups (not for competition) were tastefully arranged down the centre of one large tent. Each group differed in character from the others, but none were crowded. Mr. G. Lawson, gardener to Mrs. G. H. Ellis, Knighton Hayes, brought his specimen Ferns, which were very much admired. The children in the special classes mentioned above brought 160 exhibits.

· THE ISLAND OF FORMOSA.—A report on the Island of Formosa by Mr. Hosie has been published as a Parliamentary paper. It is the first which has been issued in this country since 1886, and in the interval the island has become an independent province of the Chinese Empire. The agricultural products include Rice (two crops annually), Wheat, Millet, Indian Corn, Sweet Potatoes, and other bulbous plants, and various kinds of Yams. Bamboos and Lotuses flourish in the North, and the Ginger plant is freely cultivated. The Guava tree grows wild. Mr. Hosie says: "In respect of economic plants the island is indeed wealthy, but up to the present neither the native nor the foreigner has taken full advantage of the wealth." The other products include Tea (a black variety erroneously classed as green), camphor, sulphur, and tobacco. Two kinds of sugar are obtained, the most important being "Saeeharum sinense, Roxb." In conclusion, Mr. Hosie says that the trade of the island is woefully undeveloped. The bulk of the tea goes to the United States, and most of the sugar to Japan.

- WILD FLOWER COMPETITIONS. - Almost everywhere these competitions are to my mind very unsatisfactory. At one show I found not less than eighty-five bunehes of wild flowers staged in competition for three prizes, and though three others were awarded, there were seventy-nine unsuccessful exhibitors. In the corresponding class for baskets of wild flowers there were thirty-one exhibits, leaving twenty-six that were disappointed. A very interesting class, however, was one of wild flowers, dried and preserved in book albums. Three of these were exhibited, the contents well preserved but very indifferently named, not one botanically, and the common names more or less local or incorrect. I ventured later in addressing the visitors to urge that some local effort should be made, as I would wish to see it universally made in rural districts, to form classes for the instruction of children in the botanical and common nomenclature of wild flowers, as that would be educational and useful, whilst the present practice of asking for mere bunches did no good whatever .-- ALEX. DEAN.

- PERSHORE FLOWER SHOW .- This and the attractions which are associated with it provide one of the most popular holidays in South Woreestershire. The eighteenth annual gathering took place on 17th inst., and the result must have been eminently satisfactory to all engaged in its promotion. The Show was revived after an interval last year, and the new management, which then successfully commenced its career, has continued to extend and develop the attractions of the horticultural Show and the attendant entertainments. Their enterprise was fairly rewarded, the attendance being larger than last year, and numbering between 6000 and 7000. The pleasant grounds of the Abbey, again placed at the disposal of the Committee by Major Hudson, formed a pieturesque locale for the Exhibition. The Show displayed many points of excellence. Of the plants and flowers shown, Ferns, Coleus, and Fuehsias were thoroughly good exhibits. Begonias were ereditable, and Asters, Zinnias, Roses, and Dahlias were all good and well shown for the season. Fruit was on the whole excellent. The Apples were remarkably fine. The Kent fruit sent by Mr. Bunyard was well to the front.

- PROPORTIONAL PRIZEGIVING .- I beg to thank Mr. Cummins for the information respecting the ultimate apportioning of the prizes at Carshalton published under my reference to the subject of last week. The figures given stand as an admirable object lesson, and merit every attention. I looked for four prizes only, but six were awarded. Now had the six been provided on the ordinary system we should have seen the £5 divided about as follows—30s., 25s., 20s., 14s., 7s., 4s. The new method of apportionment given according to actual merit shows that the first prize is but Ss. 3d. more than is the sixth or lowest. The first and second prizewinners may grumble, but the lower winners have much to be satisfied with. Another excellent result of the system I uphold is that no prize awarded is higher than the relative merits of the exhibit require. Thus in this particular competition the first prize collection was 18½ points below the Judges' maximum, showing that there was room for half a dozen better exhibits to have come between it and the maximum. Who, in such case, therefore are entitled to complain? I do not understand that the general adoption of the system advocated would necessitate a greater number of judges, except that it would often compel a higher appreciation of the work involved, and keener examination. But very much of judging is done by poin's already, and in all cases a maximum being determined even for single dishes, or of anything, let the points be written on the backs of the entry cards, with the position of the collection, and the thing is done. It would really rest with the Committee to properly apportion the prize money .-

· THE BREADALBANE VINE.—In the article in your last issue (page 139) entitled "The Giants of Grapedom," which I have found very interesting, there is an incidental reference to the Breadalbane Vine, regarding which the writer desires farther information. I had the pleasure of inspecting this famous Vine several years ago; but the statisties then acquired would not obviously describe either its dimensions or its productiveness at the present time. It eonstitutes undoubtedly the prevailing attraction at the beautiful Killin residence of the Marquis of Breadalbane. I understand that the splendid Grapes produced by this Vine are annually distributed by the benevolent Marehioness among the hospitals and infirmaries of Edinburgh and Glasgow. Her ladyship is exceedingly popular in the former city, in whose charitable institutions she takes a deep interest. Her husband is at present the representative of the Queen at the General Assembly of the Church of Scotland. I have no doubt that the Marquis of Breadalbane's head gardener at Auchmore in Killin parish, Perthshire, would be very glad to give your contributor the required statisties regarding the world-famous Breadalbane Vine. If he desires mc to do so I will write to him on the subject .- DAVID R. WILLIAMSON.

- BERDIANSK GRAPES.—Berdiansk is celebrated in Southern Russia for the size and sweetness of its Grapes. The British Consul in Southern Russia in a recent report speaks of Berdiansk town as formed by Prince Woronsoff in 1842 on the low ground adjoining the steppe, and was originally probably washed by the Sea of Azof, the soil being entirely sand and shells, with brackish water everywhere within a foot of the surface. Plans were drawn up for the formation of gardens, and about 800 acres were offered to peasants and German colonists, on condition that they planted not less than 120 fruit trees or 2400 Vines per desiatine of 2.7 acres, a rent of $7\frac{1}{2}$ per annum per desiatine being levied. Sole ownership was granted upon condition that, in case of default, the land would revert to the town. Every available plot was soon taken up, and in a few years the entire space was transformed into well-arranged and profitable gardens. During 1888 this experiment was repeated by the Town Council. A quantity of land—about 500 desiatines —was sold by auction, and averaged £10 to £50 per desiatine, the terms being an annual payment of 6s. per desiatine for ten years, and the same conditions as to cultivation. No difficulty occurred in finding purchasers, and the necessary Vines and fruit trees were planted, and the gardens now present a very favourable aspect. The Vines thrive well, and already bear fruit, large quantities of ordinary garden produce being also grown. The descriptions of Vines principally grown here are the Chassla or Bernska, Chaons, Isabella, black and white Muscat, Burgonski, Arcitinski, and the Alexandra Muscat. The Vines give a greater yield on the low, sandy soil; but the more delicate kinds thrive better on the slopes in a clay soil. About 3000 Vines occupy a desiatine of land, and no manuring is practised, although, where experiments have been made with old Vines, manure has been found advantageous. The average yield of Grapes of the common kinds is about 10 lbs. per Vine, 36 lbs. producing about 2 gallons of wine. The superior kinds give a smaller yield. Prices of Grapes average from 1s. 8d. to 8s. per 36 lbs., and new wine from 3s. to 10s. per 2 gallons. The crushing is carried on in a primitive manner, and little attention is paid to sorting or cleaning. Bulgarian and German colonists go in from the country districts during the early autumn and buy up the wine, none being as yet exported. There are several large private growers, who take special care in the cultivation of their Vines and preparation of wine, and some good, sound wine can be generally found in their cellars. The bulk of the wine being of a light character (8 to 10 per cent. of alcohol), does not bear keeping; but where the superior kinds are properly cleared from the stalks and sun-dried a good, strong wine is obtained, which keeps well, and ean be bought at 12s. to 16s. per 2 gallons. No phylloxera or other Vine disease has yet been experienced at Berdiansk. It is estimated that some 1500 desiatines of land are under Vine cultivation amongst the various colonies and villages in the district, in addition to the quantity belonging to the town. Probably in a short time an outlet will have to be found for the surplus wine, as the quantity produced will be doubled, and the supply will be greater than can be consumed in the surrounding districts. The Vines seldom fail to give a good yield. The cultivation, therefore, is found to be lucrative; but it is five years before the Vine is in full bearing. The present production of wine at Berdiansk amounts to about 300,000 gallons per annum. The Vines during the autumn are bent down and well eovered over with earth to provide against the attack of the severe frosts. In the spring this is removed and the Vines cut down to 2 feet and 3 feet from the ground, and no more than five stalks or branches are allowed to remain, and these have necessarily four or five buds on each.

- A NEW ALPINE GARDEN.—The Horticultural Society of Dauphiny and the Tourist Society of the same district have combined to form an Alpine Garden at Champrousse at an elevation of 1800 metres; 500 to 600 plants are already planted. The garden says the "Illustration Horticole" is intended as a refuge for rare or interesting species whose existence in a wild state is threatened, and as an establishment wherein such species may be propagated for distribution.

- VIOLAS.—The Rev. David R. Williamson of Kirkmaiden writes to us as follows:-"I am greatly indebted to Mr. William Dean for his generous references to my recent article on the Viola in your issue of last week. What he says of my advocacy of the merits of this beautiful and durable border flower is all the more appreciated by reason of the fact that I do not know Mr. Dean either personally or by correspondence. I am much gratified to find that he coincides with my estimate of the Countess of Wharncliffe, which by reason of its satin-like texture and exquisite fragrance I account much superior to such varieties, however admirable in other aspects, as White Flag, Sylvia, and the Countess of Hopetoun, whose splendid attributes, nevertheless, I fully recognise. Each of these is exceedingly showy, and very floriferous. In Mr. Dean's interesting and instructive article on the 'History of the Pansy,' in the same excellent number of the Journal, he has a eulogistic reference to Mr. Cuthbertson of Rothesay, which is amply deserved."

- SPANISH CHESTNUTS.—In England the Chestnut has never been of much esteem as food. For long its propagation was left to chance, and it was not until the middle of the last century that it was first cultivated. It was principally used to provide hop-poles and pigsmast. On the Continent, however, and especially in Italy and Spain, it formed an important, and in some places the principal article of food. There are many ways of preparing the Chestnut for the table. Reduced to a flour, with the addition only of water and occasionally a little salt, it is cooked in various simple ways, as polenta, a thick porridge, farinata, a soup of less consistency than the polenta, or necci, thin round cakes baked between two flat hot stones, and to which a special aroma is given by placing a dried Chestnut leaf above and below the paste while baking. These are, however, in Tuscany, usually alternated with polenta, made of Indian Corn, or Wheat and Rye bread, in which case the amount of Chestnut flour consumed is reduced to one-third or one-fourth, according to circumstances. In the Piedmont Chestnuts are only used as fruit. In parts of Spain bread made from Chestnuts is in common use. When Chestnuts are not ground they are roasted or boiled either in water or milk .-- (" Vegetarian Messenger.")

- KINGSWOOD FLOWER SHOW .- This, the third Exhibition of this Gloucestershire Society, was a distinct advance upon its predecessors. Many good prizes were offered both in the open and amateurs' classes. In the former Mr. J. Cypher, Cheltenham, won the leading prizes in his usual excellent style, Mr. Mould, Pewsey, also showing well. No less than three silver cups, each valued at 5 guineas, were won by Mr. W. Rye, gardener to Captain Bellfield, Frenchay, who had a grand lot of flowering and fine-foliaged plants and Ferns. Mr. W. Bannister, gardener to H. St. Vincent Ames, Esq., also showed plants well. Cut flowers were quite a feature in the display, Dr. Budd's Roses being particularly good. Fruit was also of great excellence. The best collection of six varieties was shown by Mr. W. Nash, gardener to the Duke of Beaufort, Badminton, who had remarkably good Alicante and Muscat of Alexandria Grapes, a handsome Golden Gem Melon, good Peaches, Nectarines, and Figs. Mr. Bannister was second. Mr. Nash was also well first for black Grapes, his three bunches of Alicante being faultless. Dr. Grace and Mr. Doel were also successful in Grape classes. Apples and Pears were numerous and good, as also were vegetables generally. Messrs. Jullion and Cottle are the Honorary Secretaries, and they are to be congratulated upon the results, financially and otherwise, of their labours.—W. I.

THE DROUGHT AND CATERPILLAR LIFE.

It is remarkable how often we find Nature brings about a favourable change out of circumstances that appear unpromising, and this has been the case in some points with the drought of the present summer. Both in the country and in gardens hordes of caterpillars appeared on many plants and trees during May, and as the dry weather continued it seemed likely that they would be the cause of much mischief to a vegetation already languishing for lack of moisture. The dryness and the warmth together did indeed accelerate the development of some species, and sent them into the pupal state earlier than usual; but with regard to a larger number of caterpillars, as time went on, the result of the drought was manifestly unfavourable. Much moisture is hurtful to most caterpillars; an excess of dryness, however, tells against them, and, after the long absence of rain the condition of the leaves was such that caterpillars became unable to masticate them, and the warmth reduced the natural juices of their bodies, so that many of them died of inanition. Of course this dying off of caterpillars was more noticeable on trees and wild plants than on cultivated species, because these were often watered to some extent, when it was possible, and so the foliage or other portions of the plants were maintained in an edible condition. Hairy caterpillars, I believe, suffered less from the heat than did smooth ones, because the coat of hairs tended to diminish evaporation from the body.—ENTOMOLOGIST.

ONIONS AND POTATOES AT CHISWICK.

THE following members of the Fruit and Vegetable Committee examined these crops at Chiswick on the 17th inst.—Messrs. H. Balderson (in the chair), G. Wythes, G. Norman, G. Sage, J. Willard, J. Wright,

G. W. Cummins, A. Dean, and A. F. Barron, Secretary.

The Committee first inspected the different varieties of Onions which have been grown in the gardens this season, the general crop being exceptionally satisfactory, having regard to the drought and other Onion troubles so prevalent elsewhere. The rows of Onions are about 20 feet long, and there were fifty of them. The seed was sown on March 3rd. All the various sections of Onions were fully represented, but there could be no doubt whatever as to the unquestionable superiority of the globular forms over the old White Spanish type, with their somewhat flattened or hollow bases. The awards made were based absolutely upon the merits of the respective sorts as presented in the trial, and only the most striking were selected for honours. The following received three marks, the highest award the Committee can make at Chiswick. Awards of merit or certificates can only be granted at the Drill Hall, where samples of the respective sorts may be shown by the persons sending to Chiswick.

Southport Yellow Globe.—Very smooth, handsome, even; Giant

Zittau type, but finer.

Southport Red Globe.—Very fine, handsome, even, firm, a first-rate one; the best of all the red section. Seed of both from Deverill and Henderson, New York.

Suttons' A1.—This is of the medium Globe type, a very fine massive

handsome Onion, that was much admired.

Deverill's Cocoanut.—The finest and best of all the deep Globe or James' Keeping type.

Henderson's Prizetaker.—Also a very fine globular Onion.

Globe Madeira (Vilmorin).—A remarkably fine stock, showing the best sample of the trial.

Italian Tripoli.—The best of the white-skinned forms.

It is perhaps surprising to learn that several Onions that have of late made a reputation for weight did not obtain awards, but, apart from lack of distinctness, these varieties under ordinary culture

were far from being the wonders they are supposed to be.

Potatoes, of which there is a good trial, were next taken, but probably one-third of the sorts need another month to mature in, whilst not a few were of poor appearance. About a dozen were finally selected for cooking, the lifted samples being all that could be desired. These selected samples were all most admirably served, for Potatoes are always well cooked at Chiswick, and the full award of three marks was made to the following. Sutton's Triumph, and Windsor Castle, white round; Jeannie Deans, flattish white round; Lillie Langtry, red round; Early Regent, a now well known variety, and Redcliffe Seedling, long white kidney shape, great cropper. Some others full of promise will have to be seen and tried later. It was agreed that the Potatoes were exceptionally sound and good this season.

DIGGING AMONGST FRUIT TREES.

THIS practice cannot be too strongly condemned, yet it is persisted in, I believe, merely for the sake of appearance. If the ground is kept clean digging need not be practised; if trees are well managed the ground surrounding them should be a network of fibres induced by surface dressings of farmyard manure. Where digging has been regularly practised for years we may look in vain for fibrous roots. The roots are driven down beyond the reach of the spade into material that is driven down beyond the reach of the spade into material that is unsuitable for them, and need we wonder that the young shoots die back and the trees canker? Only recently I have been engaged in removing comparatively young trees practically fibreless that should have been in good condition but for the spade. With the roots of trees in sour, wet, or hungry subsoil I suspect "spraying" for a lifetime with blue French broth would not prevent canker.

If trees are to produce good crops of fine fruit they must be liberally fed at their roots. If farmyard manure is not available for periodical dressings, and the drainage from the farmyard cannot be had or other sewage, recourse must be had to artificial manures. A mixture of two parts superphosphate of lime and one part of nitrate of soda is simple and good, applying from 1 oz. to 2 ozs. to the square yard, according to the state of the trees, as far as the roots extend, judging the distance by the branches. This dressing may be given two or three times during the season, commencing early in spring. A more durable manure has been recommended in the Journal, and may usefully be repeated here: "5 lbs. of bonemeal, 2 lbs. of sulphate of potash mixed and applied 4 ozs. to the square yard." If applied in spring 1 lb. of nitrate of soda might be added to this mixture.—FRUIT GROWER.



STANHOPEA AMESIANA.

This new and beautiful Orchid was exhibited at the Drill Hall on April 25th by Messrs. H. Low & Co., Clapton, and it attracted considerable attention, the Orchid Committee of the Royal Horticultural Society awarding a first-class certificate for it. It is said to have been imported amongst some plants of S. Lowiana, which

PLEUROTHALLIS PUBERULA.

This species belongs to the section Spathaceæ, and is allied to the West Indian P. univaginata, Lindl., but its flowers are smaller and more densely arranged on the raceme. It was, says the "Kew Bulletin," sent for determination by Mr. F. W. Moore, Keeper, Royal Botanic Garden, Glasnevin, in January, 1892, and again early in the present year. The flowers are pale green with a little dull yellow at the base, and exhale a Hawthorn-like fragrance. The upper half of each sepal is finely pubescent.

VANDA TERES. ON SFORM ROYSTON MOJEAN

WHILST visiting the gardens at Cadland Park, Southampton, recently, my attention was called to a plant of Vanda teres, which had obviously been injured, possibly by coming in contact with the spout of a watering can. The plant after the accident apparently

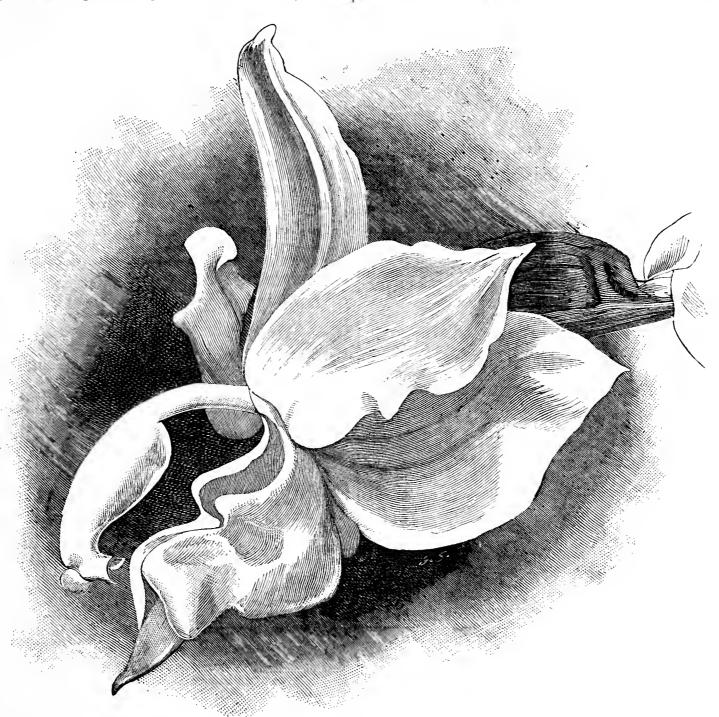


FIG. 26.—STANHOPEA AMESIANA.

as regards size and form of the flower it resembles. It differs, however, in colour. The flowers, one of which is depicted in the illustration (fig. 26), on the plant shown were very large, of an ivory or porcelain white. They were, moreover, deliciously fragrant, which enhanced them considerably. This Stanhopea is an acquisition, and doubtless will become a favourite amongst Orchid growers.

BULBOPHYLLUM SPATHACEUM.

According to the "Kew Bulletin" this species was introduced by Messrs. Hugh Low & Co. of Clapton, and flowered with Mr. James O'Brien of Harrow-on-the-Hill, Middlesex, in July, 1892, when it was sent to Kew for determination. It is allied to B. apodum, Hook, f., "Flora of British India," v. p. 766, but has shorter leaves and a much denser raceme, and much more slender membranaceous bracts. The flowers are light straw yellow, with a somewhat brighter lip. The base of the inflorescence is sheathed by spathaceous bracts, in allusion to which the name is given.

began to languish, and fears were entertained that it would die. Equal to the occasion, however, Mr. Garner, the gardener, bound moss around the growths in different places, and this being kept damp induced the formation of new roots from those points. By this means the plant was saved. Under such good management it will doubtless flourish and produce many beautiful flowers.—C.

VANDA CÆRULEA.

This is one of the most beautiful Orchids in cultivation, with its pale lilac flowers produced in October, and lasting in beauty four or five weeks. It is considered a cool Orchid. I have tried to grow it in a cool house, and was very unsuccessful. I then placed it in the East Indian house, where it commenced growing at once, producing roots from the stem and soon filling the basket. I grow the plant in an oak basket with dried sphagnum moss chopped fine and all the dust well sifted out, and one-third of crocks well mixed with the sphagnum. I suspend the basket close to the glass under one

of the ventilators in the roof of the house. When the plant has rooted into the sphagnum and is making its growth it requires abundance of water and plenty of air with a moist atmosphere, and when growth is completed very little water is needed during the winter months. The sphagnum must not be allowed to become too dry, or the plant will shrivel and lose its lower leaves.—Specialist.

WASPS:

DESTROYING WITH TURPENTINE-QUEENS.

I QUITE agree with "W. R. Raillem" that the use of gas tar is the easiest, cheapest, and best method of destroying wasps' nests, provided you can do so from above perpendicularly; but suppose the nests to be in the bank of a river, how then? My extensive rosarium, about 80 yards long, area 40 poles, is situated on the bank of the mighty river Hiz. Perpendicular fall of the bank 18 inches, depth of water 10 inches, width of river, average, 6 feet. There were four wasps' nests in the bank this year, about 6 inches above water level. These were destroyed by a piece of rag well saturated with spirit of turpentine being thrust into the holes, and then set on fire at night. Next morning the nests were dug out and burnt. Cost of turpentine 6d., rag an old pockethankerchief.

At all early flower shows, i.e., before the end of June, I would suggest a prize should be offered for the largest number of queen wasps exhibited dead, killed in the current year before date of the show, this would exclude museum specimens.—H. F. LLAG.

WASPS AND BENZOLINE.

THE wasps are doing so much damage to the orchards in South Lincolnshire that fruit growers have been obliged to gather the fruit before it is ripe, thus incurring considerable loss in their sales. At Quadring, the mail cart, which runs between Spalding and Donington, was attacked by a swarm of wasps, and the horse and driver were stung so severely that they were unable to proceed on their journey, and the mails were delayed for over an hour. Shopkeepers, whose windows are infested with the insects, have found a benzoline spray to be an effective means of extirpation.

WASPS AND TOMATOES.

Mr. Thorne, gardener, The Bush, Walton-on-Thames, informs us that he established Tomatoes in pots for growing up and over the front ventilators of the vinery purposely for excluding wasps. The air filters through the Tomatoes, but the wasps remain outside. There is quite a plague of them, and they are devouring all kinds of fruit within reach. In the absence of the Tomato barrier the vinery was "full of wasps." A gentleman informs us of a case of wasps devouring Green Gage Plums; some of these he placed in a small open conservatory among Tomatoes in pots, and there they were safe, as no wasps enter the house.

WASPS AND MUSLIN.

A SUSSEX correspondent desiring to protect ripe Figs enclosed the fruit in muslin, but the pertinacious wasps atc through the muslin and finished the Figs.

MACDOUGALL'S SMOKE FERRETS.

I Do not see that any of your correspondents who are suffering under this plague of wasps have mentioned MacDougall's "smoke ferrets," which I look upon as the simplest and most effective destroyer of wasps' nests that I have met with. I had in my rockery what seemed to be a tolerably strong nest, I therefore applied in the first instance some cyanide of potassium. This killed a considerable number; after a few days the nest was as strong as ever. I therefore one night lighted one of these smoke ferrets and put it into the hole, closing the entrance. In about half an hour's time the nest was dug out and a gallon of dead wasps was taken out, besides six large pieces of comb full of larvæ.

Many nests have since been taken by it all around me. It derives its name of smoke ferret from the fact that it is used instead of that unpleasant animal for the purpose of driving rabbits out. A lighted tube is placed in the run and bunny very soon bolts.—D., Deal.

JUDGING AT FLOWER SHOWS—WHAT IS AN EXOTIC?

At the Cardiff Flower Show last year I had occasion to blame the Judges for giving the first prize to a "collection of cut flowers, hardy herbaceous perennials, twelve bunches, distinct varieties," which contained Roses, Hydrangeas, and some other woody plants: and this year I have reason to find fault with the Judges for disqualifying a "collection of cut flowers, twelve bunches (exotic) distinct varieties," for containing a bunch of Anemone japonica alba. With this I send you a copy of the Society's schedule so that you can see the wording for yourself. Anemone japonica alba—if I mistake not—was introduced from Japan by Fortune, and is not indigenous to this country, and therefore must be an exotic to all intents. If the wording of the schedule had been "tropical exotics" I could have understood their decision; but as it is, I must say I am surprised at the Judges, especially one of them who hails from London, showing such a lack of knowledge of our English etymology. What do you think, Mr. Editor?—A. Pettigrew, Castle Gardens, Cardiff.

[We think the Judges were wrong both last year and this. We also think the wording of the schedule distinctly open to improvement in more than one class.]



CHRYSANTHEMUM FOES.

The diagrams of eelworms and text on page 129 must be of vital interest to all in this department, and we cannot but feel grateful to Mr. Abbey for revealing to us so subtle an enemy. Perhaps he and the Editor may be induced to supplement it by bringing us in like manner face to face with that "small weevil-like creature" which cripples the tops and our hopes at the same time. Given a good fat caterpillar or earwig there is something tangible to get between your thumb and finger, not to mention the exquisite pleasure (not to the beastie) of giving him the coup de grâce; but science alone can give us dominion over these microscopic foes. To this end she straps Vermorel pumps on our back and stocks the seedroom shelf with Kilm-Wrights (nothing personal) and other ingenious aids from her laboratory. One lesson I learned last season about this "worm i' the bud" is not to let him get there; dredge the tops freely with tobacco powder while healthy. The result has been that crippled tops this season are reduced to a minimum. Another lesson learned this season is that Mr. Molyneux's remedy (lime and sulphur solution), as given in his admirable book, is harmless to the roots, and can be used in safety at this season, if required, without unfastening tall plants to lay them down. This I tested by watering some plants with the mixture as diluted for syringing without any bancful results. I will not further trespass on space lest I incur the reproach that "Ireland blocks the way," but I do hope the ball will be kept rolling in that "fair field for discussion" the Editor generously provides.—E. K., Dublin.

CHRYSANTHEMUMS AT HEYWOOD.

As a West of England grower Mr. Robinson, gardener to Lord Justice Lopes, has acquired more than local fame, his success last year at several shows, including Devizes, Bath, and Bristol, being above the average, and he is, therefore, looked upon as a strong rival competitor to many who visit the above named and other shows. Judging from the present appearance of his plants there is every prospect of his credit being well maintained, if it does not even supersede that of 1892. The buds are evidently being well timed by the usual course of pinching and cutting down, according to the variety, during the spring and early summer months, and the manner in which the buds are setting, their free growth, and healthy appearance of leaf and stem proves they are judiciously and systematically treated. I was struck with the high quality of many of the varieties of recent introduction numbered among the collection of some 450 plants grown principally for large blooms. Several of the better known novelties are represented, not by solitary plants, but with from four to six of a sort, and as these are forming their crown buds in succession new varieties will sure to be a strong feature in Mr. Robinson's stands during the coming contests.

Colonel W. B. Smith is wonderfully promising, and is represented by six uniformly healthy and vigorous plants; so also is Lord Brooke. J. Shrimpton, W. Seward, and G. W. Childs, the new Cullingfordi scedlings, are each strong, and bid fair to give large blooms in due time. Duke of York, Edwin Beckett, W. Tricker, J. P. Kendal, John Dyer, said to be an improved Kate Mursell; Coronet, Waban, Golden Wedding, R. C. Kingsten, Mrs. C. H. Payne, Robert Owen, J. S. Fogg, Mrs. E. D. Adams, Mrs. Gov. Fifer, Tuxedo, Le Verseux, Mrs. Nisbet, E. G. Hill, Beauty of Castlehill, and Beauty of Castleford, are all in the finest possible condition. Mr. Robinson had perhaps the finest specimen bloom of Viviand Morel last year seen in the west of England, and his plants (several of them cut down in April) look well now. Its sports, Chas. Davis and Mrs. W. R. Wells, are equally vigorous. Of older sorts, E. Molyneux, Sunflower, Mrs. Wheeler, Mdlle. M. Hoste, Mrs. Falconer Jameson, Florence Davis, Gloriosum, Etoile de Lyon, Avalanche, Stanstead White, and Mdlle. Lacroix may be mentioned among many others, all in the same enviable state of health. The hairy petalled varieties are well represented. Of Mrs. Alpheus Hardy there are a dozen plants in various stages of bud development. Queen of the Hirsutes, Louis Boehmer, and its white sport were noted as doing well.

Some of the incurved showed much disposition to flower in the early summer months, but by cutting down a goodly portion of the Queen family this failing was outgrown. These are comparatively dwarf, but the "Princesses" are most of them 8 feet or more in height, and it is computed that by the time the flowers are open a large portion of the stock will cover 12 feet stakes. No mildew is to be found, consequently with the very close personal attention given to the smallest detail, the foliage is perfect almost to the pots; the bright sunshine, too, which we have known only too well this summer has given them the beautiful tint that bespeaks perfect maturity in the stems.

Now that the buds are forming rapidly, feeding with artificial manures will commence in earnest, Clay's and Thomson's commanding the largest favours at Heywood. Soot water has been the principal stimulant used since the pots were filled with hungry roots, with occasional weak doses of liquid manure as a change. No artificial of any sort had been used by the middle of August, save that mixed with soil at potting time, and the stout stems, vigorous foliage, and perfect colour betokens unusual effort in attending to the daily needs of the plants.

No less than four times each hot day have they been examined for watering, and the shortness of the supply has given much additional labour in carting from a distance, as it has done in numberless other gardens throughout the country.—VISITOR.

THE CHRYSANTHEMUM IN JAPAN.

In the "Transactions of the Massachusetts Horticultural Society" (part i. 1893) recently received there is a paper by Mr. James Comley of Lexington, entitled "A Visit to Japan." Unlike many of the travellers to that interesting country, Mr. Comley appears to have arranged his visit so as to spend the latter part of the year in Japan, and as a consequence his paper contains many allusions to the Chrysanthemums which he evidently saw with much advantage to himself and with interest to his real area. As the Transporting of the himself and with interest to his readers. As the Transactions of the Society referred to are not very accessible to Chrysanthemum admirers in this country, I feel Mr. Comley will excuse me making several copious extracts from the record of his visit to the Land of the Rising Sun, as I am well assured that many readers of the Journal will appreciate to the full much of the matter selected. He arrived in Yokohama on the 3rd November last year, and in the Cliff Gardens of that city had his first experience of Japanese Chrysanthemums, where, he says, he saw dwarf figures composed of Chrysanthemums representing all kinds of character. A visit was then paid to the Yokohama Gardens Association, an establishment covering 200 acres of land, which he tells us has the most beautiful collection of its kind in the world. The Chrysanthemums were grand, from 600 to 800 varieties being on view. Among these were about seventy altogether new varieties which he obtained, all wonderful in colour and shape.

Mr. Comley adds that he visited every place of note in Yokohama where he might expect to find a Chrysanthemum, and discovered one or two new varieties in each place. These were generally obtained on the spot, though this he explains is not an easy thing to do at all times, an experience in which the late Mr. Robt. Fortune would have concurred had he been alive. With genuine American shrewdness he tells us that many of the natives will not sell anything in their handsome grounds, and that the gardeners of the gentry who are dignified with the title of noblemen have to be conciliated by a little stratagem and use of

At Tokio, where the Palace of the Emperor is situated, Mr. Comley saw one of the best collections of Chrysanthemums in Japan. Imperial Gardens are difficult of access, but he managed to obtain a sight of this great home of the Japanese flower. At Davgozaka it has been the custom for many years to arrange Chrysanthemum blooms to represent notable persons, birds, or animals, or to tell of some event in history. As the visitor approaches from the street flags and banners seem to invite him, and the showmen tell of the great skill they have The costumes of the figures are composed of Chrysanthemums, the faces are carved in wood or plaster, the whole being realistic in appearance. The construction of these models is most interesting. First, a frame of bamboo of the required size is made, and the plants growing in pots are arranged in the rear of this frame in such a manner that neither stems nor pots can be seen from the front. Then the blooms are drawn through, and arranged in artistic fashion among moss on the front of the frame. These models last for about a month, and old and young go to view the show, which is considered one of the great events

By way of supplementing Mr. Comley's observations above it may be added that in Mr. Piggott's work, "The Garden of Japan," published last year, there is an illustration of one of these built-up floral models, entitled the "Seven Gods of Happiness," from a photograph taken at Davgozaka by a member of the British Legation. This writer tells us that the Chrysanthemum is the last of the "four gentlemen"-Shi Kunshi-so called for the qualities of which they are typical: the four are Mume, the Plum, vigour and sweetness; Ran, the Orchis, grace in adversity; $Tak\acute{e}$, the Bamboo; and Kiku, the Chrysanthemum, the emblem of To Ye Mei, a distinguished Chinese official, who many centuries ago retired from the Government service on account of its corruptness. Mr. Robert Fortune refers to this peculiar phase of Chrysanthemum culture as being practised by the Japanese florists, but I am not aware of any book but Mr. Piggott's in which an illustration

of it is given.

To return to Mr. Comley's paper, and I must continue as far as possible to quote his own language, for it is impossible for me to attempt to improve upon it, he says: "One morning going out early he came to a tea house, and there saw growing in the yard a magnificent collection of Chrysanthemums. There were four pretty Japanese girls sitting on the verandah of the house, and he asked permission to step in to look at a particular flower more closely. After some display of bashfulness he was admitted, and after he had taken tea and praised the flowers, the young girl who seemed to own them took up the specimen he most admired, reserved only a side shoot for herself, and he became the happy possessor of another novelty."

From there he proceeded to Kioto, where he found the best Chrysanthemums. They were to be seen in every garden, and he secured some very interesting varieties, among which were many varieties of an entirely new class. While in Kioto this enthusiastic and successful American Chrysanthenium hunter went to Sacco, a hundred miles distant, to visit the finest Chrysanthemum Show in Japan. In this Show we are told there were thirty different classes of Chrysanthemums all arranged in booths built of bamboo, each class by itself. Specimen plants were grown in almost every conceivable shape, and few people can realise his surprise at this marvellous display

after all the wonderful shows he had seen in Japan. Again, he inquired if he could purchase some of these gorgeous varieties, but was refused, and it was only after convincing the people that he wanted the plants for private use and to take out of the country that he was allowed to have some.

Pointing out some of the varieties he wished to possess he was told he could not have any of those on view but must select from others growing on a plot of land in the rear of the Exhibition. "Imagine my further astonishment," says Mr. Comley, "when a bamboo gate was opened and I saw over a quarter of an acre of land literally covered with plants, all named, two or three of every kind and more of some: Many of these plants were from 7 to 8 feet high with flowers from 7 to 14 inches in He went over the whole place, row by row and when he had finished he had no less than 175 varieties, after which he returned to Kioto well pleased with the result of his expedition and hastened to send off his treasures to Boston. He collected many other plants, but his collection of Chrysanthemums during the time he stayed in Japan amounted to about 400 varieties, amongst which, no doubt, are some wonderfully fine sorts at present unknown to American or European growers, and which we may possibly hear something further of during the next few seasons. Such a ransacking of Japanese gardens would suggest that the Americans are now in possession of everything from Japan in the Chrysanthemum line that is worth growing, but a few more observations from Mr. Comley will show there is still more room for Towards the close of his paper he says "Long as I future exploration. have cultivated the Chrysanthemum I had never seen a flower until I went to Japan where everyone loves it. I visited five hundred places where the flower is cultivated, and these were only the principal gardens in a few of the large cities."

It has been my pleasure to read many accounts, moré or less extensive, of Chrysanthemums as grown in Japan; but never until I came across Mr. Comley's charming paper have I experienced the delight of reading a personal sketch by a man well versed in the popular autumn flower. The ordinary traveller who describes Chrysanthemums hardly understands the subject sufficiently to do it justice, but Mr. Comley is a specialist and a grower, and resides in a part of America where Chrysanthemums are well understood, and the readers of the Journal of Horticulture will share with me the feeling that his "Visit to Japan" is too good an article to remain locked up in the Transactions of the Society to which he has contributed some of the most interesting and instructive material extant. That is my only reason for laying his article so heavily under contribution, and as an enthusiastic Chrysanthemum admirer he will, I feel sure, accept generously my excuses for

having done so.—C. H. P.

OUR BIRDS.

Mr. Duffryn's (page 145) are undoubtedly a thick cloud of witnesses, and, strange fact, all of whom testify evilly of my poor sparrows. Sparrows, too, are recompensed much the same way as generally are his lords and masters—whilst good deeds are ignored and forgotten, little mistakes are treasured up and remembered continuously. This regretable custom I suppose the sparrow also will have to submit to. Fortunately, quite in ignorance of these black clouds that apparently in waterspout fashion were to clear the way of all who dared to contradict, this season I, with all attention and seriousness, have been testing the sparrows' claims to a retained nitch in wisdom's huge diversity. Sustained by evidence that has been overwhelmingly favourable and singularly conclusive, the sparrow once more has demonstrated

in a way that admits of no contradiction.

In the open country to fruit growers the sparrow is an untiring friend and a determined adversary of their worst enemies. But has our Editor not been taking the sparrow into his confidence? has he not just allowed him to have one little peep where lay hidden away these multitudinous wrathful accusations? warned him to be on his best behaviour, and especially to look well after Mr. Witherspoon's Apples? But let the understanding have been what it may, this fact remains to the credit of the sparrow, whilst the Apple caterpillar appears in shoals morning, noon, and night. "They at them," and the happy result is I have the heaviest crop of clean beautiful Apples that I have ever seen. However much the friends of birds may be in a minority I am now more than convinced that truth lies their way. fortunately, my grand fruit crop has not only been preserved, but I also have had the good fortune to call in witnesses, and whose evidence will be forwarded to you in good time. My faith remains unshaken, that Nature's laws and all created are wondrously adapted to balance to restrain extremes. That there is a useful purpose and place for all, only selfish, short-sighted man refrains from tampering with machinery so effective, yet subtle, designedly framed to move man's brains and to equal him to whatever may be the responsibility or station that he may occupy.

As Mr. Verrall lives in the outskirts of a populous town, and worse,

keeps his sparrows confined in an aviary, judgment formed under such conditions can hardly be trustworthy. But as this witness seems to get badly on with birds in general, perhaps my relating to him a practice I follow with children might be of service. During the many years that I have grown fruit my garden gates have remained continuously unlocked, with the result, to my advantage, a mutual code of honour seems to exist between Apples and schoolboys which it is just possible with somewhat similar treatment his ill-brcd jacks, starlings, and

sparrows might imitate.

Next Mr. Duffryn's imported "cloud of witnesses." Just fancy, the

sparrows that requisitioned passing railway trains and utilized them as private nuterackers being told off as "little slavies" to do drudgery. No, no, the situation was taken in at a glance, and never was British honour entrusted in safer hands. "Miss Jonathan," no matter how gaudy may be her feathers, must again lay her airs to one side and recommence her own "grubbery," as, imported sparrows, be they English, Irish, or canny Scotch, are British subjects all; by nature were never intended, and never will be slaves. Some day, experience gained by also importing rabbits to where Nature saw no need for them, may prevail upon man to cease to tamper with arrangements that in ages long past were pronounced both perfect and good.

Charge No. 1.—Here, I must be a learner, as I have never been out of the United Kingdom; but, if referring to at least an arm of our pugnacious British family I am rather inclined to think that the charge will be true.

Next charge No. 2. "The sparrow as an enemy to gardeners and fruit growers." We read American scraps when in search of the mighty "tall." My over sixty years of British experience perceives that this structure has been drawn out at the expense of its stability; it is so overcharged with pure unadulterated "bosh" that it entirely misses the object aimed at.

No. 3, "The sparrow as an enemy to Grape culture." I have seen hens, ducks, blackbirds, and grey birds all enjoying the gobbling of Grapes, but in England to lay such a charge to a sparrow is as unfair as it is untruc; it is preposterous.

No. 4, "The sparrow as an enemy to grain growers." The mighty army of sparrows engaged in the scavenging work of large cities results in a heavy tithe been taken from those who foolishly grow in such situations; but of the open country this charge, too, is seriously overdrawn, and I must demand that it be amended by being based on the "country average."

No. 5, "Failure of the sparrow as an insect destroyer." With all respect to Miss Ormcrod and Mr. Gurney, jun., I must beg to repeat that my experience as a born gardener entirely differs from theirs, and I also claim that the faith that possesses me has for its foundation most careful and deeply interested observation.

Mr. Smith's reference to the march of civilisation reminds that it is such march that has destroyed that natural balance that he also refers to.

To "W. J. B." just a word of counsel. Stand to your guns, and warned by Carlyle's reminder, never turn faint-hearted when the hands held up leave truth in a minority.—JOSEPH WITHERSPOON.

P.S.—May I append the following letter, which has been sent to me by Mr. W. J. Watson, Newcastle-on-Tyne:—"No one interested in fruit growing in the north can fail to be impressed with the extraordinary crop of Apples your trees are bearing this year. The quantity and quality of the fruit on your Lord Suffields, and one or two other varieties, emphasises, in my mind, the wisdom of limiting the number of varieties planted, and you would be doing a real service to the public if you would, from your practical experience, state, say the half-dozen varieties you have found succeed best with you."—J. W.

ROYAL SCOTTISH ARBORICULTURAL SOCIETY.

It is nearly forty years since the above Society was established, and the annual excursions of the members have always been a prominent part in the programme, productive of much technical information in the science of forestry. This year the Society was successful in obtaining permission to visit Windsor Castle, by favour of Her Most Gracious Majesty. Every arrangement possible was done by the Council to make the trip a great success. A special train with seven saloon carriages was engaged for the party from Edinburgh, which numbered about 150 persons. Perhaps on no previous occasion has an equal number of horticulturists or arboriculturists been so luxuriously provided for, and the officials of the Society deserve to be congratulated upon the activity and zeal.

The trip, which occupied ten days, left Edinburgh on August 7th and travelled, as mentioned, to Windsor on that day. The royal mews were first inspected under the guidance of Mr. John Manning, the superintendent of Her Majesty's horses and carriages, and were much admired. The royal stables occupy four and half acres of ground and nearly 100 grooms are employed. The party then entered the Castle, visiting the Vandyke and other rooms, and much enjoyed an inspection of the magnificent historical paintings, statuary, and rare works of art from many lands. Grinling Gibbons's wood carvings were especially admired. In the grand vestibule are the addresses which Her Majesty has received in every form of casket from her subjects; all are carefully preserved. Here also are many of the Jubilee trophies. The throne room with the ivory chair was inspected, also the grand reception room with its splendid tapestries, as well as the Waterloo Chamber and St. George's Hall; two oak chairs appeared to be of special interest, one from oak grown on the field of Waterloo, the other one from Alloway Kirk in Scotland. The presence chamber was last inspected, the tapestry here being splendid. Several objects were pointed out by the guides, especially that of raising the tower to its present height, and it was stated that George IV. spent 14 million of money in making the Castle what it now is.

The party was next met by Mr. Owen Thomas, Her Majesty's head gardener, and conducted to the east terrace, where the flower

garden was inspected. It is a fine combination of the Italian and French styles made in the time of George IV. Thujas and Cupressus are trained pyramid in shape, and these formed an effective combination with flowers, which the most fastidious could not but admire. The terrace battlements of the Castle overlook the flower garden, and bring the whole under the vision. Near to the flower garden is a Cedrus Deodara planted by Prince Albert, and a fine tree of Paulownia imperialis, Chestnut-like in flower, and somewhat similar in perfume. The Castle slopes were next visited where Her Majesty takes her drives in her favourite pony carriage. These are principally planted with Beeches, Holly, Elms, and Spanish Chestnuts, and were re-arranged under the guidance of the Prince Consort. A wild rock garden is picturesque, being made out of an old quarry. Near to here is a fine specimen of a stunted Oak of the Norman period. It girthed 36 feet in circumference. A curious Beech tree of interest to arboriculturists was next seen. This was raised from the Martin Luther tree, and brought from Germany in 1825 by King George IV., when he was the Duke of Clarence. An Oak planted by Queen Victoria on September 12th, 1863, as marking the spot where stood Herne's Oak, which was blown down the same year. On the home farm are some very old Oaks decaying, but all arc specially taken care of.

The private grounds of Frogmore are seldom open to visitors, but the Royal Scottish Arboricultural Society were fortunate in having no obstacle to bar their visit. The first object of interest here was a grand kiosk from the Kaiserberg, Lucknow, sent by Earl Canning, the first Viceroy of India. A fine specimen of Taxodium distichum, 8 feet in girth, was inspected here; also were several trees planted by Royalty. The extent of the glass for forcing fruit and vegetables is $4\frac{1}{2}$ acres. There are 31 acres for vegetables inside the walls and 20 acres outside. There are 150 men employed.

The Show farm was next inspected, the farm breeds and cows and draught horses all receiving attention. Windsor Park and Forest were next visited. The great Vine at Cumberland Lodge was also inspected. The vinery is 138 by 18 feet, and this year there are about 1770 bunches on the Vine, the age of which is 110 years. The bunches on the young wood will average from 2 to 3 lbs. weight each. A quick drive then brought the party to the Virginia Water, a fine sheet of water, the largest artificial one in England, covering over 130 acres. It was formed in 1790. Belvedere Fort was next visited, where a tea had been provided by the thoughtfulness of Her Majesty, which was much appreciated. Afterwards, to commemorate the visit, a tree of Abies Albertiana was presented by Mr. Alex. Milne of Messrs. Dickson and Sons, Hanover Square, Edinburgh, which was planted, several members rendering assistance. A beautiful drive to Windsor brought the party back, passing en route the Cumberland Obelisk, Rhododendron Drive, and the Long Walk.

Afterwards the annual dinner was held in the White Hart Hotel, Mr. J. Methven, sen., Vice-President, in the chair, in the absence of Professor Balfour. The usual loyal and patriotic toasts were given. The Chairman, Mr. F. Simmonds, gave "The Health of the Royal Scotch Arboricultural Society," which was responded to by the Chairman. Mr. Malcolm Dunn gave "The English Arboricultural Society" in a kind and feeling way, which was responded to by Mr. Bernard Cowan and Mr. Jas. Watts, J.P. Mr. Miller, agent to the Marquis of Salisbury, made some interesting remarks as to the future of the land question. He advocated all land, where remote from railway stations, to be planted with trees, and he mentioned the better the land the better the results would be.

The next day everyone was astir in good time, as there were several objects of interest to be still seen in Windsor—St. George's Chapel, &c., in front of which the party was photographed. Carriages were then entered, and a quiet drive took us to Cliveden. On the fine terrace is a magnificent Magnolia. Tulip Trees and Lombardy Poplars here received attention, some were 105 feet high. A Yew vista, very effective and pretty, next drew attention. The glass houses are numerous, and under the able management of Mr. R. Nesbit are, of course, in good order. Dropmore, the seat of Lady Fortescue, was then visited, and this is noted for its fine collection of Coniferæ, which have often been mentioned in these pages.

The celebrated Burnham Beeches was then visited. Mr. H. J. Veitch, who joined the party at Cliveden, and proved a most instructive guide. The party was also joined here by Mr. Penney, late head gardener to the Prince of Wales. The Beeches were much admired, and the drive very pleasant through the woods. After a short drive the grounds of Mr. Harry Veitch were inspected. A halt was made at Stoke Pogis to visit the grave of Gray, who wrote his well-known elegy in a country churchyard. A drive to Windsor, and portmanteaus all quickly packed, we are soon into our special train, and arrived at Southampton the same day, to be ready the next day for the New Forest.

We were all up in time the following day to catch the 8.30 boat to Hythe, half hour drive brings to Beaulieu. There is the remains of a fine old monastery, the ruins of which was covered with Clematis Vital ba, and also Myrtus communis was in bloom here. From Beaulieu we had one and a half hour's drive to Lyndhurst, where the party was received by the Hon. Gerald Lascelles, the Deputy Surveyor in charge. A visit was also made to Marwood, the seat of Sir William Harcourt, M.P. Returning to London Kew Gardens and the Exhibition at Earl's Court were visited on Saturday. The party then dispersed, about fifty going home from Euston, the rest visiting Hatfield on Monday.—BERNARD COWAN F.R.H.S.

EPILOBIUM OBCORDATUM.

THE dwarf-growing Epilobiums, many of which are suitable for growing on rockeries, are not so well known in gardens as some of the taller species and varieties. Amongst the former E. obcordatum (fig. 27) may be mentioned, for although by no means a new plant, it is worthy of extended cultivation. It is a native of the Rocky Mountains, where it is found at over 1000 feet above sea level. It is perfectly hardy in our gardens, standing any amount of drought, and the present season has suited this plant admirably, flowering as it has done incessantly from June until the present time. Dry'sunny slopes are the places to be chosen on which to plant it. It soon covers the place allotted to it. The flowers vary from three to five on each stem, over an inch in diameter, and of a lovely dark rose colour. It is easily injured by damp during the winter season, and should be protected by a "cloche" or piece of glass raised above the plant, so as to allow free access of air. A difficulty is often experienced in propagating it, but in heat it roots readily at this season, when the cuttings have been thoroughly ripened.

HORTICULTURAL SHOWS.

TAUNTON DEANE.—AUGUST 10TH.

This flourishing Society held its twenty-sixth annual Exhibition at Vivary Park on the above date under most favourable auspices; the weather, that most important element in success or failure of horticultural exhibitions, having been all that could be wished for; indeed the Society has been most fortunate in this respect, for it is stated that of the twenty-six exhibitions only one of them was marred by a thoroughly wet day. At these exhibitions it has been my happiness to have officiated as judge for the last twenty-one years uninteruptedly, during which time I need not say great changes have taken place. Secretaries, committee, judges, and exhibitors have alike changed, and perhaps I was almost the only one present at the meeting who could look back to an official connection with the Society for so long, and now having attained my majority I think that it is most probable that my connection also with it will cease.

With regard to the Exhibition itself the same change has also taken place. The main features of it are indeed the same; two large tents of plants and flowers, the fruit and vegetables, the cottagers' productions (always most creditable here), are the same as heretofore. These were well filled, although there were some gaps owing to the earliness of the season, but on the whole it was remarkable what fine collections had been got together. The plan which has been adopted of late years of placing collections of large plants, which filled the middle of the tent on the ground instead of that on stages, is an excellent innovation. Formerly it was rather the pots than the plants which were seen, but now visitors can look down upon the plants and see them in their full

On entering the first tent we are confronted by the splendid collections of Mr. James Cypher of Cheltenham. In class 1, for twelve stove and greenhouse plants, were Statice profusa (this is one of the most splendid plants of this kind ever exhibited), Erica obata purpurea, Erica Aitoniana Turnbulli, Bougainvillea glabra, Allamanda nobilis, Allamanda Hendersoni, Dipladenia amabilis (very good), Ixora Pilgrimi,

Ixora Williamsi, and Anthurium Scherzerianum; this was a very fine specimen and well flowered. The same firm was first in class 2, for six stove and greenhouse plants, which consisted of the following:— Erica Irbyana, Erica Austiniana, Allamanda nobilis, Statice profusa, Ixora Pilgrimi, and Ixora Williamsi. For foliage plants Mr. Cypher was again first. He had grand specimens of Kentia Fosteriana, Kentia australis, Latania borbonica, Croton montefontainensis, Croton Thompsoni, Croton Chelsoni, Dasylirion acrotrichum, Cordyline indivisa; these plants were all vigorous, clean, and well grown. Mr. Cypher's collections were undoubtedly the cream of the Exhibition as far as plants were concerned, although some very excellent exhibits were staged by Mr. Brock of Exeter and Mr. Mould of Pewsey, Wilts; in fact, there was a smaller gap between the first and second collections than on many previous occasions, showing that the excellence of culture was

Considerable changes have taken place in the character of the plants exhibited under what may be termed greenhouse plants. I can look back on the time when one whole side of the tent was occupied with various classes of Pelargoniums—Zonal, Nosegay, gold and silver variegated, and bronze, while neither Begonias or herbaceous plants were to be seen. Now this is changed, and the two latter classes have come prominently forward, although one of the best exhibitors of Begonias, the Mayor of Taunton, was unable to put in an appearance, as his plants had nearly all gone out of flower. This was a great disappointment to many, as his collections were always well grown, and comprised the best novelties. At the entrance to the tent a stand of Begonias and other flowers, exhibited by Mr. Davis of Yeovil, whose strain of Begonias, both single and double, is so well known. I had made a list of these, but unfortunately have mislaid it. There were several stands of the ever-attractive herbaceous plants. These were shown in large bunches of flowers, the most conspicuous of which came from Mr. Pritchard, the well-known nurseryman at Christchurch, Hants. At this end of the tent was a fine stand of Messrs. Kelway & Son's seedling Gladioli,

for two of which first-class certificates were awarded. This firm had also other hardy flowers, making altogether a grand display. The cut flowers were exhibited on the other side of the tent, and consisted of Roses, Gladioli, Asters, Dahlias, Verbenas, Hollyhocks, and Begonias. Many of these showed unmistakeably the effects of the weather, Hollyhocks and Verbenas being especially poor.

I was surprised to see Roses so well shown as they were. Although few in number they were excellent in quality, being well exhibited by Messrs. Keynes, Williams & Co., and Mr. Budd of Bath. For thirty-six varieties the former obtained the first prize. The varieties were—Back row: Charles Lefebvre, Mrs. J. Laing, Capt. Christy, Comte Raimbaud, Hon. Edith Gifford, A. K. Williams, John Hopper, Sénateur Vaisse, The Bride, Xavier Olibo, Paul Neyron. In second row: La France, Etienne Levet, Climbing Niphetos, Lady Arthur Hill, Lady Mary Fitzwilliam, John S. Mill, Princess Vera, a very good Tea; Jean Soupert, very rich



FIG. 27.—EPILOBIUM OBCORDATUM.

and dark; Amazon, Charles Lamb, Perle des Jardins, Lady Sheffield. In the third row: Beauty of Waltham, Sunset, a good bloom; Grand Mogul, identical with Jean Soupert; Madame Hoste, a very beautiful bloom of a good Tea; Comtesse d'Oxford, Maréchal Niel, Souvenir de Madame Metral, Devoniensis, Ferdinand de Lesseps, May Rivers, a very pretty China Tea; Madame Cusin, Dupuy Jamain. Mr. S. P. Budd was a very good second. In the class for eighteen singles Messrs. Keynes, Williams & Co. were again first with the following varieties—La France, Madame Victor Verdier, Mrs. J. Laing, Marie Margot, Marquise de Castellane, Alfred Colomb, A. K. Williams, Edith Gifford, Countess of Rosebery, Perle des Jardins, Horace Vernet, Lady Mary Fitzwilliam, Princess of Wales, Duchess of Bedford, Comtesse de Nadaillac, very good in colour; Gustave Piganeau, Madame Hoste, and Charles Lefebvre. The same firm had some excellent stands of Dahlias in the various sections of show, fancy, Cactus, and single varieties. The Cactus Dahlias, especially, were fine; two were certificated, and one of these, Gloriosa, was of a brilliant colour, and promises to be an effective addition to this class.

The Mayor of Taunton's (Mr. W. H. Fowler) Gladioli were as usual of surpassing excellence, but it may serve as an illustration of the extraordinary character of the season, for whereas in 1892 he had a difficulty in obtaining the requisite number of varieties because his flowers were not in bloom, this year he had the same difficulty from another cause, viz., that nearly all his flowers were over. His stand of twenty-four comprised the following fine varieties: Grand Rouge,

Shakespeare, Grand Vainqueur (a splendid flower), Mont Blanc (a grand white), Baroness Burdett Coutts (very large and fine), Countess Craven, Giganteus, Protée (a very beautiful flower), Fantonine, Ali, Adolphe Brogniart, Medicis, Oriflamme (very bright), Dalilah, Caméleon, Mons.

Chevrueil, Le Vesuve.

The second tent was to a great extent a reproduction of the first, the main difference being that the nurscrymen do not compete, and consequently amateurs have a better scope for their exhibits. At the entrance of this tent Messrs. Robert Veitch & Son of Exeter had a stand of varied and beautiful flowers, conspicuous amongst which were two varieties of Lilium auratum—namely, plataphilaum and rubrovitatum; flowering and foliage plants from Mr. Brock of Exeter, and Miss Todd of Southampton, and Mr. Wilfred Marshall, whom I am glad to see resuming his place amongst exhibitors. Mr. Tottie's Fuchsias were, as usual, good. In Roses Dr. Budd occupied the leading position as far as H.P.'s were concerned, but that veteran florist, Mr. Hobbs of Lower Easton, Bristol, was a good second. For twelve Teas the Mayor of Taunton held the first place; his flowers were Edith Gifford, Madame de Watteville, Anna Olivier, Cleopatra, Princess of Wales, Comtesse de Nadaillac, fine in colour; Ernest Metz, Madame Cusin, Souvenir de Thérèse Levet, Marie Van Houtte, Sappho, and The Bride. Dr. Budd was second with fine flowers, but showing little variation of colour.

It must not be supposed that I have attempted to give anything like a detailed account of all the exhibits of this remarkable Show. but selected a few of the most salient points, with the object of conveying to your readers how thoroughly horticulture is patronised in the west. When I think of the feeble exhibitions which are held in my own county and in the neighbouring ones, and contrast them with the vigorous and sustained efforts which mark our western friends, I feel ashamed of our apathy. There is one thing, however, in which Taunton people have been most highly favoured, and that is in the character of the weather on their show days, as I have already said; but there is another element of their success which must not be omitted—namely, the excellence of all the arrangements. I know no Society which is happier in this respect. The courtesy of the Secretaries, and the energy with which the Committee carry out their duties, leave nothing to be desired. Judges and exhibitors may alike wish that for many years they may carry out the same courtesy and energy, duties which, however pleasant, are not light, but, at any rate, they have their reward in the gratitude of all concerned.—D., Deal.

[The vegetables and fruit were dealt with on page 157, last week.]

CARDIFF.—AUGUST 15TH AND 16TH.

THERE is every prospect of this Society becoming one of the most prominent in the south-western counties. Already it quite takes the lead in the Principality, and, thanks to the energy and untiring zeal of its Secretary, Mr. H. Gillett, and a good working Committee, such progress is being made as to quite render the Society worthy of such an

important town as Cardiff.

In the open classes Mr. J. Cypher was well to the front, taking first prizes with twelve stove and greenhouse plants in bloom, eight fine-foliaged plants, and four Orchids. In each instance Messrs. Heath and Son, Cheltenham, were a creditable second. Mr. Cypher's flowering plants consisted of Ixoras Pilgrimi and Williamsi, Phœnocoma prolifera Barnesi, Allamanda nobilis, Bougainvillea glabra, Statices Gilberti and profusa, Ericas Marnockiana, Austiniana, and Aitoniana Turnbulli, all fresh and good. The fine-foliaged plants consisted of Crotons Queen Victoria, Chelsoni, and Montfontanensis beautifully coloured; Kentia Belmoreana and Canterburyana, Cycas revoluta, and a Caryota. The Orchids were Dendrobium phalænopsis, with four spikes; Calanthe veratrifolia, Vanda cœrulea, and Cattleya Dowiana. The best six Fuchsias were shown by Mr. Hillard, a working shoemaker, and were fine pyramids of Mrs. Rundle, Beacon, Try Me, Oh! Marginata, Charming, and King. Mr. J. Clarke, gardener to Colonel Sir G. S. Hill, was second. For exotic Ferns Mr. J. Clarke was a good first, but was coloned some for six Yound Polargonians. was only second for six Zonal Pelargoniums, Mr. J. Hillard being again first with extra large well-flowered specimens. The Tuberous Begonias were remarkably fine, and with these Mr. J. Malpas, gardener to E. Jenkins, Esq., Penyland, was first. In the amateurs' tent Fuchsias again made a good display, Mr. J. Clarke being first with excellent pyramids of Mrs. F. Glass, Rose of Castille, Beacon, and Display. Mr. J. Hıllard was a creditable second. Mr. Clarke had the first prize for stove and greenhouse flowering plants, among these being Justicia carnea freely flowered and Clerodendron Balfourianum. For finefoliaged plants, Mr. Pettigrew, Cardiff Castle Gardens, was an easy first, staging fine healthy specimens of Kentia borbonica, Cycas revoluta, Phænix compacta, and Latania borbonica. Mr. J. Malpas, gardener to E. Jenkins, Esq., Penyland, was second; and Mr. J. Hockey, gardener to Colonel C. H. Page, third. Mr. Malpas was first for Caladiums, and Mr. J. Clarke second, while for Zonal Pelargoniums Mr. J. Clarke was first, Mr. J. Oxenham second, and Mr. H. Rex, gardener to C. Waldron, third. The best Tuberous Begonias were shown by Mr. J. Blackmore, gardener to A. Duncan, Esq., Mr. T. Malpas being second, and Mr. A. Whitefield, third. Mr. Pettigrew was awarded a first prize for a grand standard Ivy-leaf Pelargonium.

One tent was wholly devoted to groups, three classes being provided. The premier prize for a group to occupy a space occupying 100 square feet, was well won by Mr. W. J. Hockey, gardener to Colonel Page, Cardiff. This group was in the form of a circle, the centre consisting of a good Kentia raised rather high, and springing out of a bank of Fern,

Liliums, bright coloured Crotons, Celosias, and others. Just clear of this a circular mound was formed of Maidenhair Fern, out of which sprung numerous elegant Palms, Crotons, Dracænas, Begonias, and a few Gloxinias and other flowering plants. Mr. F. Case, Cardiff, was a fairly good second, and R. Phelps & Co., Cardiff, third. Three competed with half-circular groups, Mr. J. Clarke being a good first, and Mr. H. Rex second. With still smaller groups Mr. E. Lewis was a good first, and Mr. P. Lordon, cardoner to J. C. Maggett, Fog. third. Mr. R. Jordan, gardener to J. C. Meggett, Esq., third.

Cut flowers, in both the open and amateurs' tents, were remarkably good, and the competition very keen. Particularly good were the Roses. The best twelve triplets were shown by Mr. Crossling, Penarth, who had fine fresh blooms of Duke of Wellington, Duchess of Bedford, Mrs. J. Laing, Victor Verdier, La France, Marie Baumann, Lord Bacon, Fisher Holmes, Captain Christy, A. K. Williams, Victor Hugo, and Lady Mary Fitzwilliam. Dr. Budd, Bath, was a good second, his best being C. Lefebvre, A. Colomb, Horace Vernet, Duchess of Bedford, and La France. An extra prize was awarded to Messrs. Keynes, Williams, and Co. Selisbury. The Teas were even better than the Hybrid Person and Co., Salisbury. The Teas were even better than the Hybrid Perpetuals. With twelve triplets of these Mr. J. Treseder, Cardiff, was first, having fine fresh blooms of Comtesse de Nadaillac, The Bride, Ernest Metz, Marie Van Houtte, C. Mermet, Madame Bravy, Hon. Edith Gifford, Ethel Brownlow, Perle des Jardins, Princess Beatrice, and Francisca Kruger. Dr. Budd was second, and an extra prize went to Messrs. Keynes, Williams, & Co. The best twenty-four single blooms, any varieties, were shown by Messrs. Keynes, Williams, & Co., Dr. Budd being second. The class for twelve Teas was a grand one. Mr. S. Treseder was first. The second prize was awarded to Dr. Budd, and Mr. R. Crossling received an extra prize. Mr. G. Humphries, Chippenham, succeeded in winning the first prize for twenty-four Dahlias, among these being very fine blooms of G. Barnes, J. Walker, Crimson Ring, R. S. Rawlings, Colonist, Mrs. Gladstone, Mrs. Saunders, Queen of the Belgians, and Mr. Glasscock. Messrs. Keynes, Williams, & Co. were second. The last named took the lead with twelve bunches of Cactus Dahlias, making a very effective display with Bertha Mawley, Delicata, Apollo, Kaiserin, Countess of Radnor, and Countess of Gosford. In Mr. Humphries' second prize stand were good blooms of Alpha, the best white Cactus flowering Dahlia yet raised. Mr. Garraway, Bath, was first, and Mr. Every, Bath, second, with Asters; and Mr. G. Blackmore, gardener to A. Duncan, Esq., was first with Begonia blooms. Gladioli were not particularly good. Mr. J. Tant was first, and Mr. G. Shewring second for twenty-four varieties. Herbaceous flowers were grandly shown. Mr. G. Garraway was first for these, and Mr. G. Shewring second. Asters were shown remarkably well by Mr. J. Lloyd, gardener to Vincent Stuckey, Esq., Langport, Mr. G. Garraway being a good second.

Wreaths, crosses, and bouquets are always grandly shown at Cardiff, but the exhibitors of the best examples on this occasion did not always meet with their desserts. Mr. W. Treseder was placed first, and Mr. F. Case second for a wreath, both having magnificent exhibits, such flowers as Lilium lancifolium album, Gladiolus The Bride, Francoa ramosa, Roses, Stephanotis, Arums, and Tuberoses being very freely used. For a cross, R. Phelps & Co., Cardiff, were first, but that shown by Mr. F. Case should have been preferred, instead of being placed second. Mr. W. Treseder had a first for a grand bridal bouquet, Mr. F. Case being a close second, while for a coloured bouquet Messrs. Phelps & Co. were first, and Mr. R. Treseder second. The dining tables were not of great merit.

It is in the fruit department where the greatest strides have been made, the exhibits being more numerous, and the quality generally of marked improvement. Eight competed, with six bunches of Grapes in six varieties, and curiously enough the Judges were not equal to deciding which exhibit deserved the first prize. Mr. Dawes, gardener to Mrs. ing which exhibit deserved the first prize. Mr. Dawes, gardener to Mrs. Biddulph, Ledbury, and Mr. E. Silk, gardener to F. M. Franklin, Esq., were placed equal first, the former having good Alnwick Seedling, Black Hamburgh, and Muscat of Alexandria, and the latter fine but not well coloured Gros Maroc, poor Muscat of Alexandria, and good Black Hamburgh. Mr. J. Lloyd was placed third for some fine bunches. With Black Hamburgh Mr. Silk was first, having extra fine and well coloured bunches; the second prize to Mr. J. Greatrex, gardener to Miss Rous, who also had fine bunches. For Muscats Mr. Dawes was first, and Mr. Lloyd second. Mr. Silk staged fine Foster's Seedling, and was first, the second prize going to Mr. Lloyd. Mr. Silk was also first for any other white, having fairly good Golden Queen; Mr. F. Crossman, gardener to Captain Dick, being second with Buckland Sweetwater. Alicantes were shown in fine condition by Mr. Dawes, Mr. S. Bowditch, gardener to Colonel Gaskell, being a good second. There were also Melons were quite a feature in the several single bunch classes. display, and with these Mr. A. Pettigrew was most successful, taking first for single fruit, and for pairs in three different classes, Messrs. E. Lewis, J. Dawes, J. Portsmouth, gardener to H. W. Well, Esq., being the other prizewinners. A dish of very pale Alexandra Noblesse Peach gained Mr. J. Oswald, gardener to W. T. Crawshay, Esq., a first prize, Mr. H. Morgan being second. In the class for Nectarines Mr. F. Case was first with Pineapple, a handsome dish of Lord Napier shown by Mr. Dawes being placed second:

Apples were grandly shown. For four dessert varieties the Fruit and Flower Company, Hereford, were first, having Lady Sudelcy, Duchess of Worcester, Worcester Pearmain, Yellow Ingestre, Astrachan, and Evagil. Mr. J. Lloyd was a very close second. The Fruit and Flower Company were also first for culinary Apples, the varieties being Peasgood's Nonesuch, Lord Suffield, Frogmore Prolific, Lord Grosvenor, Cellini, and Potts' Seedling. Mr. W. J. Hockey was second. The prizes offered for a collection of six dishes of fruit are scarcely worthy of the Society, and the wording of the schedule was decidedly faulty. Mr. J. Dawes was first with good Gros Maroc and Muscat of Alexandria Grapes, Eastnor Castle Melon, very fine Barrington Peaches, Humboldt Nectarines, and Jefferson Plums. Mr. J. Lloyd was second, losing principally owing to having one variety of Grape only, his construing of the schedule being the right one.

Another tent was wholly filled with vegetables. The best collection of nine varieties was shown by Mr. G. Shewring, Mr. A. Baxter being a good second. The first of Messrs. Webb's prizes was won by Mr. Every, Mr. Garraway being a close second. Mr. J. Portsmouth was the winner of Messrs. Sutton & Son's first prize, the second going to Mr. W. J. Hockey. The principal prizewinners in the numerous other classes were Messrs. Baxter, Greatrex, Shewring, Porter, J. Richards, W. Hillier, and W. Moore.

In the non-competitive classes Messrs. B. S. Williams & Son arranged a very attractive group of Orchids, Sarracenias, Palms, and other choice plants, for which they were very highly commended. One side of a tent was wholly occupied with a group of hardy and heat-loving Ferns brought from Sale, Manchester, by Messrs. Birkenhead, and near to these was a grand display of Gladioli, Gaillardias, and such like by Messrs. Kelway & Sons, Langport. Messrs. Edwards & Son, Notting-ham, exhibited a large number of fancy pots and baskets filled with Ferns, and the display of a somewhat similar character being made by Messrs. Heath & Son, Cheltenham. Messrs. T. H. Crasp & Co., nurserymen, &c., Swansea, had several hand bouquets, wreaths, and crosses on view, and the local nurserymen lent a considerable number of plants for filling up blank spaces.

WILTS .- AUGUST 16TH.

FAVOURED by charming weather the Wilts Horticultural Society held the annual Exhibition of plants, cut flowers, fruit, and vegetables, in the Earl of Pembroke's beautiful park at Witton, near Salisbury, on the 16th inst.

In the open classes three good exhibits of twelve stove and green-In the open classes three good exhibits of twelve stove and green-house plants, six foliage and six flowering, were staged by Mr. Finch, gardener to J. Marriott, Esq., Queen's Road, Coventry; Mr. Willes, Winchester Road, Shirley; and Mr. Peel, gardener to Miss Todd, Lidford Lodge, Southampton, and the prizes were awarded to them in the order in which their names appear. The first prize dozen consisted of well flowered plants of Ixora Fraseri, Clerodendron Balfouriana, Dipladenia Thomas Speed, Erica Irbyana (about 6 feet over), E. Marnockiana, Phœnocoma prolifera Barnesi, Kentia Fosteriana, K. australis, Cycas circinalis, Latania borbonica, Croton Queen Victoria, and C. Morti, the Crotons being well coloured. In the class for nine stove and greenhouse plants, four in bloom and five foliage, there were and greenhouse plants, four in bloom and five foliage, there were three entries. Mr. T. Wilkins, gardener to Lady Theodore Guest, Inwood House, Henstridge, was first; Mr. Peel second, and Mr. Willes was third, all staging good plants. Mr. Wilkins had the best half dozen of exotic Ferns, showing fine healthy looking plants of Cyathea dozen of exotic Ferns, showing fine healthy looking plants of Cyathea medullaris, Davallia Mooreana, Adiantum Farleyense (a grand plant), Thamnopteris nidus avis, Adiantum cuneatum, and Gymnogramma Wettenhalliana. Mr. Peel was a creditable second. Mr. A. Bedford, Harnham Nursery, Salisbury, was first for pyramidal Fuchsias, Mr. George Fulford, gardener to Earl Nelson, Trafalgar Park, Salisbury, being awarded the third prize for smaller but well flowered plants. There were only two entries. Mr. A. Robey, gardener to Captain Greenwood, Harnham Cliff, Salisbury, was first in the class for six Tuberous Begonias; Mr. E. Willes was second, and Mr. Thomas Wilkins third third.

Groups of plants arranged for effect formed a feature. Mr. Willes was first for a light and well finished arrangement, "dot plants" of brightly coloured Crotons, Celosias, Ixoras, Bridal Wreath (Francoa ramosa), Tuberoses, Asparagus, small Palms set in a groundwork of Maidenhair Fern (Adiantum cuneatum), with a Palm at the back, which gave a dignified effect to the group. Mr. Wilkins was second with a similar group. Mr. Robey was third. There were five entries in this class. The group confined to gentlemen's gardeners only brought out two contestants for the honours offered, Messrs. Wilkins and Peel, who with good arrangements took the prizes in that

The silver cap, value £5, open to amateurs within a radius of six miles of Salisbury, given by the Right Worshipful the Mayor of Salisbury (A. Whitehead, Esq.), for a group of plants arranged in a semicircle of 10 feet in diameter, only brought forth two entries. Mr. Frank Pearce, High Street, Salisbury, and Mr. Alderman Lovibond, St. Anne Street, also of Salisbury, who took the prizes in that order with tastefully set up arrangements. Mr. Hinxman, gardener to H. C. Gregory, Esq., The Island, Fisherton, Salisbury, led in the class for a group arranged in a semicircle. 8 feet in diameter, being class for a group arranged in a semicircle, 8 feet in diameter, being closely followed by Mr. Ford, gardener to M. Swayne Esq., The Island, Witton, and Mr. C. Hamlin, The Close, Salisbury, all for creditable arrangements. Mr. J. Chalk, gardener to Mrs. Rigden, Relle Vye Salisbury had the best six Ferry distinct: Wr. G. Hibbert. Belle Vue, Salisbury, had the best six Ferns, distinct; Mr. G. Hibbert, gardener to Miss Nightingale, Witton, was second; and Mr. Alderman Lovibond third. The last named exhibitor had the best half dozen plants of Coleus, and Mr. J. Rockett, gardener to George Smith, Esq., Westbourne, Salisbury, was second, both showing well. Mr. A. Robey was first for six Tuberous-rooted Begonias; Mr. J. Hughes, gardener to W. Baring, Esq., Norman Court, Salisbury, was second, and Mr. J. Scammel, gardener to J. R. Kendle, Esq., Witton, third.

Mr. Hinxman was first for three pots of Liliums, and Mr. C. Hamlin

Fruit was shown remarkably well. Eight collections of eight kinds (Pine Apple excluded) were staged, Mr. H. W. Ward, gardener to the Earl of Radnor, Longford Castle, Salisbury, being well ahead with large solid bunches of Muscat of Alexandria, large in berry and well coloured; heavy bunches of Black Hamburgh, fine in berry and finish, and carrying a good bloom; fine Blenheim Orange Melon, large Sea Eagle Peaches, fine Brunswick Figs, white Magnum Bonum Plums, large, clean, and beautifully coloured Bon Chrêtien Pears, and Pineapple Nectarines, the latter being the only weak dish in the collection. Mr. A. Crossman, gardener to J. Brutton, Esq., Yeovil, was a good second. Mr. Charles Warden, gardener to Sir F. H. Bathurst, Bart., Clarendon Park, Salisbury, being a close third. Mr. H. W. Ward was also first for three bunches of Muscats; Mr. J. Fewtrell, gardener to Charles C. Tudway, Esq., The Cedars, Wells, Somerset, being sec nd; and Mr. J. Budd, gardener to F. J. Dalgetty, Esq., Lockerley Hall, R maey, third. In the class for any other white Grape than Muscat of Alexandria, Mr. Ward was first with handsome bunches of Golden Queen, Mr. Warden being second with heavy bunches of Buckland Sweetwater, and Mr. P. R. Dav.dson, gardener to Lord Wolverton, Iwarne House, Shafterbury, was third with the same variety. There were seven entries in this class. Mr. James Chalk, gardener to George Read, Esq., Westwood, Salisbury, was first for Black Hamburghs, showing three good-sized bunches. Mr. Warden and Mr. Ward were second and third respectively with smaller but better coloured bunches. In the "any other" black class Mr. Warden was first in a good competition, staging fine shapely bunches of Muscat Hamburgh, fine in berry and well coloured. Mr. Davidson was second with Black Alicante, somewhat loose in the bunch, and Mr. Hughes was third with same variety. Mr. Crossman was first for Pine Apple, showing a medium-sized Queen, large in the pips, and highly coloured. Mr. Budd was second, a larger Queen, a little green about the pips, and a good-sized Cayenne being passed by the Judges. Out of fourteen Melons staged Mr. Palmer, Conden "Villa," Andover, was first for a variety named "County Councillor," Mr. Hughes being second, showing a nice fruit of Hero of Lockinge.

Apples and Pears were well shown. Mr. Frederick Smith, gardener to the Bishop of Salisbury. The Palace Salisbury was as is usual at

to the Bishop of Salisbury, The Palace, Salisbury, was, as is usual at this Show, first for three dishes of dessert Apples, staging even, clean, well coloured fruits of Worcester Pearmain, Mabbott's Pearmain, and Céline. Mr. Evans, gardener to Lady Ashburton, Melchet Court, Romsey, was second; and Mr. Hughes third. Mr. Wilkins had premier honours in the corresponding class for culinary varieties, showing fine fruits of Blenheim Orange, Lord Suffield, and Peasgood's Nonesuch. Mr. Evans was second; and Mr. Inglefield, gardener to Nonesuch. Sir John Kelk, Bart., Tedworth House, Marlborough, was third. Mr. Hughes was first for four dishes of Pears, being closely followed by Mr. F. Smith and Mr. Browning, gardener to Canon Sir Talbot Baker, Ranstone, Blandford. Mr. Wilkins was first for Peaches with six even highly colouted fruits of Sea Eagle, Mr. Hughes being second with Barrington. Mr. Chalk was first for Nectarines with good fruits of Barrington. Pineapple.

Three collections of twelve kinds of vegetables were shown by Messrs. Wilkins, Inglefield, and Mr. A. J. Allsop, gardener to Viscount Portman, Brynstone House, Blandford, by whom the prizes were taken in the order indicated. Mr. Wilkins' collection contained fine examples of Autumn Giant Cauliflower, Sutton's Perfection Tomato, Favourite Onions of immense size, fine shape, and very firm; Satisfaction Potato, Stratagem Peas, New Intermediate Carrot, Exhibition Beet, Lyon Leek, Ne Place Ultra Rupper Bean, Model Cucumber, and Giant, White Celery,

Stratagem Peas, New Intermediate Carrot, Exhibition Beet, Lyon Leek, Ne Plus Ultra Runner Bean, Model Cucumber, and Giant White Celery, the whole being very tastefully set up with green Parsley.

The cut flower classes were well filled, and Dr. D. Seaton, Rutland Lodge, Bitterne, Hants (gardener, Mr. Pomroy), was well first for twenty-four Roses, single trusses. Mr. Evans was first for twelve Roses, distinct, with good blooms. Mr. Budd was a good first in the class for eighteen bunches cut flowers. Dahlias were shown well by Mr. West and Mr. C. Hooper, and Asters by Mr. Browning.

Messrs. Keynes, Williams, & Co. contributed an artistic arrangement of cut flowers and plants, also eight stands of Show, Fancy, and Cactus Dahlias. Messrs. Robert Veitch & Son, Exeter, had a fine and rare assortment of herbaceous and alpine plants in great variety, also a good assortment of Apples, the fruits being of fine size, clean, even, and

assortment of Apples, the fruits being of fine size, clean, even, and many of them being very highly coloured. Mr. Ladhams, Shirley, also greatly helped in rendering the flower tents both interesting and attractive by a liberal contribution of herbaceous and alpine flowers, which served to illustrate the utility and attractiveness of these, in many places, neglected hardy plants.

EARL'S COURT,—AUGUST 23RD AND 24TH.

A SPECIAL Show of Gladioli, Dahlias, with other flowers and fruit was held at the Gardening and Forestry Exhibition, Earl's Court, on the above dates. The tent in which the Show was held was fairly well filled, and most of the exhibits, considering the season, were of good quality. Gladioli and Dahlias were fairly represented, but comparatively few Asters were forthcoming. Miscellaneous floral exhibits made a good display, as also did fruit. Rain fell heavily on the opening day, Miscellaneous floral exhibits made a and the Show was not numerously attended.

The principal class provided was for 100 spikes of Gladioli, but here only one firm competed. This was Messrs. J. Burrell & Co., Howe House Nurseries, Cambridge, to whom the first prize was awarded. The spikes shown by Messrs. Burrell were grand, being large in size and brilliant and varied in colouring. Space will not permit us to give the whole of

the varieties shown, but the names of a few of the most striking may These included Grand Rouge, Baroness Burdett Coutts, be interesting. These included Grand Rouge, Baroness Burdett Coutts, Cygnet, Atlas, Flambeau, Florence, Iolanthe, Corinne, Muriel, Fiamette, Castilda, and Tessa. First-class certificates were awarded for the last four varieties. In the class for twelve varieties Mr. D. Witlaw, Brechin, Scotland, was the only exhibitor, and the first prize was awarded for a collection of fine spikes. The best of these were Enchantress, Dr. Bailley, Grand Rouge, Opale, Sultane, Pyramid, Tiger, and Baroness Burdett Coutts. Messrs. Kelway & Sons, Langport, were awarded a silver-gilt medal for a fine collection of Gladioli, comprising seventy-two spikes of the leading kinds, also nine new varieties. Among the latter were Boston, Kate Marsden, Palene, Admiral Marden, Mariana, Among the latter and Indiana, the last-named a very deep coloured variety. A first-class certificate was awarded for a charming variety named Sir Michael Culme Seymour. Messrs. Kelway & Sons also had some boxes of Asters, Gaillardias, and miscellaneous hardy flowers.

Dahlias were shown in good condition, although not so extensively as might have been expected. There were five exhibitors in the class for twenty-four Show and Fancy Dahlias, and the competition was very keen. Mrs. S. Mortimer, Rowledge, Farnham, succeeded in winning the first prize with a stand of fine. clean, and even blooms. The best of keen. Mrs. S. Mortimer, Kowledge, Farnham, succeeded in winning the first prize with a stand of fine, clean, and even blooms. The best of these included Mrs. Saunders, Reliance, Mrs. George Rawlings, Maud Fellows, Henry Walton, Eclipse, Duke of Fife, Diadem, Sunbeam, and Harrison Weir. Mr. C. Turner, Royal Nurseries, Slough, was a close second with even flowers, Colonist, W. Keith, Miss Cannell, Hope, and Crimson King being particularly fine. Mr. M. V. Seale, Vine Nurseries, Sevenoaks, was third with smaller flowers.

In the class for twelve Show and Fancy Dahlias there were also five exhibitors, and Mr. T. Vagg, gardener to J. Theobald, Esq., M.P., Bedfords, Havering, Romford, won the leading prize. The finest flowers in this stand were Prince of Denmark, John Walker, Mrs. Gladstone, and William Rawlings. Mr. A. Ocock, gardener to Mrs. McIntosh, Havering Park, Romford, was second, and Mr. J. G. Fowler, Glebelands, South Woodford, third.

The single Dahlias were exceedingly good, and it is a pity that there were not more exhibitors. Messrs. J. Cheal & Sons, The Nurseries, Crawley, secured the first prize for twenty-four bunches, showing the principal varieties. Amongst others Victoria, The Bride, Lowfield Beauty, Eclipse, Alba Perfecta, and Formosa were very good. Mr. M. V. Seale followed with an attractive stand, the third award going to Mr. E. F. Such, The Nurseries, Maidenhead. Mr. Seale was first, however, for twenty-four bunches of Pompon varieties, the best of which were Red Indian, Whisper, Favourite, and Dorothy. Mr. C. Turner was second, and Messrs. J. Cheal & Sons third. The last-named firm was, however, first for nine bunches of Cactus and decorative Dahlias. The most attractive of these were Duchess of York, Delicata, Charming Bride, and Bertha Mawley. the second prize, and Mr. C. Turner followed closely. Mr. Seale gained

Miscellaneous floral exhibits were more numerous than those in the competitive classes. Messrs. J. Cheal & Sons sent a collection of Cactus, decorative, and Pompon Dahlias, tastefully arranged in bunches (silver medal). Mr. S. Mortimer had a large number of Show and Fancy Dahlias, the blooms being clean and brightly coloured. A similar collection came from Mr. E. F. Such, who also had some summer flowering Chrysanthemums (silver medal). Mr. W. Salmon, 2, Ivy Cottages, Elder Road, West Norwood, sent hardy flowers, arranged in bunches, and a collection of Dahlias (silver medal). Messrs. P. Barrand Sons Long Ditton, had a collection of Liliums and other hardy and Sons, Long Ditton, had a collection of Liliums and other hardy flowers, for which a silver medal was awarded. Messrs. W. Paul and Son, Waltham Cross, sent a splendid collection of fruit trees in pots, including Apples, Peaches, Plums, Pears, and Figs. The trees were remarkably healthy and loaded with fruit. The same firm also had boxes of cut Roses, dishes of Apples and Pears. This contribution attracted considerable attention by reason of its diversity and excellence, and merited the gold medal awarded. Mr. W. Welsford, South Lambeth, sent a group of annuals in pots, and a collection of hardy flowers. Mr. J. Hudson, gardener to Messrs de Rothschild, Gunnersbury House, Acton, contributed a group of specimen scentedleaved Pelargoniums, some of which were 4 feet in height and as much in diameter. Mr. J. Walborn, Cedars Nursery, West Kensington, had a small group of plants, comprising Palms, Liliums, and Crotons (silver medal). Mr. G. Wythes, gardener to the Duke of Northumberland, also staged Crotons and some well-grown Nepenthes (silver-gilt medal). Mr. A. W. Young, South Norwood, had some Gloxinia and Begonia blooms. Fruit formed a feature in the Show, although only one competitive

class was provided. This was for twelve dishes of hardy fruits, and there were four exhibitors. Mr. McIndoe, Hutton Hall Gardens, Guisborough, secured the first prize for a grand collection, comprising Pitmaston Duchess and Souvenir du Congrès Pears, Crawford's Early and Violette Hâtive Peaches, Elruge and Byron Nectarines, Columba and Jefferson's Plums, Swedish Reinette and Cox's Pomona Apples, Morello Cherries, and Apricots. Mr. G. Wythes was second, this exhibitor showing a good dish of Mulberries in this collection. The third prize went to Mr. G. H. Sage, Ham House, Richmond. Mr. J. F. Hoar, gardener to J. T. Cooper, Esq., The Grange, West Molesey, sent a collection of Plums, Cherries, Pears, Peaches, and other fruit. Messrs. S. Spooner & Son, Hounslow, had a splendid collection of Apples of bright and clean appearance (silver medal). Mr. W. G. Richerd, gardener bright and clean appearance (silver medal). Mr. W. G. Richerd, gardener to F. Lilley, Esq., "Croft," Mount Park, Ealing, sent a number of dishes of fruit, including ten varieties of Peaches (silver medal). Mr. T. J. Stacey, The Peacheries, Caversham, Reading, had a very large collection of Melons, for which a silver medal was awarded.



FRUIT FORCING.

Pines.—Potting Rooted Suckers.—When the suckers obtained from the summer fruiting plants are ready for repotting, it is well to divide the plants into two batches. The strongest should be put in 10 or 11-inch pots as soon as they are well rooted, affording them a position near the glass in a light airy house. The plants so treated will produce a good successional supply of ripe fruit in late summer or early autumn next year. The other plants, suckers from the summer fruiters, winter best in 7 or 8-inch pots, transferring them to larger ones in the spring, which with suckers of Smooth-leaved Cayenne that were started last March will provide a successional supply of Pines through the winter

Re-arranging the Plants.—Those plants not fruiting will have completed their growths, and should have air liberally for the next six weeks when the temperature exceeds 80°. All well rooted plants require a bottom heat of 80° to 85°, but recently potted suckers, or those not having roots well established in the fresh compost, should have

the bottom heat maintained at 90°.

Fruiting Plants.—Moderate atmospheric moisture will be necessary for those swelling their fruit, admitting a little air early in the morning, so as to allow of any superfluous moisture escaping before the sun's rays act powerfully or directly upon the fruit. Any fruit it is desired to retard should be moved to a rather cool or shady house, affording an abundance of air.

Figs.—Earliest Trees in Pots.—These may be placed outdoors if the wood be ripe, but if there is any doubt about this the trees must be continued under glass with a free circulation of air. These are matters in which the cultivator must exercise judgment. In either case encourage surface roots by a top-dressing of rough loam and manure, with a sprinkling of superphosphate occasionally. Those placed outdoors must not be allowed to root from the base of the pots. Cut off all such roots, top-dress, after which afford a good watering, and they will need no more water at the roots than is sufficient to keep the foliage in health.

Earliest Fig Houses.—In the house started at the new year and with the trees planted out the wood will now be ripening, and the supply of water may be diminished or discontinued, air being given very liberally. If, however, the second crop is not yet ripened moderate moisture in the soil will be necessary, with a rather free circulation of warm air to insure high quality in the fruit. When the fruit is gathered take prompt measures to destroy insects, syringing forcibly to dislodge red spider, and remove brown scale with a brush and solution of softsoap, 3 ozs. to

a gallon of water.

Late Houses.—The fruit of trees in cool houses is earlier and finer this year than usual, and the second-crop Figs are so forward as to be likely to ripen. If any are left with this object it should be at the base of the current growth, removing those from the extremities of the shoots. The great point is to keep the growths thin and the roots restricted, so as to insure sturdy, short-jointed, well-ripened wood. Keep up a circulation of air, expose the fruit as much as possible to the sun, and if red spider be troublesome syringe on a fine morning after a close picking of the fruit, and give no more water than is absolutely needful for the well

being of the plants.

Unsatisfactory Trees.—Planted-out Fig trees not unfrequently grow rampantly, and in consequence produce thin crops of fruit. In that case root-pruning should be resorted to, and the roots confined to a narrow border of from 3 to 4 feet width. A trench taken out at this narrow border of from 3 to 4 feet width. distance from the stem after the fruit is gathered will check the tendency to a late growth, assist in the ripening of the wood, more especially if the growths are disposed thinly, and the points of the shoots, instead of being closely tied-in, are allowed to grow up to the glass. If the drainage be defective it will be necessary to lift the trees as soon as the leaves commence falling, and replant in fresh soil. Place 9 to 12 inches of rough rubble for drainage, and on this about 3 inches thickness of old mortar rubbish freed from pieces of wood. This will keep the drainage clear indefinitely, and the roots will find the lime that is required. Good turfy calcareous loam, rather strong than light, will grow excellent Figs. If deficient in lime add a sixth of old mortar rubbish to the loam, and in replanting ram the compost, thoroughly incorporated, well about the roots, for short-jointed wood cannot so well be secured by any other means than a solidified compost. The border must be 24 inches deep. Should the drainage he good it will only be recovered to the contract of th deep. Should the drainage be good it will only be necessary to confine the roots to the narrow border, removing some of the old soil from amongst the roots, and supply fresh compost.

Melons in Houses.—Maintain a night temperature of 65° to 70°, and 75° artificially by day. As the weather is exceptionally favourable there will be little need for fire heat, and the supplies of water will require to be liberal. As the days shorten lessened supplies will be needed, yet give enough water to keep the soil in a moist state whilst the fruit is swelling, but after it is full sized or ceases swelling afford no more than to prevent the foliage flagging. Keep the laterals well stopped to one joint or leaf, and rub off all superfluous shoots as they show, allowing nothing to interfere with the principal leaves, or to retard the swelling of the fruit. Plants with fruit advanced for ripcning should have an abundance of air, with, if practicable, an increase of temperature, avoiding a close moist atmosphere, and keep rather dry at the roots.

Latest Plants.—Those planted in houses will require every encouragement, maintaining a moist atmosphere and a temperature of 70° to 75° by artificial means, falling 5° on cold nights, and keeping the bottom heat steady at 80° to 85°. The leader must not be pinched until it reaches the trellis, when it may have its point taken out if more than one leader is wanted. Keep a sharp look out for canker at the collar and upon the stem, rubbing quicklime into the parts affected, striving to

maintain a clean growth. Melons in Pits and Frames.—The latest plants in pits and frames will have set or be setting their fruit. In order to secure a good set, the growths require to be kept rather thin, the atmosphere warm and dry by the aid of linings, so as to insure steady progress and the free admission of air. Those in hot-water-heated pits will be the better of a gentle warmth in the pipes on cold nights and dull wet days, a gentle heat affording facilities for ventilation, which should be given, if only a little, so as to insure evaporation, and the consequent elaboration and assimilation of the sap, on which depends in a great measure the quality of the fruits. The plants may be sprinkled, avoiding the collar or stem, early in the afternoon, and closing before or by the temperature has receded to 80° or 85°, and so as to raise it to 90° or 95°. Admit a little air at 75°, or increase it from that with the advancing sun heat to 85° or 90°, at which keep through the day from sun heat. Plants in frames should be attended to as required with linings of sweetened fermenting material as the nights become cold, so as to prevent the temperature falling below 65° in the morning, and if mats are placed over the lights after the sun leaves the frames, and removed shortly after the sun has risen, success will be ensured.

THE KITCHEN GARDEN.

Cabbages.—Hot weather and warm moist soil having caused the seeds to germinate quickly and the plants to grow rapidly, there is every likelihood of the earliest raised plants being much earlier than desirable. Anyway they ought not to be wholly depended upon. If more seed is sown at once thinly in drills previously moistened, there is every probability of the plants obtained being quite large enough to put out this autumn. Even if they are not they may yet prove very handy next spring either for forming successional beds or for filling blanks caused by many of the too early raised plants running to seed prematurely. Coleworts have also grown very rapidly, and no time should be lost in planting these extensively. They could be planted in succession to Peas, Beans, and autumn Onions without any preparation of the ground other than surface hoeing and removal of weeds. Should the weather be hot and dry this ought not to hinder planting, as rather than spoil the plants in the seed beds they ought to be well soaked with water prior to drawing, and be replanted in drills, also watered. A foot apart each way is enough space for small quick hearting Cabbages and Coleworts.

Onions.—In some gardens there are particularly good beds of Onions to be seen and in others very poor ones indeed. Where the seed was sown early and came up well the bulbs are all of good size and well matured, thick or "bull" necks being scarce. There is scarcely any necessity to twist down the tops in order to hasten maturation of the bulbous roots, and the latter will be fit for drawing and storing very much earlier than usual. Directly they come away readily from the soil is the time for removing them, and if they are further harvested on dry boards or wattled hurdles in the open, or if the weather is wet, an empty vinery or other dry airy place should be utilised. Onions after they are thus well prepared should be stored in a cool airy shed. Where the seed germinated irregularly, some not starting till several weeks later than the rest, the crops will be difficult to deal with. The late plants are bulbing badly and will not mature properly. It will be quite useless to draw these with a view to storing them, and the better plan will be to leave them where they now are, drawing them as they are wanted for use. Those that have made fairly good progress should have their necks or tops twisted down to hasten maturation, while all that are already ripening ought to be taken the greatest care of, being treated as already advised in the case of early beds, as it is these that will keep the longest.

sowing Onion Seed.—It is not yet too late to sow seed of Tripoli and White Spanish Onions to stand through the winter. Such are not absolutely indispensable, but are recommended if large heavy roots are desired early next summer, and ought certainly to be grown extensively where the summer crops are partial failures this season. The Queen, Early White Naples, and other early maturing varieties may well be sown with Giant Madeira, Giant White Tripoli, Roccas, and other large bulbing sorts, the drills being drawn 12 inches apart, and moistened prior to sowing the seed. The White Spanish types are quite as hardy as the Tripolis, but the bulbs obtained from plants raised very early in the year under glass are invariably of better form than those formed by autumn-raised plants, also keeping better.

Winter Spinach.—Judging from the progress made by a number of late planted winter green vegetables, Spinach will grow rather rapidly, and should the hot weather last through August the earliest plants of the latter will very probably run to seed prematurely. It is advisable, therefore, to sow another good breadth of ground at once. An open, rather high, or well drained and fairly rich piece of ground should be selected, and the seed be sown in shallow drills drawn not less than 12 inches asunder and well moistened.

Lettuces.—Where Lettuce can be obtained good early in the season is the best site for growing late autumn Lettuce. The Cos varieties sown late may fail to heart properly, and the preference ought therefore to be given to Early Paris Market, Golden Queen, Commodore Nutt, and All the Year Round Cabbage Lettuces. Draw drills 10 inches apart, give a gentle watering, and sow the seed rather thinly. During showery weather the thinnings drawn from rows of Cos as well as Cabbage varieties may well be dibbled out on warm borders, and should the weather keep fairly mild during September some useful Lettuces may be had for storing in frames or protecting with boards and frame lights.

be had for storing in frames or protecting with boards and frame lights.

Tomatoes in the Open.—This promises to be a remarkably good season for Tomatoes grown against garden walls and fences, as well as those in the open. Already a considerable weight of fruit has been cut, and there are large numbers of ripening and green fruit on the plants. All leading growths ought ere this to have been topped, while superfluous side shoots should be kept constantly cut away. Leaves are very strong and healthy, no disease being apparent. In order to favour the development of the later fruit, and to hasten ripening generally, the leaves should be freely reduced in size, in many instances not more than one-third of the leaf being left. As yet no disease has been observed, but it may become troublesome directly there is a change to dull showery weather. The best preventive is keeping the leaves dry. In many instances spare garden lights might with advantage be fixed over the plants against walls, these effectually warding off rains and heavy dews

Tomatoes under Glass.—These also have cropped admirably, the plants where they have not been stopped continuing to set great clusters of fruit. Where they have grown rather vigorously, and perhaps failed to fruit well in consequence, the plan of freely shortening back the leaves would have checked this over-luxuriance, and have promoted a more productive habit of growth. Many of the older leaves will now be quite yellow, and should be cut off. If disease spots show on the leaves, the worst form known as Cladisporium being denoted by yellow spots near the size of a threepenny piece, and a mildew-like patch underneath, can only be safely checked by means of a considerable increase of fire heat, accompanied by a good circulation of dry air. Raising the temperature of the house or houses to about 115° during the hottest part of three or four days in succession kills much of the fungus, as is both a safe and good remedy. Old plants in boxes or narrow ridges of soil can be kept in a growing productive state till next summer if need be. All that is necessary is to reserve and lay in side shoots thinly all over the roof, these soon commencing to bear fruit. In order to infuse a little new life into these old plants give a soaking of liquid manure, a short time after removing a little of the surface soil, and top-dressing with a mixture of turfy loam and short manure, a sprinkling of bone meal improving the compost. Young plants, especially when the body of the house is to be utilised, are the most likely to produce heavy crops of fruit, and these may well be placed singly in 12 inch pots at once. While the weather remains hot and dry these young plants may safely be left in the open, but directly there is a likelihood of a change to colder, damp weather they ought to be housed, or otherwise they may become affected by the Potato disease.



APIARIAN NOTES.

AT THE HEATHER.

AFTER a week's improved weather, of which the bees did not fail to take advantage, a change for the worse came on the 19th inst. High winds prevailed, accompanied by a heavy fall of rain, putting a stop to honey gathering. As the Heather is not yet past, however, the dry season having favoured it greatly both in the extent of growth and profuseness of bloom, in a few more fine days there will be some unusually weighty hives.

Crossed and pure Punics have given every satisfaction, enabling me to disprove every adverse criticism about these bees in Britain and America. One prime swarm two months hived cannot have risen less than 70 lbs., but accurate weights will be given in due course. My time has been fully occupied since I removed the bees here, so persistent in swarming have they been, and are not past yet. If the Punics are the best in the aggregate my two best hives are composed of second cross Syrians unswarmed, and a second cross Carniolan, an old swarmed stock.

Our local bee and honey shows appear to have been a success, but I have been unable to attend any. What I have learned and fully proved at the moors this year will by-and by be embodied in practical articles for beginners, which I trust will be of permanent benefit to them.

CAN BEES COUNT?

My bees stand at the foot of one glen and on the point of intersection to the main one that leads to many others, and behind a stone dyke which runs east and west, the hives facing north. A hive I had forwarded to me was placed at the west end of three

detached hives, and it is bad policy to crowd the hives. The empty hive was placed 6 feet from the western one, the bees and drones of which alike immediately entered, while some of the bees from the next hive entered the westmost one. I then moved it to 20 feet distant, and this time with the entrance quarter round, and still some bees and drones flew towards it. The lesson is the same as that I have so often taught, Never alter the appearance or aspect of hives after September.

Do BEES FLY IN A STRAIGHT LINE?

It is generally believed that bees when returning to their hives fly in a direct line, but this is not verified here. The bee stands were at the foot of a glen that separates two hills. In order to reach another glen situated at a right angle on the hill at a considerable elevation rather less than a quarter of a mile distant, where the Heather is extra fine, and where gold was at one time found and was sometimes wrought for, in a straight line the bees would have come down the hill at an angle, but instead they flew right down the second named glen until they reached the bottom, then turned to the east at a right angle again, flew down the main glen, and past their hives from 150 to 200 yards where the valley and dyke nearly intersect, then over the dyke, reaching their hives on the lee side of it, flying at least a mile further when windy than when calm. — A LANARKSHIRE BEE. KEEPER.



*All correspondence should be directed either to "THE EDITOR" or to "THE PUBLISHER." Letters addressed to Dr. Hogg or members of the staff often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Bee subjects, and should never send more than two or three questions at once. articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post, and we do not undertake to return rejected communications.

Grapes Shanking (R. C. N.).—Your letter arrived as we were 1 reparing for press. The matter shall receive attention next week.

Plums under Glass (R. II.).—For training up the rafters of a house with a south-west aspect Denniston's Superb, McLaughlin's, Brahy's Green Gage, and Transparent Gage are excellent. Other four, not Gages, are Jefferson, Washington, Kirke's, and Coe's Golden Drop.

Peaches for Market (S. S.).—We suspect our correspondent will not recommend any particular form of tree as the best under all circumstances. His experience is much too great for that, but he may be expected to refer both to trees grown as pyramids in pots and to trees planted out and trained to trellises.

Potting Tuberoses (Reader).—Tuberoses should be potted so that the tops of the tubers are about half an inch above the soil. The suckers ought to be removed. There is no advantage in keeping the tubers for a second year, as they seldom flower satisfactorily. The three shoots round the crown bud of the Chrysanthemum should be

Anemone polyanthes (L. B. E.).—This fine Anemone grows about a foot to 18 inches in height, with a wealth of fine ornamental The flowers are produced in bunches of from six to eighteen, umbel fashion, on longish scapes. The blooms are rarely less than an inch in diameter, pure white, firm textured, and lasting a considerable time in a cut state. It loves shade, plenty of moisture in rather a heavy but rich soil. The leaves are deciduous; the crown, though exposed, requiring no protection, as it is found at altitudes of from 10,000 to 12,000 feet above sea level from Kashmir to Sikkim, flowering during the carly summer.

Lathyrus sativus (Amateur).—You are right. The Blue Pea (Lathyrus sativus) is one of the prettiest and most distinct of all the annual Peas of ornamental character. It is an old plant in gardens, and yet many persons have never seen it, although it is universally admired by all who chance to see it covered with its clear blue blossoms. Its culture is of the easiest. Seeds sown in drills or clumps in March produce plants which flower in July, and continue in bloom until late in the autumn. All the attention required after sowing is to stake each clump with a few bushy twigs about 2 feet in height. The 3 to 4 seeded pods are curiously

winged along the back. This species has long been grown in South Europe as a forage plant, but its beauty ought to guarantee it a welcome in all good flower gardens.

Keeping Late Grapes (H. P.).—Late Grapes, to keep well, should be thoroughly ripe by the middle of September, which can only be effected by assisting the Vines in spring and early summer with gentle fire heat, so as to have them sufficiently early for ripening the fruit by the time indicated. The Grapcs should be allowed to hang on the Vines until the leaves have fallen, when they ought to be cut with a sufficient length of wood below the bunches to allow of that part being placed in bottles containing water, and all the wood above the bunches should be retained, at least it is best so to do, as cuts increase the evaporation. The oottles should be about three-parts filled with clear rain water, and a piece of charcoal placed in each. The bottles must be placed on a rack, so that they slope to an angle of about 45°, so that the bunches will depend clear of the bottles. The latter will need replenishing as the water wastes, and the Grapes should be examined occasionally for decayed berries, which should be removed as they appear. The most suitable place for keeping the Grapes, failing a Grape-room, is a rather dry room, which can be kept at a temperature of about 45°, or ranging between 50° as a maximum and 40° minimum.

Tomatoes Irregular in Size (S. S.).—When the plants are vigorous and the leaves and trusses large, the fruits are generally uneven in size. The first setting on the trusses are usually the largest, and the next medium-sized, whilst the latest are generally small. The crop is, therefore, easily assorted into three grades. The first, consisting of large fruits, and the last of small, say the size of a Green Gage Plum, are less profitable than the medium-sized fruits, which generally realise good prices. To secure this, judicious thinning is necessary, and if practised early does not impair the total weight of the crop, for by removing the ill-shapen and the latest set fruit on the respective trusses those left swell to an even size. This requires judgment so as to get a full weight of fruit of even sample and have it come in successionally, but the main point is not to overcrop. The hot dry weather has been against the swelling of Tomatocs, and the fruits have ripened in some cases prematurely through the sun being unusually powerful and the atmosphere not having been kept proportionately moist. A slight shade would, no doubt, have improved matters by lessening evaporation and securing the better swelling of the fruit. As the growth is free enough there cannot be anything materially amiss with the soil, but the chief essential to the swelling of the fruit is nitrogen, which is not overabundant in artificial manures, as it is the most costly substance. In a season like the present solid manure is decidedly advantageous on account of the humus and resultant nitric acid, but it is easy to supply nitrogen if the swelling of the fruit is not free enough by dressings of nitrate of soda, a small handful in the powdered state being applied to a space of 8 square yards, or ½ oz. per square yard, it being mixed for facility of application with an equal quantity of dry earth. This supplied according to the needs of the plants and the condition of the soil and weather will be amply repaid.

Sago Palms (A New Reader).—You desire to know something about sago, and from whence it is obtained. Sago is obtained from various species of Indian Palms. In the Indian Archipelago it is procured from Sagus Rumphi, Sagus lævis, and Sagus genuina; on the Coromandel coast from Phœnix farinifera; in Ccylon from Corypha umbraculifera; and in Assam from Caryota urens. These trees are cut down, and from the pith filling their stems the sago is extracted. The pith is thoroughly washed, and from the washing, when allowed to rest, the fecula or starch subsides; this is the sago flour of commerce, of which large quantities are used in the manufacture of calico. When used as food it is granulated, and known as pearl sago. Tapioca is really sago in lumps, and was so called merely because the French, who introduced it from India, named it Sagou-tapioka. About eight thousand tons of sago are annually imported. Sagus Rumphi is a small tree, comparatively speaking, not above 30 feet high. It is a native of the Indian Archipelago, particularly of Malacca, Borneo, Sumatra, Celebes, and the Moluccas. Before the tree has arrived at maturity the stem consists of a mere shell, about 2 inches thick, with a great mass of spongy pith, becoming gradually absorbed, and ultimately the stem remains hollow. At the time when the pith is fully developed, and before it has begun to diminish, which is indicated by the superior leaves being covered with a sort of farina or white dust, the tree is felled, and the trunk cut into lengths of 6 or 7 feet long, which are split to admit of the pith being more easily removed. The pith is in the state of a coarse powder, and is mixed with water in a trough having a sieve at one end; the water, loaded with farina, passes through the sieve, and is received in convenient vessels, where it is allowed to stand till the insoluble matter has subsided. The water is then strained off, and the farina which is left may be dried into a kind of meal, or moulded into whatever shape may be desired. Sago, as it comes to this country, is prepared by forming the meal into a paste with water, and rubbing it into grains; it is produced in the greatest abundance in the Moluccas, but of the finest quality on the eastern coast of Sumatra. The Chinese of Malacca refinc it, so as to give it a fine pearly lustre, and large quantities are also prepared at Singapore. It is said that a single tree will yield from 500 to 600 lbs. of sago. Sago forms the principal food of the natives of the Moluccas. A decoction of sago fermented yields alcohol by distillation, and by ascescence it forms vinegar. The fruit of this Palm is the size of a hen's egg. The base of the leafstalks is covered with long fibrous filaments, that serve to make cordage and sacking.

Names of Fruits .- Notice .- Special attention is directed to the following decision, the object of which is to discourage the growth of inferior and promote the culture of superior varieties. In eonsequence of the large number of worthless Apples and Pears sent to this office to be named, it has been decided to name only specimens and varieties of approved merit, and to reject the inferior, which are not worth sending or growing. The names and addresses of senders of fruit to be named must in all cases be enclosed with the specimens, whether letters referring to the fruit are sent by post or not. The names are not necessarily required for publication, initials sufficing for that. Only six specimens can be named at once, and any beyond that number cannot be preserved. (Wm. Huxley).—Apple Pcasegood's Nonesuch. (Evans, Hassoeks).—Duchess of Oldenburg. (F. B. D.).—1, Red Astrachan; 2, King of Pippins; 3, Court Pendû Plat; 4, London Pippin. (R. B.).—1, Brown Turkey; 2, Brunswick.

Names of Plants.—We only undertake to name species of plants, not varieties that have originated from seed and termed florists' flowers. Flowering specimens are necessary of flowering plants, and Fern fronds should bear spores. Specimens should arrive in a fresh state in firm boxes. Slightly damp moss, soft green grass or leaves form the best packing, dry wool the worst. Not more than six specimens can be named at once, and the numbers should be visible without untying the ligatures, it being often difficult to separate them when the paper is damp. P.). — Specimen insufficient. (A. M.). — Lilium lancifolium.

(B. B.).—Adiantum cuneatum.

TRADE CATALOGUES RECEIVED.

J. Carter & Co., High Holborn, London.—Bulb Catalogue. J. Cheal & Sons, Lowfield Nurseries, Crawley.—Spring Flowering Bulbs.

Dobie & Mason, Oak Street, Manchester. — Hyacinths, Tulips, Croeuses, &e.

Fisher, Son, & Sibray, Handsworth Nurserics, Sheffield.—Bulbs and $Flower\ Roots.$

J. Laing & Sons, Forest Hill, S.E.—Dutch, French, and other Bulbous Roots.

Little & Ballantyne, Carlisle.—Bulb Catalogue.

Vilmorin, Andrieux & Co., Paris.—Bulbous Rooted and other Flowers.

COVENT GARDEN MARKET .-- AUGUST 23RD.

OO TENT CARDEN M	ALLEI,—AUGUST ZERD.
Large supplies, readily changing hands	at low rates.
FRU	JIT.
s. d. s. d.	_
A mmla - mail 1 1 1	d. s. d.
Apples, per bushel 1 0 to 6 0	Grapes per lb $0 9 \text{ to } 2 0$
" Tasmanian, per case 0 0 0 0	Lemons, case 10 0 15 0
", Nova Scotia, brl. 0 0 0 0	Oranges, per 100 \dots 0 0 0 0
Cherries, half sieve 0 0 0 0	Peaches, per doz 1 6 8 0
Cobs 25 0 0 0	Plums, per half sieve 1 6 2 6
Filberts, per 100 lbs 25 0 0 0	St. Michael Pines, each 2 0 5 0
Gooseberries, half sievc 0 0 0 0	Strawberries, per lb 0 0 0 0
	, per
VEGET.	ABLES.
s. d. s. d.	s. d. s. d
Asparagus, per bundle 0 0 to 0 0	Mustard and Cress, punuet 0 2 to 0 6
Beans, Kidney, per lb 0 3 0 4	Ondana 1
Beet, Red, dozen 1 0 0 0	n , / 1
Claumata hamal	Parsley, dozen bunches 2 0 3 0 Parsley, dozen 1 0 0 0
	Potatoes, per cwt 2 0 4 6
Oelery, bundle 1 0 1 3	Salsafy, bundle 1 0 1 6
Ooleworts, dozen buuches 2 0 4 0	Scorzonera, bundle 1 6 0 0
Oucumbers, dozen 1 6 3 0	Seakale, per basket 0 0 0 0
Endivc, dozen 1 3 1 6	Shallots, per lb 0 3 0 0
Herbs, bunch 0 3 0 0	Spinach, bushel 8 0 0 0
Leeks, bunch 0 2 0 0	Tomatoes, per lb 0 3 0 4
Lettuce, dozen 0 9 1 0	Turnips, buuch 0 4 0 6
Mushrooms, punnet 0 9 1 0	2 arm ps, bauou 0 4 0 0
AVERAGE WHOLESALE	PRIOES.—OUT FLOWERS.
Orchid Bloom	ns in variety.
s. d. s. d	s. d. s. d.
Arum Lilies, 12 blooms 2 0 to 4 0	Marguerites, 12 bunches 2 0 to 4 0
Asters (French), per bunch 0 9 1 3	
" (English) doz. behes. 3 0 5 0	
Popular hands of the state of t	Myosotis, dozen bunches 1 6 3 0
Bouvardias, bunch 0 6 1 0	Orchids, per dozen blcoms 3 0 12 6
Carnations, 12 blooms 0 6 2 0	Pelargoniums, 12 bunches 6 0 9 0
Carnations, dozen bunches 4 0 8 0	Pelargoniums, scarlet, doz.
Chrysanthemums, dozen	bunches 3 0 6 0
bunches 4 0 6 0	Primula (double) 12 sprays 0 6 1 0
Chrysanthemnms, doz. bls. 1 0 2 0	Pyrethrum, dozen bunches 2 0 6 0
Cornflower, dozen bunches. 1 0 2 0	Roses (indoor), dozen 0 6 1 6
Eucharis, dozen 1 6 4 0	
Gardenias, per dozen . 2 0 4 0	
Lilium lancifolium, dozen	
blooms 100 000	"Yellow, dozen 2 0 4 0
blooms 1 6 3 0	Stocks, dozen bunches 4 0 8 0
Lilium longiflorum 12	Sweet Peas, doz. bunches 2 0 4 0
	Direct Leas, dez. Billiones 2 0 4 0
blooms 2 0 4 0	Sweet Sultan, per dozen
Maidenhair Fern, dozen	Sweet Sultan, per dozen bunches 3 0 4 0
	Sweet Sultan, per dozen

d. s. d. 0 to 12 0 0 36 0 0 10 6

6 0 18 0

42 24 18

18 6 7

10 9

PLANTS IN POTS.

Hydrangea, per dozen . 12 0 to 24 0
Ivy Geraniums 4 0 6 0
Lilium lancifolium per dozen 12 0 18 0
Lilium Harrissi, per dozen 12 0 24 0
Lobelia, per dozen . . . 3 0 6 0
Lycopodiums, per dozen . 3 0 4 0
Marguerite Daisy, dozen . 6 0 12 0
Mignonettc, per doz. . . . 4 0 6 0
Myrtles, dozen 6 0 9 0
Palms, in var. each . . . 1 0 15 0
, (specimens) 21 0 63 0
Pelargoniums, per dozen . . . 6 0 12 0
Pelargoniums, per dozen . . . 6 0 12 0
Petunia, per dozen . . . 6 0 9 0

" searlet, per dozen.. Petunia, per dozen

Rhodanthe, per dozen ...

Arbor Vitæ (golden) dozen 6

Euonymus, var., dozen 6 Evergreens. in var., dozen 6 Ferns, in variety, dozen 4 Ferns (small) per hundred 4

Ferns, in variety, dozen . . 4
Ferns (small) per hundred
Ficus elastica, each . . . 1
Foliage plants, var., each . . . 2
Fuchsia, per dozen . . . 5



FODDER FOR WINTER—ENSILAGE.

TROPICAL heat, the thermometer at nearly 90° in the shade, with nine hours of bright sunshine day after day at mid-August, is certainly brilliant harvest weather, and Wheat samples will be so high in quality as to compare favourably with imported corn. But this extreme heat, this parching weather, is fatal to the hopes of those farmers who put off mowing what little grass they had till corn harvest was well advanced, in the vain expectation that enough rain would fall after all to induce some really useful additional growth of herbage. It is true enough that rain has fallen so freely in many districts to thoroughly moisten the soil to a considerable depth, and wherever this has happened pastures are clothed with rich luxuriant herbage, but there are others where the pasture has never recovered from the effects of the drought, and there the outlook is indeed gloomy. Useless for their assistance now is it to dwell upon the folly of laying down the whole of the land to permanent pasture—of starving the land when it is so laid down: we cannot help them. It is to those who were wise enough to sow Rye, Oats, Italian Rye Grass, Tares, and Peas or Beans as catch crops, that we turn to urge them to do their utmost to preserve and store as much of such fodder as they can for use next winter and spring.

In the prevalent hot weather, any of it that is sufficiently forward in growth can easily be made into hay, but most of it will not be ready for moving till unsettled weather and shortening days render haymaking much too speculative to be safe. Recourse must then be had to ensilage, as a simple, sure, and efficient means of preserving fodder in a wholesome nutritious condition. Prejudice and ignorance may try to oppose it, but in such a crisis no quarter must be given to any nonsense of the kind. There has been too much forbearance shown in this matter, and we believe that among the lessons of adversity taught by this trying year, the real value and use of silage will take a prominent place.

No longer is it necessary to build costly silos as receptacles for chaffed fodder—that is one of the things we have had to unlearn. Nor do we require any of the costly patent pressing apparatus which keen implement makers speedily placed on market in response to an apparent want. Experience has shown that green forage mown and placed in a sufficiently compact heap in layers of a yard thick, with an interval of three or four days between the stacking of each layer, will afford an invaluable store of nutritious food for horses, store cattle, cows, sheep, and lambs. To go fully into detail, let us explain what is considered as the best way of making a compressed silage heap at the present time. It requires some practice to enable one to decide beforehand upon the size of the heap. The fact of a cubic foot of a well-made silage heap weighing half a hundredweight shows how closely it can be pressed together. Bearing this in mind, with a calculation as to the weight of crop per acre, should enable one to decide upon the size of a heap which when finished is to be 6 feet in height, on a clear level place, easy of access, and near the yards. Mark, for example, a space 18 feet wide by 36 feet long. Upon this cart and shoot the forage as it is mown, spreading it out regularly, keeping the sides upright, but making a slope with the forage at each end for the loads to be drawn upon the heap, and the empty carts to pass off at the other end, just as is done in making a Suffolk manure heap. This carting upon the heap helps to make it

compact; a horse drawing an iron roller is also kept going over it till a firm layer 3 feet high is made. This layer is then left to settle and heat for three or four days, a thorough rolling with the horse and iron roller being given daily. Then another layer is put on and treated in precisely the same way, the heap being thus gradually built to a height of 6 feet. The sloping ends are then cut off with a hay knife, thrown upon the top of the heap, spread out and well trampled down, so that ends and sides are all left perpendicular. The top is then weighted with timber-rough logs answer perfectly well-topped up with rough litter or straw and thatched. Of course there is some heating, but the gradual construction and pressure prevents excessive or hurtful heating, and the silage becomes cool in about three months. At half a hundredweight to the cubic foot, the contents of such a heap work out at about 97 tons, and the fortunate owner of it might well be an object of envy to his brother farmers in the coming winter. The difficulty—the only difficulty, is to get enough green forage, not necessarily of the same sort. It may be a mixture of green Oats, Rye, Rye Grass, Lucerne, second cut of Clover, Tares, or mixed seeds, it matters not which; all or any of them treated in the simple manner described will make an aromatic heap of fodder that will prove invaluable for stock feeding from Christmas till May day, or longer if necessary.

We had written the above before seeing the hints on special ensilage which the Board of Agriculture has sent out, and which appeared in the last number of the Journal. They are certainly well timed, and will do good if they induce farmers to save every scrap of spare herbage, and store it for winter by ensilage. Our details of the process were advisedly confined to the making of clamped silage, because of its facility, economy, and certainty. After the clamp is made the two important points are pressure and thatching to throw off rain. By all means use dry earth if it can be had; but bearing in mind how doubtful that is in autumn, we think it better to recommend the use of logs of timber. Anything heavy will do-we used slag from an old blast furnace for our first silo-so as to keep a steady pressure upon the heap, then top up to a sufficiently acute angle and cover with thatch of straw, reeds, rushes, heather; with corrugated iron sheets, weather boards, felt, or anything to throw off rain and keep the silage dry. Soil alone will not do this, and we certainly think the Board of Agriculture's advice to use it for a covering as risky. We repeat, use plenty of pressure, and keep out the rain, if you would preserve silage in good condition.

WORK ON THE HOME FARM.

At the Royal Show at Chester an enterprising seedsman had a bundle of drought-resisting fodder plants with very long roots on his stand. He was wise, because particular attention to such crops has been forced upon the grazier this summer. We hope it may lead to the more general culture of Lucerne, which, good as it always is, has stood out conspicuous for its superiority over all other forage plants without any special culture beyond that followed in ordinary practice. With its roots deep down in the soil it has passed through the drought unscathed, unaffected by it in the slightest degree. The three growths of it have given an aggregate in height of full 10 fect. What would graziers in Leicestershire with their hay crop barely 10 inches high, or Kent and Sussex farmers with no hay at all, say to this? Often when urging the value of this crop and its easy culture upon tenant farmers have we been told that soil must have lime in it for Lucerne. Well, we would certainly give land a heavy dressing of lime rather than go without Lucerne, and we once more earnestly recommend it for general cultivation.

Second crops of Clover are much heavier than was the first crop. They are being mown and made into hay with great facility now, the demand for hay of any kind being so general that very little Clover will be left for seed. Harvest work, and the breaking up of stubbles, has been going on briskly. Sheep-folding on a capital crop of White Mustard helps to ease the pastures. It makes a wholesome change for the flock, and the land is enriched for a crop of Winter Oats.

We have had many complaints of fly striking among the sheep of our correspondents, a special grievance being made of flies attacking sheep so soon after they have been dipped. It should be clearly understood that while dipping may give sheep immunity from fly attacks for a short time, its special work is to destroy at the time of dipping all

parasitical insects in the wool or upon the skin, especially those terrible blood-suckers, the ticks, which irritate the sheep to such a degree that they are practically never at rest, and cannot thrive. Dipping soon after shearing, and again in September, is usually all that is required; both are indispensable, and are usually sufficient. Fly attacks are to be expected daily and hourly in such dry hot weather as we are now having, but there can be no material harm from them if the flock has proper attention. That is the point—pains and care, very little science is wanted. We recently went through the flock of a veterinary surgeon, and found several bad cases of foot-rot; evidently the man of science was not a careful, hardly a humane man.

OUR LETTER BOX.

Thistles (B.).—To destroy Thistles they must be pulled up by the roots. On arable land this is done by repeated hoeing among root crops, or by thorough autumn tillage, ploughing, harrowing, deep stirring with cultivator or horse hoe, so as not only to sever the roots well beneath the surface, but to bring the loosened plants upon the surface, to be killed by exposure, or, better still, collected and burnt. On pasture, the practice of mowing Thistles once or twice during summer may weaken growth, but we always regard it as a waste of time and money. them up once for all, and there is an end of them; we have had them pulled up by hands protected with stout leathern gloves when the land is softened by heavy rain, also dug up with dock spuds. The plan may be tedious, but it is certainly thorough. Never suffer a Thistle to run to seed; turn every one to the rooting up of them at odd times, and by the exercise of a little perseverance you will get rid of them. Show this to your neighbour, and at any rate try and induce him to prevent Thistle seeding. We have known an entire parish to become infested with this pest by seed blown about it from the land of a slovenly farmer. That farm eventually came into our hands. By steady persistence we got rid of the Thistles. If your land is as badly infested by them as that was, you will have a very clear idea of the true meaning of perseverance before you have done with them before you have done with them.

POULTRY IN FRANCE.—The income derived by French people who rear fowls, says an industrious statistician, according to octroi and market returns, is 337,100,000 francs, of which 153,500,000 francs represent the value of the flesh, and 183,600,000 francs that of the eggs. The quantity sold in poultry yards is immense, as is also the number used in the homes of those who rear fowls. These figures do not find their way into statistics.

THE HARVEST IN THE MIDLANDS.-Midland farmers, a daily contemporary asserts, have had greater advantages for in-gathering their crops this year than they have had for nearly a quarter of a century. It is estimated that Wheat on the average will yield from four to five quarters per acre, which is above the usual produce, while the quality is exceptionally good. Oats again are far above the average, and are already so ripe that thrashing can begin as soon as the crop is cut. It is complained that the straw is short; but the farmers have the compensating advantage that both quality and quantity are fairly excellent. During the past few days considerable progress has fairly excellent. During the past few days considerable progress has been made with the in-gathering, and the result so far has created much satisfaction.

METEOROLOGICAL OBSERVATIONS.

CAMDEN SQUARE, LONDON. Lat. 51° 32' 40" N.; Long. 0° 8' 0" W.; Altitude, 111 feet.

DATE.	9 A.M.									
1893.	Barometer at 32°, and Sea Level.	Hygrometer.		Direc-	Temp. of soil			Radiation Temperature		Rain.
August.	Barc at 32 Sea	Dry.	Wet.	Wind.	1 foot.	Max.	Min.	In Sun.	On Grass.	
Sunday . 13 Monday . 14 Tuesday . 15 Wednesday 16 Thursday . 17 Friday . 18 Saturday . 19	Inchs. 30·180 30·232 30·223 30·137 30·088 29·819 29·920	deg. 74·5 71·3 74·9 75·2 76·3 84·3 68·5	deg. 67·6 61·2 64·2 62·7 65·9 66·7 61·8	E. Oalm. S. S.W. S.W. S. S.W.	deg. 65·4 65·2 65·6 66·0 67·0 67·9 68·8	deg. 78·5 82·7 87·8 90·7 92·7 93·6 79·5	deg. 59·3 60·2 58·8 59·9 61·3 64·1 63·8	deg. 99°1 111°0 119°8 130°4 118°9 131°9 123°2	deg. 55·1 55·3 54·3 53·3 56·1 56·8 60·3	Inchs.
	30.086	75.0	64.3		66.6	86.5	61.1	120.6	55.9	_

REMARKS.

13th.—Bright sunshine early, but haze and cloud gradually accumulated, and only occasional gleams of sun after 11 A.M.
14th.—Calm, hazy, and oppressive throughout.
15th.—Sunny and hot; hazy, with a little cloud in morning, and solar halo about 11 A.M.

11 A.M.

16th.—Hot; almost cloudless till 3.30 P.M.; solar halo about 4 P.M., cloudless again by 5 P.M.

17th.—Sunny and hot throughout, a little hazy in the morning.

18th.—Almost cloudless, with very high temperature, but breezy and pleasant; distant lightning at night.

19th.—Cool and pleasant, with sunshine at times.

A very hot week; probably the hottest recorded here since the observations commenced in 1858. The 9 a.m. temperature on 18th (84.3°) is without precedent in the thirty-six years, and the 16th, 17th, and 18th are the only instance of three consecutive days with max. above 90°. The temperature of 93.6° on 18th has only once been exceeded, namely on July 15th, 1881, when 94.6° was recorded.—G. J. SYMONS.



VER all the fruits that are grown in our island home the Apple remains king in usefulness; but it has to be said that the fruit, broadly and generally speaking, is not yet represented in kingly fashion. In too many instances it lacks dignity, and does not command the respect to which the fruit when seen in its full nobility of character is justly entitled. Apples were on the down grade for many a year, but their course was checked by the efforts of men who believed them worthy of a better fate than that to which they were being driven by apathy, ignorance, and neglect. The Apples of Britain, taking them in the bulk, a dozen years ago were a disgrace to the nation and spurned by its inhabitants in favour of the better, larger, brighter samples from other lands; yet the soil of those lands was no better than in our own, the varieties no better, the enemies no fewer, the climate no more favourable as a rule to the growth of Apples than that which generally prevails in this country. Impediments have to be encountered everywhere, and losses periodically sustained, but this is the case with the production of all crops that are influenced by the weather, as both farmers and gardeners know too well; and whatever the obstacles in growing fruit, those persons who adopt the best methods are bound to have the greatest success, as in the splendid Apples exhibited in the Agricultural Hall, Islington.

When the planting of Apple trees much more extensively than formerly was being so strongly advocated during what may be termed the fruit crusade, many persons feared that if the advice were followed the country would soon be so full of fruit that the crops would "fetch nothing." Undoubtedly the effect of the agitation for growing more and especially better fruit in this country resulted in the planting of millions of trees and bushes over thousands of acres of land. Great numbers of those trees are now in bearing, and the fruit is leaving its impress on the markets. Broadly speaking the result so far is to render the small scrubby Apples from old or exhausted trees not worth sending to market, while fine fruit from young trees finds a ready sale at prices, if not high yet remunerative to the grower. As the supply of first-class fruit increases in bulk prices would inevitably fall but for two great counteracting influences-1, the constant increase in the number of consumers; 2, the increased disposition of the public to purchase fruit when it is of the best appearance, good in quality, and obtainable at a moderate price. Inferior fruit is repellant to thousands, and they will not have it at any price, but bright, good sized, speckless, and tender-looking specimens are so tempting as to become irresistible. Several instances could be cited of the uselessness of third or fourth-rate Apples and of the value of first-class produce to the grower, but one must suffice at present.

W. H. Myers, Esq., M.P., is a gentleman who takes great interest in improving his estate, not because of the advantage of this to himself alone, but because, while he may eventually gain, a number of men are in the meantime benefited by the employment afforded in establishing extensive plantations of Larch and other trees. These plantations will be more profitable in the end than the land surrounding under agricultural tillage; but fruit trees have also been planted at Swanmore by Mr. Myers' gardener—not many, only about 2000—and though the oldest of these trees have only been planted three years, some of them are already giving an encouraging return. The fruit from these young trees as grown

in good and well-prepared soil is, so to say, "run after" at 5s. a bushel; while the crops of smaller fruit from old and more or less enfeebled orchard trees would be gladly disposed of for a fourth of the price, yet more time is involved in gathering the latter than the former.

This Swanmore experiment in Apple culture is suggestive and instructive. In the first place varieties were wisely chosen that had been found to succeed the best in a small orchard planted fifteen years ago. These were mainly Warner's King, the tree never failing to yield magnificent fruit, Ecklinville and Mère de Ménage as cooking Apples, with Worcester Pearmain, King of the Pippins, and Cox's Orange Pippin as table fruits. Several other sorts including Blenheim Pippin did not succeed half so well in the strong loam resting on chalk, and, therefore, were excluded from the new plantation; but other varieties of repute were included. A grass field of 5 acres adjoining the garden was devoted to this Apple growing experiment. The position is elevated and open, and in those respects favourable to the blossoms escaping destruction by spring frost in comparison with those of trees in low, damp, and confined enclosures.

One portion of the field was planted with standard trees 30 feet apart, and a bush tree between each two standards in the lines, also a row with the trees 15 feet asunder between the rows of standards, thus in this portion the trees stand at the distance last named. They are on grass, each planted in a prepared station, 4 feet wide and 2 feet deep. The soil is kept free from weeds and loose on the surface, not by digging but with the hoe. The growth has been so good and the root action so free that the ground has been broken in circles a foot wide and 18 inches deep outside the stations to permit of root extension in the upper layer of soil. The trees were pruned after planting to obtain the requisite number of branches, and have made admirable progress. Some that made very free growth, suggestive of exuberance, were simply taken up and replanted - an excellent plan for enhancing vigour and inducing fruitfulness not sufficiently practised. When once bearing commences the fruits will keep the growth in subjection. All the lifted trees are replanted higher than before, and it is found that the higher the mounds are in reason the more satisfactory is the growth, as combining adequate extension with firmness and blossom-forming proclivity. Some of the mounds are 18 inches high, few less than a foot above the ground level. On trees that are in bearing and mulched with manure the fruit is magnificent, and fine enough to sell in any market where the trees are not mulched, as is the case with the majority. This orchard on grass will be profitable in another year or two, and numbers of the trees have paid for themselves and something more already.

The other half of the field was wholly broken up and planted similarly, but extra rows of maiden trees were planted between the standards and two-year-old bushes, so that the whole stand $7\frac{1}{2}$ feet apart. This is the way to obtain the most money off the ground by the sale of Apples at a small extra cost in planting the maidens, though no doubt a still earlier gain would be had by inter-planting with Gooseberries; but this is an Apple experiment. The standard trees are included in case at any future time, as they advance in growth, the dwarfs can be gradually removed, and the ground beneath the tall standards devoted to grazing, if it should be required for that purpose, and it is proverbially difficult to foresee what may be wanted eventually on a gentleman's estate, as the fancy of some owner may turn in the direction of live stock in preference to fruit. For producing the greatest abundance of the best Apples, cultivated fruit gardens is the system to adopt, and in suitable soil and positions, combined with good management, the work may be expected to prove fairly remunerative even if the prices for fruit fall lower than they are now, always provided the produce is of high quality and of uniformly good throughout the bulk. Second and third rate fruit carelessly marketed cannot be expected to pay in the future. For the very best home-grown

Apples there always has been, and it is reasonable to suppose there always will be a ready sale.

Returning to the varieties in Mr. Myers' experiment the standard trees consist of 100 Worcester Pearmain, forty-six Ecklinville, thirty-six Cox's Orange Pippin, and fifty Bramley's Seedling. The dwarfs comprise 250 Warner's King, a variety that would be increased in an extension of planting; 220 Ecklinvilles, too many, as the fruits are soft and liable to be specked; forty Mère de Ménage, a satisfactory proportion; twenty Worcester Pearmain, not nearly sufficient, as the fruit sells so well; forty Irish Peach, not profitable, and would not be planted again for market purposes; 120 Lady Sudeley, as coming in just when wanted, would be increased; seventy-five Cox's Orange Pippin, would be considerably increased; thirty King of the Pippins, sufficient, crop good, and fruit fine, but not bright enough; twenty-five Lady Henniker, too many, tree too large, and a sparse bearer; 550 Lord Grosvenor, one of the most profitable of all, and would be largely increased; 100 Bramley's Seedling, growing and bearing so well that it would be considerably increased both in the form of standards and dwarfs; 125 Lane's Prince Albert, of which many more would be planted; 100 Stirling Castle, such an early and bountiful bearer that it would be planted more extensively.

In respect to the bearing of the young trees in the plantation, Bramley's Seedlings, as standards and dwarfs planted in 1890, are carrying from twenty to twenty-five fruits 10 inches in circumference, and are not blown off the trees. A maiden planted last autumn had three fruits 12 inches in diameter, heavier than itself, pointed to as not a "slow" bearer. Warner's King and Lord Grosvenor, bearing twenty-five fruits 13 inches in diameter, 35 bushels being sold from the latter at 5s. a bushel; Stirling Castle, overladen, fruits good, but unduly taxing the trees; Lane's Prince] Albert, young trees, supporting twenty to thirty splendid Apples, and making satisfactory growth; Cox's Orange Pippin carrying fifty to sixty handsome fruits, several girthing 9 inches.

Of the varieties grown in less numbers, the Queen and Cox's Pomona were promising well, as were Bismarck, very fine Wealthy, Wiltshire Defiance, and Sandringham, very large; Queen Caroline, beautiful; Golden Spire, and Frogmore Prolific. Of table sorts, Devonshire Quarrenden has paid well, and Mr. Molyneux wishes he had several hundred trees of Benoni and several hundred bushels of Worcester Pearmain. He finds a great dearth of table Apples between the first earlies—such as Red Astrachan, Mr. Gladstone, and others—and the autumn bearers, hence the special value of such as Lady Sudeley, Worcester Pearmain, and Benoni, and of these he would plant largely, in the full assurance of a ready sale. Upwards of 100 of the best varieties in cultivation are on trial at Swanmore, including most of the new sorts, the object being to ascertain by comparison those most likely to give the best return if extensively planted for commercial purposes. This well conducted experiment in Apple culture will be of practical value to intending planters, and Mr. Myers and his gardener are to be congratulated on the progress already made, as well as on a promising future.

HARDY FLOWER NOTES.

MORINA LONGIFOLIA.

THERE are few hardy flowers which attract more attention than a good specimen of Morina longifolia when in full bloom. The long, glossy, somewhat spiny leaves are very pretty, and the handsome spike with its crowded whorls of white and crimson flowers add to the appearance of the plant. It seems to be a favourite wherever grown, and it is to be regretted that it does not prove a true perennial on all soils. It is so easily raised from seed, which it ripens abundantly, that it can be readily replaced; and it may be noted that young plants transplant much more successfully than older ones, as the long tap roots are liable to injury. One of the pleasing features of this plant is the variety presented by the flowers in their various stages. The buds are

white, and when open the flowers are of a pretty pink, which again passes off to a fine bright crimson. The flowers have rather long tubes in proportion to their breadth, these being about 1 inch, and the flower about three-quarters of an inch across. The blooms are produced in whorls in the axils of the flowering stems, which attain a height of 2 feet or more. The leaves are from 10 inches to upwards of a foot in length, and are pinnatifid.

to upwards of a foot in length, and are pinnatifid.

Morina longifolia will be found to thrive well in a rich but somewhat light soil, and prefers a little shade. The customary period for flowering here (Dumfries) is July, but occasionally a plant will fail to bloom in the ordinary season, and throws up a flower stem in late autumn. Even a plant which flowers in its usual course will sometimes throw up late stems. A fine spike on one of my plants was just beginning to open late last October, when a severe night's frost destroyed it. It is a native of Nepaul, whence it was introduced by Wallich about 1839. Seeds may be sown in pots or boxes as soon as ripe, and placed in a frame, or they may be kept until spring, and sown in the open ground in March or April. With good treatment plants should flower the second season. Division of the plants is also practised, but this should not be attempted unless they are a fair size.

The genus Morina was named in honour of Louis Morin, a French botanist, who existed in the end of the seventeenth and beginning of the eighteenth centuries. The first species of the genus which was introduced was M. persica, discovered by Tournefort. Besides this, and the subject of this note, there are some half a dozen other species, all being natives of Asia. Few of these are in cultivation in this country. The Morinas belong to the natural order Dipsaceæ, and a synonym of the genus is Asaphes. An illustration of M. longifolia is given in the "Botanical Magazine," tab. 4092; in the "Botanical Register," vol. xxvi., plate 36; and one may also be found in Maund's "Botanic Garden," vol. v., plate 197. The latter only shows part of the spike, and consequently does not do full justice to the symmetry of the plant. Morina longifolia is one of the flowers which can be recommended with every confidence.

COREOPSIS MONSTROSA.

The specific name of monstrosa has occasionally been applied in a most inappropriate manner to flowers, and it cannot, I think, be denied that here we have a case in point. Judging from the appearance of Coreopsis monstrosa from a garden or from a structural point of view, there is nothing about the plant which would give warrant for according it a specific name far from appropriate to such a graceful flower, for this plant shares the grace of its congeners, which, as a whole, are exceedingly beautiful in habit. It seems to be a plant of garden origin, and only a large-flowered and extremely fine form of one of our most beautiful garden flowers—C. lanceolata. The habit of the plant is more robust than is the typical C. lanceolata, and it may be recommended as a decided improvement upon the latter. I have seen this plant in various gardens and soils, and taken as a whole C. monstrosa will bear favourable comparison with the much-praised C. grandiflora, its bright clear yellow flowers being of good colour and form. There seems to be no special difficulty in its cultivation.

MORISIA HYPOGÆA.

Although I have recently written of this neat rockery plant, some additional information as to its propagation may be of interest, especially as I have failed to discover any reference to this system of propagation as applied to the Morisia. This is by means of root cuttings, a well known and useful method of propagating many flowers. In lifting a plant of M. hypogæa for the purpose of taking off cuttings and dividing the plant, an examination of the character of the roots caused me to be of opinion that it could be easily increased by means of cuttings of short pieces of the root. Several of the roots were taken off, cut into pieces about an inch in length, inserted in pots of light sandy soil, and placed in a cool greenhouse. The upper or thicker end of each root cutting was of course placed uppermost and so placed that it was just under the slight layer of sand with which the pot was surfaced. In about a fortnight leaves began to appear from the apex, and the plants produced in this way are nearly as large as those obtained by ordinary cuttings of the stems inserted the same day. The cuttings were taken off in the end of June.

CIMICIFUGA SERPENTARIA.

Whatever may be said for the literal accuracy of the name of Serpent-like Bugwort, all who have seen this flower will, I feel sure, agree in thinking it a most unpleasant one for such a pretty occupant of our garden borders. I fear even the Rose if burdened with the name of Bugwort would hardly "smell as sweet," and one is tempted to wish for a revision of some of the names which, like the plants themselves, have come to us from the other side of the

Atlantic. Until, however, some authority can give us a better name and secure its general acceptance, we must, I suppose veil it under the Greek name which, although of similar meaning, disguises to ordinary ears the unpleasant reference of which we

In Mr. Nicholson's "Dictionary of Gardening" C. merpentaria is described as a synonym of C. racemosa; but, while this may be the case from a botanical point of view, for garden purposes the plants sold as C. racemosa and C. serpentaria are very distinct in the appearance of the inflorescence, the former having straight, erect racemes of flowers, while the subject of this note has its racemes twisted and abruptly bent in a curious manner, whence, I suppose, the derivation of the distinctive or specific name of ser-In general this form in flowers is not particularly attractive, resembling as it does the effect at times produced by blooms which have for some time been laid prostrate, and have then been staked and tied to an erect position, thus frequently giving the flower spikes a twisted appearance. In C. serpentaria, however, this is not so, but the abrupt angles and contortion renders the plant more interesting, and in no way detracts from its beauty. I find, indeed, that this Cimicifuga is being more frequently sought for, and much disappointment is felt when, as is not unfrequently the case, the ordinary C. racemosa is supplied.

I have recently seen some fine specimens of C. serpentaria, and in the garden at Cavens, Dumfries, N.B., several fine plants about 5 feet high had a good effect in a long border contrasted with Aconitum bicolor. The Cimicifugas belong to the large family of Ranunculaceæ, and are very beautiful in a border suited to the growth of the taller herbaceous plants, where with a little shade and a fair amount of moisture, they will soon form handsome clumps. They are readily propagated by division, or by means of

seeds, sown as soon as ripe.

EARLY FLOWERING OF AUTUMN BULBS.

The warmth of the past season has ripened bulbs early, and the rain which succeeded the great heat has pushed many into growth, thus bringing several plants which generally flower late in autumn into premature flower. Thus Leucoium autumnale came into flower the first week in July, and Colchicums Bertoloni and C. latifolium came into flower on July 28th and 29th respectively. One can hardly say that their appearance was welcome at this early season, when flowers were plentiful, and we looked forward to their succeeding other plants, and bridging over what is usually a comparatively dull season.—S. ARNOTT.



ORCHIDS AT CHELSEA.

THERE were not at the time of my visit to Mr. Bull's the other day a great number of Orchids in bloom, as the season has cleared them off much more rapidly than usual. However, what there were assisted materially to brighten the structures devoted to their culture, and particularly noticeable amongst those in flower were Cypripedium cenanthum superbum, a very beautiful piece of Angræcum descendens, the blooms of which were diffusing a faint but pleasing fragrance; Habenaria militaris, little plants of which were throwing up their brightly coloured blooms; Oncidium Kramerianum, Saccolabium Blumei longiracemosum in fine condition, and several richly coloured Lælias purpurata and elegans. On many of the Orchid pots were to be seen pieces of Potatoes placed as traps for woodlice.

LÆLIA MONOPHYLLA.

WE have no more charming little summer flowering Orchid than this. There are about a dozen examples of it in flower in the cool Orchid house at Kew, each bearing from six to a dozen flowers of elegant butterfly form, and coloured vivid orange-scarlet. have heard of a plant which bore three flowers on a scape, but all of the plants at Kew have only a single flower on each scape. The pseudo-bulbs are no thicker than a knitting-needle, 6 inches long, each bearing a single narrow leaf 3 inches long. The scape is slender, curved, 3 inches long, and the flower is between 1 and 2 inches in diameter.

The Kew examples have been in flower a fortnight, and the flowers are, at the time of writing, still quite fresh. They are grown in a cool house along with Masdevallias, and they get a fair supply of water all the year round. This species was first intro-

duced and flowered at Kew in 1882, plants having been found by Mr. Morris in Jamaica on St. Andrew's Mountain at an elevation of about 5000 feet. Mr. Norman Cookson is trying to cross it with other species of Lælia.—W. WATSON (in "Garden and Forest").

ORCHIDS IN NORTHUMBERLAND.

Anyone visiting Morpeth, the former capital of Northumberland, would scarcely at first sight be aware, or expect to find, so large an area of glass houses devoted to plant and Orchid culture as that possessed by Edward Hopper, Esq., of Riverside. collection of Orchids is one of the best in Northumberland. On a recent visit I had pointed out to me Dendrobium giganteum with four blooms, Oncidium papilio majus, 5 inches across, very fine; and Odontoglossum Uro-Skinneri, so very suitable for buttonholes. Amongst other plants must be mentioned Clerodendron fragrans for its pleasing perfume; Hedychium album, a charming white flower, and the curious Strelitzia Reginæ with ten spikes.

Mr. Hopper is a great botanist, and possesses one of the finest botanical libraries in the district, is a warm enthusiast, and always glad to meet persons interested in gardening. He has now secured the services of Mr. James Wood as head gardener, and the place is a credit to the latter's gardening skill, which is well known in the north of England.—Bernard Cowan.

INSECTS OF THE FLOWER GARDEN.

(Continued from page 93.)

SINCE the mites are insects that are to be found almost everywhere, indoors and out, we may be sure they have some representatives in every flower garden. Tropical countries can furnish specimens belonging to this group which are as large as a pea, but all our British species verify their name—they are but specks of life, and many are so tiny that they can scarcely be seen without a magnifying glass. Like the aphis and some other insects of small size, their numbers enable them to produce results they could not otherwise accomplish, and there are species that give us trouble, even in the cultivation of flowers, a few being particularly noticeable. It is only of late that attention has been called to the economy of these insects, and, in the case of some plants and trees, it is likely to remain for the present a doubtful matter whether the mites upon them are a cause of disease or its consequence. mite most familiar to us in houses and gardens is the annoying red spider (so-called), and its useful relatives, if endued with intelligence, might very well disown a species having habits so unlike theirs. Juvenile mites are not much different in appearance from full-grown specimens, except that they possess but six legs, eight being the complete number; nobody has ascertained yet how long their life lasts. All species have the abdomen neither segmented nor stalked, but more or less rounded, and joined on to a small thorax bearing the legs. It might be desirable in some cases to destroy their eggs; the minuteness of these is a difficulty, however. Also it has been suggested that they are wafted by the air from the place where they are laid to another spot, and certainly their sudden appearance at times is mysterious, for the insects themselves are not of migratory habit, or but rarely.

Of all the mites, the spinners come nearest to the spider proper, since they are able to weave a web, having claws specially adapted to this, and a spinning apparatus. The mouth has a barbed sucker, and mandibles or jaws as well; and some suppose that those of the spinning mites which act as blood-suckers throw into the tiny puncture they make some kind of poison. Specimens of both groups, of the vegetable feeders and of those that are predacious, are to be noticed in flower gardens. Those of the former are the smaller, and of pale or dull colours, also semi-transparent; those of the latter are velvety and opaque, in colour some shade of red or black. One of our worst enemies is the red spider, Tetranychus telarius, a strict vegetarian, and which, though most troublesome in houses, abounds upon some exotic plants in beds and borders. call it red, and many of these insects are of some shade of red, but others occur that are green or brown, hence some have been thought to be distinct species. An entomologist noticed upon the Hollyhock red spiders of various colours, possibly of different ages; and upon the Rose, in some districts, some occur of pale green hue, and almost transparent. Boisduval thinks that red spider rarely almost transparent. appears on the Rose if the tree is healthy, and also with Camellias and Dracænas; it is plants out of condition that the insect seems to single out for attack. This insect is so notably a lover of warmth that it has been observed, in some instances, to die off plants that have been shifted from houses into the open air, being unable to stand the change of temperature. But it may often be found flourishing under the ordinary conditions of our climate, and a dry spring and summer, such as we have had, must have favoured

the increase of red spider out of doors, while many plants were less able to resist its attacks. The injury done arises from the combined results of biting and sucking, also the leaf-pores are choked by the secretions of the insect. With the aid of a hand magnifier we can perceive, upon the under side of leaves chiefly, the manner in which red spiders group themselves, scores, or even hundreds feeding together, the party including specimens of all sizes and ages; but the juveniles are, of course, very minute in their first stage, semitransparent, and more sluggish than those that are nearly or quite full grown. The eggs are large in proportion to the insect; but it is also the fact that individuals partly grown, and with their legs tucked in, presumably in the act of changing their skins, have been taken for eggs. It is not certain whether, in the open air, this species passes the winter in the egg state. French entomologists think adults hybernate under stones and in odd corners, to resume activity in spring, depositing eggs then, which give birth to the new brood. It would seem that the web is the united work of several of the older individuals on a leaf, the minute claws and hairs of the legs being employed. It is both a protection and a help to loco-motion, for the mite has some difficulty in crawling upon the surface of smooth or slightly sticky leaves. When spraying and syringing to destroy this insect, either with Gishurst compound, sulphur and soap, or whatever other remedy may be tried, it is necessary to remember that little good is done if the under side of the leaves is not thoroughly wetted. Red spider is kept in check by many insect foes, or it would do us much more harm.

Some people who are liable to be attacked by what is often called the "harvest bug" are very careful to keep away from corn fields during August, not knowing, perhaps, that this pest may attack us in our own garden. The harvest bug, T. autumnalis, which is another of the spinning mites, occurs not only about fields but amongst Beans, Currants, and Raspberries, also on some herbaceous plants in our borders, and upon the grass of lawns. It is a brownish red, but very minute, so that it is not easily seen; but it can make itself felt. People often suppose that have been bitten by fleas or gnats, when they have been insidiously attacked by this mite, which sometimes, though not always, buries itself under the skin, raising a lump or tumour. Some persons present no attractions to this insect, others suffer much from it, and it frequently assails the domestic cat, owing to its habit of prowling about gardens in quest of birds. Cats have been found to have swarms of harvest bugs on their feet and legs, causing the supposi-tion that they are suffering from itch. A curious fact is, that before they transfer themselves to man and animals these bugs have been feeding upon vegetable juices, which they quit to become bloodsuckers. Another of the harvest mites has been noticed by thousands upon the pebbles of garden walks near London, having, it is thought, been conveyed there with gravel. This is Trombidium lapidum, rose red when young, afterwards brown or brownish red, with a few white spots. Probably the insect afterwards attaches itself to various low plants. Another of this genus that occurs in gardens is T. holosericeum, a mite with an array of barbed hairs on its back, which is very plump, and scarlet in hue. Mr. Stewart states that it is useful, because it devours aphides and small newly hatched caterpillars.—Entomologist.

NOTES BY THE WAY.

BRAMBLETYE is a name that calls up recollections of pleasant country lanes, margined by hedges heavy with the sprawling, rambling growths of Blackberries; but it is not by such ways that it must be sought. The place lies on the main road from East Grinstead to Maresfield, Nutfield, Uckfield, and so on in the direction of the coast. From Oakleigh, which is on the left, to Brambletye, which is on the right, is but a short walk, and neither time nor trouble need therefore be expended in reaching it. The place is in the occupation of Donald Larnach, Esq., a wealthy Australian, or Scotchman with Australian connections, and it is certainly one of the finest estates in a neighbourhood which is far from being poor in imposing establishments. The house is a fine one, commanding splendid views of Ashdown Forest and the southern range of hills. It stands out boldly in its tree-clad eminence, and can be seen for many miles around.

With the gardens of Brambletye was for a long time associated the name of an excellent cultivator—Mr. Jenks, but he is now installed in a little nursery in the adjoining village of Ashurst Wood; and a stalwart broad-shouldered Scot, in the person of Mr. G. F. Glen, reigns in his stead. I do not know whether the latter emulated the feats of the famous Donald Dinnie in his younger days; he certainly looks big enough, and strong enough too, and in his brogue there is the burr of a mighty bass. Before coming into Sussex he had charge of the extensive gardens at Wentworth Woodhouse, Lord Fitzwilliam's splendid Yorkshire seat, and has therefore had the experience which stands a man in such good stead when a large place is offered to him. Between Yorkshire and Sussex there is a difference other than that of so many miles.

The true Yorkshireman is of quite a different type to the Sussexite, and doubtless therefore the Anglo-Scottish gardener finds the conditions of work much at variance with those in the northern county.

Brambletye is a large place, and the flower garden is some distance from the kitchen garden and houses. To the former Mr. Glen did not lead me, considerations of the presence of "the family" operating with him so far as I could understand. A gardener should always place the wishes of his employers before any desire to have his own handiwork admired. The impulse should be respected even while due weight is given to the fact that most gentlemen make a wide distinction between visitors who come to pourtray the beauties of their estates and those who come to ramble round out of mere curiosity, or perhaps to find openings for adverse criticism. If a gardener has a fine house of Grapes, representing in a great measure his own cultural skill, he likes to have it appreciated, and quite right, say I; similarly, if a gentleman has a beautiful house and grounds he does not disapprove of their being admired, but in nine cases out of ten is glad to have others express their pleasure in them, but always at a convenient time.

But if, from the reasons given, I am not in a position to say what Brambletye is like from the main ornamental point of view there is a side issue to which I gladly call attention. This is neither more nor less than a sub-tropical garden formed on the site of a large rubbish heap at the entrance to the kitchen garden. What transformation could be more striking? At the theatre one sometimes sees a gay ball-room scene succeed a representation of a thieves' kitchen, or a stately street of palaces and temples follow a hideous slum. Mr. Glen has directed his scene-shifters with such wisdom and boldness that he has produced something well worthy of comparison with the best efforts of a Telbin. This little sub-tropical garden—the word "bed" is insufficient—is one of the most admirable ornamental features of a large place that I have seen in any garden this year. I understand that its conception was due to a special wish of Mrs. Larnach, and everybody is to be congratulated on the resul't.

The little garden is not a stiff square nor a formal parallelogram, nor, if I may be permitted to say it, an equally stiff and formal circle. It is undulating and flowing in outline, with graceful sweeps and curves, possessing that free informal character which everybody so much admires, but rarely, if ever, imitates. It is as boldly planted as it is admirably designed. Stately Musas uprear their huge leaves, and the beautifully marked foliage of Lavatera arborea variegata shows up well. This fine plant is as effective in form as it is in the markings of its leafage, which, by the way, were not half developed at the time of my visit. Ricinuses also play an important part, Gibsoni and Obermanni being very conspicuous, as do Atriplex hortensis rubra, Abutilon Thompsoni, Wigandias, Coleuses, Agapanthuses (giving a welcome tone of colour against the masses of foliage), and Zeas. A pleasing carpet or groundwork is formed of the little Königa variegata. And all this in the place of a rubbish heap!

There are other ornamental features about this part of the garden. For instance, it is observed that the exterior bases of all the houses are furnished with flowering plants, in which Zonal Pelargoniums and Heliotropes shine conspicuously. This entirely does away with the bare appearance which usually prevails. And the interior of the fruit houses is also brightened up with plants, for which a sort of platform stage is provided at the side of the path. This is the wish of the ladies of the house, and there can be no denying the beautiful and cheerful appearance that it imparts. Amongst them are noticed Globe Amaranths, Celosias, Musk, Petunias, Lobelias, Coleuses, Diplacus glutinosus, Francoa ramosa, Fuchsias, Nicotiana affinis, Hydrangeas, Achimenes and Gloxinias, all clean, healthy, and flowering freely. It is easy to imagine many gardeners declaring that it is quite enough to grow Peaches and Grapes without having plants to bother about as well, but it is done at Brambletye, and the result is very good. Æschynanthus Lobbianus I noticed growing and flowering freely in a hanging basket, and a beautiful object it was.

I must not forget the fruit in admiring the flowers. Vines and Peaches looked remarkably well, notwithstanding that a thoughtless act on the part of an assistant had somewhat seared the foliage of the latter. They must have a congenial root medium, for they grow with extraordinary luxuriance, in spite of the lifting that has been repeatedly practised. Grosse Mignonne carried a grand crop of very fine fruit, two trees giving twenty-two dozen. I was much struck with the exceptional colour in Lord Napier Nectarine. All the varieties colour highly, but his lordship was deeply suffused almost all over his countenance with a rich and ruddy glow, quite drowning his usual speckled appearance. The Grapes are excellent, and some canes of Buckland Sweetwater and Foster's Seedling, four years old, have made unusual progress. They are evidently in good soil and well managed.

The outdoor fruit is a wonderfully heavy crop, and it was sad, in one sense, to see quantities falling from the drought. One of the best Apples in a somewhat large collection is Harvey's Wiltshire Defiance, a conical fruit with prominent ribs, and taking on a rich colour. It is a constant cropper, a good keeper, and possesses excellent quality. There

are also some model trees of Bramley's Seedling, planted by Mr. Jenks when the variety was first sent out, I believe. He was bold enough to plant a good many, and they have amply vindicated his judgment. It is admitted to be one of the best Apples grown in the neighbourhood. D. T. Fish and Warner's King, often classed as synonymous, are distinct enough at Brambletye, and particularly so in the foliage. The former has small, light-coloured leaves, the latter much larger and darker ones. The difference between them in this respect is not so minute as to require a long study with a microscope to discover, but is clear and palpable enough at a glance. Early Rivers Plum was breaking down its branches with fruit, bearing, not wisely, but too well. Some people are fond of saying that this wonderful Plum has made a handsome slice in a goodly fortune for Mr. Rivers; that I know nothing about, and it is a private matter into which it is not seemly to inquire. But of this I feel satisfied, whether it has filled his pockets or not, it has those of more than one market grower, though they are not too fond of admitting anything about the pocket-filling, only the emptying.

One more hint picked up at Brambletye, and that is concerning the great usefulness in a season like the present of New Zealand Spinach. Sown in heat in April and planted out on mounds in a frame, minus lights at the time of my visit, it had been picked from all the summer, and would assuredly give dishes until the frost came, a period of something like six months let us say. It grows luxuriously and continuously, and though I am not going to say it would be as acceptable in the dining room as tender and delicate Peas, it is not despised in a season when Peas and Beans are excessively scarce.

From what I saw at Brambletye it is a place well done and worth visiting. I congratulate Mr. Glen on his good work, and wander through a rock-lined path, and across the fields to Plaw Hatch, the residence of Mrs. Arbuthnot, and the gardens of which are in charge of Mr. Draper. That wise and witty gardener has much to talk about and much to show you. What a conversationalist he is to be sure! And what a garden he has under his charge! Surely there never was such a mixture. I am overwhelmed by it. Descriptive powers of an ordinary type are of no avail in dealing with Plaw Hatch. Mr. Draper is too much for me.—W. P. W.

BLACK HAMBURGH GRAPES OUTDOORS.

I SEND you a box containing one bunch of Black Hamburgh Grapes grown and ripened entirely out of doors without any artificial aid on the south wall of my house. The season is, of course, exceptional, but I have ripened them thoroughly the three past seasons, though always

later in the year.

The wall, as is the case in many houses in these south-western counties, is slated to keep out the driving winds, and this no doubt helps in the result, and there is a kitchen chimney inside; but there must be hundreds of houses equally favourably situated (for this is very much exposed to winds and gets no shelter) which might well produce similar results. I have about fifty bunches larger and smaller this year, the Vine having been planted four years ago. There was a fine bloom on the Grapes when packed, but I fear they will suffer in transit.—
J. R. Dummelow, Membury Parsonage, Chard.

[The bunch of Grapes was of medium size, the berries being fine and well coloured.]

SUMMER LETTUCES.

The difficulty of maintaining a supply of Lettuces this summer has been a common cause of complaint. Those having a poor soil to deal with have no doubt experienced a Lettuce famine to a certain extent. Daniel's Continuity, a variety spoken favourably of by your correspondent "W. K. W." recently, has been very useful here on account of its long standing before running to seed. Its colour, too, causes it to be looked upon by those unacquainted with it as somewhat of a novelty, making an agreeable change with the lighter green of Cos and Cabbage varieties. Hammersmith, one of the most reliable for winter work, "bolted" every plant under the tropical sun we have lately experienced, though sown and planted alongside Veitch's Perfect Gem and other popular sorts. Sutton's Intermediate is a good Lettuce. As its name implies, it is intermediate in appearance and character between the Cabbage and Cos varieties. It has the dark leaves of the Bath Cos, with the dwarf growth and compact head of the Cabbage. Those who object to the soft leaf of the latter section would find in this an intermediate crispness between the two, and for this reason I am inclined to the belief that it will become popular. It has been the favourite of all the sorts grown in these gardens this summer. The Celery ridge usually furnish the finest Lettuce of the season, but it has not done so in our case this year; the best we have had was from firm undug ground on which Strawberries were planted late last autumn in one instance, and another in which a crop of Broccoli was grown last year, and the ground left undug for planting the same crop again this summer.

The Lettuce seeds were sown in the intermediary spaces in the spring, and the Broccoli plants put out in their places when they were ready before the Lettuces were cleared off. We were cutting some very fine heads from this firm ground when in many gardens they refused to grow at all, consequent on the severe drought. Veitch's Perfect Gem has done splendidly, and is a valuable and distinct summer variety, and from what I saw of it last spring in a neighbour's garden I should say it is a good winter sort too.—W. STRUGNELL, Rood Ashton Gardens.

LILIUM HENRYI.

ALTHOUGH this beautiful Lilium has been grown at the Royal Gardens, Kew, for the past three or four years, it has not yet found its way into many private establishments. Being now in commerce, however, it will no doubt be quickly distributed, for the distinctiveness of the flower will render the species popular. It is a charming Lily, and is said to have been discovered in 1888 near Ichang in the Hupeh Province of Western China by Dr. A. Henry, a missionary in that locality. Mr. Ford, Hong Kong Botanical Gardens, sent bulbs of it to Kew, and these flowered in August, 1889. Bulbs have been planted out at Kew, and they are now flowering profusely, the spikes varying from 4 to 6 feet or more in height, and carrying upwards of a dozen flowers each.

As will be seen by the illustration (fig 28), which has been prepared from a bloom kindly supplied by Mr. T. S. Ware, Hale Farm Nursery, Tottenham, the flower resembles that of L. lancifolium in shape, but differs considerably in colour, being of a rich orange yellow shade marked with crimson. It is a vigorous growing species, and is now

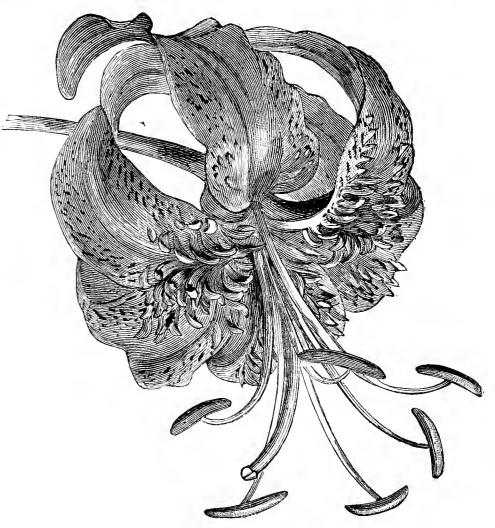


FIG. 28.—LILIUM HENRYI.

flowering freely in Mr. Ware's nursery, where, we believe, it has proved quite hardy. By referring to the report of the Exhibition held under the auspices of the Royal Horticultural Society at the Agricultural Hall this week, it will be seen that a first-class certificate has been awarded for this grand Lilium.

ROYAL HORTICULTURAL SOCIETY.

GREAT SHOW AT THE AGRICULTURAL HALL.

AUGUST 29TH, 30TH, 31ST, AND SEPT. 1ST.

The frequent references to the great Exhibition of the Royal Horticultural Society at Islington have proved the interest which the event has excited in the floral world. It has been approved and condemned, voted too long, and fixed for the wrong place, and in other ways criticised, but withal it has taken hold of people's attention. We do not know particulars of the arrangement which the two Societies have made in connection with the Show, but at least it must be admitted that the R.H.S. has done its share of the work well, for a great and varied Exhibition has been arranged which merits the support of the public. There was a magnificent display of fruit, perhaps the best which has been got together in London of recent years, and that in itself should prove a great attraction. The leading growers, both amateur and professional, have acquitted themselves nobly, and when such leading cultivators as Messrs. Bunyard, Cheal, Paul, Rivers, Veitch, Woodward,

and others are doing their best the display is no mediocre one. Then there was a wonderful display of cut flowers-one of the finest ever seen-Roses, Gladioli, and Dahlias being the three chief features, and most of the leading growers were represented by them. Groups of plants made grand banks in the centre of the Great Hall, but imposing though they were it is doubtful if these are not relatively the least striking feature of the Exhibition. They were dwarfed by the great altitude of the building, but had they been a little elevated a superb effect would have been produced.

There was only a small attendance in the early portion of the opening day, but we hope to be able to record in due course a success as great from the financial as it undoubtedly is from an artistic point of view. While it is a pleasure to note so much that is good, we must not overlook one or two oversights, especially as we are authoritatively informed that the Council enjoy fair criticism. One mistake—we will call it a printer's-fixed the time for judging at one o'clock, whereas it ought to have been finished then, and it naturally caused delay and confusion in staging. The 1 o'clock was no doubt intended for 11 o'clock, so firstly by the misplacement of a comma (referred to in another place), and then the omission of a "1," a check was experienced, but all went smoothly in the end. The second oversight was in omitting to send reporters' tickets, at least to this office, and we wonder how the authorities thought our three reporters could pass the closely guarded barriers to let the world have a record of this, the last and best work up to date of the R.H.S. However, reporters are proverbially men of resource, and the following is the result of their endeavours. The luncheon, however, beat them, though the scribes belonging to ordinary (not horticultural) newspapers found admittance to the tables. Perhaps the Agricultural Hall Company were responsible for the ticket arrangements, and they were not like the Show itself—a success.

A detachment from the Fruit Committee, headed by Dr. Hogg, was told off to inspect the large contributions arranged in the body of the hall, such as those of Messrs. Bunyard, Cheal, Rivers, Veitch, and others, and splendid they were, a reserve being arranged for the table for the examination of new products under the superintendence of the genial Chairman, Mr. Phillip Crowley. The table men, in addition to the Chairman, were, so far as can be remembered, Messrs. T. F. Rivers, Chairman, were, so far as can be remembered, Messrs. T. F. Rivers, F. Q. Lane, J. Hudson, J. Cheal, G. Reynolds, A. J. Laing, A. Young, and J. Wright. The flying contingent, besides the Doctor, were Messrs. Taber, H. J. Pearson, H. Balderson, G. W. Cummins, A. Dean, and W. H. Divers, and both divisions had plenty to do. The first products placed on the table were from Mr. Owen Thomas, from the Royal Gardens, Frogmore, who sent a white Melon raised from Frogmore Seedling and High Cross Hybrid. The seedling was handsome, juicy, and refreshing, but wanting in flavour. Another Melon from Frogmore and refreshing, but wanting in flavour. Another Melon from Frogmore named Cambrian was similar in character, but with a distinct aroma. Several fine fruits of Frogmore Seedling were sent by Mr. Thomas, and a vote of thanks was awarded. Mr. Llewellyn Hughes sent a dish of splendid fruits of Lord Suffield Apple grown in a small back garden in populous Islington, far superior to fruits that were grown in the country twenty years ago. We are advancing, and a cultural commendation was awarded to Mr. Hughes. A new Melon was sent by E. Hart, Esq., Fairlawn, Totteridge, Herts (gardener, Mr. J. Smith). It is a closely netted fruit raised from Countess and Syon House; good, but not quite good enough for a certificate. Mr. E. Gilman, gardener to the Earl of Shrewsbury, sent six Melons—Pride of Ingestrie, the result of a cross between Coleton Bassett and Syon House; fruits handsome a cross between Colston Bassett and Syon House; fruits handsome, juicy, sweet, and refreshing, but not equal to existing varieties, and no award was made.

Mr. W. H. Divers sent a seedling Peach Late Crimson, raised from Byron Nectarine, fruit fine and very heavy, said to ripen after Sea Eagle. Mr. Divers was requested to send six fruits another year, and so comply with the conditions, which he was unable to do on the present occasion. Messrs. R. Veitch & Son sent from Exeter fruits of the Late Devonian Peach, the result of a cross between Belle de Vitry and Late Admirable. They were sent to show the high colour of the variety, and ripe samples are expected to be sent to a subsequent meeting. Mr. Miller, gardener to Lord Foley, Ruxley Lodge, Esher, sent fine fruits of Barrington and

Chancellor Peaches, but they were not ripe (vote of thanks).

Mr. John Allsop, The Gardens, Dalton Hall, Hull, sent a dish of Tomatoes Allsop's Elected. A splendid cluster was exhibited, and handsome individual fruits. Recommended to be tried at Chiswick. Messrs. James Carter & Co. sent dishes of the Duke of York Tomato, very fine fruits. A beautiful dish of Blenheim Orange was also sent by Messrs. Carter, and a vote of thanks accorded. Messrs. Collins Brothers sent a plant of the Challenger Tomato bearing fine fruits. Vote of thanks, the variety having been previously certificated. Mr. Joseph Fitt, The Gardens, Malshanger Park, sent two fine clusters of the Lady's Finger Banana, and a cultural commendation was awarded.

Mr. J. Hudson sent from Gunnersbury House neat bunches of Lady Hutt (round white), and Appley Towers (black) cut from Vines grown on the Muscat of Alexandria; also Gros Maroc from a Foster's Seedling stock for representing improvement in flavour; but as no fruit from a Vine on its own roots was sent for comparison, no opinion was expressed, but a vote of thanks awarded. Mr. Francis Calver, Ludlow, sent a dish of smal wellow dessert Apples, ripe, tender, of fair quality and useful

as ripening at the present season. The variety was not named (vote of thanks).

A seedling Potato, George Dickson, was sent by Mr. H. Mackerbeth, Ulverstone; tubers round, roughly skinned, and of excellent shape; recommended to be grown at Chiswick, as the produce was much admired. A similar recommendation was made in respect to a new Kidney Potato, named Barton Court Perfection, the result of a cross between Magnum Bonum and Snowdrop; beautiful shaped tubers, sent by Mr. Wm. Young, Barton Court Gardens, Kintbury.

Mr. William Trotter, gardener to F. Ricardo, Esq., Bromeberrow Place, Ledbury, sent two cases of fruit, grown and dried at Bromeberrow. Apples and Plums in different varieties were represented, also Peas and Kidney Beans. The samples were so good and suggestive that a silver medal was unanimously recommended. Mr. J. Clarke, Albion Nursery, Farnham, sent upwards of thirty bunches of Grapes in seven varieties, grown without fire heat, not large but good and well finished, and a

small silver medal was recommended for them.

Dr. P. H. Emerson, Claringbold, Broadstairs, Kent, sent an unusual and interesting collection of fruits and vegetables grown in the open air, comprising Sweet Potatoes (Convolvulus Batatas), Ohio Squash, Brazilian Gourd, Yokohama Squash, fine English Codlin Apples (grown on the Quince stock), English Codlin, Skirret, Hamburgh Turnip-rooted Parsley, Beurré Hardy Pears, Sweet Mountain Peppers, Spanish Mammoth Pepper, Monstrous Pepper, Egg Plant (Early Dwarf and Long Purple), Sandwich Island Salsify, Lima Bean, Ground Nuts (Arachis hypogæa), Pe. Tsai (Brassica sinensis var.). A bronze medal was unanimously recommended, and the Chinese Cabbage, which is said to be very hardy, and somewhat like Spinach when cooked, but more mucilaginous, requested to be grown at Chiswick.

The preceding exhibits were examined at the Committee table; the following arranged in the body of the hall, and here, it must be said, that the display of fruit by the leading nurserymen was magnificent, trees in pots bearing splendid dishes, forming an appropriate and effective background to the dishes and baskets in front.

Messrs. T. F. Rivers & Son had splendid Peach and Pear trees in pots bearing fruit of the first size and tempting in quality. The prominent Peaches, Sea Eagle, Albatross, Princess of Wales, Osprey, and unnamed seedlings were all very fine, as were the Pears Labrun, Louise Bonne of Jersey, Souvenir du Congrès, Conference, and Marie Louise d'Uccle. The valuable Monarch Plum was represented by heavily laden trees in pots and splendid fruit in boxes—a Plum with a future, as ripening when the "glut" is over. Figs in pots were well shown, and what may be termed a hedge of fruiting Vines had an imposing effect. A gold medal was recommended for this splendid collection.

Messrs. Cheal & Sons had heavily laden Apples and Pears in pots, the fruit being fine and admirably coloured. Two years old Bismarck Apples were laden with fruit; still finer were many of the specimens shown in baskets and dishes, all the leading varieties being admirably represented, such as Alexander, Gascoigne's Seedling, Frogmore Prolific, Bismarck, Worcester Pearmain, Lady Sudeley, Flower of Kent, Mère de Ménage, Cellini, The Queen, and others, all speckless and in beautiful colour. Pears were also excellently represented (silver-gilt Knightian medal). Messrs. James Veitch & Sons had an extensive and imposing display of Apples, Pears, and Plums, with a central group of Figs and Peaches in pots. Some of the finest Apples were Seaton House, Winter Hawthornden, Peasgood's Nonesuch, Frogmore Prolific, Stirling Castle, Gascoigne's Seedling. Of Plums, Grand Duke, Autumn Compôte, Belle de Septembre, Monarch, Coe's Golden Drop, Late Transparent Gage, Bryanston Gage, and Decaisne, attracted attention by their size and colour. Raspberries and Cherries were also included in this fine collection (silver-gilt Knightian medal).

Messrs. G. Bunyard & Co. had a splendid exhibit of fruit and fruit trees, its interest lying as much in its great diversity as in its quality. There were trained trees of nearly all kinds, such as espaliers ready for furnishing fences or walls, cordons, fans, pyramids, amateurs' standards fruiting up the stem and forming good heads, the kinds represented in fruit being Peaches and Nectarines, Apples, Pears, Grapes, Plums, and Figs. Such an exhibit as this must be full of interest to the public and not without instruction. There were about sixty trees in all. The Maidstone firm also had a splendid display of gathered fruit, comprising about 120 dishes, thirty-six baskets, of gathered fruit, comprising about 120 disnes, thirty-six baskets, and seven stands (Grapes). Amongst the finest of the Apples were Duchess of Oldenburg, Lord Suffield, Annie Elizabeth, Cellini, Lord Grosvenor, Potts' Seedling, Stone's, Lady Sudeley, The Queen, Worcester Pearmain, Stirling Castle, and Grenadier. Pears—Dr. Jules Guyot, and Williams' Bon Chrêtien. Plums—Cox's Emperor, and Monarch. The Nuts are also worthy of mention. The Prolific Filbert was shown in large clusters quite ripe, and a large and splendid variety likely to become very popular is Bergere. About fourteen variety likely to become very popular is Bergere. About fourteen varieties of Strawberries were shown, some in planting pots and others

potted off (silver gilt Knightian medal, and it ought to be a large one).

Messrs. W. Paul & Son, Waltham Cross, had a large display of Apples, Pears and Plums, the produce being of their usual high quality. They also had some splendid trees in pots (silver-gilt Knightian).

The English Fruit and Rose Company (Cranston's) sent 100 dishes of Apples, large in size and well coloured, some of the best being Seigende Reinette, Lord Suffield, Tom Putt, Lord Grosvenor, King of the Pippins, and Potts' Seedling. Mr. Bythway had forty-five dishes of Apples and two baskets, some of his varieties being very good indeed, notably Bramley's Seedling, Tom Putt, Tower of Glamis, Mère de Ménage, The Queen, and Ribston (silver Knightian). Messrs. Spooner

and Sons had ninety-five dishes and baskets, but they were in two parts, otherwise would have looked more effective. The fruit was not noteworthy for size, but was clear, and well coloured (silver Knightian). Messrs. J. Peed & Sons sent fifty dishes of well-coloured Apples and Pears (silver Knightian).

Competitive Classes.—The misplacement of a comma caused some to wonder what was wanted in the first of the fruit classes. The schedulc read, "Twelve distinct kinds, black and white Grapes, admissible." This was thought to refer to twelve kinds of Grapes, black and white, but a very little reflection should have sufficed to show that twelve kinds of fruit, black and white Grapes admissible, was meant. There was some delay in judging this, so we may take the second class first. This was for six distinct kinds, black and white Grapes admissible, as before. Mr. Ocock won with Muscat of Alexandria and Alicante, Elruge Nectarine, Cox's Golden Gem Melon, Osprey Peach, and Williams' Bon Chrêtien Pear, altogether a very good display. Mr. Masterson was a good second, but weakened by moderate black Grapes, and Mr. Wallis third.

Mr. McIndoe, gardener to Sir J. W. Pease, Bart., M.P., Hutton Hall, Guisboro', was the only exhibitor of twelve kinds, and it was hardly up to his best condition. He had fair Gros Guillaume and Buckland Sweetwater Grapes, Negro Largo Figs, Moorpark Apricots, Pineapple Nectarines. Exquisite Peaches, Beurré d'Amanlis Pears, Magnum Bonum Melon, Jefferson's Plums, Ribston Pippin Apple, Morello Cherries, and a

fair Pine. The second prize was awarded.

Grapes were excellently but not extensively shown. The first of the classes was for three bunches of Muscat of Alexandria, the principal prize being a silver cup presented by the Turner Memorial Trustees. This was secured by Mr. Reynolds, gardener to the Messrs. de Rothschild, Gunnersbury Park, Acton, with large and splendidly coloured clusters. Mr. Winter, gardener to W. Maw, Esq., Walk House, Barrow-on-Humber, was second with bunches of a very similar character, but a trifle smaller; while Messrs. Tidy of Stanmore, and Jordon of Holdenby House Gardens, were equal third. There were three other stands. A similar prize was offered for Black Hamburgh, and this cup was carried off by Mr. Elphinstone, gardener to E. M. Mundy, Esq., Shipley Hall, Derby, whose bunches were very fine in berry and splendidly coloured. Mr. Reynolds was second, his berries being smaller than those of Mr. Elphinstone; and Mr. Messenger was third. Three others competed. Mr. Reynolds had the best three bunches of any other white, Buckland Sweetwater, perfectly coloured and fine in berry, securing him the first prize. Mr. Osman, gardener to L. J. Baker, Esq., Ottershaw Park, Chertsey, was second with Mrs. Pearson. Mr. S. T. Wright, gardener to C. Lee Campbell, Esq., Glewston Court, Ross, had some magnificent 6-lb. bunches of Alicante in the class for any other black Grapes, and won somewhat easily; but Mr. Howe, gardener to H. Tate, Esq., Park Hill, Streatham, showed the same variety very finely, and was a most creditable second; Mr. Reynolds being third with good Gros Maroc.

There was one other class for Grapes, this calling for sixteen bunches in eight varieties, and some splendid fruit was staged in it. Mr. Reynolds had a grand collection, his bunches being well coloured throughout, and the berries very fine. He had Chasselas Napoleon, Madresfield Court, Muscat of Alexandria, Black Hamburgh, enormous bunches of Trebbiano, Alicante, Mrs. Pearson, and Gros Maroc. Taken in conjunction with his other successes, Mr. Reynolds may be said to have scored a Grape triumph. Another splendid contribution came from Mr. Bury, gardener to C. Bayer, Esq., Tewkesbury Lodge, Forest Hill, who had Alicante, Muscat of Alexandria, Gros Guillaume, and Gros Maroc in very fine condition, but Trebbiano was not nearly so good as Mr. Reynolds's. Mr. Wallis was third, his Golden Queen being

the best

Some splendid Peaches were shown in the class for four dishes, six fruits to each. Mr. Divers, gardener to J. T. Hopwood, Esq., Ketton Hall, Stamford, won with magnificent fruit of Princess of Wales, Barrington, Prince of Wales, and Sea Eagle. They were of great size and splendidly coloured. Mr. Woodward, Barham Court Gardens, Maidstone, followed, also having beautiful examples. Mr. McIndoe was third, and an extra prize was deservedly awarded to Mr. Wallis, gardener to R. Sneyd, Esq., Keele Hall, Newcastle, Staffs. Mr. Tidy gardener to W. R. D'Arcy, Esq., Stanmore, was first with two dishes, Sea Eagle and Late Admirable representing him. Mr. Ocock, gardener to Mrs. McIntosh, Havering Park, Romford, was second; and Mr. Elphinstone, Henley Park, Surrey, third. Mr. McIndoe won with four dishes of Nectarines, his varieties being Byron, Humboldt, Pineapple, and Spenser, small, but beautifully coloured. Mr. Woodward was second, and there was another competitor, Mr. Potter, St. Clere Gardens, Kemsing, who was perhaps third, but his card was not marked. Mr. Divers appeared to be the only exhibitor of two dishes, and was awarded the first prize for Spenser and Pineapple in excellent order.

Divers appeared to be the only exhibitor of two dishes, and was awarded the first prize for Spenser and Pineapple in excellent order.

Mr. Ocock had the best pair of Melons, staging very fine fruits of Countess and a white-fleshed seedling. Mr. Messenger was a good second, and Mr. Masterson, gardener to the Marchioness of Camperdown, Weston House, Shipston-on-Stour, third. With four dishes of Plums Mr. McIndoe was to the front, winning with excellent dishes of white Magnum Bonum, Prince Englebert, Jefferson, and Lawson's Golden Gage. Mr. Turton, gardener to J. Hargreaves, Esq., Maiden Erlegh, was second, and Mr. Messenger, Woolverstone Park Gardens, Ipswich, third. Mr. McIndoe was easily first with a collection of Plums.

Apples were extremely good. There were nine collections of six dishes, and of these the best was a wonderful half dozen from Mr. Woodward, which easily accounted for the first prize. The varieties were Peasgood's Nonesuch, Emperor Alexander, New Hawthornden,

Warner's King, Lord Suffield, and Washington, all being of enormous size, clean, and finely coloured. Mr. G. Chambers, Beech Farm, Mereworth, Maidstone, was seeond, his Cox's Pomona being full of colour, and the other varieties were very good. Mr. Turton, Maiden Erleigh, Reading, and Mr. Prinsep, gardener to Viscountess Folkestone, Buxted Park, Sussex, were equal third. Three dishes of Pears were asked for, and with these Mr. Gibson, gardener to Earl Cowley, Draycott House, Chippenham, was victorious, his varieties being Beurré Clairgeau, Duchesse d'Angoulême, and Pitmaston Duchess of great size. Mr. Woodward was second. Messrs. Masterson and another, whose card was unmarked, equal third.

Mr. Watkins' prizes for a collection of hardy fruit was carried off by Messrs. Woodward and McIndoe, both having excellent displays. The former's first-prize stand was strengthened by some very good Peaches, which were lacking in the Yorkshire grower's collection. He also had some splendid Apples, Pears, and Plums. Mr. McIndoe had Apples, Pears, Cherries, Plums, Gooseberries, Apricots, Nuts, and Red Currants

-a good and varied exhibit.

The first prize for a collection of Apples went to Messrs. Bunyard and Sons, who had a large and very varied collection of high-class fruit, the produce being large, clean, and well coloured, speaking volumes for the Maidstone soil, air, and culture. The English Fruit and Rose Company were second in this class. Mr. Woodward secured the first of Messrs. Bunyard & Co.'s prizes for three dishes of dessert Apples with Ribston, Washington, and Lady Sudeley, beautifully coloured, and the first for three dishes of culinary varieties with Peasgood's Nonesuch, Stone's and Warner's King, the minor awards going to Messrs. Chambers and Turton.

Messrs. Bunyard & Co. appeared to be the only exhibitors of orchard house trees, and were awarded the first prize for healthy, well-trained specimens, carrying excellent fruit. Mr. McIndoe won with orchard grown fruit, Mr. Potter being second, and Mr. Nicholson, gardener to

J. W. Melles, Esq.. Sewardstone Lodge, Chingford, third.

VEGETABLES.

There were nine vegetable classes, the first of them being for a collection of twelve distinct kinds arranged in baskets or "rounds," the first prize being the Turner Memorial cup, value £5. Mr. Waite, gardener to Colonel Talbot, Glenhurst, Esher, won with some grand produce. His imposing basket was made up of Carter's Autumn Mammoth Cauliflower, Satisfaction Potato, Globe Artichokes, Silver Ball Turnip, Intermediate Carrot, Glenhurst Favourite Tomato, Ailsa Craig Onion, Veitch's Early Rose Celery, Pragnell's Beet, Student Parsnip, Ne Plus Ultra Runners, and Dobbie's Champion Leeks. Mr. Wilkins, gardener to Lady Theodore Guest, Inwood House, Henstridge, was second also with grand produce, his Ailsa Craig Onions and Intermediate Carrot being particularly fine. Mr. Watson third. Only one competed with six kinds, namely Mr. Payne, gardener to W. A. South, Esq., Neasdon, and the first prize was awarded to him, a generous decision. The first of Messrs. Carter's prizes went to Mr. Waite for a very fine basket of the Holborn firm's excellent specialities, and the second to Mr. Payne. Mr. Chopping, Periwinkle Mills, Sittingbourne, was first for Messrs. Carter's prize for Potatoes, showing six: excellent dishes. This amateur is an admirable grower of Potatoes. Mr. Waite was second. Mr. Chopping also won the Turner Mem rial cup for twelve dishes of Potatoes, exhibiting some magnificent tubers. Mr. Waite was second, and Mr. W. Young, Barton Court Gardens, Kintbury was third. Messrs. Cannell & Sons and Mr. Wilkins had very fine collections of Onions not for competition, for which silver mcdals were recommended.

Mr. Waite won with Salads, and was second with Onions, being defeated in this class by Mr. Wilkins, whose produce was larger but less handsome than Mr. Waite's. Mr. Wilkins had Lord Keeper and Mr. Waite Ailsa Craig. Mr. Howe won with three dishes of Tomatoes, having very good dishes of Lady Bird, Silver's Invincible, and Perfection. Mr. Ryder was second, and Mr. Tidy third. Messrs. Dobbie & Co. offered prizes for their fine Leek Champion, and some splendid produce was shown. Mr. D. Gibson, gardener to C. R. Dubs, Esq., was first, Mr. R. Watson second, and Mr. J. Findlay third. Messrs. Dobbie exhibited some grand specimens of the Leek themselves, and also of their other specialities. Messrs. Carter & Co. exhibited a large and handsome Tomato named Duke of York, also their well-known Blenheim Orange.

PLANTS AND CUT FLOWERS.

This section comprised the bulk of the exhibits, and the following members of the Floral Committee made the awards in the miscellaneous division. Messrs. G. Paul, C. T. Druery, T. D. Pawle, W. H. Williams, C. E. Pearson, R. Owen, C. Jeffries, W. Bain, G. Stevens, R. Dean, J. H. Fitt, Thomas Godfrey, R. B. Lowe, C. J. Salter, J. Jennings,

H. Turner and Frank Ross.

Messrs. E. D. Shuttleworth & Co., Albert Nurseries, Peckham Rye, and Fleet, Hants, had a large group of miscellaneous plants, arranged in an effective manner. The background was composed of large Palms, and the front portion being principally Crotons, Dracænas, Coleus, Maidenhair Ferns, Conifers of various kinds, and Liliums (silver-gilt Flora medal). Messrs. W. Cutbush & Son, Highgate Nurseries, N., also contributed a group of ornamental foliage and flowering plants, including large Palms, Liliums, Dracænas, Carnations, Bouvardias, Dracænas, and Crotons, the whole being put together in a charming manner (silver Flora medal). Mr. C. Turner, Royal Nurseries, Slough, staged a splendid group of Liliums and Hydrangeas, amongst which were a few Palms. This group made an imposing appearance, and was much admired by visitors (silver Banksian medal). A solid-looking

mound of Pompon Dahlias, tuberous Begonias, Adiantums, and Zonal Pelargoniums was arranged by Mr. H. J. Jones, Rycroft Nursery, Lewisham. Amongst the Zonal Pelargoniums the "nearest blue" variety, Mrs. W. Wright, was most conspicuous. This is a showy Zonal with large trusses of bloom (silver Flora medal). Mr. J. Hudson, gardener to Messrs. de Rothschild, Gunnersbury House, Acton, exhibited in this section, as well as in the competitive classes, a number of trained scented-leaved Pelargoniums. Two plants of the old Radula, trained like a fan, were most attractive, and some standard Aloysia citriodora commanded attention (silver Flora medal). A large collection of exotic and native Ferns from Messrs. W. & J. Birkenhead, Sale, Manchester, formed quite a feature in the Show, there being most of the leading and choice varieties represented. Conspicuous amongst others in this contribution were the beautiful Athyrium f.-f. kalothrix, Adiantum Hodgkinsoni, Davallia fijiensis elegans, Lygodium dichotomum, Adiantum tenerum roseum, Microlepia hirta cristata, Pteris nobile, and Polystichum acrostichoides lobatum, the last-named being a new hardy Fern (silver Flora medal).

Messrs. B. S. Williams & Son, Victoria and Paradise Nurseries, Upper Holloway, arranged a large oval-shaped group of foliage plants in the centre of the hall. Amongst others in this collection were splendid Tree Ferns and Palms 12 or 15 feet in height, Alocasias, Dracænas, ornamental foliage Begonias, and some fine specimens of the variegated Indiarubber Plant (Ficus elastica variegata). A few plants of Nepenthes and Orchids in flower were placed on pedestals, these adding variety and attractiveness to the group (silver-gilt Flora medal). Messrs. H. Cannell & Son had, amongst other things, a choice collection of Cacti and succulent plants, amongst which the Prickly Pear (Opuntia monocantha) was in fruit, Agave Victoria Regina, Echinocactus in variety, and numerous others. Blooms of Cactus Dahlias were shown with the plants referred to (silver Banksian medal). Blooms of Cactus A remarkably fine group of Palms of huge size, interspersed with Tuberoses, Dracenas, Crotons, and Ferns was arranged by Mr. P. McArthur, 4, Maida Vale. A plant of Cypripedium Harrisonium superbum was noticeable in this contribution, one of the flowers being exceptionally fine. Other Orchids, including Oncidium crispum and Catasetum macrocarpum were also conspicuous in the group (silver Flora medal). Mr. A. Waterer, Knap Hill, Woking, had specimens of the Colorado Blue Spruce (Picea pungens argentea), and one of P. p. glauca, both varieties being very showy (bronze Banksian medal). Messrs. Hurst & Son, 152, Houndsditch, London, sent half a dozen plants of a new crested Golden Feather under the name of Pyrethrum aureum cristatum, but no special award was made. W. B. Kellock, Esq., Stamford Hill, sent two seedling Agaves named A. Leopold II. and A. univittata marginata, for which first-class certificates were awarded. The plants are described elsewhere.

Messrs. J. Veitch & Sons, Royal Exotic Nursery, sent a basket of Cornus brachypoda variegata, for which a first-class certificate has been awarded. This is described below. A certificate was also adjudged for Clerodendron trichotomum, which was likewise shown by Messrs. Veitch. From Mr. Anthony Waterer came, in addition to the Piceas already mentioned, a box of blooms of Spiræa Anthony Waterer, and Weigela Eva Rathke, a late flowering variety, for which a first-class certificate was awarded. Sir Trevor Lawrence, Bart., secured an award of merit for Pentstemon Clevelandi, which is described elsewhere, and a first-class certificate for a plant of Exacum macranthum, which was figured in the Journal for Dec. 22nd, 1892. The Rev. W. Wilks, Shirley Vicarage, gained an award of merit for Helianthus rigidus Miss Mellish, which is described elsewhere. Messrs, J. Peed & Sons, Roupell Park Nurseries, sent a small group of Caladiums and some plants of the recently introduced Strobilanthes Dyeriana (silver Banksian medal). Messrs. Wallace and Co., St. John Street, Colchester, had a number of new Liliums, including L. Henryi, for which a first-class certificate was awarded. This species is described and illustrated on page 191 of this issue. Messrs. G. Paul & Sons, The Old Nurseries, Cheshunt, had a large group of Bamboos in tubs, and some dwarf Cannas, for which a silver Flora medal was recommended. Messrs. W. Barron & Sons, Elvaston Nursery, Borrowash, Derby, had a large collection of foliage from ornamental and deciduous trees (bronze Banksian medal).

Messrs. E. D. Shuttleworth & Co., Albert Nurseries, Peckham Rye, arranged a handsome group of hardy flowers and shrubs. Amongst the most noticeable flowers in this stand were Gladioli, Liliums, Calliopsis lanceolata, Phlox Attraction, Helianthus grandiplenus, Helenium autumnale, Asters (Michaelmas Daisies), and a bright collection of show, fancy, and Cactus Dahlias (bronze Banksian medal). A very beautiful collection of Gladioli was staged by Messrs. Kelway & Son, Langport, Somerset, the best of which are Boston, Herkomer, Myers, Ouless, Mills, Ellis, Sir S. Northcote, Fiducia, Mrs. Langtry, Maid of Orleans, Marquis of Exeter, Ovide, and Mary Anderson. Gaillardias were also very bright and showy, the best being Magenta King, Jas. Kelway, Avalla, and Raphael. The same firm also have a box of Dahlia serratifolia Duke of York, Pompon Dahlias Darkness, Guiding Star, Dandy, A. F. Barron, Fashion, G. Brinckman, and Royalty. Asters were also shown, and a varied collection of herbaceous flowers, including Eryngium planum. Pyrethrums, Solidago altissima. Cannas. and Eryngium planum, Pyrethrums, Solidago altissima, Cannas, and Michaelmas Daisies (silver Banksian medal). A arrey beautiful collection of hardy flowers was staged by Messrs. Barr & Son, King Street. Covent Garden, including Lilium lancifolium, Helianthus, Pentstemons, Gladioli, Calliopsis, Phloxes, Colchicum byzantium, C. varegatum, Violas, and summer flowering Chrysanthemums (silver Banksian medal). A collection of hardy flowers and Dahlias was shown by

Messrs. Cutbush & Son, Highgate, in which Gladioli, Hyacinthus candicans, Tritoma Uvaria, Gaillardias, Liliums, Dahlias (Pompon and Cactus, Lobelia cardinalis, Calliopsis lanceolata grandiflora (exceptionally good), Anemone japonica alba were most noticeable (silver Banksian medal). Roses were grandly shown by Messrs. Wm. Paul & Son, Waltham Cross. Particularly good were Duke of York, White Lady, Lorna Doone, Corinna, Pride of Waltham, Spenser, Grace Darling, Souvenir de la Malmaison, Marie Rady, L'Idéal, Comte Henri Reignon, Madame Lausette de Messimy, Madame Victor Verdier, Wm. Allen Richardson, Mrs. John Laing, Polyantha Roses, Madame Pierre Cochet, a reddish W. A. Richardson, Marie Van Houtte, Madame Hoste, La France, Souvenir d'Auguste Legros, Ernest Metz, Général Jacqueminot. France, Souvenir d'Auguste Legros, Ernest Metz, Général Jacqueminot, Ella Gordon, Homer, and Madame Alfred de Rougemont (silver Flora medal). Mr. Reynolds, gardener to the Messrs. Rothschild, Gunnersbury Park, Acton, staged a box of Carnation Mrs. Leopold de Rothschild, for which he received an award of merit (see below). Messrs. Dobbie & Co., Rothesay, had a very large collection of Dahlias of various types, Asters, and Marigolds, the latter being very fine. A silver gilt Flora medal was recommended. Mr. Eric F. Such, Maidenhead, had a collection of Show and Fancy Dahlias (bronze Banksian medal). Mr. B. Ladhams, Southampton, arranged a group of Ernest Ladhams perpetual flowering Pink, for which he has received an award of merit.

There was only a light display of Orchids, and the following members of the Orchid Committee were present to judge the exhibits:—Sir Trevor Lawrence, Bart. (Chairman), Jas. O'Brien, T. Statter, E. Hill, F. Sander, H. M. Pollett, H. J. Veitch, H. Ballantine, and Dr. Masters. A beautiful table was made up of the combined contributions of Messrs. W. L. Lewis & Co. and Sander. The former had Cattleya bicolor, C. Gaskelliana, Cypripedium Roezli, Cyp. Bradshawianum, Brassavola fragrans, and others tastefully displayed amongst Ferns and Grasses (a silver Banksian medal was awarded). Messrs. Sander & Co. received a similar honour. They had Habenaria carnea (first-class certificate, see below), Aërides Ballantineanum aureum (award of merit), Cypripedium Sander-superbiens (award of merit), the beautiful Pescatorea Klabochorum, and other choice things. T. Statter, Esq., Stand Hall, Manchester, sent Cypripedium Edwardi (award of merit), and several forms of Cattleya granulosa. Mr. Cookson had Cypripedium Sandersuperbiens (see page 195).

Competitive Classes.—Groups of plants and specimens were not so well represented as might have been expected. For a group of Palms and foliage plants to occupy a space not exceeding 800 square feet, the first prize of £15 being presented by Messrs. E. D. Shuttleworth & Co., there was only one exhibitor-namely, Mr. H. B. May, Dyson Lane Nurseries, Upper Edmonton. This contribution was tastefully arranged, the Palms being of graceful habit, and not too thickly disposed. Crotons, Dracænas, Ferns of various kinds, and Ananassa sativa variegata were conspicuous, and made a pleasing effect. In the class for a group of flowering and foliage plants arranged for effect, to occupy a space not exceeding 300 square ieet, Mr. J. Hudson, gardener to Messrs. De Rothschild, Gunnersbury Park, Acton, won. The group arranged by this exhibitor was very fine. The groundwork was composed of Adiantums and other Ferns, from which rose Liliums, Crotons, Ixoras, Pancratiums, Bouvardias, Vallotas, and graceful Palms. There was only one firm exhibiting a group of Liliums in pots, this being Messrs. Bunting & Sons, Colchester, to whom the first prize has been awarded. The plants in this group were grandly flowered, and made an imposing display. At the back were some fine L. auratum platy-phyllum, then plants of the L. lancifolium type, the front consisting of L. Batemanniæ and L. longiflorum. Mr. J. Nicholson, gardener to J. W. Meller, Esq., Sewardstone Lodge, Chingford, was the only exhibitor in the class for a group of flowering and foliage plants to occupy a of flowering and foliage plants arranged for effect, to occupy a space bitor in the class for a group of flowering and foliage plants to occupy a space not exceeding 150 square feet. This was a creditable arrangement, and the first prize was awarded. Palms and Crotons, the latter highly coloured, were the features here.

Specimen plants were not numerous. For eight Crotons Messrs. B. S. Williams & Son were the only exhibitors, and the second prize was awarded. The plants were only medium sized but richly coloured, especially Disraeli, Queen Victoria, Williamsi and Mutabilis. For twelve Coleuses, distinct, Mr. J. Nicholson was the only exhibitor. plants were good specimens and deserved the first prize awarded. competitors were forthcoming in the class for twelve stove and green-house Ferns,—namely, Mr. Howe, gardener to Henry Tate, Esq., Streatham Common, and Mr. P. McArthur, Maida Vale. named exhibitor proved victorious with fine specimens. were Goniophlebium subauriculatum, Nephrolepis ensifolia, N. exaltata, Adiantum Williamsi, Microlepia hirta cristata, and Dicksonia antarctica. The plants shown by Mr. McArthur were good specimens. Mr. Hudson was the only exhibitor in the class for a group of Pelargoniums of any class, showing well trained specimens of the scented leaved varieties, for which the first prize was awarded. Some of these specimens are very fine, the best being Radula, Pheasant's Foot, and Quercifolium minor. No less than twenty varieties were shown by Mr. Hudson. Mr. Howe was placed first for two large Palms, showing Kentia Fosteriana and Seaforthia elegans of gigantic size. Messrs. B. S. Williams & Son followed, and this firm also secured the prizes for two large Cycads, and two Palms in pots not exceeding 10 inches, and gained the only prize awarded for two large Tree Ferns. In many of the classes there were no entries, as for instance, those provided for a group of Tuberous Begonias, early Chrysanthemums, groups of China Asters, Zonal and Ivy-leaved Pelargoniums, Cannas and Fuchsias.

Messrs. J. Cheal & Son, Lowfield Nurseries, Crawley, gained the

first prize for a collection of Dahlias arranged for effect, with one of the most striking exhibits in the Show. The Dahlias were arranged in sprays of six blooms, and had between them sprays of Asparagus plumosus, the combination being a most happy one. Amongst the most beautiful of the Cactus section were Delicata (very fine), Duchess of York (good), Marchioness of Bute, Lady Primrose (very delicate), Edith Cheal (good dark), Blushing Bride (fine), Honoria (good yellow), and Countess of Radnor. Singles—Duchess of Fife, Miss H. Cameron, Alba Perfecta, Mrs. Parrott, Miss Glascock, Duchess of Albany, Lady Montefiore. Pompons—George Brinckman, Whisper (good), Isabel, E. F. Junker, Darkness, Revenge, Tommy Keith, and Martial. Show—Mrs. Gladstone, Mrs. Saunders, T. J. Saltmarsh, R. T. Rawlings, Prince Mrs. Poter MacPengia, Crimgon, King, Goldfinder, and of Denmark, Mrs. Peter MacKenzie, Crimson King, Goldfinder, and Theobold. The second prize was gained by Messrs. Keynes, Williams and Co., The Nurseries, Salisbury, with a very fine stand, in which Apollo, Bertha Mawley, Kaiserine, Countess of Radnor, Lady Penzance, Countess of Gosford, Cactus Gloriosa, seedling (award of merit, see below) and Daphne were the most prominent.

For sixty Show and Fancy Dahlias, in not less than thirty kinds, Mr. John Walker, Thame, Oxon, was first. The stand was composed of Majestic, Prince Bismarck, John Hickling, Crimson King, Colonist, Maud Fellowes, Harry Keith, Shirley Hibberd, Mrs. David Saunders, J. T. West, Wm. Rawlings, Henry Walton, Burgundy, Professor Fawcett, Majestic, Arthur Ocock, T. J. Saltmarsh, John Walker, Earl of Ravenworth, Dorothy, Mathew Campbell, Jas. Cocket, Willie Garratt, Prince Henry, Wm. Keith, John Neville Keynes, John Standish, Dr. Moffat, Mrs. Harris, Jas. Stephens, Harrison Weir, Wm. Powell, Prince of Denmark, Mrs. Jefford, Mrs. Gladstone, Fred. Smith, John Henshaw, and Constancy. The second prize was taken by Mr. S. Mortimer, Swiss Nursery, Farnham, with some magnificent flowers. Mr. Chas. Turner, Royal Nurseries, Slough, was a very good third. Messrs. Keynes, Williams & Co. have been placed first for eighteen bunches of Dahlias, staging in grand condition Apollo, Kaiserine, Baron Schröder, St. Catherine, Black Prince, Lady Penzance (award of merit, see below), Duke of Clarence, Lady Skelmersdale, Countess of Pembroke, Dawn, Delicata, Countess of Radnor, Bertha Mawley, Countess of Gosford, Chancellor (award of merit, see below), Miss Violet Morgan, Sir Roger, and Lady Henry Grosvenor. Messrs. J. Cheal & Son have taken the second prize. Their stand includes Delicata, Countess of Gosford, Ernest Cheal (award of merit, see below), Robert Cannell (very good), Beauty of Eynsford, and Countess of Radnor.

Messrs. Keynes, Williams & Co. took the premier award for eighteen bunches of Pompon Dahlias, distinct, ten blooms in each bunch. Crimson-Beauty, Lady Blanche, Little Jack, Midnight, Whisper, Janet, Sovereign, Admiration, White Aster, Isabel, Ceres, Darkness, Lælia, Grace, George Brinckman, Bacchus, and Madge are the varieties represented in this stand. Messrs. J. Cheal & Son were a very close second, with Mr. Chas. Turner a good third. In this stand Mr. Turner showed Rowena, for which he received an award of merit (see below). For eighteen bunches of single Dahlias Messrs. J. Cheal & Son deservedly secured the leading position with some grand blooms of Annie Hughes, The Bride, James Scobie, Evelyn, Lowfield Beauty, Yellow Satin, Miss Glascock, Ruth, Aurora, Amos Perry, W. C. Harvey, Duke of York, Gulielma, Lady Whitehead, Kitty, Formosa, Victoria, and Northern Star. The second position was occupied by Mr. E. F. Such, Maidenhead.

In the amateurs' class for twenty-four Show and Fancy Dahlias, W. Keith, Esq., Cornwalls, Brentwood (gardener, Mr. J. T. West) was first. The varieties represented in this exhibit were Harry Keith, Alice Emily, J. T. West, W. Rawlings, Dorothy, E. Britton, Edward Sherman, George Rawlings, John Walker, Nellie Garrett, Maud Fellowes, Arthur Rawlings, Sunbeam, R. T. Rawlings, Burgundy, Prince of Denmark, Frank Pearce, Mrs. Gladstone, and some seedlings. Mr. Vagg, gardener to Jas. Theobald, Esq., The Bedfords, Havering, Romford, secured the second place, and Mr. J. Gurney Fowler, Woodford, Essex, third. For twelve bunches of Cactus Dahlias to be competed for by amateurs, Mr. J. T. West staged St. Catherine, Jos. Chamberlain, Marchioness of Bath, Mary Hillier, Harry Freeman, Duke of Clarence, Blanche Keith, Mrs. Keith, Glory of Brentwood, Kynerith, Charles Bolfa, Boht, Mahor, and gained the first price. Mr. J. Carrier, E. Rolfe, Robt. Maher, and gained the first prize; Mr. J. Gurney Fowler being second and Mr. J. Hudson, Gunnersbury House Gardens, Acton, third. Mr. Maher, gardener to A. Waterhouse, Esq., Yattendon Court, Newbury, received the second prize for twelve bunches of Cactus Dahlias with good examples of Marchioness of Bute, Robert Maher, Lady Marsham, Honoria, Panthea, Juarezi, Professor Baldwin, and Mrs. Hawkins. This was the only exhibit in this class, and the first prize was withheld. For twelve bunches of Pompons, Mr. J. T. West was placed first with Eva. Fair Helen, Arthur West, Eurydice, Mary was placed first with Eva, Fair Helen, Arthur West, Eurydice, Mary Kirk, Achilles, Little Sweetheart, Tommy Keith, Gipsy and Winifred, and two seedlings in magnificent condition. Mr. J. Hudson gained the

Mr. B. Ladhams, Shirley Nurseries, Southampton, gained the first prize for a collection of herbaceous flowers, amongst which the best were Scabiosa caucasica, Gaillardias, Centaureas, Campanulas, Eryngiums, Perennial Phloxes, Anemone japonica, Tropæolum speciosum, Malva moschata alba, and Liatris Pycnostachya. Messrs. Paul & Son, the Old Nurseries, Cheshunt, were second; and Messrs. James Cocker & Son, nurserymon, Abordson third. Mr. C. H. Sarsa graduour to the Fact of nurserymen, Aberdeen, third. Mr. G. H. Sage, gardener to the Earl of Dysart, Ham House, Richmond, was first in the amateurs' class for a collection of herbaceous flowers, amongst which were Gaillardias, Statice speciosa, Irises, perennial Phloxes, Calliopsises, and Pyrethrums. The Rev. F. Page Roberts, Scole Rectory, Norfolk, was second; and Miss R.

second award.

Debenham, St. Peter's, St. Albans, third. Mr. Hudson was placed first for twelve bunches of herbaceous flowers, and had amongst others Rudbeckia laciniata, R. Newmanni, Helenium pumilum,

japonica alba, and Aster Shorti.

Messrs. Geo. Paul & Son secured the premier position for a collection of twelve bunches of Phloxes in not less than nine varieties. Their stand contained Eugène Dangaverillas, Roxelane, Caron de Aehe, Wm. Muir, Molière, Amazon, Baccile, John Forbes, Granville, Flambeau, Boule de Feu, and Comtesse de Castries. The second place was held by Messrs. Harkness & Son, nurserymen, Bedale, Yorks. J. Burrell & Sons, Cambridge, gained the premier position for a most beautiful collection of Gladioli, staging many fine varieties, amongst which Cassandra, Bernice, Gertrude, and Orlanda received awards of merit (see below). Messrs. Harkness & Son, Bedale, were second. Messrs. G. Paul & Son were awarded the first prize for a collection of Roses in pots and cut blooms. The flowers on the opening day were fresh and varied, the best being Marie Van Houtte, La France, Alfred Colomb, Beauty of Waltham, L'Ideal, and Ulrich Brunner. Messrs. J. Cocker and Sons, Aberdeen, followed with a collection of bright flowers, Mr. E. Mount, Canterbury, being third. Four competitors in this class. Mr. Gibson, gardener to T. F. Burnaby Atkins, Esq., Halstead Place, Sevenoaks, Kent, was placed first for twelve bunches of stove and greenhouse flowers, amongst which Allamandas, Anthuriums, Eucharis, and Dipladenias were conspicuous. Mr. Howe, Park Hill, Streatham, was a good second, the flowers in this stand being well arranged. The third prize went to Miss R. Debenham, St. Peter's, St. Albans. For a collection of Sunflowers and Rudbeckias Messrs. J. Burrell & Co., Howe House Nurseries, Cambridge, were first; Mr. G. H. Sage, gardener to Earl Dysart, Ham House, Richmond, was second, and Messrs. G. Paul and Son third. A. J. Rowberry, Esq., The Crescent, South Woodford, secured the silver medal presented by the London Pansy Society for twelve sprays of Violas, and Messrs. J. Cocker & Sons, Aberdeen, the bronze medal. bronze medal.

CERTIFICATES AND AWARDS OF MERIT.

Aërides Ballantineanum aureum (F. Sander & Co.).—An East Indian Aërides, noteworthy for the very rich colouring of the side lobes, which are very much deeper than those of A. Ballantineanum, being rich

butter-yellow (award of merit).

Agave Leopold II. (W. B. Kellock, Esq.).—This is a magnificent plant with an interesting history. It is the result of a cross between A. Schidigera princeps and A. filifera, the latter being the pollen parent. It was raised from seed sown about fifteen years ago, one of the parents being much admired by Her Majesty in visiting the gardens of the Royal Horticultural Society at South Kensington at that period, when it was exhibited by Dr. Kellock. The plant is one of the most effective Agaves we have seen, the spines being from 18 inches to 2 feet in length, covered with white woolly filaments. It was named in honour of the King of the Belgians by permission (first-class certificate).

Agave univittata marginata (W. B. Kellock, Esq.).—This is another seedling raised by Dr. Kellock. It is the result of a cross between

A. Schidigera princeps and A. univittata. The leaves are deep green with a distinct paler stripe down the middle, and the margins are white and smooth, wherein it differs from A. univittata (first-class certificate).

Carnation Mrs. Leopold de Rothschild (Reynolds).—A flesh pink variety, much after the style of Miss Joliffe, but with somewhat larger

flowers (award of merit).

Cornus brachypoda variegata (J. Veitch & Sons).—An attractive shrub with ornamental foliage. The centre of each leaf is pale green, with a well-defined cream margin (first-class certificate).

Cypripedium Edwardi (T. Statter, Esq.).—This hybrid is the result of a cross between C. Veitchi and C. Fairrieanum. It is a small but attractively marked flower, with drooping wavy petals, green lined with purple dots, and margined with purplish rose; dorsal sepal greenish white veined with chocolate and purplish rose (award of merit).

Cypripedium Sander-superbiens (Cookson).—A beautiful hybrid, procured by crossing C. Sanderianum and C. superbiens, and is the first Sanderianum hybrid yet produced. It was crossed by Captain Vipan and raised from his seed by Mr. Cookson. The flowers are very large, and are remarkable for the very long and drooping petals, which are double the length of the lip. They are pale yellow in colour, heavily blotched with chocolate, the lip brownish red, the pointed dorsal sonal greenish white with absolute lines (arread of marit) sepal greenish white with chocolate lines (award of merit).

Clerodendron trichotomum (J. Veitch & Sons).—This is a comparatively well-known hardy shrub from Japan. The foliage is large, of a deep green colour, the flowers being white with a purplish calyx

(first-class certificate).

Dahlia Ernest Cheal (Cheal & Son) .- A good Cactus variety with broad petals of a rich crimson scarlet colour (award of merit).

Dahlia Rowena (C. Turner).—A compact Pompon-flowered variety, the petals of which are clear yellow tipped and slightly flushed bright red (award of merit).

Dahlia Mrs. Mortimer (S. Mortimer) .- A good Fancy variety, clear

yellow tipped rosy lilac, fine form, quite distinct (award of merit).

Dahlia Gloriosa (Keynes, Williams & Co.).—Rich bright scarlet; fine flowers of the Cactus type (an award of merit).

Dahlia Lady Penzance (Keynes, Williams & Co.).—A Cactus variety with delicate primage and large scarled and several delicate primage and large scales and several delicate primage scales are several delicated and several delicate primage scales and several delicated an

with delicate primrose yellow coloured flowers; broad petals (award of

merit). Dahlia Lady Penzance (Keynes, Williams & Co.).—A fine, narrow-petalled variety of a clear canary yellow colour (award of merit).

Exacum macranthrum (Sir Trevor Lawrence),—This is a beautiful

plant, suitable for stove decoration, but it is by no means new. It was figured in the Journal of Horticulture for December 22nd, 1892. The flowers are of a bright purplish blue shade (first-class certificate).

Gladiolus Bernice (J. Burrell & Co.).—A fine spike with large

flowers of dull creamy shade, tinted pink (award of merit).

Gladiolus Cassandra (J. Burrell & Son).—This is a very fine flower, dull white or heavily shaded yellow and pink (award of merit)

Gladiolus Gertrude (J. Burrell & Co.).—A grand variety with delicate flowers, creamy white, tinted pale pink (award of merit).

Gladiolus Orlande (J. Burrell & Co.).—A fine variety with large deep

salmon pink flowers (award of merit).

Habenaria carnea (F. Sander & Co.).—A distinct species, much larger than H. militaris, and of a tender rosy flesh or blush colour. It is a most beautiful Orchid, and was much admired (first-class certificate).

Helianthus rigidus Miss Mellish (Rev. W. Wilks).—This is a grand form of the well-known type. The flowers are rather large, and of a bright golden yellow (award of merit).

Lilium Henryi (Wallace & Co.).—This beautiful Lilium is illustrated

and fully described on page 191, so it is needless to reiterate here (first-

class certificate).

Rose Duke of York (W. Paul & Son).—This is a new China Rose of great merit. The flowers are neat in shape, medium sized, and of a rich silvery pink shade (award of merit).

Pentstemon Clevelandi (Sir Trevor Lawrence).—A charming hardy

plant with spikes of scarlet flowers (award of merit).

Pink Ernest Ladhams (B. Ladhams). — Very fine border Pink. Flowers pale blush, heavily fringed, blotched rich maroon at lower part of petals (award of merit).

Weigela Eva Rathke (Anthony Waterer).—This is described as being "a perpetual bloomer." The flowers are dark red, and certainly form a novelty at this period of the year (first-class certificate).

HORTICULTURAL BUILDINGS AND APPLIANCES.

These were fairly well shown, most of the leading firms being represented, but the magnitude of the floral and fruit exhibits somewhat dwarfed this portion of the Exhibition. The greenhouses, heating appliances, and stands of horticultural sundries, being arranged at one end and along the sides of the vast hall, were perhaps not seen to the advantage they would be were it possible to have had them in more conspicuous positions. Noticeable amongst the glass structures were the substantially built houses of Messrs. Foster & Pearson (Limited), Beeston, Notts, who were well represented. Here may be seen buildings fitted with every modern improvement, also heating appliances of the best type, and fitted with patent smoke consumers. Frames of various kinds, including the popular three-quarter span-roof type, were also shown by this firm (silvergilt Flora medal). Mr. W. Cooper, the horticultural provider of the Old Kent Road, S.E., made a splendid show of his specialties. About a dozen greenhouses of various kinds, suitable for large or small gardens, were exhibited, these being fitted with heating apparatus. Poultry houses were also shown by Mr. Cooper, who had likewise a stand of composts, fertilisers, insecticides, and general sundries for the garden. We were unable to find the mention of any award either on the official list supplied to us or on the exhibits for this large and useful contri-

bution; was it an oversight?
Mr. G. W. Riley, Herne Hill Rustic Works, Dulwich Road, S.E., contributed a number of rustic summer houses of a varied type and strong appearance (silver Banksian medal). Messrs. E. Newton and Co., Hitchen, Herts, have a well-built greenhouse, and Messrs. Messenger & Co. were well to the fore in that respect. This well-known firm exhibited a large span-roofed greenhouse fitted with hot water pipes and a propagating bed, which could not be other than useful in any garden (silver-gilt Flora medal). Mr. C. Toope, Stepney Square, Stepney Green, E., had a miniature greenhouse fitted with Toope's patent fog purifying and self-ventilating system. Small boilers, and oil and gas stoves, suitable for heating small greenhouses, were also exhibited by Mr. Toope (silver Banksian medal). Messrs. Fenlon & Son, Eldon Street, E.C., had various heating appliances for large and small structures, and the automatic damper was shown (silver Banksian medal). Messrs. Sam Deards & Co. also sent apparatus for heating purposes, and a small greenhouse "glazed without putty, springs, lead, or packing of any kind" (silver Banksian medal).

Manures, insecticides, and other sundries made quite a display. Messrs. H. & E. Albert, 17, Gracechurch Street, London, E.C., had a

stand of their pure concentrated manure which has proved so beneficial as a fertiliser. Mr. W. Colchester, Ipswich, showed tins of Ichthemic guano, and Messrs. Corry & Co. had a stand of garden necessaries, including thermometer, stakes, baskets, labels, and other items. The Stott Co., Limited, Manchester, made a good show with their useful sprays, syringes, engines, and the equally serviceable "Killmright" insecticide. A large stand of manures, soils of various kinds, stakes, labels, and other essentials for garden use was arranged by Messrs. Wood & Sons, Wood Green, N. Mr. J. T. Anderson, 135, Commercial Street, Shoreditch, also had a number of speciality well displayed, one of the most important of which was a new kind of "wood wool." This material is very fine and much softer than the ordinary "wood wool," and might, therefore, be used for packing tender fruit and choice flowers. Mr. J. George, 10, Victoria Street, Putney, was represented by a stand of Thomson's Vine and plant manure and other garden sundries. A large collection of grasses, insecticides and fumigating material came from Messrs. Sly, Dibble and Co., 2, Colonial Avenue, London, S.E., and the Lawes Chemical Co., 5, Mark Lane, E., had a stand of disinfecting fluids. Messrs.

Osman & Co., had an attractive display of material useful for decorative purposes, and Clarke's patent syphon oil stoves are shown (silver Banksian medal). Other miscellaneous exhibits are plentiful, and included a stand of fruit and vegetables and seeds from Messrs. Harrison and Sons, Leicester. Messrs. Gayner, Banham, near Attleborough exhibited Apples as used for cider making, the stand forming quite a feature in the exhibition. The Standard Manufacturing Co., St. Alkemund's Churchyard, Derby, had a large number of their tree and shrub pruners, which, judging from a practical demonstration, are of great service. The same firm exhibit "the standard fruit gatherer," a useful contrivance for reaching fruit on outside branches of high trees. Combined with this implement is a pruner, the net for catching the fruit being moveable (silver Flora medal).

We were not able to obtain an official list of the prizes and awards

made other than in the implement division, and this was apparently incomplete; therefore if any omissions occur further reference must

be made to them.



EVENTS OF THE WEEK. - The principal events of horticultural interest during the ensuing week include the annual Exhibition of fruit, flowers, and vegetables, which is held at Sandy, Bedfordshire, to-day (Thursday). On Friday, September 1st, the Show of the National Dahlia Society will open at the Crystal Palace, continuing the following day. A three-days Exhibition of Dahlias and Gladioli will open at the Royal Aquarium, Westminster, on Wednesday, September 6th. The Agricultural Hall Show, which is reported in the present issue, continues open until Friday night.

- THE WEATHER IN LONDON.—For the most part fine dry weather characterised the past week in the metropolis, although it has been decidedly cooler, especially at night. At the time of going to press, however, it is dull but with prospects of clearing.

- ROYAL GARDENERS' ORPHAN FUND.—A handbill has been sent to us announcing that the Director of the Promenade Concerts, Theatre Royal, Covent Garden, has made arrangements to supply tickets on liberal terms in aid of the above fund, but we have not received any official information relating to the project.

- MR. JAMES DOUGLAS.—The first Carnation and Auricula catalogue of the well known gardener and florist of Great Gearies reminds us that we have not made any announcement of his having established a business at Great Bookham. He purchased land there some time ago, and we have seen in passing a fine glass structure. His catalogue of new and choice varieties of Carnations and Picotees and Auriculas indicates that he has large stocks of plants for distribution. The business address of Mr. James Douglas is Edenside, Great Bookham, Surrey.

- FATAL ACCIDENT TO MR. W. D. LLEWELYN .- The profound sympathy of a wide circle of horticultural friends will be extended to Sir J. T. D. Llewelyn, Bart., in the terrible loss that he has sustained in the death of his eldest son, Mr. William D. Llewelyn, who was found dead in Penllergare woods on Friday last. He had gone out with his gun and fishing rod, and not having returned at a late hour a search was instituted, when the shocking discovery was made that he had been killed by the discharge of his weapon. Mr. William Llewelyn was in his twenty-sixth year, and when at Oxford was a noted cricketer. At the time of his death he was a Justice of the Peace for the county of Glamorgan, and the melancholy circumstances of his untimely fate are heightened by the fact that he was shortly to have been married, and only a day or two previously had attended the wedding of his younger brother. An inquest was held on Saturday, when a verdict of accidental death was returned and a vote of condolence with his relatives was passed. The tragic event has cast a gloom over the whole neighbourhood, for there, as in the horticultural world, Sir John Llewelyn is extremely popular.

- "PERFECT" WEED KILLER.—We have received from Mark Smith, Ltd., Louth, samples of the "Perfect" Weed Killer, and after a thorough test can vouch for its efficacy. This preparation is in the form of a powder, and one of its greatest advantages is its portability as compared with the liquids which have previously been prepared for the same purpose.

- —— GARDENING APPOINTMENT.—Mr. J. Hollingworth, Woodseat, Uttoxeter, has been appointed gardener to Lord Tredegar, Tredegar Park, Newport.
- —— HANDSOME LEGACY.—According to a daily paper, the late Lord Calthorpe has left by his will £700 to Mr. Thos. Jones, the head gardener at Elvetham Park, Winchfield.
- THE BAMBOO COMPANY, late of 58, St. Paul's Churchyard, desire us to mention that they have removed to more commodious premises at Great Sutton Street, Clerkenwell, E.C.
- THE WAKEFIELD PAXTON SOCIETY.—At the meeting of this Society last week Mr. T. Pitts, gardener to Dr. Kendell of Walton, gave an interesting and instructive discourse on "The Pea," illustrated by a number of specimens of the most popular kinds, fully describing the best methods of culture. Several members took part in a discussion of the subject.
- —— THE members of the HIGHBURY HORTICULTURAL SOCIETY made their outing to Swanley on Saturday last. After inspecting the neighbourhood they made long inspection of Messrs. Cannell & Sons greenhouses and seed farms. A large Wardian case containing seedling Chrysanthemums that were shown at Sydney (New South Wales) last April, causing much sensation there, had just arrived, and this, together with Begonias, Brugmansia Cornucopia (The Horn of Plenty) much interested the visitors.
- DERBYSHIRE HORTICULTURAL SOCIETY.—We have received a schedule and tickets for the Show, which is to be held on September 6th and 7th, but there is no intimation where the Exhibition will be held, but presumably in or near Derby. We note that some good prizes are offered, including £20, £15, £10, and £5 for groups of plants, and these should insure first-class competition. The Exhibition is to be held in connection with the Agricultural Show, Mr. W. Bacon, Beckett Mill Printing Works, Derby, being the manager of the horticultural department.
- TURAL SOCIETY, held at Stranraer, the leading prizes for Roses were won by Messrs. Thomas Smith & Sons and Mr. McMicking, head gardener to James McDouall, Esq., of Logan, in the parish of Kirkmaiden. A splendid specimen of Charles Lefebvre exhibited in the Logan collection was considered absolutely perfect. Mr. McMicking was equally successful with his Dahlias, which were remarkably fine. The richly coloured Grapes exhibited by Mr. Day, Lord Galloway's head gardener, easily obtained the premier place; while the Rev. Dr. Barty of Kirkcolm was first as formerly with herbaceous flowers.
- LILIUMS AT CHELSEA.—In the large show house at Mr. Wm. Bull's Nursery, King's Road, Chelsea, there are at present in flower some very beautiful Liliums. Amongst the best were a large flowered pure white variety of the speciosum type named album novum; L. s. punctatum, another small pure white flowered variety with coloured spots on the petals; L. s. Melpomene, a very dark coloured variety having fine flowers and an unusually broad leaf; L. Henryi, the colour of which is I suppose a rich apricot, the petals being sparsely speckled with brownish crimson. This is a most attractive species with extremely fragile looking growths. L. Batemannæ was also seen standing out prominently amongst numerous others.—W.
- FARM ORCHARDS.-Mr. J. Hiam writes:-"I have read the articles on this subject with much interest which have lately appeared in the Journal, and can speak as to the deplorable condition in which many orchards are, but with the best material to renovate them running to waste down the ditches and into the streams, the liquid from farmyards. In my lectures last spring I made this a leading subject among country audiences, including many farmers, and placed on the slides under the microscopes spots of sewage after evaporation, in order to bring most intelligently to their minds and eyes the great waste of manure running away at their expense. In support of what I recommended I turned a stream of water in February from an ordinary field ditch to irrigate a row of Apple trees. The effect has been that, in spite of the excessive dry spring and summer, the trees have made more growth than during the past ten years, and the fruit is quite double the size I have ever grown of the same sorts, whereas the rule of the season is that fruit is very small. Irrigation on well drained ground works wonders, and the surprise is that so few appear to realise the advantages of brooks and streams with the aid of self-acting rams and other means."

- —— FRUIT TREES IN SWITZERLAND.—In Switzerland it is stated that very stringent laws exist for the protection of fruit trees from insects and other pests. No tree owner is allowed to treat his trees as he chooses, but a strict watch is kept over both amateur and professional horticulturists.
- —— FRUIT HAWKERS IN OLDEN TIMES.—According to a daily contemporary, in the sixteenth century there was a curious enactment in England whereby street hawkers were forbidden to sell Plums and Apples, for the reason that servants and apprentices were unable to resist the sight of them, and were consequently tempted to steal their employer's money in order to enjoy the costly delicacies.
- SUDDEN DEATH OF A JERSEY NURSERYMAN. We regret to hear of the death of Mr. Ch. B. Saunders of Jersey, who died suddenly from apoplexy on August 1st. Mr. Saunders was born January 4th, 1824, and at the early age of twenty-one took over the management of his father's then very extensive business of a nurseryman and fruit grower. It is reported that his business will be continued by Mr. Becker.
- A French Pomological Congress.—We understand that the tenth general Show and the eleventh Pomological Congress, organised by the Pomological Association of the West of France, will take place at Vannes from October 17th to 22nd. The samples of fruit destined for the Show are to be the property of the Society, and must be sound, ripe (or almost ripe), and represent the average type of exhibited varieties. A special exhibition of instruments, such as crushers, grinders, presses, and stills will also be held.
- ROYAL HORTICULTURAL SOCIETY'S JOURNAL. We have received a copy of part 1, vol. xvi., of the Journal of the Royal Horticultural Society. This forms a neat book of upwards of 300 pages, and contains much useful information. The papers that have been read at the meetings held during the first half of the present year are included, and these alone are worthy of perusal. Extracts from the proceedings of the Society are also given, and the whole of the awards made during the above-mentioned period are enumerated. Many of the new and rare plants are illustrated. The price of the work to non-Fellows is 5s.
- THE POTATO CROP IN JERSEY.—This is the second year in succession the Jersey Potato crop has been unsatisfactory, the price made per ton for those exported having been a little less than £5, against an averaged value for eleven years of rather over £6. The crop is about 11,000 tons less than in 1892. It is stated that the earliest consignments only made £20 per ton this year against £52 last year, while the latter ones made £3 10s. per ton against £2 3s. 4d. last year. The total amount received for the crop this year is no less than £160,275 8s. 4d. less than for the good crop of 1891, in which year no Potatoes were sold at less than £5 per ton.
- SPARROWS AGAIN.—The sparrows have undoubtedly many sins to answer for from a gardener's and farmer's point of view, but I can speak from many years' close observations that they are particularly fond of the Oak leaf-rolling caterpillars, the chrysalids, and the moths. Neither are they the only helpers the rooks have in clearing Oaks, for starlings, the tit tribe, and in the mature state swallows and martins, darting hither and thither among the branches, take the moths, and help in the general destruction. Sparrows undoubtedly take much insect food when they have young. I once put a brood in a cage, and the old birds brought a large number of cockchafers and pushed them between the wires, but the young birds dropped them in the bottom of the cage, not being able to feed themselves.—J. HIAM.
- WHITE ANTIRRHINUMS. Why does "T. S." (page 172) refer to the variety in bloom with him as "Iggulden's?" It would be as correct for me to refer to the white Snapdragon which blooms so beautifully at Swanmore Park as "Molyneux's." The fact is the variety is found in all directions, and though I have never seen it anywhere in such profusion or more beautiful than at Swanmore, yet it is to be found in many gardens. It is very much more to the point to find that such striking effects can be obtained from Antirrhinums. There are plenty of other self-coloured forms that would answer equally well if grown from cuttings, as this white variety is. I had a splendid rich crimson with a white throat at Bedfont, named Brilliant, that I have not seen excelled for effectiveness and would make a beautiful bedder; for this purpose striking self colours are best.—A. D.

DEATH OF MR. THOMAS DOBSON.—It is with regret that I have to announce the death of Mr. Thomas Dobson, which took place on 22nd inst. He was for over thirty years head gardener to Sir Hedworth Williamson, Bait., at Whitburn, near Sunderland, and was deservedly and highly respected amongst his brother gardeners. He had lately been pensioned off by Sir Hedworth, and but recently, during the inspection of a neighbouring gentleman's greenhouse, he fell and injured his head, from which effects he never recovered, and there is no doubt the sad occurrence hastened his death. He was interred Thursday last at Harton. Amongst the mourners were Sir Hedworth Williamson and the principal servants of his estate.—BERNARD COWAN, F.R.H.S.

— FIELD Voles.—I have been much interested from time to time in watching the doings of the Board of Agriculture in respect to diminishing the plague of voles in Scotland, and quite agree with the remarks on page 138 as to the use of owls, kestrels, and weasels as useful destroyers of these pests, from what I have observed. Owls and kestrels ought to be not only encouraged instead of destroyed, but to have homes placed in convenient places to breed and roost in, and so accumulate. I have had both in my homes placed in the trees in the fields. Voles are fond of fruits and vegetables. I catch them with baited traps with Apple, but this would involve too much expense to carry out on a large scale probably. Still, when it comes to a matter of reducing the value of land to such an extent, the best and cheapest way to restore its value is the consideration.—J. HIAM.

Nemesia Strumosa Suttoni.—"R. P. R." writes:—"This annual, sent out by Messrs. Sutton & Sons, bids fair to become a popular plant. Although not one of the best of seasons in which to try a new introduction, this charming plant has stood the test well. There is a strange fascination about the flowers which is rather difficult to describe, some I have seen being of a rich orange, pale yellow, beautiful shades of ochre, the throat being quaintly blotched with black and yellow. If seed is sown about the middle of March in gentle heat, and the seedlings transplanted when the danger from spring frost is over, the plants will branch out freely. This last season being so dry the plants have reached a little more than a foot in height, and I should fancy 18 inches would be the limit. Dwarfer plants may be produced by pinching out the leading point of the plants when well established after transplanting."

FRUIT IN NORTHUMBERLAND.—A northern daily contemporary remarks that a very boisterous south-west wind made havoc amongst the fruit trees in the orchards and market gardens in the Hexham district last week. The mischief was worst amongst those trees which bear fruit of the largest size. Some Apple trees which bear only a limited number of fruit, but of a large and superior size, were almost stripped, while trees bearing a smaller class of fruit only lost, comparatively speaking, a small percentage of their yield. Pears, particularly of the Hessle variety, were an abundant crop. One tree, growing on the bank of the Hextol stream, had to have its branches propped up, so heavily were they laden. The wind stripped the Pear trees of a good percentage of their fruit. The Plum trees did not suffer anything like so severely, the trees being smaller, and not so much exposed to the violence of the wind.

- THE WEATHER AND THE CROPS. - Mr. P. Davison, The Gardens, Iwerne House, Blandford, observes:-The summer of 1893 will long be remembered in the annals of horticulture for its excessive drought and heat. The spring months, with few exceptions, were mild, and brought forth an early and abundant show of fruit blossom of all kinds. During its expansion and setting we had three frosty nights in succession, varying in intensity from 9° to 12°, which left its indelible marks on the embryo fruit, and is now apparent in blotches, blister, and deformed Apples and Pears. Still, we have abundant crops of the two latter, and also all kinds of fruit, including Strawberries and bush fruit. The latter were small, and wanting in juice and flavour. The drought was most severely felt in the months of April, May, and nearly all June. Lawns and pasture fields were brown and bare. It was only by dint of mulching and incessant waterings that we could keep our young plants alive in the kitchen garden and in the flower beds. Vegetables suffered severely - Peas nearly a failure, while Lettuce and Spinach ran to seed, and Turnips were dry and stringy and bitter in taste. Rain came moderately at the end of June, and in July a large quantity fell and gave vegetation a new life. We are now having a plentiful supply of vegetables, such as Autumn Giant Cauliflower, Vegetable Marrows, Beans, dwarf and running. Cabbages have been terribly infested by the caterpillars. The temperature during the present month has been exceedingly high. At noon, on the 16th and 17th inst., the thermometer indicated 95° in the open. Late Peas, such as British Queen, Egyptian Marrow, &c., are eaten up by mildew. Wasps, and all insect pests, have been unusually numerous and troublesome this year. Potatoes are a splendid crop of good medium size and excellent flavour, and so far are nearly free from disease.

A FUCHSIA SHOW.—A western contemporary remarks that at Bristol the grounds presented an exceptionally attractive appearance at the Zoological Society, Bristol, when the Fuchsia Show was held recently. The plants were attractively set out in a large marquee erected on the lawn, the effectiveness of the display being enhanced by the judicious use of Palms and Ferns. There were altogether 160 Fuchsia plants exhibited, and Mr. Harris, the Society's head gardener, may well be proud of the fine show they made. Possibly owing to the fierce heat experienced of late, the collection would have looked a little better a month ago, but the sight of the Fuchsias, over-fruitful in their rich clusters of pendulous bloom, was one not to be missed by admirers of flowers. Altogether 109 distinct varieties were represented. Seedlings looked extremely well, and formed an important feature of the Exhibition.

— Dahlias at Rowledge.—That Mr. Mortimer should, in the first London competition for Show Dahlias, have exhibited such beautiful blooms as he did at Earl's Court, winning the prize easily from older competitors, is all the more remarkable when it is remembered that the soil in which his Dahlias are growing was but a few years ago a piece of poor, starved shallow heath or common; so poor, indeed, that it would have seemed dear at 10s. per acre. Even now, close by, there is land that wears just the same starved hungry appearance, and which no one would for one moment think could hardly grow a Potato, much less a Dahlia. The result, as seen with the Dahlias, shows what can be done in converting a barren heath into living productive soil. Here it is as dissimilar from what is found at Slough, Salisbury, and Thame, as chalk is from cheese. It is therefore all the more to the credit of Mr. Mortimer that in such a dry season as the present has been he should have done so well.

CURIOUS JUDGMENTS.—If we did not know that Mr. Pettigrew did not pose as a wag, we might have imagined that he had been joking over the oddities of the judges at Cardiff, whose acts he criticises. How on earth was it possible for judges to read the term "exotic" as they did? If they will turn to their dictionaries they will find the term signifies "foreign"—that is to say, any plant introduced here from other countries is an exotic, or, in other words, is not indigenous to Great Britain. Mr. Pettigrew intimates that the term exotic, without any explanatory prefix, was employed. Then, of course, every imported plant was inadmissible. Why will committees make such errors in compiling their schedules, and judges do such odd things? The placing of Roses and Hydrangeas amongst hardy herbaceous perennials is indeed another oddity. How Mr. W. Marshall would have revelled in the consequent disqualification.—D.

- FLOWERS IN A CEMETERY .- South Shields possesses parks, the beauties of which are greatly admired; but it can also boast of another floral display of a most attractive kind. The latter, however, is not in a pleasure ground, but in a cemetery. In connection with their new place, near Harton, the South Shields and Westoe Burial Board have adopted a policy from the first of making it as cheerful and pleasant-looking as possible. Mr. Bernard Cowan, F.R.H.S., the Superintendent, during the present summer has been most successful in this respect, and the ground under his control will well repay a visit from all admirers of fair Flora. The cemetery, says the "Newcastle Daily Journal," has been laid out so as to hide the graves from public view as much as possible, and on first entering the place it is difficult to imagine that it possesses any sombre aspect at all. On the other hand it has all the characteristics of a fine ornamental garden. Some skilfully worked-out designs in carpet bedding attract attention at the entrance, while further on the borders of the main roads are simply charming. Some of these are arranged in circular and oblong flower beds cut out of the green turf, and present a most tasteful arrangement of colours. Others, fully occupied with herbaceous plants, are ablaze with bloom of great variety of colour and form, while yet another has a magnificent display of Carnations in full flower. The trees and shrubs which surround the grave spaces have grown rapidly, and their thick foliage sets off splendidly the floral display. Altogether, the cemetery presents a most charming appearance, and reflects high credit on its Superintendent.

HALTON.

HALF hidden amongst the trees with which the Chiltern Hills are covered lies the rural village of Halton, which claims as a resident one of the greatest financiers of the day—Mr. Alfred de Rothschild. His estate, which covers an enormous area, is, perhaps, one of the most beautiful in this country, the gardens being models from which anyone might easily learn a lesson. Cleanliness predominates over all, from the stately mansion of Bath stone down to the humble potting shed. An invitation to go and have a look "all over the place" was accepted with alacrity, but with a very faint idea what those few words

got to the top of one of the Chiltern Hills, from whence the panorama presented before our eyes was one of surpassing beauty. Down in the valleys lay the fertile vale of Aylesbury, with the stately home of the Earl of Rosebery showing amongst the trees, and away beyond on another high hill could be seen Waddesden Manor, the home of Baron Ferdinand de Rothschild. Truly we were in the country of the Rothschilds; on every side the land for miles belonged to some one of this wealthy family, who are so highly respected by their poorer neighbours, to whose comfort and well-being they are so truly solicitous. A little further on and we come upon a veritable plateau on the top of a hill, not a natural one be it understood, but one which Mr. de Rothschild

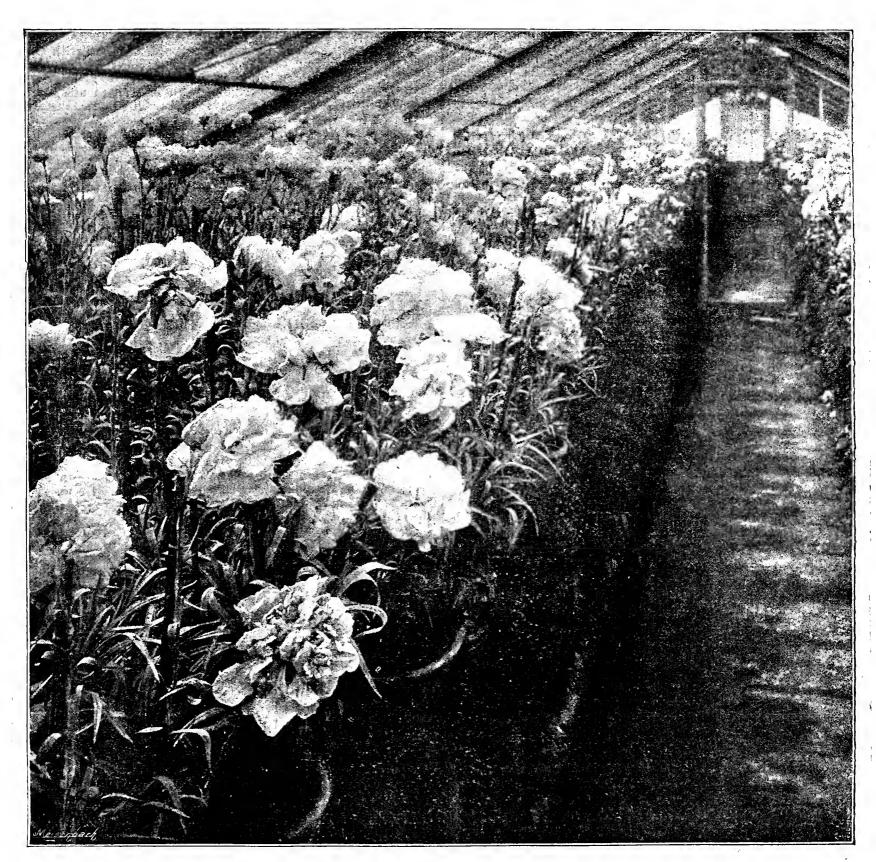


FIG. 29.—SOUVENIR DE LA MALMAISON CARNATIONS AT HALTON.

meant on a summer's day with the thermometer registering well into the nineties, and that in the shade. However, notwithstanding the heat, I spent one of the most enjoyable and instructive days I have ever had during my life. I will endeavour to recall for the benefit of those readers of the Jonrnal who are unable to visit Halton some of the points which appeared to me to be of more than passing interest or of unusual beauty.

To ensure myself a good long day I left London by the 9.15 A.M. train and reached Tring punctually at half-past ten, where I found Mr. Sanders, the genial and talented gardener, waiting to take me under his wing. From the station we drove through the town of Tring, past Lord Rothschild's beautiful demesne, through the country for about four miles, until we came to one of the entrances of the Halton estate. Instead of going direct to the gardens we went round and round until we

had formed more, so far as I could see, to give work to some of the labourers about than for any advantages that could possibly accrue to him from it. Facing this stands a very beantiful châlet, which has been erected as a resting place for players in the American bowling alley to which it is attached. It is indeed a charming spot, the views from both back and front being almost incomparable, at least to those who love English scenery.

From thence we drove down grass drives through shady woods of Beech trees, between which could be caught at intervals glimpses of the mansion lying far away down in the valley below. Through one of these vistas was opened a view of the flower gardens, and the picture was a perfect one, worthy of being reproduced on canvas by any of our most celebrated artists. During the drive down the hills several rustic summer houses were passed. These erections, I was surprised to

see, were, though rustic outside, not by any means so in, the floors being thickly carpeted, and comfortable looking chairs standing about, adding an air of cosiness to them which is all too often conspicuous by its absence in these useful and ornamental additions to a garden. A long drive through the park brought us to the kitchen and fruit gardens, which are situated rather over a mile from the mansion and flower gardens. It is in this part of the estate that Mr. Sanders' pleasant house is situated, almost hidden under some old Beech trees, and close beside an orchard which has been but very recently planted. Here we stayed and had a thoroughly good rest, took some substantial refreshment for the welfare of the body, and then away we started to walk through the park to the flower gardens, which are unusually extensive.

The gardens round the mansion are composed of lawns and flower beds, all of which are kept scrupulously clean, and have been during the past summer heavily watered, which, as evidenced by the bright and robust condition of the plants, has had a most beneficial effect. The terrace beds are filled with tuberous and fibrous-rooted Begonias, Fuchsias, and Zonal Polargoniums, all the varieties planted being conspicuous for their bright colours. The Begonias have not flowered so freely as is customary, the soil, which is of a very chalky nature, not having held enough moisture to insure the utmost floriferousness. There were, however, two strikingly notable exceptions to this, and they both belonged to the fibrous-rooted section; one was B. Worthiana, and the other B. fioribunda rosea, the former being covered with its bright orange-coloured blossoms, and the latter forming a perfect mass of rosy pink. Down the centre walk from the garden entrance to the house beds and vases on each side look very bright, and at the end is a large circular fountain, round the back of which is a bright border containing Eucalyptus globulus (Blue Gum), Castor Oil Plants, Palms, Cannas, Nicotiana affinis, Marguerites, and Zonal Pelargonium John Gibbons. On each side of this fountain, partially hidden in the background of bushes, is a newerful electric light, with the reflectors fixed to shine directly and is a powerful electric light, with the reflectors fixed to shine directly on the centre ornament. The pedestals on which the vases are stood in the walk are made so that the lower portion swings back, and in each is found an electric light; this throws its light straight down the walk towards the fountain, and the effect thus produced when the lights are burning is, said Mr. Sanders, truly magnificent. The beds, vases, and fountains with their occupants are as clearly seen by this artificial light by night as they are by day under the natural rays of the sun. These vases are filled with Begonias and various other plants, amongst the best being those occupied by double white and pink Zonal Pelargoniums, which are flowering with exceptional freedom.

We next visited the Italian garden, where a most emphatic change The centre is a lawn with one large centre bed, and the greets the eye. sides are of trellis, up which Ivy has been trained. Niches have been made in which statues are placed, and at the extreme end is a large summer house, over which Roses are being trained. The bed in the middle of this garden is a large one filled with Lilium longiflorum, L. tigrinum splendens, yellow Marguerites, and some excellent Fuchsias. This Italian garden is one of the most novel features of the estate, and for lovers of the uncommon certainly one of the most attractive. For my own part, however, I prefer the style so well portrayed in what is known as the German garden, where the beds are formed of large masses of a few different plants, planted in a manner which needs an inspection to be understood, as for me, at any rate, it is practically indescribable. Dark and light-foliaged Cannas are in this style of planting seen to advantage, as also are the Begonias, amongst which Acacia lophantha has been planted, Centaurea Clementei, and Abutilons. The Indian garden represents an entirely different mode of planting, the pre-dominating features throughout being handsome Palms and Dracænas of all sizes. These might be termed the background, but flowers of various sorts were used to form attractive beds and borders. A tent is erected in the Indian style in this garden, and forms an unusual feature in a flower garden, being furnished in a really luxurious manner. Stands are fixed in here, as in almost all the other structures on the estate in which flowers and plants may be placed, and these, it is needless to say are effective. An unique attraction on one of the lawns is a huge wicker basket filled with plants of different kinds. It is of immense size, measuring about 14 feet across and standing upwards of 5 feet high, the cross handle, of course, rising much higher than this. I was much struck with the beauty of this ornament, and have never before seen such a thing. The basket is lined with turves, grass side outwards, and in this is placed a casing, which carries the weight of the soil. The centre was bright with Lilium longiflorum and L. tigrinum splendens, grand Hydrangeas, Petunias, and Tropæolums, the latter being allowed to hang in festoons over the sides. The gardens surrounding an ornamental lake, which has been formed mainly to provide skating during the winter months, are very charmingly laid out. Liliums and Zonal Pelargoniums are largely utilised here, as also are shrubs of various kinds and of all sizes.

The kitchen and fruit gardens are also admirably kept, but the latter is completely overrun with wasps this season, and to such an extent do they carry their depredations that Mr. Sanders has found it absolutely necessary to have all the Pears gathered before they were nearly ripe, as they were all being rapidly destroyed. At the end of the garden runs an arm of the Grand Junction Canal, and in the banks of this the wasps make their homes, which are unfortunately rather difficult of access for the men to destroy them. Cyanide of potassium is, however, being used with fatal effects to many hundreds of the pests daily. All the small fruits have been gathered, but the trees and bushes bear the

unmistakeable stamp of being in good hands. A number of the Apple trees have been covered with hexagon netting to keep out the wasps, but if they are as precocious as those referred to by a Sussex correspondent at page 176 of your last issue this precaution will be of little use. All the best varieties of Apples are grown, and particularly noticeable were some trees of Cox's Orange Pippin, King of the Pippins, and Wellington, which were carrying crops of magnificent fruits. Strawberries are forced in very large numbers, and preparations are now in an advanced stage for supplying an abundance of fruits during the coming season. In the houses the same difficulty with the wasps has to be contended with, though not to quite such a large extent. Several vineries and Peach houses have been cleared of their fruit, as also have some Fig trees, for which there is a large demand. Notwithstanding the fruit that has been gathered, there is still abundance ripe and ripening, more especially amongst the Grapes.

The houses devoted to plants are completely filled with those suitable for furnishing the mansion and summer houses, Caladiums, Crotons, Dracænas, Anthuriums representing the largest stocks. Maidenhair Ferns are not largely grown in pots, though some are of course so cultivated, but the fronds when required are taken from the end wall of one of the vineries on which plants have been secured by the aid of a wire trellis. This, as will be readily admitted, besides supplying innumerable fronds, forms a most pleasing and at the same time novel appearance. Unfortunately my visit was too late for me to see the Souvenir de la Malmaison Carnations in their best condition, but some idea may be gained on referring to the illustration (fig. 29), which has been reproduced from a photograph, of the great beauty of the plants and the striking success of the mode of culture to which they are subjected. So grand are the plants and the few individual blooms which remained, that I asked Mr. Sanders to favour me with details of his mode of procedure, and he gives it as follows:—

"The house of Souvenir de la Malmaison Carnations in the photograph contains about 700 plants of the fleshy white and pink varieties, which, with the striped Lady Middleton, are the only three that can claim to be true types of that now popular flower. Their culture being generally well known by all who take an interest in Carnations, there is perhaps nothing new in our method of treating them. Layering, in preference to cuttings, is done in frames in July as soon as the plants are ready, shading them for a week or two until they commence to make fresh roots, when they are gradually hardened and exposed to the weather by removing the lights altogether. When well rooted the young plants are lifted and put in 48-size pots, using good loam, leaf mould, and sand. When well established in the soil they are again shifted into 32's, a little well decayed manure being used this time and at all succeeding pottings. No more shifts are given them during November, December, and January, when growth is naturally slow and root extension is not required. Watering is at that period very carefully done, and a dry atmosphere is maintained, with an even night temperature of 45° to 50°, and the plants being kept well up to the light.

"When the days begin to lengthen and the sun to regain its power Another notting is then given, the plants soon make new growth. Another potting is then given, which carries them through their flowering period, during which they are benefited by liberal treatment in the way of liquid manure waterings, and an occasional application of Clay's fertiliser. Soot, too, is an important factor in producing that deep leek-green foliage, indicating perfect health. One flower stem each is all to be expected the first flowering, but the plants are at the same time making side shoots close down to the soil. These shoots soon form a perfect cluster of growth, These shoots soon form a perfect cluster of growth, ensuring a good harvest of flowers the following year. After flowering, during which time shading is necessary, the plants are gradually exposed and stood outdoors for a week or two before being finally reported, this time in 10 or 11-inch pots, to allow the soil to be worked well around the loosened balls with their mass of roots. The plants are shaded and syringed a little to establish them in their new They soon grow into good bushes, with from eight to sixteen strong growths, the earliest of which flower during the winter and early spring. A little higher temperature is given to the earliest plants, 55 at night, which materially assists the development of the flowers. The wealth of bloom is not looked for until May and June, when the same liberal treatment is resorted to until the plants have done flowering. The plants represented in the engraving are two years old. To have an abundance of flowers it is necessary to raise plants every year from the two-year-old plants after flowering, there being no advantage in keeping them longer, unless extra size specimens are required. They at no time want coddling, and like plenty of light and air on all favourable occasions, shading only after potting and when in flower. No plant repays the cultivator better for liberal treatment when the blooms are developing, and flowers 4, 5, and even 6 inches across are the result.

"Like all other plants Carnations have their enemies, and a perpetual war is always raging to keep them under. Green fly is very persistent, and frequent fumigations are necessary to dislodge the pest. Red spider during hot dry weather is a still worse enemy; dipping or syringing with insecticides being resorted to to clear the plants of them, or sickly yellow foliage soon follows. But worst of all is the brown fungi, which infests the plants during the winter, for which I know no absolute cure. We keep it under by continually going over the plants and rubbing it off with a dull pointed stick, using a mixture of water, softsoap, and sulphur, which kills the spores when dislodged. While there is really no cure, I believe there is a preventive, which lies in the management of the plants during late summer and autumn, growing them well exposed to

the sun, which hardens every particle of growth, and avoiding a moist muggy atmosphere; but as we are situated on a level with a branch of the Grand Junction Canal we cannot well control the latter as much as we should like."—H. J. W.

WASPS.

The season proves exceptionally favourable for the development of wasps' nests, and many hornets have made their appearance once more after an absence of many years. There is a mistake on page 126 copied from a contemporary, in supposing that wasps "develop from eggs in a single night," as it takes weeks to pass through the various stages of transformation. The probability is that the wasps mentioned were of the species Vespa norwegica, and when taken at this season of the year, or a fortnight earlier, the workers naturally become inactive, although still inside the nest, as I have frequently noticed. The extra warmth and the disturbance of the nest by bringing into a dwelling would induce activity.

About a fortnight ago I cut one of these species of nest out of a Hawthorn bush for a farmer, and as it was a very good specimen it was intended to be placed in a glass case as an ornament. Before doing so I took the precaution to place the nest in a tolerably hot oven all night, in order to kill all the wasps inside, and dry any larvæ which might still exist in the combs. I also have an excellent specimen nest I cut out of a Holly-tree while the wasps were in full vigour in working. My method of procedure is to first drive inside any wasps building or protecting the nest by syringing with cold water, as a shower, gently, and then very carefully release the nest from all sprays except the main bough by which, it is suspended, with pruning scissors, and hold the main branch firmly, to prevent falling when cutting off.—J. HIAM, Astwood Bank.

ANTI-BLIGHT POWDERS.

What I may be doing is of very little consequence to anybody I surmise, but before my experimental Potato plots, whereon I have applied the anti-blight powders this year, arrive at their sere and yellow leaves, I feel that I should like you to see specimens representing the present appearance of their foliage. No. I represents leaves upon which I have applied a new powder that Messrs. Tate & Buchanan describe as "Agricultural" anti-blight, distinctive from their "Horticultural" powder, which has been three years in distribution. The Agricultural is a much cheaper production, and more palpably lasting upon the foliage, as you may observe. We have had severe winds and heavy rains since I applied it, the (with the fear of Mr. Abbey before my eyes as I write it) Phytophthora infestans spores would find it a great difficulty to enter the stomata through the above cuticle protective. Mr. Barron and Mr. Barr well know that I do not care a brass farthing about the under sides of the leaves, though I would not answer for the disease spreading if it gained a bed before the application.

I begin my dressings with the powder from the youth up of the haulm, at least, that is to say, I have done so with the "Horticultural" anti. The early frost came last year just as Mr. Barr sent me a supply and effectually put a stop to my powderings, so I have been using that reserve this season till I obtained the new "Agricultural" as I would presumably have done gold dust. Nos. 2 and 3 foliage have been dressed entirely with the "Horticultural" compound which do not maintain itself so distinctly upon any foliage, but the beautiful glaze and greenery it evolves makes it far preferable for greenhouse work, and with me it is quite effective in preventing the Potato disease. No mildew or vermin can ever become established on the haulm when dressed judiciously with powder. I send you also a first main leaf from one of my Tomato plants, which have now eight ripe and fourteen unripe fruit upon it. In practice I foreshorten the principal leaves to prevent crowding as the plants grow with single stems about 15 inches apart and 4 to 5 feet high, they are now a beautiful sight; we have Tomatoes galore, and between ourselves fried bacon and Tomatoes do not make a bad dish.

In passing Major Thoyt's lodge gate the other evening, I said to the occupant, "Good evening Pullen, how are the taties?" "Bad, bad." "Why you don't mean to say they are diseased?" "Just look across the garden there, they are gone quite black." Sure enough they were, and I see in another neighbour's garden next to me, he has cut off all his tops. Now if my neighbour's Potatoes are so diseased why should mine be left for four consecutive years? I will say no more, let those speak who have not borne the burthen and heat of the day.

As to fruit, my Gladstone and Irish Peach Apples were failures, plenty of Keswick Codlins, and my Pay the Rents and Wellingtons would break themselves down if they were not propped. Pears are good with me, or rather were, but the wasps necessitated my gathering them before they were ripe. Perry is the consequence, and cider will soon prove so with the Apples in part, and I regret to say so with Cox's Orange Pippin, of which I have a full crop. Of small fruits the missus's jam shelves are full, and so are my winc barrels. I never had a more bountiful supply of small fruits, but then, you know, I tapped one of the finest and unfailing springs when I first came here; and as Beau Brummel was said to say "Cravats made the man," I say water made my fruit.—ROBERT FENN.

[The specimens were withered when examined. We hear, however, of a projected pilgrimage to Sulhamstead, when the plants can be examined, and the overflowing stores of the veteran and his "missus" somewhat diminished.



NATIONAL ROSE SOCIETY.

It is with fear and trembling that I take up my pen to reply to Mr. Grahame, for it appears that in taking any notice whatever of his semi-official-looking circular we Secretaries committed, at all events in his opinion, a great blunder. For this unpardonable offence he tells us we "must take the consequences of the subject being discussed in the gardening Press." I suppose it is useless pleading that even such a fearful crime as simply trying to amend Mr. Grahame's circular cannot justly warrant so dreadful an exposure as that with which the Committee is now threatened. However, the deed is done, and the consequences must be faced as best they may.

In such straits one is apt to catch at any straw which happens to float by at the time. I am, therefore, wondering whether there is any slight consolation to be found in the thought that there is probably not a single society in the kingdom the management of which would altogether please so exacting a critic as Mr. Grahame. Again, but I suppose I must be wrong, I have hitherto been under the foolish impression that there is scarcely any other horticultural society which possesses so spotless a record of the past, or whose affairs would bear as searching an examination as our beloved National Rose Society.—E. M., Berkhamsted.

Notes About Roses.

I FEAR that I must have been misunderstood in what I said about Ernest Metz. I never meant to imply that it was not a most beautiful Rose when caught, but I did doubt its constancy upon this ground that special prizes have been offered for it at the Crystal the last three years, that in 1891 and 1892 there was no competition, and that this year, which was considered to be an especially favourable one for it, only the two great Colchester firms competed, and yet I know that several amateurs went in largely for it, and intended to compete, but could not. Perhaps another season may prove more favourable.

I note that your correspondent, Mr. Williamson, (page 170) expatiated on the satisfaction that Tea Roses had given him; he singles out a few by name, but curiously enough, three of them are not Teas. L'Ideal is a Noisette, as he will see it marked in the Rose Society's catalogue, while Gustave Regis and Cheshunt Hybrid are only Hybrid Teas. The latter have been long placed among the Hybrid Perpetuals, but is now transferred to the special class of Hybrid Teas.

A correspondent in one of your contemporaries made the statement that Louis Van Houtte was a sport from Charles Lefebvre. This was so new to me, and seemed so little credible, that I ventured to ask on what authority it was based. To this, as far as I can see, no reply has been given. Are any of your readers able to say whether they have heard this statement or not?

Whatever may have been the disappointment experienced by rosarians this year, they have had some compensation in the wealth of autumn bloom, not only in the Teas but in the Hybrid Perpetuals; the former especially have been a marvel of beauty.

While writing on the subject of Roses I would mention a matter on which I feel a little sore. I have just received from the Treasurer of the N.R.S. a list of those members who have not paid their subscriptions; this, I am sorry to say, amounts to ninety-five, or about one-sixth of the whole, and amongst these are to be found members of our Committee and many of our exhibitors. As a special circular was addressed to our members to ask them not to give this additional trouble, and that the plan of deducting their subscriptions from their prize money would not be allowed, I think, to say the least, it is very inconsiderate, and should this meet the eye of any of those alluded to I hope they will make no delay in sending in their subscriptions either to the Treasurer or to one of the Secretaries.—D., Deal.

CONTINUATION SCHOOL GARDENS.

A NOTE relating to the discovery of recently established school gardens in Lincolnshire having gone the rounds of the Press under the heading of a "Novel Idea," the following letter on the subject appeared in a recent issue of "The Standard."

"In reference to the 'novel idea' of boys' gardens in connection with schools, as announced in "The Standard" of the 14th inst., as well as in other journals, may I, as 'Horticultural Instructor,' acting under the directions of the Technical Education Committee of the Surrey County Council, briefly describe what is being done in the county mantioned in teaching practical gardening to youths in several villages?

"Small gardens in close connection with schools, it may be said, is by no means a novel idea. I remember, many years ago, observing plots of ground attached to the schools at Rangemore, supported by Lord Burton, and quite recently I have had the opportunity of inspecting school gardens at Hale, near Farnham, where plots of ground have long been provided both for boys and girls, the former for the cultivation of vegetables, the latter for flowers. These gardens have been established for about twelve years, and Mr. E. Cæsar, the schoolmaster, who is a

successful amateur gardener, has had pleasure in teaching those of his pupils who desired to learn what they could of gardening to cultivate these plots. They have always been in great demand, and most of them

have been very well managed indeed.

"Recognising the value of teaching practical horticulture in connection with schools, the Surrey County Council first provided a series of lectures on gardening for schoolmasters and pupil teachers; then plots of ground were obtained in villages to be worked by the older boys attending school, as well as others who have ceased attending, and who are engaged in various occupations in the parishes. The first of these small gardens—twenty-four—were formed at Banstead, on land kindly provided by Mr. Robertson Rodger, C.C. The plots of 1 rod each have been worked by the boys for two seasons, under the superintendence of local gardeners. Vegetables of approved varieties are grown, also a few flowers by those who desire to have them, while a plot of 4 rods is set apart for affording lessons in the cultivation of hardy fruits. These miniature vegetable gardens have been admirably cropped and cultivated. They are at this moment full of useful produce, and are neat, clean, and

They are at this moment full of useful produce, and are neat, clean, and orderly—cherished by the tillers and their parents alike.

"Similar groups of gardens are established at Ashtead, Fetcham, Hersham, Effingham, Clandon, Bookham, Horley, and Hale. It is my duty to inspect these plots periodically, give instructions, take note of the different crops and estimate their merits, which are represented in points, those boys who win the most by their diligence and aptitude being the recipients of prizes proportionate with the merit displayed. The Hale County Council Gardens have been quite recently examined, and it would be extremely difficult to find a weed in sixteen out of eighteen of them, while the crops are as good as could be expected eighteen of them, while the crops are as good as could be expected during the season of drought on an extremely porous and gravelly soil. These plots are, in fact, as well cared for, as clean, and as creditable as are any gentlemen's gardens in the district, and they have been admired by many visitors. It is not suggested that they excel the groups in other villages still to be inspected, and where the crops ought to be, and no doubt are, better, in the better soil. They are mentioned as showing that the best has been done that could be done under the circumstances, while a previously barren square of land has been rendered distinctly useful, the boys in the meantime gaining knowledge which can scarcely fail to be of service to them in after life.

"Each boy in the different villages is provided with a set of tools are intable size comprising a grade digging fook draw here. Dutch here

of suitable size, comprising a spade, digging fork, draw hoe, Dutch hoe, and planting fork or trowel, with sheds for their accommodation. These tools are inspected, and, with trifling exceptions, are kept in the most admirable condition, being made bright, and then lightly oiled to prevent rusting. Potatoes and seeds were provided for cropping, and prizes have been awarded for the produce at some local exhibitions. The boys attend horticultural lectures when these are given in their villages during winter evenings, and appear in every way anxious to acquire information on the management of land and the production of crops. So far as is known, the Surrey system of Continuation School Gardens is the most complete that has been yet established under County Council auspices; and it is hoped and expected that the rising generation will be benefited by the privileges afforded.—J. WRIGHT."

LILIUM LANCIFOLIUM AND ITS VARIETIES.

THERE are few more beautiful flowering plants for greenhouse or conservatory decoration at this season than the various types of Lilium lancifolium. Some few years ago they were cultivated more extensively than at present, and it is strange that such charming plants

should be neglected.

Good sound imported bulbs can be procured from any nurseryman. The bulbs will be found in most instances to be of a moderate size, and three are sufficient for a 10-inch pot. Drain the pots well, and place over the crocks a handful of partly decayed leaves, afterwards half fill the pots with a compost of fibry loam, one part dried horse droppings and rough leaf mould, adding a remaining part of broken red sandstone and coarse silver sand. This has been the best compost we have ever used, the growth of the plants being strong, and the flowers exceptionally fine. When the pots have been filled to the height mentioned give a sprinkling of coarse sand, on which place the bulbs, and fill up almost level with the top of the latter.

After potting we place the pots in a cold frame, plunging them to rims in ashes. If the soil was fairly moist no water will be the rims in ashes. requisite until growth is perceivable. Protection from severe frost may be afforded by covering the lights with any stout material, removing it on every favourable occasion, and giving ventilation when necessary. In this position they may remain until growth is well advanced in the In this position they may remain until growth is well advanced in the spring. The plants can then be removed outside, standing them on ashes, which will allow the water to drain away freely and keep out worms. As the pots become full of roots top-dress with a similar compost to that recommended. During growth, and until the buds begin to show colour, weak applications of liquid manure will be found very effectual. Soot is invaluable, the growth assuming a deeper green, and a sprinkling of some fertiliser is also beneficial. Neatly painted stakes should be placed to the growths to prevent the bulbs getting loosened, and when the buds show signs of colour a cool greenhouse is the best place, as then the flowers open perfectly clean.

the best place, as then the flowers open perfectly clean.

After flowering we never place the pots out of doors but in the greenhouse, and repot the plants when they have finished flowering. They are then carefully watered, for I am of the opinion that more failures occur through the pots being placed outside and exposed to the

cold rains of the autumn than from any other cause. As the stems show gradual signs of decay water is entirely withheld, and the pots transferred to a cold frame, where the bulbs keep plump and are ready to make a good start in the spring. The varieties we used to grow largely were Roseum and Album, but these are now superseded by Rubrum, with more intense colouring, and Album Kratzæri, with better formed flowers and a green band in the petals. I enclose a few flowers, from which you will see that our treatment is not very far wrong. -R. P. R.

The flowers sent are very fine, and reflect credit on the grower.

PROPORTIONAL PRIZES.

IF Mr. A Dean has been contending for the right of proportional prizegiving in the *Journal* (page 155) I am very sorry to have missed noting his efforts to effect this very just alteration. The Carshalton Exhibition appears to show the unfairness and absurdity of the ordinary method of prizegiving. Wherever I have had anything to do with schedule framing I have tried to bring the value of the prizes offered as near together as possible. When competition is severe there is often the slightest margin between the successful exhibitors, yet that slight difference may mean pounds, as for instance when the prizes are £15, £10, £5, and many of us can recollect cases in which the first prize has been £15, and the second only £5.

The large first prizes have arisen, as I believe, from a mistaken notion on the part of committees, that a good sum of money was a greater inducement to exhibitors to enter specimens. I do not know whether I am right or wrong, but I have always fancied that a larger number of exhibitors is obtained by a greater number of prizes. For instance, I think £10, £8, £6, £4, would bring together more competitors than £20 and £10, and if entry fees are charged this is a matter of some

moment to the Committee.

There are other advantages attending proportional prizegiving. It would necessitate greater care on the part of the judges, and though I believe in the great desire of judges to act fairly towards all exhibitors, everything that tends to the exercise of care and caution in awarding prizes is an advantage to the general body of exhibitors. Moreover, when there is a great difference in the value of prizes, exhibitors who, perhaps, naturally look favourably on their own productions, would probably acquiesce in the judgment when they saw how close was the competition, and everything that tends to kindly feeling between the two classes is an advantage. The office of judge, if honestly carried out, is no sinecure; it means a fair share of labour, and this method of prize-awarding would mean that every class would have to be "pointed." This is often quite unnecessary, one exhibit being often immeasurably superior to the other. No doubt a large number of judges would be required, and a stricter clearing of the tents at the stated time, a matter that is not sufficiently attended to at most shows, and one that greatly curtails the time at disposal of the judges.

I see some difficulties. Of course, instead of a certain number of prizes being offered, some such note as this would be necessary, "In the following classes such a sum (whatever the Committee have agreed to) will be offered in —— prizes." But what will a single exhibitor receive, or exhibitors, fewer than the number of prizes offered? Then it would seem necessary to have in the Secretary's tent someone well up in the matter of per-centages, whose duty it would be to thus divide the sum. I do not exactly envy him the work, and certainly the post will not be solicited by myself, although I suspect that these difficulties would soon be smoothed over.—Y. B. A. Z.

PRESENT USE OF HOTBEDS.

DURING such bright weather, such as we have had lately, it seems somewhat out of place to write about hotbeds and their uses; but a well constructed hotbed at the present time is of much importance for rooting the cuttings of various summer bedding plants which are required for stock for the following season. Some gardeners keep a stock in pots all the summer, which is a very wise plan. Where this is not done no time should be lost in striking a good batch of each sort used, and a hotbed is the most suitable place wherein to root the cuttings quickly. Such as Coleus Verschaffelti, Iresines Lindeni and Herbsti, Gnaphalium, Alyssum, Lemon-scented Verbena, Heliotrope, and Harrison's Musk, are easily rooted in a hotbed. Pelargoniums are the best rooted in boxes outdoors, Mesembryanthemums in pots in a cool frame or greenhouse, and rootlets of Lobelias dibbled in boxes and placed under a north wall till established. Alternantheras are generally taken up, divided, and put in boxes; but I like to have a stock of young plants also. They grow more freely during the winter and early spring months, and give a greater number of cuttings in the spring, healthier and freer in growth than those taken from old stock plants.

The hotbed should be made of litter, old dry leaves, and a little lawn grass mixed in, each layer being slightly damped as the work proceeds if the material is at all dry. About 6 or 8 inches of ashes, cocoa fibre, or sawdust, may be placed on the top when the material has been made firm. This is in the case of hotbeds made in deep pits; if they are to stand alone in the open the frame must be placed on at a certain stage, and more heating material added afterwards, so that the surface of the pots when plunged will be about 8 inches from the glass.

A suitable compost to root the cuttings in is half leaf mould and half loam, with a free admixture of sharp sand. Make the soil firm

in the pots before inserting the cuttings, and sprinkle a little sand upon the surface of the soil after the cuttings are in and watered. This helps to prevent damping. Be careful that the cuttings do not flag much before being placed in the frame, leaving a little air on at the top so as the vapour may escape. Attention is necessary afterwards to see that the cuttings do not flag, and are well shaded from all sunshine till rooted. When this has taken place air may be gradually admitted more freely, and the plants put in pots or boxes as is most admitted more freely, and the plants put in pots or boxes as is most convenient. If they be kept in a suitable temperature during the winter, and not over-watered, grand plants will be at hand for quickly increasing the stock to the required number.—G. GARNER.

HORTICULTURAL SHOWS.

SHREWSBURY.—AUGUST 23RD.

ONCE again has the famed and beautiful Quarry Grounds of historic and picturesque Shrewsbury been seen in a manner to be remembered. The best specimen plants that Britain can boast, with beautiful groups half filling one of the huge marquees; cut flowers in extraordinary numbers and superior quality, with floral arrangements of the first order of merit, and in some respects unique; fruit in enormous quantity and superb condition—the premier display of the year; vegetables as if grown for an army of giants; the best music the kingdom affords—the bands of the Royal Horse Guards and the Grenadiers, led by the "two Godfreys," with sundry other attractions of a very miscellaneous order; with Pain's fireworks and 40,000 people on the green sward, encircled by towering Limes, we have an aggregate of a very remarkable character brought together on the occasion of the "Floral and Musical Fôte"—the nineteenth of the series—the greatest and the best that has yet been provided by the Shropshire Horticultural Society.

The Society, as represented by the records of its shows, appears to have started well, and to have gone on improving with no checks worth mentioning, until it has reached its present commanding position in the horticultural world. The total receipts from the first Show in 1875 was £790, an amount it may be noted only a little above the sum allocated for prizes during the present year. The receipts last year from all sources were £3740. This year they may be a little less in consequence of the unfortunate disturbance in the coal trade, and thousands of men "out" of the class which, with their families, attend the great Provincial Festival. The takings on the first day (£535) were greater than on the corresponding day in any other year, while those on the record day amounted to £1400—a wonderful result under the circumstances. There was no falling off in the competition; but on the contrary, an increase of 200 entries, bringing the total up to 2400. This speaks well for the confidence that is reposed in the Society. Exhibitors are treated in no niggardly fashion, but every encouragement that can rightly be given is extended, as is instanced by the number of medals and special prizes granted for miscellaneous exhibits of a meritorious character. In a word a generous policy is pursued, and it is this which has mainly made the Society what it is. Societies that work on the principle of getting as much from and giving as little as possible to those who are in a position to support them, seldom if ever win a high position and gain the confidence of the horticultural community. Of such magnitude was this last Show at Shawkhury that no loss than twenty two Indoor was this last Show at Shrewsbury that no less than twenty-two Judges were engaged, and they could only just complete their duties in time for the public admittance. The following were the adjudicators in the different sections :-

SPECIMEN PLANTS AND GROUPS. — Mr. Outram, B. S. Williams and Co., London; Mr. Ranger, R. Ker & Sons, Aigburth Nurseries, Liverpool; Mr. Chapman, gardener to J. Spode, Esq., Hawkesyard Park, Rugeley.

CUT FLOWERS, FLORAL DESIGNS, BOUQUETS, &C.—Mr. W. Dean, Sparkhill, Birmingham; Mr. Wright, Journal of Horticulture Office, London; Mr. Blair, gardener to the Duke of Sutherland, Trentham; Mr. Barnes, gardener to the Duke of Westminster, Eaton Hall.

FRUIT.—Mr. O. Thomas, gardener to H.M. The Queen, Windsor; Mr. Coleman, gardener to Lady H. Somerset, Eastnor Castle, Ledbury; Mr. Millon gardener to the Farl of Crower Combo Abbay: Mr. Rabone.

Mr. Miller, gardener to the Earl of Craven, Combe Abbey; Mr. Rabone, gardener to the Earl of Shrewsbury, Alton Towers.

VEGETABLES.—Mr. Muir, gardener to Miss Talbot, Margam Park, Glamorgan; Mr. Lambert, gardener to the Earl of Powis, Powis Castle, Welshpool; Mr. H. W. Ward, gardener to the Earl of Radnor, Longford Castle, Salisbury; Mr. N. Pownall, gardener to F. Wright, Esq., Lenton Hall, Nottingham.

WILD FLOWERS.—Mr. W. Beacall and Mr. T. P. Blunt, Shrewsbury;

and Rev. W. Serjeantson, Acton Burnell.

COTTAGERS.—Mr. J. Jones, gardener to A. P. Heywood-Lonsdale, Esq., Cloverley; Mr. J. Wallis, gardener to R. Sneyd, Esq., Keele Hall; Mr. T. B. Field, gardener to Sir H. Thyrwhitt, Bart., Stanley Hall; and Mr. Farrant, gardener to Mrs. Juson, Shrewsbury.

Only the chief features of the Show can be noted, and the prizewinners in some of the principal classes recorded.

GROUPS AND SPECIMEN PLANTS.

Groups.—The schedule opened with a class for a "group of miscellaneous plants, in and out of bloom, arranged to produce the best effect, and occupying a space of 300 square feet." The prizes offered in these classes were £20, £16, £14, and £12 respectively, and it may be said that the winners of the third and fourth prizes were as well entitled to the amounts allocated as were the first and second prizewinners to the relative greater

sums. Five groups were arranged in squares and produced an imposing and diversified effect. After long and close examination the premier prize was awarded to the group of J. H. Manners Sutton, Esq., Kelham Hall, as arranged by Mr. A. Webb, gardener. It may be described as strong and rich, though perhaps a trifle heavy, yet it could scarcely be described as overcrowded, though undoubtedly, to use the familiar term of gardeners, there was "stuff enough in it." It was, however, good "stuff," the plants being bright and healthy. The arrangement consisted of a bold central mound of Crotons, Dracænas, and Ferns, surmounted with a spreading Palm. There were five or six smaller mounds of a similar character supporting isolated plants of Crotons, Dracænas, and small Palms in excellent condition. The ground, or dells between the elevations, was furnished with small brightly coloured plants and Ferns, not packed closely together, but dotted in the moss, and plenty of space between them. The background consisted of Palms, Crotons, and Liliums. The contour and character of every plant was displayed, instead of, as is so often the case, one spoiling the effect of the other by crushing and crowding.

That great prizewinner at shows, Mr. Cypher of Cheltenham, who has also the reputation that so many persons appreciate, of being a "good loser," just lost the first prize in this class but well won the second, an extremely light and chaste arrangement, but not, as some thought, quite rich enough. White as represented by Francoas and Caladium argyrites predominated under a canopy of Ferns. The plants were thinly disposed, and in that respect, perhaps, excelled all others, and the effect of the whole would have been enhanced with fewer variegated plants as a background. Mr. F. Denning, Birmingham, was placed third with a good but rather heavy arrangement, though lightened with a group of Tuberoses springing from a mass of Asparagus plumosus or allied form—an attractive combination. This is the best group we have seen from this exhibitor, who seems to possess the spirit of perseverance that usually brings success sooner or later. The remaining prize was worthily adjudged to the group of C. H. Wright, Esq., Halston Hall (Mr. Roberts, gardener), and was composed of bold masses of Liliums associated with Palms, interspersed with small Crotons and other plants—effective and ran its rival rather closely. The fifth group was arranged by Messrs. Jones & Son, Shrewsbury. Its merit was recognised by an extra prize of £5, and the exhibitors will now perhaps fortify themselves for another contest.

Specimen Plants.—The class for sixteen stove and greenhouse plants, half to be in bloom, created a good deal of interest, as it seemed to be understood that Messrs. Cypher and Finch (Mr. Marriott's able gardener) were showing their best for the premier (£20) prize. Some persons thought that the latter's magnificent Ixoras and brilliant Crotons would "pull him through," but the predominating view was that "Cypher would overweight him," and so it was. He won with a grand collection. His Ericas Eweriana, Marnockiana, and Aitoniana, also Allamanda Hendersoni, Dipladenia amabilis, Statice profusa, and Clerodendron were highly effective, and admirably supported by magnificent 8 feet Crotons angustifolius, Sunset, and Queen Victoria, and these well backed by lofty Palms—a ponderous contribution, as it had to be to hold the position against the Coventry contingent. Mr. Finch's Ixora Duffi was remarkable by the richness of its massive heads. Its equal has probably never been seen, and the Williams' Memorial medal was awarded for it as the best flowering stove plant in the Show. Finch had other fine Ixoras, a splendid Erica, fine Allamanda, good Lapageria, and glowing Crotons Prince of Wales and Warreni, but his Palms lacked weight. He well won the £15 prize, and £2 extra with the Williams' medal. There were no other competitors, and luckily, perhaps, for the large tent was overcrowded with exhibits.

Amongst these the plants in the class for Shropshire gardeners contributed effectively to the display. The first prize for six specimens was won by Mr. Pearson, gardener to Lord Berwick, Attingham Hall, with two Ixoras, an Allamanda, Dipladenia, Palm, and Croton, all in good condition, as were the plants with which Mr. Farrant, gardener to Mrs. Juson, Shrewsbury, won the second prize. Ferns were admirably represented, and the specimens of Salopian gardeners were most creditable, those of Mr. Penson, gardener to Lord Forester, Willey Park, Broseley, perhaps especially so. His plants comprised Microlepia hirta cristata, Nephrolepis davallioides, Polystichum capense, Adiantum decorum, Davallia Mooreana, and Adiantum farleyense, wonderfully fresh and healthy. Messrs. Bremmell and Steventon were also successful exhibitors. Tuberous Begonias, Fuchsias, Coleuses, Dracænas, and Caladiums were effectively shown by Messrs. Lambert, Leith, Bremmell, and other gardeners; but Orchids could not be expected to be numerous so late in the season. Messrs. Cypher and Shuttleworth & Co. (Bradford) were successful in the nurserymen's class, winning the prizes of £12 and £8 respectively, A. E. W. Darby, Esq. (Mr. Dawes, gardener), The prizes for being the only exhibitor in the amateurs' section.

Palms were won by Messrs. Cypher, Finch, and Webb.

In the same plant tent Messrs. T. S. Ware, Tottenham, had a splendid collection of Tuberous Begonias, for which a gold medal was awarded, a similar mark of distinction being granted to a most extensive and varied exhibit of plants by Messrs. Pritchard & Sons, Shrewsbury, and a silver medal to the Liverpool Horticultural Company for a fine group of Tea Roses.

CUT FLOWERS.

The cut flower section is always a heavy one. There were thirty-six classes in the division open to all. In the class for a collection of cut Roses, in space 12 feet by 6 feet, two admirable exhibits were staged, both from Scotland. Messrs. James Cocker & Son, Aberdeen, were well first with fine blooms, staged in small groups of separate varieties, a basket of Viscountess Folkestone being the centre object. Messrs. D. & W. Croll, Dundee, was second—a fine display, with a conspicuous centre of blooms of Maréchal Niel and Céline Forestier. For twenty-four cut Roses the prizes were awarded to these two firms, the

Aberdeen firm being first.

In the class for a collection of Dahlias of all types, in a space 15 feet by 6 feet, there was a display which drew forth warm admiration, Messrs. Keynes, Williams & Co., of Salisbury, easily taking the first prize with a fine assortment most effectively arranged; Mr. George Humphries, The Nurseries, Kingston Langley, second; Messrs. Jones and Sons, Shrewsbury, third; Messrs. Kimberley, of Coventry, also Messrs. Jones & Son, Shrewsbury, being commended. For twenty-four Dahlias—first, Mr. Humphries; second, Messrs. Harkness & Sons, Bedale; third, Messrs. Keynes & Co.

Three collections of Gladioli were staged, each in a space of 24 fect by 6 feet, and made a brilliant display. The first prize fell to Messrs. Harkness & Sons, Bedale, for bold, well-bloomed large spikes. Second, Messrs. Jones & Son, Shrewsbury. Third, Mr. Wm. Shaw, Kidderminster. For eighteen spikes of Gladioli Messrs. Harkness & Sons were first, and Mr. William Shaw second. Liberal prizes were offered for Begonia blooms in a space 8 feet by 6 feet, and here Mr. Davis of Yeovil had it all to himself with a very fine display. In the class for twelve bunches of stove and greenhouse flowers, Orchids excluded, some excellent exhibits were staged. Mr. Carling, gardener to Mrs. Cope, Woolton, Liverpool, was first, and other good boxes were staged.

A grand display was made with hardy border flowers, set up in competition for the liberal prizes for collections, each in a space 15 feet by 6 feet, annuals and shrubs excluded. Six collections were staged, and each deserved a first prize. Messrs. Cocker & Son, Aberdeen, were first with bold bunches in great variety, well arranged. Messrs. Harkness & Sons were second with a very extensive assortment, too much crowded into the given space. Third Messrs. Laxton Brothers, Bedford (succeeding to their late father's business), with noble bunches. Fourth Messrs. Biddles & Co., Loughborough. Fifth Messrs. Dicksons,

Chester, with an excellent group. Prizes of £5, £4, and £3 were offered for a collection of Carnations and Picotees in variety, shown with their own foliage and buds, and not dressed in any way, in a space 9 feet by 6 feet. The season for these flowers was over south of the Tweed, but three collections were staged from Scotland. First, Mr. Campbell, Blantyre. Second, Messrs. Laing and Mather, Kelso; and third, Mr. John Forbes, Hawick. It is an excellent idea, as it shows the character of the varieties, and had the month of August been the blooming time as usual with the Midland

growers, there would have been a much finer display.

Shrewsbury is famous for bouquets, and prizes of £5, £4, and £3 are annually offered for a ball and a bridal bouquet. Messrs. Jenkinson and Son, florists, Newcastle-under-Lyne, were first with two handsome shower bouquets. Second, Messrs. Perkins & Sons, Coventry. Third, Mr. Gilbert Davidson, Ammanford. Liberal prizes are also given for buttonhole bouquets, a hand bouquet, bridal bouquet, and epergnes. Another class is devoted to a decorative dinner table for ten persons with flowers and fruits. Messrs. Jones & Sons, Shrewsbury, were well first with two epergnes, and a good Melon, Pine, Nectarines, Peaches, and Grapes, and six small specimen glasses. Four other exhibits were staged in this class.

A new departure here was to be seen in liberal prizes being offered for a group of floral arrangements, in a space 12 feet by 6 feet. There were six competitors, all of considerable merit and beauty of arrangement. Messrs. Perkins & Sons, Coventry, were first with a splendid assortment, consisting of shower bouquets, in which shades of cream colour and light yellow predominated; others, made up of light coloured Cattleyas and Oncidium flexuosum; lovely baskets of flowers, anchors, wreaths, crosses, sprays, and along the top lovely fan-shaped arrangements of Grasses, Ferns, and foliage. Various other designs were staged in this collection, and in the centre was a large wedding cake ornamented with wreaths. Messrs. Jenkins & Sons, Newcastle, were a good second, and three equal third prizes were awarded. The amateur classes in the cut flower department were generally also well filled.

Fruit was magnificently shown, the competition in all the classes being very heavy, and with a remarkable absence of inferior exhibits. It was the largest and best exhibition ever held by the Society,

particularly of Grapes.

Collections.—There were five entries for twelve dishes of fruit, premier honours being secured by the Earl of Harrington, Elvaston Castle (gardener, Mr. J. H. Goodacre), who staged Muscat Hamburgh, very fine; Muscat of Alexandria, Madresfield Court, and Foster's Seedling Grapes, all in prime condition; his other dishes consisting of Walburton Admirable and Golden Eagle Peaches, Hero of Lockinge Melon, Brown Turkey Figs, Washington Plums, Victoria Nectarines, a good Pine, and a fine dish of Strawberries. Second, J. Corbett, Esq., Impney (gardener, Mr. Parker), with Golden Queen, Alicante, Alnwick Seedling, and Muscat of Alexandria Grapes, well finished; Cox's Orange Pippin Apples, Brown Turkey Figs, Humboldt Nectarines, Best of All Melon, Princess of Wales Peach, Jersey Gratioli Pears, Jefferson Plums, and a good Pine. Third, Hon. Mrs. Meynell Ingram (gardener, Mr. Dawes), a very close opponent, all the dishes being fine. Fourth, W. A. H. Marks, Esq. Ledbury (gardener, Mr. J. Bailey), who staged some very fine fruit, but his Pine was weak. For a collection of nine dishes of fruit, open to Salop only, the competition was keen. H. H.

Hayhurst, Esq. (gardener, Mr. S. Bremmell), secured first honours, his best dishes being fine Muscat of Alexandria and Alnwick Seedling Grapes, Bon Chrêtien Pears, Late Duke Cherries, Hero of Lockinge Melon, and Prince of Wales Peaches. Second, Rev. J. M. Buckley Owen (gardener, Mr. J. Langley). Third, J. Watson, Esq. (gardener, Mr.

A. Gant), both staging fine fruit.

Grapes.—The class for six bunches of black Grapes excited much attention, the prizes amounting to £19 causing heavy competition, and grand specimens were staged by many veterans. The Hon. C. H. Wynn, The Rhûg, Corwen (gardener, Mr. J. Bennett), was placed first with magnificent bunches of Gros Maroc, Alnwick Seedling, and Alicante, the size of berry, depth of bloom, and perfect finish were splendid. Second, the Earl of Harrington, with fine Gros Guillaume, Alicante, and Alnwick Seedling. Third, J. Grant Morris, Esq, Allerton Priory (gardener, Mr. Craven). Fourth, C. Bayer, Esq., Forest Hill, London gardener, Mr. J. Bury). Fifth, Earl of Cork, Frome (gardener, Mr. W. Iggulden). The two latter receiving extra prizes, their exhibits being so meritorious. For three bunches of Black Hamburghs, J. C. Sinclair, Esq., Rock Ferry (gardener, Mr. R. Brownbill), was first with beautiful examples in a heavy class. Second, J. T. Harris, Esq., Stone (gardener, Mr. J. Bates), with fine bunches, well finished. Third, R. Pilkington, Esq., Rainford Hall, St. Helens (gardener, Mr. G. Middleton). The class for three bunches of any other black was a grand one, many fine stands of Alicante and Gros Maroc having to stand out, as Madresfield Court swept the deck. Many exhibitors hope the Society will make a class for late Grapes another year. J. Grant Morris, Esq., was a good first with fine bunches, and berries well finished. Second, Mrs. Meakin, Cresswell Hall, Stafford (gardener, Mr. J. Wilks). Third, Hon. C. H. Wynn.

For four bunches of white Grapes in two varieties, J. R. Franklin, Esq., St. Hillary, Cowbridge (gardener, Mr. E. Silk), secured the first position with fine Muscat of Alexandria and Mrs. Pearson. Second, Hon. C. H. Wynn, with Muscat of Alexandria and Buckland Sweetwater. Third, Duke of Newcastle, Worksop (gardener, Mr. C. Slade), with Duke of Buccleuch, and Muscat of Alexandria. Many splendid lots could not receive notice as the class was so extensive. The white Muscat class was a big one, but though the fruit was fine in bunch and berry the colour generally was not good, and shrivelling had set in on many stands, the opinion being that the season has been too forcing to suit Muscats. R. Pilkington, Esq., was a good first. Second, the Duke of Newcastle, very close on the first. Third, J. Daintry, Esq., Congleton (gardener, Mr. A. H. Hall). For three bunches of any other white, J. Grant Morris, Esq., was first with fine well coloured clusters of Buckland Sweetwater. Second, Mrs. B. Darby, Baschurch (gardener, Mr. R. Lawley). Third, C. Bayer, Esq. Two bunches of Black Hamburgh Grapes, open to Salop only, first, Rev. J. M. B. Owen. Second, C. H. Wright, Esq., Halston Hall, Oswestry (gardener, Mr. C. Roberts). Third, G. Borr, Esq., Oaklands. Other successful exhibitors in the classes confined to Salop were Lord Harlech, Col. R. T. Lloyd, R. Darby, Esq., and Lord Berwick.

Lord Bagot, Blythefield, Mrs. Horsfall, and Mrs. Meekin were the successful exhibitors of Peaches, but the names of the varieties could not be ascertained; the fruit was very large and highly coloured. For Nectarines R. Sneyd, Esq.. Keele Hall (gardener, Mr. J. Wallis), was first with beautiful fruit of Darwin. Second, Lord Harlech, with Violette Hâtive. Third, Hon. Mrs. Meynell Ingram. Lord Harlech also took first with Apricots and with twelve purple Plums, J. Corbett, Esq., occupying a similar position with white Plums. Green-flesh Melons were well shown by Mr. J. Edmonds, Earl of Harrington, and Lord Berwick, who took the prizes in the order named. For scarlet-flesh Melons Rev. J. M. B. Owen, Hon. Mrs. Meynell Ingram, and the Duke of Newcastle took the honours as named.

Five splendid Pine Apples were staged by Mr. C. Slade, gardener to the Duke of Newcastle, well deserving the certificate of merit and special prize awarded. A similar prize was awarded to the Hon. C. H. Wynn for six Pine Apples, very fine. A special prize was awarded to C. Lee Campbell, Esq., Glewston Court, Ross (gardener, Mr. S. T. Wright), for three immense bunches of Black Alicante Grapes, which were also large in berry, with a dense bloom, in perfect condition. Mr. J. Watkins, Pomona Farm Nurseries, Hereford, was awarded a certificate of merit and a silver medal for a large collection of Apples, Pears, and Plums, all the fruit being large and of very high colour, attracting much attention: The English Fruit and Rose Company, King's Acre, Hereford, were awarded a certificate of merit for a large collection of Apples of brilliant colour for the time of the year.

VEGETABLES.

Large quantities of vegetables were shown, many of them of excellent quality, but better finished collections have been seen at previous Shrewsbury Shows. There were six competitors for the Society's prizes offered for twelve varieties, but the Judges experienced no great difficulty in awarding those prizes. Mr. T. Wilkins, gardener to Lady Theodore Guest, Blandford, was well first, having fine Autumn Giant Cauliflowers, Lyon Leeks, Sutton's Solid White Celery, Green Globe Artichokes, Exhibition Beet, Ne Plus Ultra Runner Beans, Satisfaction Potatoes, Perfection Tomatoes, Ailsa Craig Onions, Model Cucumbers, and Antegrat Ress. Mr. W. Bene gardener to the Forl of Cornervon. and Autocrat Peas. Mr. W. Pope, gardener to the Earl of Carnarvon, Newbury, took the second prize with a good even collection, in which Solid White Celery and Satisfaction Potatoes were particularly fine. The third prize went to Mr. R. Milner, gardener to Miss Talbot, Penrice Castle, Swansea. In the class for six varieties, this being confined to the county of Salop, there were twelve competing, a capital lot of produce

being shown. Mr. S. Wakeham, gardener to T. W. Williams, Esq., was first, he having good Autumn Giant Cauliflowers, Snowball Turnips, Ailsa Craig Onions, Intermediate Carrots, Main Crop Tomatoes, and Blood Red Beet. Mr. J. Abbott, gardener to Mrs. C. Guise, was a creditable second; and Mr. R. C. Townsend, gardener to Colonel R.

Lloyd, third.

Potatoes in all the classes provided for them were remarkably good, coarseness being less apparent, and less favoured by the Judges than usual. The best six varieties were shown by Mr. J. Hathaway, gardener to the Earl of Lathom, Ormskirk, who had Satisfaction, Edgcote Purple, Chancellor, Reading Ruby, Cole's Favourite, and Scarisbrick Favourite in perfect condition. Mr. G. H. C. Shorting was second, and Mr. E. Cumberbatch third. For three varieties, Mr. T. Griffiths, gardener to J. Dixon Taylor, Esq., was well first, having excellent dishes of The Bruce, Prizetaker, and Satisfaction. Mr. J. Hathaway was second, and Mr. W. Pope third. There were twenty-five competitors with one dish of Tomatoes, Mr. D. Sheppard, Winchcombe, being first with very good examples of Perfection; Mr. A. Ruddock being second, and Mr. W. Shaw third. Carrots, Turnips, Onions, and other vegetables in season were extensively and well shown, a whole tent being principally devoted to them.

Special prizes were offered by several of the leading seedsmen, the competition being good in most cases. Five competed with collections of vegetables, the prizes for which were provided by Messrs. Webb and Sons, Stourbridge. Mr. T. Wilkins took the lead with very fine Excelsior Onions, Webb's Solid White Celery, Autum Giant Cauliflowers, Autocrat Peas, Webb's Defiance Carrots, Sensation Tomatoes, Satisfaction Potatoes, and Ne Plus Ultra Runner Beans. Mr. C. Pope was second, his Mammoth Red Celery and Stourbridge Gem Cucumbers being extra good. The third prize went to Mr. J. Hathaway, the fourth to Mr. R. Milner, and the fifth to Mr. R. C. Townsend. Messrs. Webb & Sons also provided prizes for a dish of Tomatoes, and in this instance Mr. W. Loculden, gardener to the Earl of Cork. Frome, was first with well Iggulden, gardener to the Earl of Cork, Frome, was first with well selected Webb's Sensation; Mr. J. Langley, gardener to the Rev. Bulkeley Owen, West Felton, being a close second. Mr. J. Cooke, gardener to G. Singer, Esq., third, and Mr. J. Craven, gardener to J. Grant Morris, Esq., fourth. Messrs. Sutton & Sons offered prizes for collection of vegetables, the first of which only was open to all, the rest being confined to the county of Salon. Mr. T. Wilking was well first being confined to the county of Salop. Mr. T. Wilkins was well first with a collection very like that which he staged for the Society's prizes. with a collection very like that which he staged for the Society's prizes. Mr. S. Wakeham was a good second, Mr. R. Townsend third, Mr. G. Pearson, gardener to Lord Berwick, fourth, and Mr. J. Milner fifth. Messrs. Carter & Co., High Holborn, London, offered prizes in three separate classes, in each of which there was good competition, Messrs. Farrant, Iggulden, Bird, and others taking the prizes. Messrs. Taylor and Thomson, Bishopsgate, London, also provided good prizes for their customers to compete for. The first for a collection of vegetables was well won by Mr. W. Pope, Mr. T. Wilkins was second, and Mr. R. C. Townsend third. Townsend third.

The first of the prizes offered by the late Mr. Laxton for four varieties of his new Potatoes was won by Mr. W. Iggulden, who staged medium-sized tubers of Early Laxton, Reward, Victorious, and General. The winner of the first prize for Clibran's Tomato was Mr. A. Ruddock, gardener to E. A. Young, Esq., but the fruits were rough. A series of prizes were offered by Mr. R. Sydenham, Birmingham, which attracted fairly good competition. Messrs. G. Cooke, A. Lowe, Bridgend, and W. T. Roderick, gardener to A. M. Biddulph, Esq., Chirk Castle, being the principal prizewinners. The names of the winners of the prizes offered by Messrs. Thompson & Co. did not transpire in time for inclusion in this report. Cottagers' exhibits were extensive and meritorious.

HONORARY EXHIBITS.

These alone were sufficient to make up a very fine Exhibition. Gold medals were awarded to Messrs. Dobbie & Co., Rothesay, for an enormous collection of Dahlias, choice Sweet Peas, African and French Marigolds of the finest quality, summer Chrysanthemums, herbaceous and other flowers—a bright, varied, and admirably arranged display; also, as previously stated, to Messrs. Thomas Ware & Co., Tottenham, for a very fine collection of Begonias in pots and in a cut state, and to Messrs. Pritchard & Sons, Shrewsbury, for a very extensive bank of

decorative plants.

Silver medals were awarded to Mr. Albert Myers, nurseryman, Shrewsbury, for a bank of plants; Messrs. Birkenhead, Sale, for choice Ferns; Messrs. Dicksons (Limited), Chester, a collection of plants; Ferns; Messrs. Dicksons (Limited), Chester, a collection of plants; Messrs. Wm. Cutbush & Son, Lendon, collection of cut flowers; Messrs. Hewitt & Co., Birmingham, Begonias and other plants; Messrs. Phillips and Co., Shrewsbury, a collection of fruit; Mr. Watkins, Pomona Farm, Hereford, collection of Apples, Pears, and Crabs; The Liverpool Horticultural Society for a group of Roses in pots. The Williams' Memorial medals, and £2 to Mr. W. Finch, gardener to Mr. Alderman Marriott, Coventry, for his grand example of Ixora Duffi, and to Mr. W. Evans, Stone, Staffordshire, as an amateur who does not employ a gardener, for a fine plant of Oncidium incurvum. for a fine plant of Oncidium incurvum.

Certificates of merit were awarded to Messrs. Perkins & Sons, Coventry, for seedling Cactus Dahlias Grand Mogul and Matchless, also to a lovely Pompon, Greyfriars; Messrs. Keynes, Williams, & Co., Salisbury, for seedling Cactus Dahlias, Gloriosa, Dawn, and Mephistopheles; Mr. Hy. Eckford, Wem, for Sweet Peas; Mr. Wm. Innes, Rothesay, for Pansies and cut flowers; Messrs. Edwards & Sons, Sherwood Nottingham for floral decembers. Messrs. Lowers for Co. Chard. wood, Nottingham, for floral decorations; Messrs. Jarman & Co., Chard, for a collection of vegetables; Mr. W. D. Bacon, Wolverhampton, for new Milltrack Mushroom spawn; The English Fruit Company, Hereford,

for a collection of Apples and Pears; Laxton Brothers, Bedford, for Sweet Pea Princess May, in colour very like Countess of Radnor.

A special silver medal was awarded to Mr. Wilkins, gardener to Lady

Theodore Guest, for twelve sorts of Onions, six bulbs of each, very large and well ripened, a wonderful exhibit, Ailsa Craig standing out prominent amongst them.

Such is the general character of the Shrewsbury Show. Only by great zeal, sound knowledge, and unremitting labour on the part of the Committee and experienced Secretaries (Messrs. Adnitt and Naunton) could such gigantic displays of garden produce be arranged. The success of the Society has been phenomenal, and the town, its charities, schools, and other objects have shared in its prosperity to the amount of £3500. Bravo, Shrewsbury!

TROWBRIDGE .- AUGUST 23RD.

THE forty-fourth Exhibition of this Society was held on the above date under favourable circumstances, and must have proved a financial as well as a horticultural success, judging from the immense number of visitors and the extensive array of exhibits on view. No large money prizes are offered to attract exhibitors from a distance, but the district is one from which a first class exhibition may be made. Fuchsias are always a feature here, and it is doubtful whether a rival exhibition of these popular plants could be found anywhere. The redoubtable Fuchsia raiser, Mr. James Lye. gardener to the Hon. Mrs. Hay, Market Lavington, was the champion in both classes provided—namely, for four and six plants, his specimens being perfect in every detail, and standing from 8 to 10 feet in height. Mr. Geo. Tucker won the second, and Mr. Pocock, gardener to J. P. Haden, Esq., third prize.

For nine stove and greenhouse flowering plants, Mr. Mathews, gardener to Sir W. Roger Brown, was first, but Major Clark followed him very closely, Mr. E. B. Rodway being third. This was a strong class, including good, healthy, well-trained and perfectly flowered plants of Allamanda nobilis, A. Hendersoni, Bougainvillea glabra, Lapagerias rosea and alba, Ixoras, Ericas, Eucharis amazonica, Rondeletia speciosa, Clerodendron Balfourianum and others. The same exhibitors secured the prizes in the order given for six and three flowering plants. For fifteen Ferns or Mosses Mr. G. Tucker was a good first, Mr. Haden second, and Mr. Sancombe third. Sir Roger Brown Mr. F. Applegate and Captain Spicer (gardener Mr. F. Perry). Brown, Mr. F. Applegate, and Captain Spicer (gardener, Mr. F. Perry), shared the prizes for foliage plants in the order named. Only two exhibits of Caladiums were staged, but these were large, well grown plants of good variety, Mr. Pocock was first and Mr. Mathews second. Mr. Mathews was again to the front in a strong class for specimen trained Coleus, the Hon. Mrs. Hay second, and Mr. E. B. Rodway third. Mr. Mathews was the only exhibitor of Heaths, six plants, and gained the first prize. Mr. Pymm, gardener to Mrs. Goldsmith, was first for a group of plants arranged for effect on a space not exceeding 50 square feet, but Mr. Deacon, gardener to H. Harris, Esq., Calne, staged a much more effective arrangement, highly coloured Crotons, Eulalias, Dracenas, Hedychiums, and Orchids, being raised lightly from a groundwork of Ferns, Panicums, and similarly dwarf plants. Mr. Pymn's was a simple "bank," too symmetrically arranged, and devoid of the undulating features that characterised his opponent's exhibit. Mr. Tucker was first for six well grown Gloxinias, also for the same number of Achimenes and double Begonias. Mr. Keen won with six single Begonias, with profusely flowered plants of small blooming sorts, quite out of date according to present day's standard of perfection. The premier award for Orchids was won by Mr. Pymm, Sir Roger Brown being second, and Mr. Deacon third.

Cut flowers were well represented, Asters being first-rate. Messrs. W. J. Jones, G. Garaway, Bath, and A. A. Walters, Bath, won the prizes with twenty-four German Asters; while with French of the same number of blooms Messrs. A. A. Walters, T. Every, and G. Garaway were the winners in the order of their names. Roses were not extensively shown, but for the season were very good indeed. In the open classes Dr. Budd, Bath, was first for twelve bunches; Messrs. Cooling and Son second; and Mr. W. Smith, Kingswood, third, and these positions were repeated by the same growers for twenty-four Roses, single blooms. In the amateurs' division Dr. Budd was beaten by Mr. T. Hobbs, Bristol, in the class for twelve bunches, and also for twelve single blooms. Gladiolus, Verbenas, Hollyhocks, hardy annuals, and choice greenhouse cut flowers; Dahlias, and trusses of brightly coloured Zonal Pelargoniums were each represented in large numbers of good stands.

In the fruit tent it was universally admitted that the Show was one that had never been equalled on any previous occasion, every class being largely contested. For a collection of ten dishes, excluding Pines, Mr. W. Strugnell, gardener to W. H. Long, Esq., M.P., Rood Ashton, Trowbridge, first, his dishes being Black Hamburgh, Muscat of Alexandria and Alnwick Seedling Grapes, Blenheim Orange Melon, Bellegarde Peaches, Pineapple and Stanwick Elruge Nectarines, Jefferson Plums, Brown Turkey Figs, and Morello Cherrics placed on brightly coloured leaves of Ampelopsis Veitchi. Mr. G. Pymm was second with good Foster's Scedling and large bunches of Black Hamburgh Grapes, Exquisite Peaches, Green Gage Plums, Lady Sudeley Apples, Cherries and Pears. Mrs. Hardwick, Bradford-on-Avon, and Mr. W. Goele gordener to Maior Handwick Campton Passet Ware a Ware deepend Cook, gardener to Major Heneage, Compton Basset, were awarded equal thirds, and there were two other collections. For a collection of six varieties Mr. F. Parry was successful over Mr. Palmer, Bradford-on-Avon, and R. B. Cater, Esq., Bath. Grapes were numerous in the

several classes provided, but particularly so in the one for black, in which Muscats are excluded. Mr. W. Marsh, Coombe Down, Bath, was first with large, shapely bunches of Alicante, perfect in colour and berry. Mr. T. Jones, Bath, second for Gros Maroc. Third, Mr. Attwell, Stoke Bishop, Bristol. Messrs. J. Dole, J. Gibson and Attwell won with Buckland Sweetwater in the class for any other white, and for White Muscats Messrs. T. Jones, J. Gibson and Attwell were again the successful competitors. Black Muscats were the least strongly contested, Messrs. Jones, Gibson and R. J. Philips, gardener to Mrs. John Baily, Frome, sharing the prizes in the order named. Mr. E. D. Foxcroft, Bath, and Mr. J. Stratton, Melksham, won with green-fleshed Melons, Mr. S. Humphrey and Mr. J. Gibson with scarlet-fleshed sorts. Mr. W. Strugnell won with dessert Plums, Mr. Pymm with Cherries, Mr. J. Colman, Bristol, Peaches, Mr. Strugnell Nectarines, Mr. G. Garaway dessert Apples, and Mr. Strugnell culinary Apples, showing Peasgood's Nonesuch, weighing from 16 ozs. to 22 ozs. each.

Bouquets, wreaths, and vases of flowers were a good feature, and as usual attracted much attention. Messrs. Attwell, A. H. Newman, and E. T. Hill of Bristol; Brown & Son, Frome; W. Strugnell, and Miss Maud Cole were the principal exhibitors; the memorial wreath of the

latter being particularly good.

Vegetables, as is always the case at Trowbridge, were staged in considerable quantities and in the highest state of excellence, this applying equally to the open, amateurs', and cottagers' sections. Messrs. Webb and Sons, Stourbridge, offer prizes for a collection of six sorts, and this, as well as the open to all class, were both won by Mr. Geo. Garaway, market gardener of Bath. Potatoes were numerous and good, so also were Carrots and Onions; but Peas and Beans displayed evident signs of the ungenial weather experienced of late.

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Mr. James Huntley has been Honorary Secretary for upwards of thirty years, and his genial manners and business capacities win him many friends and helpers. Both Secretary and Committee work hard in the promotion of, and the carrying out the arduous duties involved in such an exhibition, and they deserve all the praise bestowed. The prize money is always paid before exhibitors leave the field, and the Society, it may be added, is in the most flourishing state, with a

substantial reserve fund in hand.

BASINGSTOKE.—AUGUST 25TH.

The annual summer Exhibition of this Society was held in Hackwood Park—a charming site for such a fête. With the exception of a few showers in the morning the day was delightfully fine, many persons taking the opportunity to visit the Show, the park, and the military tournament. The Exhibition was decidedly good, and superior to any previously held under the auspices of the Society. The competition was keen in nearly all classes, while the quality of the exhibits left little to be desired. Vegetables were admirably represented, a few perhaps too large, and it was evident the Judges paid more regard to high quality than mere size. The arrangements were under the superintendence of the Hon. Secretary (Mr. J. A. Wallington) and his efficient assistant (Mr. Weeks), and left little to be desired. Four marquees were necessary to accommodate the exhibits, and so well were they arranged that ample space was provided for the visitors to inspect the Show without unpleasant crowding.

Plants were not only numerously staged, but of good quality. The principal class was for twelve specimens, in or out of bloom. Mr. Bowerman, gardener to C. Hoare, Esq., Hackwood Park, was easily first, so good were his plants of Allamanda grandiflora, Clerodendron Baifourianum, Statice profusa, and Ixoras in the flowering section, combined with several well coloured Crotons and healthy Palms. Mr. T. Russell, gardener to W. Bradshaw, Esq., Audley's Wood, was second by the superiority of his flowering plants. Mr. H. Brown, gardener to A. B. Welch-Thornton, Esq., Beaurepaire Park, third. Mr. Russell was the first prizewinner with six plants in flower, staging good specimens. Mr. T. Weaver, gardener to W. C. Gilchrist, Esq., Oakley Park, Basingstoke, secured first honours for six foliage plants, healthy well-developed Palms with fairly good Crotons being conspicuous. Mr. Brown second, Mr. Russell third. For a collection of miscellaneous plants arranged in a semicircle, effect to be the leading feature, there were three exhibitors, Mr. Bowerman and Mr. Weaver making a grand display for the first and second prizes in the order named. The only fault that could be found with the first prize group was a slight preponderance of Crotons and Tuberoses. The group was well arranged, light and effective. Mr. Weaver erred by crowding the plants, which were good, but too numerous for the purpose. Mr. G. Southcott, gardener to Captain Oldfield, Basingstoke, third. In the class for single specimen flowering plants Mr. Bowerman secured the premieraward with Allamanda Hendersoni, Mr. Brown coming second with a well-grown plant of Clerodendron fallax. These two exhibitors reversed the order in the specimen foliage plant class, Mr. Brown having Cycas revoluta, while Mr. Bowerman had a well coloured Croton Queen Victoria. made a great display. For twelve plants Mr. H. Brown won easily with handsome specimens, carrying remarkably good blooms. Mr. G. Best, gardener to F. W. Leyland, Esq., The Vyne, Basingstoke, was second. Mr. Brown also won with six plants. Coleus were remarkably well shown. For four pyramids Mr. G. Southcott was distinctly ahead of Mr. T. Russell; the plants from both were over 6 feet high and well Mr. Brown staged the best Liliums, well grown and flowered plants of the lancifolium type. Mr. Weaver had best six exotic Ferns, well developed examples of popular kinds. Table plants were numerously staged, Mr. Best winning for twelve, Mr. Bowerman being an extremely close second. Many other plants were well represented,

space only preventing our naming the winners.

Cut flowers added greatly to the attractiveness of the Show. Roses were not numerous, but the prize flowers were of excellent quality and well arranged. For twenty-four blooms Mr. Neville, gardener to F. W. Flight, Esq., Cornstiles, Twyford, Winchester, was the only competitor, but he staged remarkably handsome blooms. He also well won premier honours with twelve blooms. Mr. Russell was second. For twelve bunches of cit flowers Mr. G. Best won the first position with a neatly arranged collection. Hardy herbaceous flowers were staged in quantity, Mr. N. Kneller, gardener to W. S. Portal, Esq., Malshanger Park, was first, and Mr. Best second. Mr. Weaver won with twelve trusses Zonal Pelargoniums, Mr. Kneller second, both staging well. Dahlias were fairly well represented, Mr. R. H. Munday first, Mr. Neville second. The first-named had the best Asters in twelve blooms, a really good stand, mainly of the Comet type. Table decorations, bouquets, and sprays were well represented in classes open to ladies only, Mrs. Whitlock, Mrs. Thorne, and Miss Owen being the most successful exhibitors.

Fruit made a capital display. For eight dishes Mr. Bowerman was an easy first, staging nicely finished bunches of Gros Maroc and Muscat of Alexandria Grapes, Barrington Peaches, Countess Melon, Brown Turkey Figs, and Williams' Bon Chrêtien Pears. Mr. T. Osman, gardener to L. Baker, Esq., Ottershaw Park, Chertsey, was second, he also staging well. For a collection of six dishes Mr. Osman was first, Mr. H. Brown second. Grapes were well represented. In the Black Hamburgh class Mr. Bowerman was first with medium sized bunches, having good berries and colour, Mr. Brown second. In the any other black class Mr. Osman was first with Alicante, admirably coloured, Mr. Bowerman and Mr. Kneller following in the order named. Mr. Brown had the best White Muscat Grapes, staging fairly good examples, Mr. Osman second, though he took the highest position in the class for any other white with Foster's Seedling. Mr. Russell had the best green flesh Melon, a tolerably good one of Hero of Lockinge; Mr. W. A. Hunt second. A somewhat peculiar circumstance occurred in the scarlet flesh class, Messrs. Wright and Molyneux withholding all the prizes, so unpleasant, not to say nauseous, were the fruits. Mr. Bowerman had the best Peaches, Sea Eagle, and Mrs. Field the best Nectarines. Apples made a great display. For three dishes of dessert kinds Mr. Kneller was placed first, Mr. Nevile second. Kitchen varieties were well represented also, as were Plums, Mr. Bowerman winning for three dishes.

Vegetables filled the whole of one side of a large tent. For six varieties, the prizes offered by Messrs. Sutton & Sons, Mr. Lye, gardener to W. H. Kingsmill, Esq., Sydmonton Court, Newbury, beat his formidable opponents, Messrs. Kneller and Bowerman, who were placed in the order named. In the first prize collection were grand examples of Satisfaction Potato, Perfection Tomato, Excelsior Onion, Sulham Pink Celery, Mammoth Cauliflower, and New Intermediate Carrot. Mr. Bowerman turned the tables on Mr. Lye in the class for the best collection in competition for Messrs. Carter's prizes with a good collection, consisting of Rousham Park Onion, Autumn Giant Cauliflower, and Satisfaction Potato. Messrs. Bowerman and Lye won first and second prizes offered by Messrs. Webb for six varieties with produce similar to the foregoing in quality and variety. Mr. Lye won the first prize offered by Messrs. John Sharpe & Son, Mr. Best second, and Mr. Bowerman third, all staging excellent produce. For a collection of Potatoes in nine distinct varieties Mr. Lye was an easy winner with clean shapely examples of leading varieties.

Messrs. Sutton & Sons, Reading, had a collection of cut blooms of annuals and perennials, with several plants in pots of their choice Begonias, Shrimp Pink and Queen of the Whites, all bearing a deep

impress of the strain sent out by this firm.



HARDY FRUIT GARDEN.

Cleansing Fruit Rooms.—As the time is fast approaching when fruit rooms will be fully occupied, it is desirable that everything should be clean before bringing in choice Apples and Pears. Wholesome conditions in the storing of fruit are imperative. Taints of any kind, musty smells, and an unsuitable atmosphere will soon be transferred to the delicate flesh of Apples and Pears. Therefore let the walls be whitewashed, the shelves and woodwork thoroughly cleansed with soap and water, and the floor scrubbed, admitting plenty of air afterwards to dry the structure quickly.

Gathering Apples and Pears.—No wholesale clearance of the fruit from trees must yet be adopted where it is necessary to store specimens for future use, but where Apples and Pears for immediate supplies are needed, especially for cooking purposes, any sufficiently sized fruit may be secured. Fallen fruit collected and used at once proves useful, but such ought not to be stored in the same place with choice carefully gathered specimens. Varieties which ripen immediately may be picked as soon as they part readily from the spurs. To remain

on the trees until dead ripe has the effect of the fruit losing its freshness, aroma, and flavour if stored. If gathered just on the turn, without injury, and kept in a cool dark place with the atmosphere pure and sweet, neither too dry nor damp, each specimen will finish well

Hints on Storing Fruit.—Place Apples and Pears in the store-room in single layers on clean dry boards or shelves, from which they can absorb no taint or smell. Avoid laying fruit on straw of any kind, as the least mustiness in it will be attracted to the fruit. Clean white paper may be employed with advantage to cover shelves. With varnished white wood shelves fitted in the fruit room there is little fear of fruit being injuriously affected. Common deal boards often contain turpentine. Plums to be kept for future use should be allowed to hang until perfectly ripe, then carefully gathered with the stalks intact, wrapped in tissue paper, and laid in a dry airy place in the fruit room. It is the late varieties which are chiefly stored to yield a succession as long as possible, but some weeks may elapse before it is needful to detach the fruit from the trees where it is desirable they should hang protected, in the case of very choice varieties, with gauze bags from the attacks of birds, wasps, and bluebottle flies.

Protecting Choice Fruit.—Specimens of any kind of soft fruit intended for any special purpose should be effectually secured against the attacks of birds and insects. The former may be kept at bay by the judicious use of nets, but for the latter other contrivances are necessary. The gauze bags referred to are the surest means of protection, while bottles of sweetened beer hung about the trees will attract and drown numbers of wasps and flies. Earwigs are often prevalent, soon doing much mischief. The only way of guarding against their depredations is to trap them in short lengths of bean stalks, examining the traps every morning, and blowing out the insects into hot water. Keep the surroundings of the trees clean, as earwigs, woodlice, and other marauders always accumulate among weeds and rubbish, especially if dry and partly decayed.

Supporting Fruit Trees .- As trees are relieved of their crops some assistance may be necessary to aid the roots in perfecting the fruit buds for another season. Adequate moisture in the soil in which the principal fibrous roots ramify is the first essential. Red spider increases fast when the soil is deficient in this respect, and the leaves once overrun with this small, but troublesome pest their premature loss is certain, to the detriment of the fruit buds which derive their main support from healthy green foliage fully exposed to light and air. Further assistance being needed after the soil is properly moistened it may be afforded by applications of liquid manure. Weakly trees only should be treated to this. It will cause their buds to plump up better, and the growth generally to be strengthened. Trees already strong enough had better not be encouraged to make further growth. It may be advisable to restrict the rooting powers of such trees if fruitless, and this condition grises from excessive growth.

Thinning out Crowded Branches.—This is the best period of the year for such operations. There is no advantage in having the interior of trees full of wood and foliage which cannot receive any light. Every superfluous branch is detrimental to fruitfulness. While the foliage is present on the trees a better idea can be formed of the exact distances branches require in order to fully receive and benefit by the full admission of sunshine and air to every leaf and bud.

Subduing American Blight.—This is now very conspicuous on many Apple trees, and an attempt ought to be made to arrest its increase. Spirits of turpentine and petroleum are both effectual destroyers of the pest without injury to the trees if used judiciously. The application must not be heavy, only sufficient to moisten the bristles of a paint-brush, then dabbing the insects and their fluffy covering with either spirits of turpentine or petroleum. The oil must not be allowed to run to waste down the stem, or saturate the bark. A portion of the loose downy substance can be collected on a saturated brush without touching the bark or stems at all to any extent.

FRUIT FORCING.

Vines in Pots for Early Forcing .- Those intended for starting early in November should now be completely at rest, the wood thoroughly ripe, the laterals cut close back, and the canes shortened to about 6 feet-more or less, according to the length required for the position they are to occupy and the situation of the plump eyes. If the Vines are kept rather dry at the roots it reduces the tendency to bleeding, or the cuts when dry may be dressed with styptic or knotting. Do not allow the soil to become dust dry, for this causes the roots to shrivel, whilst a very wet condition may induce the decay of the fibres. Keep the Vines in a cool, airy house. Later Vines in pots may be placed outdoors to harden the growth and induce rest, the south side of a wall or fence being preferable. If Vines have to be bought they should now be ordered. The best for early forcing in pots are White Frontignan, Foster's Seedling, Black Hamburgh, and Madresfield Court.

Earliest House.—The earliest forced Vines—those started from early December to January—should now be pruned. It is not necessary to wait until all the leaves have fallen if the Vines are going to rest—the wood brown and hard and the leaves turning yellow; the pruning will cause the Vines to rest more quickly and thoroughly. loose bark should be removed, washing the rods with clear rain water and afterwards with an insecticide or a solution of softsoap, 4 ozs. to a gallon of water. If there be any scale or mealy bug add half a wineglassful of petroleum and half an ounce of washing soda to the solution, and keep it well mixed whilst being applied with a brush to reach every hole, angle, and crevice. Before dressing the Vines the woodwork

should have been cleansed with softsoap and water, the glass with clear water, and the walls limewashed. Top-dress the borders both inside and outside, clearing away the old mulching material and the loose surface soil first; then supply fresh turfy loam, with a 9-inch potful of bonemeal and double that quantity of wood ashes to every 3 bushels of loam, and make firm. Weakly Vines, or those in an unsatisfactory state, will be improved by removing the soil down to the roots and supplying fresh turfy loam with an admixture of a sixth of old mortar rubbish and a sprinkling of bonemeal and wood ashes, lifting any roots available for the purpose, and laying them out in fresh material within 6 inches of the surface. This, however, is best done before the leaves have fallen. Comparative dryness is desirable, but excessive drought weakens, if not destroys, the young roots, and a sodden soil causes their Outside borders should have a covering of some kind to protect them from the heavy autumn rains, which reduce the temperature considerably. Glass lights are much the best, as they throw off the rain whilst allowing the sun to warm the soil. These not being available, and they need only be used in the case of heavy rains, a covering of leaves and litter will be necessary after the weather sets in cold. 1

Late Grapes.—Continue a night temperature of 65° and 70° to 75° by day artificially, with 80° to 85° from sun, until the Grapes are perfectly ripe, ventilating freely and keeping lateral growths closely stopped a warm atmosphere with a few lateral growths closely stopped, a warm atmosphere with a free circulation of air being essential to thorough ripening. Laterals allowed to grow only excite root action, and this encourages late growth. Material for covering the borders should be held in readiness, for late Grapes keep much better when the roots are not chilled by the autumn rains. Tarpaulin, shutters, or roots are not chilled by the autumn rains. Tarpaulin, sthatched hurdles can be used for this purpose when required.

Young Vines.—These generally make a strong growth, and are consequently late in ripening. Such should be assisted with fire heat, maintaining a minimum temperature of 65° and a maximum of 75° from fire heat, running up to 85° to 90° from sun heat, accompanying the artificial heat with a little top and bottom ventilation so as to insure a circulation, increasing it proportionately with the sun heat. Laterals also should be kept well in hand, not, however, pinching them so close as to start the principal buds.

Cucumbers.—Earlier closing and syringing is necessitated by the shorter and colder days, it being desirable to husband the sun heat and have the foliage fairly dry before dusk. Employ fire heat to maintain a temperature of 70° to 75° by day and to secure 65° at night. Keep the shoots thin, remove old growths to make room for young ones, and so insure a succession of bearing wood. Stop young shoots a joint beyond the fruit. Encourage root action by a steady bottom heat of 80°, surface dressings of lumpy loam and sweetened horse droppings, and afford tepid liquid manure whenever water is required. Do not allow the fruit to hang after it becomes fit for use, and avoid overcropping.

Autumn-fruiting Plants.—Stop the growths so as to insure an even spread of bearing wood. Remove the staminate blossoms and tendrils, also the first fruits. No shading will now be necessary. Cease syringing the plants in the morning, and only practise it lightly on bright afternoons, keeping the house damped as occasion requires. Admit air early but moderately, avoiding draughts, for chills stunt the growths, and a confined atmosphere causes the foliage to become thin and flabby. Endeavour to secure a sturdy growth whilst opportunity offers by early

and judicious ventilation.

Winter-fruiting Plants.—The plants from seed sown early in August are now fit to place in their fruiting quarters. The house must be a light one, have a south aspect, and means of securing a temperature of 65° to 70° in all weathers. A bottom heat of 80° to 90° is also necessary. All soil previously used must be cleared out, and the whole of the interior of the house scalded, if possible, with hot water, washing the woodwork with softsoap, water, and a brush, making the glass clean, and lime-washing the walls. Where rubble is used over and about the pipes for bottom heat see that it is clean; if not, take it out and cleanse it by washing. Secure the drainage with a layer of turves, slightly charred, grass side downwards. Place in hillocks or ridges of soil of about 2 feet base, 10 or 12 inches depth, and 1 foot across at top. Use turfy loam of medium texture two-thirds, fibrous sandy peat one-third, rejecting any woody matter, old mortar rubbish freed of laths or pieces of wood, with the rough broken small one-sixth, and nut charcoal one-twelfth, the whole well incorporated. This material is equally suitable for plants in beds, pots, or boxes, and should be made moderately firm. Pots or boxes must be well drained, and only so far fille i with soil that when the plants are introduced their seed leaves will be about level with the rims of the pots, and as they will have some stem below the seed leaves which will admit of earthing as the plants increase in growth. Very serviceable fruits can be had from plants in pots or boxes in houses with a stove temperature, training the growths so that their leaves will be clear of the Plant when the soil is warmed through, press it gently, and secure the plants to stakes reaching to the trellis. Rub off the laterals to that height, and stop the leading shoot at about the second or third wire of the trellis. Shade from bright sun until established. Syringe lightly in the early afternoon, damp the house in the morning, noon, and afternoon. Maintain a day temperature of 70° to 75°, rising 10° to 15° from sun heat, and a night temperature of 70°, falling 5° through the night. The plants will give fruit in the late autumn, but they must not be cropped much if they are to produce a crop from Christmas to spring.

Seed may now be sown for raising plants to give a supply of fruit about Christmas and onwards. Telegraph is still one of the best varieties. Place the seed singly in 3-inch pots a little more than half

filled with soil, and cover half an inch deep. A pane of glass over each pot will bring up the plants quickly; remove it as soon as they appear above the soil, and keep well up to the glass. Earth up the plants as they require it, and transfer to 5-inch pots when they need a shift, placing a stick to each, to which secure the plant as it grows. Rub off laterals as they show, and train with a single shoot. The plants will be fit to place out during the first fortnight of October

fit to place out during the first fortnight of October.

Pits and Frames.—The growths in these will need to be kept thin as a safeguard against damp, and watering must be done early and with care and judgment, as cold and damp are disastrous to Cucumbers late in the season. The plants will need very little water after this, as the roots get enough moisture through the decay of the fermenting materials. They must not, however, be allowed to flag, and a light sprinkling may be given occasionally at closing time. Line the beds with stable litter, and admit a little air at the back to allow of any steam escaping. The temperature should be kept at about 65° at night, employing a covering of mats over the lights on cold nights. With due attention to the linings and covering Cucumbers will be obtained from these structures for some weeks to come.

Strawberries in Pots.—Any plants not yet in their fruiting pots should be given them without delay. Placed in 5 or 6-inch pots, according to the size of the plants, they will fill them with roots before the winter, and though not so large as those potted earlier, will give some fine fruit, if they are not started before February. Plants potted some time ago should be examined, and if making side buds these ought to be removed with a pointed piece of hard wood, so as to throw the vigour into the central crown or bud. Vigorous plants will not require liquid manure, but weakly ones may be supplied with it twice a week. All runners must be removed as they appear, also weeds. If the surface of the soil becomes hard loosen it, especially at the sides of the pots, so as to ensure the thorough moistening of the ball. As the plants grow set the pots farther apart so as to expose the foliage to light.



APIARIAN NOTES.

BEES AT THE MOORS.

WE have now at the time of writing reached August 28th, and the morning dawned the pleasantest I have witnessed since I came on the moors. Ice was as thick as a shilling, and every green thing stiff and white as at midwinter. The rain four days previous to the 26th completely washed the honey out of and spoiled some Heather, but there still remains a great quantity of it in fair order, but all is past lower down the hills. The long continuation of the bloom here gives us bee-keepers an advantage over those where it is warmer and the Heather naturally earlier but shorter in duration.

Owing to the prolonged spell of stormy weather during the best of the Heather bloom the yield of honey is not so great as it might have been, but on the whole is fairly good; and now with the improved weather at the end more may be added. It is rather singular to witness honey gathering, swarming, and frosty weather at same time, but experience gives confidence, and is more reliable and valuable than theory.

From one hive there has been an increase of eleven, while other four have been frustrated, making sixteen in all had they been allowed. As my time is limited, further particulars I will hold over till later on, when I will give them in a concise form for the benefit of beginners; and, I may add, for modern bee-keepers in general.—A LANARKSHIRE BEE-KEEPER.

PREPARING FOR WINTER.

Those who already possess stocks must, unless the bees are taken to the moors, at once begin to prepare for winter; each stock must be fed up to a sufficient weight, and if need be strengthened by an addition of driven bees, in accordance with the instructions given in these columns, and then when every attention has been paid to these salient points the less the bees are disturbed until March next the better it will be for the stocks. If it is desired to ruin a stock late feeding and continued manipulation in the late autumn will soon do its deadly work; but if strong, prosperous colonies are desired that can be had with as little trouble and not much more expense than starveling stocks, which, dragging on a weary existence through the winter, are a discredit to any bee-keeper, and a sign of lamentable slothfulness and neglect.

Bees must be kept strong, and the fact can never be too often impressed upon bee-keepers in general, and some in particular, that one strong stock is of more value than three weak ones, and with less time expended on it in the way of manipulation will give greater results than the three weak ones put together. True, in exceptional cases a weak stock does in spring make a rapid advance, but this is only by way of exception owing to a young and vigorous queen; but even this rapid progress

is not in the same ratio as that which a strong stock, headed by an equally good queen, would make under the same circumstances.—F.

TRADE CATALOGUES RECEIVED.

Dobie & Dicks, 66, Deansgate, Manchester.—Dutch Bulbs.
James Douglas, Edenside, Great Bookham, Surrey.—Catalogue of Carnations, Picotees, and Auriculas.

C. Turner, Royal Nursery, Slough.—Hyacinths, Narcissus, Tulips, &c. R. Veitch & Son, High Street, Exeter.—Dutch Bulbs, &c.



*All correspondence should be directed either to "THE EDITOR" or to "THE PUBLISHER." Letters addressed to Dr. Hogg or members of the staff often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Bee subjects, and should never send more than two or three questions at once. All articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post, and we do not undertake to return rejected communications.

wasps (S. S.).—If you consult the last few issues of the Journal of Horticulture you will, we think, find recorded all the known remedies for destroying wasps; but after all that is done the plague continues, and each fruit grower must adopt the best local measures available for saving his fruit. There is no universal panacea, any more than there is for ridding the world of flies and various insect pests.

Glands on Peach Leaves (Ignoramus).—The glands are minute wart-like growths at the extreme base of the leaves, and in some instances are round and in others kidney shaped. In some varieties of Peaches and Nectarines the glands are visible enough, in others more or less obscure, while a few are glandless. Examine a number of leaves of different varieties closely, and your eye will soon become educated on the subject of glands.

Exhibiting Shallots (H. Bell).—You ask if the Shallot is a vegetable on the ground that "a friend was disqualified because he placed a dish consisting of one variety in a collection of vegetables." We have many times intimated that the schedules of shows should accompany questions of this nature, in order that we may see the precise conditions under which exhibits must be staged. Of course the Shallot is a vegetable, but all the same, may not be admissible in certain classes, according to special stipulations which, if ignored, might result in disqualification.

Grapes Shanking after Ripening (R. C. N.).—There is such a thing as Grapes shanking after they are ripe, both when they are hanging on the Vines whilst these are in leaf, and after the Grapes have been bottled and placed in the Grape room. One form of shanking is caused by a micrococcus, and produces an enlarged or ulcered condition of the footstalk prior to the shanking, and it is likely that shrinkage of the footstalk without the ulceration may be caused by the same micro-organism, but this is as yet undetermined, and in fact, no malignant bodies have been discovered in the wire-like shanked footstalks.

Nectarines Shrivelling (Cestria).—The shrinking generally occurs at the apex, and is rather common with the fruits borne by young or vigorous trees, and the fruit partakes more or less of the nature of the growth. When such fruits ripen the watery matter is dissipated, and as this is most abundant where the swelling has been greatest they shrivel. The shrinkage is generally confined to Nectarines, Peaches under the same conditions being little affected, as they retain more of the watery matter in ripening, and the evaporation takes place more evenly through their having downy skins. The fruits affected are not really a defect of culture. Perhaps a slight shade in very bright weather would have prevented the shrinking; but the best preventive is plenty of air, taking care not to over-feed the trees.

Clematis Failing (Tom Ridley).—We have examined all the sprays you forwarded, and have been unable to find any parasite likely to cause the appearance presented by No. 3 spray. No. 2 is, as you say, "beginning to go," but you have not sent that part where the mischief begins, and the collapse of the portion above the seat of the malady is only a question of a few days and sometimes hours. No. 1 is healthy; in fact, all the sprays are free from malignant micro-organisms, for, as before stated, the attacked parts have not been sent. This is sometimes situated on the stem and at the node or joint next the root on which the variety is grafted, then the plant collapses altogether, and often the same year as planted. But the attack is generally confined to the base of the annual growths where they spring from the preceding year's wood, and

it is not restricted to the first, but the secondary growths collapse in a similar manner. It is occasioned by a fungus or micrococci which girdles the shoot, and causes the collapse of the part above the affection. confined to certain species of Clematis, and is culturally believed to be due to over-propagation, but this is purely conjectural. The only thing we have found of any use is to promptly cut away the affected parts a joint or two below where they die off; but the disease is, in some cases, so fixed in the basal portion as to be beyond remedy, for to cut the affected parts away in some cases means the destruction of the plants. It is best to limit yourself to those varieties which succeed the best in the position assigned to them.

Truffles (R. B.).—The lump of soil sent contains what resembles Truffles, but in such a state of putrefaction that it is impossible to speak with certainty on the subject. The common Truffle (Tuber estivum), as described by Thompson in the "Gardeners's Assistant," "is nearly spherical in shape, and has been known to attain a weight of 3 or 4 lbs., and measure 4 inches in diameter. The surface is rough, warty, and black. The flesh is greyish, or white when young, black veined with white when old. The smell is powerful, but by no means unpleasant. It grows from 2 to 10 inches under the surface of the ground, and the spots where it is to be found are discovered by means of dogs trained for the purpose. It is abundant in some parts of Britain, particularly in Wiltshire, Kent, and Hampshire, but never occurs in any but calcareous toils, where it grows under the shade of trees, generally the Oak and Beech. In warm moist years it may be found throughout the year, but most abundantly from August to October." We reproduce a fine specimen

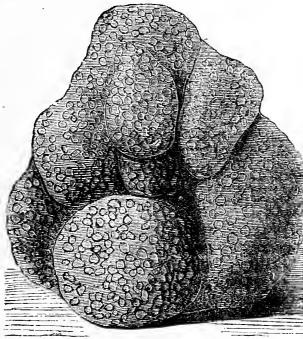


FIG. 30.—A BLACK TRUFFLE.

of the black Truffle. Just as many aërial fungi only grow on dead wood, and that of a particular kind, so the black Truffle is only met with among the roots of trees, and more especially the common and Evergreen Oak and Quercus coccifera. It is among the roots of these trees that the Truffles are most abundant, and acquire a perfume that makes them esteemed all over the world. Truffles increase like other allied fungi. When ripe they contain minute spores not exceeding 1.250th of an inch in diameter, and when the Truffle decays in the ground these produce white threads or mycelium, like Mushroom spawn when running, and

a fresh crop results.

Names of Fruits.—Notice.—Special attention is directed to the following decision, the object of which is to discourage the growth of inferior and promote the culture of superior varieties. In consequence of the large number of worthless Apples and Pears sent to this office to be named, it has been decided to name only specimens and varieties of approved merit, and to reject the inferior, which are not worth sending or growing. The names and addresses of senders of fruit to be named must in all cases be enclosed with the specimens, whether letters referring to the fruit are sent by post or not. The names are not necessarily required for publication, initials sufficing for that. Only six specimens can be named at once, and any beyond that number cannot be preserved. (J. H. Eldridge).—The Apples are evidently seedlings, as we do not recognise them as among named sorts. No. 1 is not unlike as we do not recognise them as among named sorts. No. 1 is not unlike Irish Peach; Pears No. 2 quite rotten, and No. 1 resembles Verulam. (B. W.).—No. 1, Greenup's Pippin; 2, Fearn's Pippin; 3, small Scarlet Nonpareil; 4, Cellini. (F. John Gray).—1, Ribston Pippin; 2, Dutch Codlin, small; 3, not known; 4, Reinette de Caux; 5, Yorkshire Greening; 6, Emperor Alexander. (A. H. L.).—1, Wadhurst Pippin; 2, Lord Derby; 3, Beurré d'Amanlis; 4, Summer Rose; 5, Greenup's Pippin; 6, Lemon Pippin. (J. R. B. Watson).—1, Grosse Calebasse; 2, Beurré Superfin; 3, too unripe. (E. J. M.).—Undoubtedly Golden Queen. (W. P. S.).—Nouveau Poiteau. (D. M.).—The coloured Pear, which is quite ripe, is Beurré d'Amanlis, but we do not think the other is the same; Apples—No. 1, Greenup's Pippin; 2, Ribston Pippin; 3, decayed; same; Apples—No. 1, Greenup's Pippin; 2, Ribston Pippin; 3, decayed; 4, Gravenstein. (J. F. W.).—We cannot name Peaches without a portion of the young wood and information as to the size of the flowers; the one sent is evidently one of Mr. Rivers' seedlings, probably Early

Louise. (B. Wells).-5, Emperor Alexander. The others not worth naming or growing except for cider. (*E. H.*).—1, Norfolk Colman; 2, Striped Beefing; 3, Winter Hawthornden; 4, Greenup's Pippin. (*A. E.*).—1, Sandringham; 2, Blenheim Pippin; 3, Ecklinville; 5, Cox's Pomona; 6, Lord Derby (?). (*H. R. Dugmore*).—1, Napoleon; 2, Maréchal de Cour; 3, Grosse Calebasse; 4, Beurré d'Aremberg; 6, Winter Nelis. Six is the maximum number of collection and the better they are the better their chance of being named. (Thos. Pye).—Lane's Prince Albert (?); 2, Alfriston; 3, Winter Hawthornden; 4, Roundway Magnum Bonum. (A. J. N.).—1, Louise Bonne of Jersey; 2, Nouveau Poiteau; 3, General Toddleben; 4, Marie Louise; 5 and 6, Beurré Capiaumont. (J. S. B.).—1, Dredge's Fame; 3, Scarlet Nonpareil; 4, Court Pendû Plat; 5, Cox's Orange Pippin. Late truits should be contracted in the principle period. sent nearer the ripening period.

Names of Plants.—We only undertake to name species of plants,

not varieties that have originated from seed and termed florists' flowers. Flowering specimens are necessary of flowering plants, and Fern fronds should bear spores. Specimens should arrive in a fresh state in firm boxes. Slightly damp moss, soft green grass or leaves form the best packing, dry wool the worst. Not more than six specimens can be named at once, and the numbers should be visible without untying the ligatures, it being often difficult to separate them when the paper is damp. (H. J. P.).—Oncidium microchilum. (H. F.).—Dendrobium canali-

COVENT GARDEN MARKET .-- AUGUST 30TH.

Large supplies, readily changi	ng hands	at low rates.	
_		JIT.	
s. d.	s. d.	1	d. s. d.
	to 6 0 0 0		0 9 to 2 0 0 0 15 0
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Filberts, per 100 lbs 25 0	0 0	St. Michael Pines, each	2 0 5 0:
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Beet, Red, dozen 1 0 Carrots, bunch 0 4	0 0	Parsley, dozen bunches 2 Parsnips, dozen	
	3 0	District and many sensitive of	
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Coleworts, dozen bunches 2 0	4 0	Scorzonera, bundle I	
Cucumbers, dozen 1 6	3 0	Seakale, per basket 0	
Eudive, dozen 1 3	1 6		3 0 0
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Leeks, bunch 0 2	0 0		$0 \ 3 \ 0 \ 4$
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zzuozzo-z, p		PRICES.—CUT FLOWERS.	
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" (English) doz. bches. 3 0	5 0		L 6 3 0
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Carnations, 12 blooms 0 6	2 0	Pelargoniums, 12 bunches	50 90
Carnations, dozen bunches 4 0	8 0	Pelargoniums, scarlet, doz.	0 6 0
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Aspidistra, specimen plant 5 0	10 6	Ivy Geraniums	4 0 6 0
Balsams, per dozen 3 0	6 0	Lilium lancifolium per doz. 1	
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Dracæna viridis, dozen 9 0 Euonymus, var., dozen 6 0	18 0	Myrtles, dozen	
Evergreens. in var., dozen 6 0	24 0	Palms, in var., each 1	
Ferns, in variety, dozen 4 0	18 0	" (specimens) 21	0 63 0
Ferns (small) per hundred 4 0	6 0	Pelargoniums, per dozen	0 12 0
Ficus elastica, cach 1 0	7 6	" scarlet, per dozen 2	
Foliage plants, var., each 2 0	10 0	Rhodanthe, per dozen 4	4 0 6 0



THE DAIRY—FODDER CROPS.

Among dairy farmers having nothing but permanent pasture for the cows, there is much complaining of poverty of herbage, and a consequent lowness of milk yield. This, for the moment

is bad enough, but the outlook for the coming winter is still more gloomy. Where is the Michaelmas rent to come from? and how are the cows to be fed next winter? are questions to which no satisfactory answer appears forthcoming from that section of the farming community who, placing their dependance entirely upon pasture, have been content to take all they could get from it, without spending a penny upon manure of any sort, and with as little expenditure as possible upon labour. In ordinary seasons, with an average rainfall, this answers sufficiently to enable them to pay their rent, to obtain means for subsistence, and to "keep the money together;" or, in other words, to keep capital invested in the business intact. But the folly and risk of such a system, of such absurd parsimony, is only too apparent under stress of a drought, when the pasture fails them, and they have nothing else on the farm to turn to. Then the underfed cows quickly fall off in condition, there is a proportionate decrease in the milk yield, which, of course, tells upon the milk sold, or the butter and cheese made, as well as upon the quantity of such produce.

Of the cheese rooms we have inspected this season, the only one that is really satisfactory in both quantity and quality of cheese is that of a Midland tenant farmer, who not only systematically applies manure to his pasture, but also has enough arable land to afford a supply of other green crops, roots, and corn. He also employs sufficient labour to have all necessary work done well and quickly. In this matter his views are peculiar, aa he will only have young men and lads who board and lodge at the farmhouse, and who have to work with him. In a new farmhouse and homestead in course of construction for him we have taken care to have enough bedrooms for his requirements, so anxious are we to encourage good, sound, sensible practice on the estate. We have also given him special facilities and convenience in the outbuildings, but as all this will be explained in another article, we refrain from further mention

Our especial object here is to call attention to green crops, which have proved useful under the great drought, while pasture has failed so generally, but not universally. It is important to mention this, because though the valleys of the Trent, Wye, and Derwent in Derbyshire; of the Soar in Leicestershire, and many a rich alluvial "level," marsh, and fen, have had abundant herbage for grazing, and a full hay crop, we have also seen excellent pasture at hill farms where good management and thorough cultivation of the pasture prevails.

Of all auxiliary green crops none have told better this summer than green Maize. No doubt it was the spring drought that induced much more of it to be sown than usual, but still there is not half enough of it grown. Well does a correspondent in The Field ask why stock-owners do not try it more generally? He goes on to say, "There is a stupid prejudice that it is a tropical plant which is quite unsuitable to our English climate. But this is not true. If the farmer were advised to grow the grain it would be quite another matter, but at least in the southern half of England a large crop of green Maize is as certain as Turnips, more certain than Mangolds, and withal the simplest and cheapest crop to grow which can be mentioned. This is the seventh year the writer has taken a crop without a failure, although with one partial failure. Curiously, the great value of Maize is felt in years like the present, inasmuch when grass suffers for want of rain and great heat Maize flourishes best if it has firm hold of the soil. At almost all times in normal years the pastures are bare in autumn, just when Maize comes in; milk consequently falls off when it is most valuable on account of its superior quality. How opportune, then, comes the daily waggonload of Maize, which is strewn about the pastures and eaten up, stock, lock, and barrel, by the ravenous cattle, whose partiality for it is sufficient to convince the feeder of its value."

Sorghum saccharatum has been of equal value this year. Both crops grow with such freedom, yield so large a bulk of nutritious succulent food per acre, develop with such marvellous rapidity, and are alike useful as green food or for silage, that they should be regarded as indispensable. In so hot a summer Maize answers everywhere. We have seen recently Maize of a good height on the borders of Yorkshire. Both these grand forage plants are exceedingly nutritious. The Sorghum may perhaps be the more fattening of the two as it is so rich in saccharine. We have tasted excellent sugar made from plants grown in this country.

WORK ON THE HOME FARM.

The Early Drumhead Cabbages drilled in April bid fair to be ready for use before the green Maize is finished. This is what we particularly aim at—this overlapping of successional crops. Anything like the free growth of Cabbage or Kale this summer has only been possible where land was really well done. As the Rye folds were ploughed the drill followed at once day by day; there was thus plenty of moisture in the soil to make quick seed germination a certainty, and the land was so rich in fertility that plant growth was equally speedy. Trifolium incarnatum, the crimson flowered Italian Clover, has been got in well on a clean stubble, nicely softened by rain, so much so that only light Barley harrows were used. These were passed over the stubbles first, then the seed-28 lbs. to the acre-was sown broadcast, well worked in

by bush harrows, which were followed by a light roller.

A field of Sutton's Giant Evergreen Italian Rye Grass sown early in September proves most useful throughout the following year. Sow 3 bushels of seed per acre, and take care that it has rich land; it is then invaluable as green food in stables and cow-house, for hay, for silage, and for sheep-folds, a fold of "Italian" being generally regarded as equal to three folds on pasture, because it affords food for three times the number of sheep that the best pasture does. On poor land it is comparatively worthless, and the seed is wasted, for though it may germinate freely the plant comes yellow in bine, and its growth is so stunted as to be worthless. Under the high cultivation of which it is so worthy it continues growing freely from early spring till late in autumn, giving crop after crop of marvellous abundance, no fodder crop known to us being more useful. We place some stress upon this because of the popular idea that this grand crop requires a sewage farm. Unquestionably it, like green Maize, gives a much greater bulk of crop under the advantage of irrigation, but we need only to take care to sow on land rich in fertility to obtain heavy crops of both. We have long held it in high esteem for its earliness, coming into use as it does before mixed seeds or ordinary pasture.

OUR LETTER BOX.

Brewers' Grains for Cows (E. C. C. D.).—Brewers' grains should be used in moderation for cows when the milk is required for butter, of which they are liable to affect the flavour injuriously if used as a principal article of diet. They are considered to promote a full yield of milk and are used freely where milk is sold for immediate consumption. Stored in large quantities in a compact mass, grains keep sweet and wholesome for months, and we recommend the use of them with due caution for all cows while fodder is so scarce and the price of hay is so high.

METEOROLOGICAL OBSERVATIONS.

CAMDEN SQUARE, LONDON. Lat. 519 32/40" N . Long. 09 8/0" W .: Altitude, 111 feet.

DATE.	9 A.M.			IN THE DAY.						
August.	meter o, and Level.	Hygrometer.		Direc-	Temp.			Radiation Temperature		Rain.
	Wet.	Wind.	at 1 foot.	Max.	Min.	In Sun.	On Grass.			
Sunday 20 Monday 21 Tuesday 22 Wednesday 23 Thursday 24 Friday 25 Saturday 26	Inchs. 29·852 29·650 29·869 29·976 30·073 30·276 30·272 29·995	deg. 72.5 68.1 67.2 65.0 63.2 63.1 61.2	deg. 62·3 64·8 60·1 58·1 56·9 56·2 54·3	S.W. S. S. S. S.W. W. N.W.	deg. 68.0 66.9 66.2 65.8 63.8 62.9 62.2	deg. 77.3 77.8 74.4 65.8 72.7 73.6 68.4	deg. 59.4 63.7 55.2 57.1 51.7 51.0 49.7	deg. 118·7 124·9 119·1 96·3 124·1 125·9 110·5	deg. 55·2 60·1 50·2 54·8 48·8 48·1 45·2	Inchs. 0.022 0.012 0.010 0.248

REMARKS.

REMARKS.

20th.—Occasional sunshine in morning, shower at 3.30 P.M.; fair evening.

21st.—Cloudy, with frequent slight rain; sun in afternoon, fresh breeze; fine evening.

22nd.—Cloudy, with bright sun occasionally early and throughout day, fresh breeze; dark and heavy, with strong wind at 5 P.M.

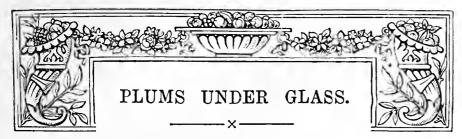
23rd.—Dull, with slight rain early, and rain at 9.20 A.M., dark at 11.15, and rain up to 3 P.M., then fair.

24th.—Overcast early, a little sun during morning with strong breeze, sunny rest of day; fine night.

25th.—Bright and sunny morning, a little cloud at 2.10 P.M.; sun bright at times in afternoon, but generally overcast; fine night.

afternoon, but generally overcast; fine night. 26th.—Bright and sunny throughout.

A fine week, and though nearly 10° colder than the previous one it has been above the average temperature.—G. J. SYMONS.



DLUMS generally are more impatient of a forcing atmosphere than any other stone fruit. This, however, does not preclude the successful cultivation of the choicer varieties under glass, for with properly constructed and well managed houses Plums of the highest excellence may be readily obtained. Lean-to structures erected against south-east, south, or south-west walls answer admirably, provided they are well ventilated, the border thoroughly drained, and adequate supplies of water given the trees. The side and top lights should open the whole length of the house, and the roof lights be moveable. Cases 6 feet in width will accommodate trees on walls and others on a low trellis in front, say to the extent of one-third the distance up the sloping roof. The front trees may be trained as cordons, and, duly restricted at the roots, they bear abundantly. This plan, however, is not so good as training half-standard trees to a trellis fixed 9 to 12 inches from the glass, the stems being the height of the front lights. Less space is afforded by this method, but the fruit attains to greater perfection and is more abundant than on trees trained to the wall. When the house is 10 feet or more in width, bush, pyramid, or low-stemmed trees with round heads may be grown with great advantage in front, either planted out or in tubs, and so arranged as not to deprive the trees on the back wall of too much light. Grand Plums are also grown in wall cases by planting the trees in front, one to each rafter, and training them up the roof as cordons. This does not prejudicially affect Peach or Nectarine trees on the wall.

Span-roofed houses with the ends north and south, or north-east and south-west, are suitable for standard Plum trees—the best of all methods of training stone fruits under glass. A row of trees can be disposed in the centre, and a row on each side of the house. It is imperative that the trees have stems so high that their heads will be exposed to full light. If grown in pots it matters little what form the trees are in, nor what height or width the house may be if it is light and airy. In exposed localities it has been recommended to sink the floor of the house somewhat below the surface, so as to secure the advantage of earth heat, and facilitate the covering of the roof with mats or canvas in severe weather. The great objection to sunk houses is damp, especially in low sites. With the trees in pots the roof lights may be fixed, as they can be transferred anywhere at will, and the grand secret of success in the culture of Plums in cool houses is keeping the trees dormant as late as possible, with the soil in a thoroughly moist condition. Excessive dryness at the roots as a means of forcing the trees to become and remain dormant till late in the spring often causes the buds to fall. When the trees are fully exposed from the fall of the leaves to the bursting of the buds inactivity and the soundness of the buds are assured during the resting season, and Plum trees take no harm whatever in the severest weather when the pots are plunged over the rims in ashes. An orchard house with boarded sides, not so close as to entirely deprive the trees of light on frosty nights and on cold days when the house is shut, hinged boards at the sides opening the full length of the structure provide efficient ventilation, and the roof glazed with large panes of glass, is the exact position for growing Plum trees in pots. This site affords sufficient shelter against our uncertain springs, insures the perfect ripening of the fruit in cold, dull, wet seasons, and prevents its

deterioration by throwing off rains and keeping it safe from dews and fogs.

The early and late varieties are invariably excellent for growing under glass, but the crackling-fleshed and high quality midseason varieties, as the Gage race, Jefferson and Kirke's, do not always finish satisfactorily, the fruit turning soft and shrinking instead of ripening. The late Mr. T. Rivers advised trees of these Plums to be removed to a warm and sheltered situation outdoors for ripening; it is an excellent plan provided means are taken to protect the fruit from rain, otherwise it cracks in wet weather. This method can only be adopted with trees in pots. For planted-out trees careful attention is necessary in ventilating, watering, and feeding during the early stages of growth, with plenty of air moisture when the fruit is swelling, especially at night in dry hot summers. Air at the time of ripening cannot be too freely admitted, as it is excessive evaporation which causes the fruit to ripen prematurely and be soft and poor in flavour. Oullins Golden is very handsome and as good as it looks, but the tree grows too freely to fruit well, yet it frequently does better under glass than in the garden. Denniston's Superb admits no rival in its season for crop and quality. McLaughlin may be described as a large Green Gage with a fine perfume. Brahy's Green Gage is earlier than the old Green Gage and larger; it certainly is one of the most delicious Plums. Early Transparent Gage is excellent for growing as cordons and in pots, but the fruit requires to be somewhat severely thinned. Green Gage bears enormously when the soil is firm and the roots restricted or root-pruned. Transparent Gage grows vigorously, and it requires a firm soil and restriction at the roots or root-pruning. Purple Gage shrivels, and is richly flavoured accordingly. Lawson's Golden Gage affords a pleasing variety and is excellent in quality. Guthrie's Late Green and Reine Claude de Bavay, with Late Transparent Gage, continue the supply up to October, and collectively comprise a dozen of the richest Plums in cultivation. They are all, except Purple Gage, greenish yellow, or yellow streaked or blotched with green or purple. Bryanston Gage also ripens late in September, and the tree is very prolific. Few, if any, Plums are richer flavoured than Angelina Burdett, and being black with brown spots is of good appearance. Of other Plums for dessert Early Favourite ripens as soon as any, followed by De Montfort, Jefferson, Kirke's, Coe's Golden Drop, and Ickworth Impératrice, so that with a judicious selection choice fruit can be had from trees in a cool house from July to November inclusive. The following are also good for dessert or culinary when grown under glass-Czar, Belgian Purple, Sultan, Denbigh, Victoria, Italian Prune, Prince Englebert, Washington, Monarch, Imperial de Milan, Blue Impératrice, and Grand Duke. All may be grown as cordons, planting the trees about 2 feet apart, and training the stems about 1 foot from the glass. If the trees are fan-trained fewer varieties will be required. Denniston's Superb, Brahy's Green Gage, Jefferson, Transparent Gage, Kirke's, and Coe's Golden Drop cannot well be excelled for affording a succession of choice fruit.

Whether the trees are planted out or grown in pots they require a rather stiff soil. Good calcareous strong loam interspersed with small stones or flints needs no admixture for borders. Efficient drainage, consisting of 3-inch drains to carry off superfluous water, 1 foot depth of rubble, preferably brickbats with a 3-inch top layer of old mortar rubbish, and 18 to 24 inches depth of soil are necessary for borders. For pots or restricted borders a fourth part of well decayed manure to three of stiff maiden loam, with a 9-inch potful of bonemeal and a quart of soot added to every 3 bushels of compost, are suitable. If the soil is deficient of grit and lime add a fifth part of sifted old mortar rubbish, and if turfy use Thomas's phosphate instead of bone dust. The pots should be drained thoroughly with crocks or oyster shells. Make the soil firm and allow sufficient space for helding water. Planting or potting is best done immediately the leaves have fallen. Potted trees ought to be plunged

in ashes, and it is desirable to allow them to make a year's growth outdoors before they are placed under glass for fruiting. When trees two or three years from the bud or graft, and especially in pots, can be had, it is better to purchase such than to rear them, and being furnished with blossom buds a crop of fruit may be had the first year.

If the trees are placed outdoors each winter (after the fruit is gathered in the case of early varieties), they should be returned to the house before the buds are so far advanced as to show colour, allowing plenty of room for the development of the growth, and standing each pot on two or more bricks on the flat a little distance asunder, so that the roots will not pass into the soil, whilst insuring a free passage for the water. Such trees can be moved at any time without prejudice to the growth. When the trees are kept under glass constantly the ventilators should be wide open during the winter whenever the temperature is above freezing point, but when frost prevails they ought to be kept closed. The trees also should be placed close together, so that they can be protected from frost by a covering of dry hay or straw between and over the pots, standing them apart in the spring. Similar remarks apply to plantedout trees in respect of ventilation under fixed roofs in winter, but the better plan is to remove the roof lights when the leaves have fallen and keep them off until the spring.

Under the circumstances indicated the trees will start naturally in the spring, and from this time forward a circulation of air, except in severe weather, should always be maintained by leaving the ventilators open more or less day and night. Abundance of air and a dry atmosphere is the only way to secure a proper set of fruit. By the time the fruits are set and swelling the sun will have considerable power, and may be taken advantage of to accelerate the growth by reducing the ventilation in the afternoon, yet leaving some, airing early each morning, and when the wind is sharp and cold ventilate on that side opposite its direction. In the summer the ventilators should be kept constantly open.

The trees must never be distressed for lack of a supply of water; one flagging ruins the crop for the season, and trees in pots are successful in proportion to the watering and nourishment. The soil must always be kept moist. Trees in pots require water twice, sometimes three times a day in the summer; also top-dressings of rich compost, preferably pieces of turf, to encourage plenty of surface roots, which can be fed to any extent by liquid manure and sprinklings of chemical fertilizers occasionally. Trees in borders will require water less frequently, that depending on root area, the spread of the top and the crop, but there must not be any deficiency of moisture or want of food. Over-watering and over-feeding must not be indulged in, for the Plum is impatient of extremes, but liberal treatment should be accorded if the trees are expected to produce full crops annually. As the fruit advances in ripening lessen the supplies of water and withhold liquid manure, but the foliage must not be allowed to become limp or to flag.

From the time the fruit is set until it begins to ripen the trees should be syringed in the morning, also in the afternoon, except on dull cold days, when a genial atmosphere may be secured by damping the paths and borders when they become dry. Syringing the trees must cease when the fruit commences to ripen, and the atmospheric moisture be gradually reduced, but a little of the latter will not do any harm provided the air is not stagnant, and it is necessary for the perfecting of the fruit and the health of the foliage. Hexagon netting over the ventilators, and frame doors covered with it, are necessary to exclude bluebottle flies and wasps, otherwise use the thinnest muslin over the trees or enclose the fruits in bags of that material. After the fruit is removed recourse must be had to syringing, watering, and proper supplies of nourishment for the perfecting of the wood and buds for next year's crop. Early varieties in pots should be placed outdoors as soon as the fruit is gathered, assigning them a sunny position, and duly attended to in watering and syringing. Midseason varieties may be treated similarly, also the late sorts as they are cleared of fruit.

Repotting or top-dressing is best done before the leaves fall. The object to be kept in view is to secure fresh roots in new material, therefore remove as much old compost as possible without excessive root disturbance, not carrying the reduction too far, and ram the soil firmly. In top-dressing trees in borders the old mulching should be removed, and fresh supplied after loosening the surface. If the trees are growing too luxuriantly a few of the stronger roots may be severed and removed. When the trees grow exuberantly they should be carefully lifted and root-pruned, replanting with the roots near the surface, and well firming the soil. If the trees are unsatisfactory or weakly lift them, remove the old soil, and replant in fresh compost over good drainage.

Training and pruning are the next points to consider. Bush, pyramid, and round headed trees on stems are best for pots or planting-out. Standard trees are unequalled for the latter purpose, and are easily formed by heading at the height required. Pyramids merely require the side shoots pinched and the leader stopped to secure them. Summer pinching may be practised twice or even three times on the leader, and the side shoots once or twice to four or six leaves, avoiding overcrowding the growths, otherwise the fruits are deteiorated for lack of air, and many of the spurs will be too weak to produce fruit, the numerous dead spurs on Plum trees being due to this cause. Pruning may be performed in the spring, as the buds are then easier distinguished by the inexperienced, but as soon as the fruit is gathered is the best time. As a rule Plum trees under glass should be trained for fruit first and form afterwards, that is, pinching, disbudding, and thinning must not be carried too far, for growth is necessary for the production of fruit, its development, and perfect finish. Trees on trellises or walls require the usual summer and winter pruning, but the spur system is not by any means the best for the Plum under glass. The trees being on front or roof trellises are best treated on the alternative system, in which the shoots are allowed to grow up to the glass, only keeping them just clear, these being stopped and kept moderately thin. By thinning out the fruited branches annually, and encouraging shoots to take their places, the trees are maintained in youthful vigour, and the fruit produced is abundant and very fine. Old trees that produce little beyond breastwood and leaves will often yield enormous crops by laying-in young wood, which in the second year will form bloom buds throughout its length and give some fruit, and in the third year a good crop.—G. ABBEY.

PROPAGATING BEDDING PLANTS.

The work of propagating bedding plants has perhaps this year been delayed longer than usual, for the sake of preserving the full beauty of the beds. It should, however, now be pushed on as fast as possible, in order to get the cuttings well rooted before the dull short days come. Judging from the appearance of Pelargonium cuttings, there is every reason to suppose that fine plants, with a small per-centage of losses, may be anticipated, as they are hard, short-jointed, and entirely devoid of the soft sappy growth which predominated last year. These favourable conditions should be taken advantage of by making the cuttings somewhat shorter than usual, so that the plants resulting therefrom may be sturdy from the first. Cuttings with two or three joints will in the majority of

instances prove the best. When placed in shallow boxes a couple of inches asunder large numbers may be wintered in a limited space, but where there is plenty of house or pit room during the winter I would strongly advise inserting the cuttings at once in 3-inch pots. of potting at a busy time in the spring is then avoided, and plants One crock only need be of the dwarfest habit are obtained. placed over the base of each pot, a little rough leaf soil being excellent material to cover this with. Whatever compost is used for filling the pots with, it should be made somewhat light and sandy by the addition of leaf mould and road sand. It is, however, a mistake to use old and exhausted potting soil when this pot system is practised, or the plants will not make progress in A good proportion of fresh loam or moderate rich the spring. A good proportion of fresh loam or moderate rich garden soil should therefore be incorporated with the compost. A sunny position on a bed of coal ashes in the open air is a capital position in which to place the pots after the cuttings are inserted. Should boxes be employed I like to place these on thin strips of deal, so that the air may circulate under the boxes, and thus

prevent loss through damp.

Notwithstanding the great heat of the present summer Violas have flowered so splendidly right up to the present time that we have as yet inserted no cuttings; the work will, however, be in progress by the time these lines are in print. When a sufficient number of young shoots spring from the base of the plants can be obtained we give them the preference, but in many instances these do not suffice to supply our requirements; the points of the old shoots are then used. If these are stopped early in the spring they make good plants. Any varieties which produce very few cuttings may be quite cut down now, the old shoots cut into lengths containing two or three joints each, and be inserted in pans placed in cool close pits. More cuttings will be produced from the old plants by the end of September, and these if dibbled into light soil placed in cold pits will make excellent plants. The Dairymaid, a variety I have grown this year, has been very popular. Early in the season the flower is ivory white, but as the summer wanes the colour is French grey. Countess of Hopetoun is I think still by far the best white variety, indeed, I know of no other hedding plant which makes a colonial white hedding other bedding plant which makes such a splendid white bed during the summer months. All my gardening friends who visit me are glad of a few cuttings of it when they do not already possess that variety. The most of our cuttings are inserted in front of a south wall in the ordinary garden soil, which is rather light. A little road sand is first placed on the surface. are placed a couple of inches apart, and are well attended to in the matter of being watered when they require it. They remain in this position without any protection throughout the winter, and only a very low percentage of losses are the result.

Coleus, Iresine, Alternantheras, Mesembryanthemums, Helio-Cupheas, and similar plants root quickly and easily if inserted in well-drained pots or pans which are stood in a pit or frame, provided they are kept close, syringed once or twice daily, and are shaded from bright sunshine. Should wet cold weather set in the three first named plants, being somewhat tender, will make more satisfactory progress if stood upon a hotbed or in a heated pit, the great point to aim at being to get cuttings of all kinds established as soon as possible after being inserted. To do this they must not be allowed to flag after they are taken from the parent plants. If greater attention were paid to this point we should hear less complants about the difficulty of rooting cuttings of all descriptions.—W. C.

SEASONABLE HINTS ON FLORIST FLOWERS.

THERE has probably never been a season more disappointing to the cultivators of florist flowers than that of 1893. Everything seemed turned topsy-turvy; plants came into flower three weeks or a month before their time, and the dates of exhibitions had to be altered; and now that the end of August has come we are asking ourselves where are our autumnal flowers? The long-continued drought increased the difficulty, and to keep plants in good health

AURICULAS.—These, the earliest of florist flowers, were the first to indicate the normal character of the season; they were out of flower fully three weeks before their usual time, and consequently have had a longer time in their summer quarters than usual. So far as I can see they have not suffered from this. I see few summer deaths among my small collection, but altogether they look well. They have not certainly suffered from drip, for there was no rain to cause it. At present it will be necessary to go carefully through the plants to take off all dead outside leaves, remove weeds, and if there be any aphides either brush them off carefully or fumigate the plants. In about a month's time it will be necessary to remove them to their winter quarters either in pits or frames facing south, giving them all the air possible, but not allowing them to get rain. I have this year reduced the size of the pots in which the plants are grown, and this of course makes the collection seem to be much smaller. I remember successful cultivation being achieved by those who grew in both large and small pots, and am therefore not sure whether I shall gain much by the change.

CARNATIONS AND PICOTEES.—Here again the character of the season has led to very unsatisfactory results, at least so far as my own garden is concerned, owing to the excessive forwardness of the plants, which necessitated the alteration of the date of the Carnation Show. It was necessary to layer very early, for the wood was ripe, and had it been left any longer layering would have been a matter of very great difficulty. It was a choice of two evils, for I feared that too early layering would lead to the layers running up to bloom; the weather of July being wet and comparatively dull was favourable for them, and the layers rapidly

rooted. I now find that my fears were not groundless, as a considerable number have spindled for bloom, and will of course be valueless. It will now be time to remove layers from the plants, for notwithstanding all that has been said as to wintering them in the open ground it is a hazardous thing, and I think it is much better to remove the layers, and pot them and place them in cold frames for the winter. They may be potted either singly or in pairs, and by this method the plants will be very little disturbed when they are planted out in the spring. best to use simple compost in potting; in fact, good loam with a little sand is all that is needed. Where the plants are potted in pairs they should be placed near the outside of the pot; when potted they ought to be removed to a close frame for two or three days, watered, and afterwards have as much air as possible given to them. By the end of September they may be removed into a frame facing south, which can be left partially open night This will, of course, be the proper time for adding to and day. one's collection, and it is remarkable how much more people's minds are turned towards the border varieties than to the old florists' kinds, not that I think that the latter will ever lose their place in the estimation of the true florist; the only thing likely to effect that being the over-dressing to which they are subjected. is almost hopeless to have this remedied, although attempts have been made by offering prizes for undressed flowers to get rid of the practice.

GLADIOLI.—Here, again, the season has sadly interfered; like everything else, they were too early. In the west of England they were mostly over in the second week of August, and here I shall hardly have a flower left by the end of the month, whereas in some years I have had a difficulty in getting a stand for the Crystal Palace on the 6th and 7th of September owing to their not being yet in flower. Notwithstanding the dry weather, or perhaps in consequence of it, they have done better with me this year than One result will be that the bulbs will be sooner fit for lifting than in most years, and this will probably be in their favour for a future bloom; there will be, however, no necessity for inter-The earlier sections of the ference with them for some time. Lemoinei and Nancianus groups will, however, soon be ready, as they are earlier than the Gandavensis section. I do not lift these every year, but protect them with a mulching of some sort. As, however, I did not lift them last year I shall do so now. I have found, singularly enough, that while my unprotected bulbs perished in the winter 1891, thus dispelling the notion of their hardiness, here at any rate, one of them, Duguesclin, has survived, but so have some of the varieties of the Gandavensis, and, therefore, I am afraid neither of the section can be pronounced

PANSIES.—The summer has always been in the South of England a trying time for these plants, as the dryness of our atmosphere does not seem to suit them; they may now contract mildew and perish. I find that many plants have gone off since they were planted out. It will be necessary now to put in small pots any cuttings that have rooted, and to divide the plants, cutting off all straggling shoots and placing them in a cold frame, which should be kept close for a few days until they are rooted.

Roses.—This exceptional season is now drawing to a close, and certainly the last few weeks have wonderfully developed the growth of our plants. I think it is now a very good plan to thin out the weaker shoots and those which have done duty in flowering this year. It gives more air to the plants, and consequently a greater chance of ripening the wood. The long shoots which have greater chance of ripening the wood. sprung up from the base should now be staked to prevent their

being blown about.

I have not included among florists' flowers such as Phloxes, Pentstemons, and other plants which have been by some included amongst them, nor have I said anything about Tulips and Ranunculus, because nothing can be done with them except looking over the bulbs to see that they are not receiving any injury from mildew; neither have I included Pelargoniums or Fuchsias, Neither can I admit which are essentially greenhouse flowers. their right to be included in this division; and yet it would be very hard to say on what principle a Phlox is not to be considered a florist's flower while a Carnation is. But definitions are puzzling things, and I have never met with one about florists' flowers that would go on all fours.—D., Deal.

FACTS AND THOUGHTS ABOUT APPLES.

IT will, in all probability, be a long time before we again have such splendid crops of Apples of the finest quality. Our English grown Apples ought this year to hold their own against all comers, for they apparently possess every desirable good quality, being large, highly coloured, and of fine full flavour. Many varieties

which during ordinary seasons are quite unpalatable in an uncooked state are this year tempting enough for dessert purposes, and those which are generally considered the cream of dessert kinds have a flavour far superior to that they usually possess. I noticed

this a few days ago when tasting several early Apples.

Worcestershire Pearmain, I thought, the best of all Apples of The fruits, the Codlin type, and is unusually good this season. being large and of great depth, are wonderfully attractive in appearance. Lord Suffield is carrying prodigious crops in this neighbourhood, but in many instances the trees canker badly. Stirling Castle is equally productive, but also suffers much from canker; indeed, I invariably notice that trees which are remarkable for their good cropping qualities are the first to succumb to this troublesome disease. Lord Grosvenor seems to be rapidly replacing Lord Suffield in some districts, but hereabouts (Warwick) Manks Codlin will, I think, prove the best early cooking Apple to grow. It is a free and certain bearer, the beautiful golden colour of the fruit renders it more attractive in appearance than those cooking kinds above enumerated. In the gardens here the trees show no traces of canker. Ecklinville, Keswick Codlin, and Hawthornden have also very heavy crops; the former variety grows more freely than the majority of early ones, and suffers but little from canker. The latter should be extensively grown for home use, as it is frequently preferred to other cooking kinds on account of its brisk and somewhat sharp flavour. Golden Spire is a variety which I think ought to be more extensively planted. In appearance it is extra fine, crops well, and ripens a little later than Lord Suffield. I do not remember ever having previously seen such good crops of Warner's King as I have met with this year. At the Castle Nursery Mr. J. Kitley recently showed me two large bush trees carrying grand specimens of this fine variety. A noteworthy fact in connection with them was that the branches were bearing freely quite in the centre of the Mr. Kitley is a great believer in the practice of thinning the branches freely and leaving them unshortened, and he considers his success in Apple culture is in a great measure due to the fact that he adopts this method. Very heavy crops of Devonshire Quarrenden are this year prevalent around Warwick, and that favourite local variety Wyken Pippin is also abundant. Cox's Pomona nor Cox's Orange Pippin (which with me usually crop well), is this year very productive. On the other hand, standard trees of Irish Peach, King of the Pippins, Worcestershire Pearmain, and Kerry Pippin are loaded with fruits.

At one time Apples of all kinds promised to be undersized, but

since the late rains a wonderful improvement has taken place; and considering the heavy crops the trees are carrying many of the fruits are remarkably large. These being ripened under the influence of brilliant sunshine are firm, sound, and good in colour, so that we may reasonably look forward to their keeping well. Considering how very early gathering has to be commenced this year it is well that the fruit can be stored in good condition. Every possible care ought also to be exercised in storing, so as to prolong the supply as much as possible. In seasons like the present one, when Apples are so plentiful, the fruit room proper will seldom accommodate the whole of the crop. The early varieties may then be conveniently stored in sheds and outhouses, in which positions they generally keep in good condition if placed in

thin layers and kept cool and dark.

It seems to me that too many early varieties have during recent years been planted, with the result that our markets are glutted with Apples, which must be disposed of because they will not keep. In a season like the present this is especially apparent. What we want is a greater bulk of such late-keeping kinds as Sturmer Pippin, Lane's Prince Albert, and Northern Greening. It is scarcely possible to say too much in favour of the first of this trio, as it is a consistent cropper. The fruits will keep perfectly sound and fresh till June, when it is good for both culinary and dessert purposes. I shall be much mistaken if the abundant yet early Apple crop of 1893 does not have the effect of causing fruit growers to devote more attention to very late kinds, with which I am sure they may successfully compete against those sent by our kinsmen in the Antipodes.—H. Dunkin.

SOFT VERSUS HARD COLD WATER.

It is seldom that I do otherwise than content myself by pondering over the pages of the Journal of Horticulture, reading the practical and interesting articles from the pens of so many good writers, in most cases sound and reliable authority; so that in taking up my pen to defend one of my secret ideas, which in a recent issue your correspondent, "W. P. W.," has thought right to divulge, I may be pardoned for any slight misgivings that naturally arise in publicly accepting the responsibility of an "eccentric idea," if such it can be proved. I am still under the impression that "W. P. W." has launched his boat upon a troubled sea, and will find it difficult to steer a straight course to convince a practical gardener that "hard cold water" is little better than slow poison to vegetation in general. The nourishing qualities of "hard cold water" are rendered easily perceptible if constantly followed

by watering plants either in pots or planted out.

We will turn for a moment to the forcible query "W. P. W." confronts us with—viz., "What, I wonder, would the many persevering amateurs do whose plants never receive any except hard water?" If this statement means "hard cold water" direct from tap or pump, then my compassion for such plants is fully aroused, and my advice to those persevering earnest men who endeavour to keep vitality in their plants by such means is, Abandon the idea. My answer to "W. P. W.'s" query as to what those earnest amateurs would do is rather difficult to frame. What they ought to do is easily answered—viz., those who are living in towns, and have only "hard cold water" at command, ought, in the first place, to procure a tub or cistern, and fix outside fully exposed to the air, and in such a position to catch the full power of the sun's rays for a few hours during the day. This will be found to act wonderfully upon the water. Nature, in this particular instance, teaches most indisputable lessons which no theoretical knowledge can dispel. Is not vegetation in due season nourished with showers and warmth according to their wants—warm showers in summer, cold showers in winter? Therefore, those who are guided by Nature's laws in respect to water that must be artificially used will reap the surest and greatest reward.

I claim that water used within a few degrees, more or less, of the temperature of the soil to be moistened, is the truest guide to administer nourishment to plants. "Hard cold water" used constantly during the height of summer, produces a pale, stunted, sickly appearance upon vegetation in general, and so attracts insects and diseases which might otherwise be a verted by timely thought and a little extra trouble, which would be doubly repaid. Such water is not only injurious when admitted to the roots of plants, but it is detrimental to the foliage if used for syringing during the summer. Take, for instance, a Peach tree infested with red spider. It is an impossibility to thoroughly eradicate this pest with "hard cold water," yet by constantly using soft or rain water this troublesome insect can be mastered.

In conclusion, allow me to assure "W. P. W." upon his closing remarks (page 168), that gardening with all its difficulties might be made far more enjoyable, especially during such a trying season as we have passed through, if gardeners and amateurs could but realise the value of soft water, or hard water rendered soft and warm, as a nourishing, health-producing stimulant to vegetation in place of the easily obtained obnoxious drug, "hard cold water." I now leave the subject in the hands and minds of readers of the *Journal*, and "W. P. W." in particular, to prove by practical demonstration that my ideas are whimsical, and that I am deviating from established forms before I accept the term "eccentric."—F. Dunn.

THE SPARROW QUESTION.

WITH due respect to Mr. J. Witherspoon (page 177), the facts which I quoted (page 145) seem to test the strength of his faith to the utmost. Thus squeezed he becomes fierce, and tries vainly to overturn them. He may call us his opposers what he likes, "selfish, short-sighted, wrathful, &c.," because we do not love the ways of the sparrow. He may scornfully ignore and condemn the charges made against these destructive birds, but where is he going to stand while he thus throws dust into the eyes of truth? I know he stands alone, for he fishes for recruits. He throws his hook and line across Mr. Editor's path with a tempting bait of persuasion at the end of it, but this discreet gentleman quietly lets it float and does not bite. Like a defeated marshal on a battlefield Mr. Witherspoon stands alone, his rakish regiments having been shattered, not by the ammunition of those "good deeds," but by the explosive power of those "little mistakes" (as he terms them) so apparent in the scoundrel sparrow. I consider your correspondent both unjust and inconsistent in his endeavour to defend these birds.

Charge 1 (page 145), he submits (though very reluctantly) to be a learner and, as he says "that he is rather inclined to think that the

charge will be true.'

Charge 2. He disbelieves that these birds are enemies to gardeners and fruit growers. He denounces the grand volume of the American Agricultural Report as mere "scraps," throws it one side and puts his small, comparatively speaking, "experience" in its stead. Age does not always indicate the width of experience, and younger persons often possesses more experience than their elders in some things

Charge 3. He screens the sparrows with the feathers of hens, ducks, I blackbirds. We all know that Grape culture in our country is not and blackbirds. carried on like that of America; but this does not impugn the accuracy

of the report.

Charge 4. Here, "J. W." takes refuge in cities, and describes sparrows as "scavengers" which pick bones and clear away refuse; but grain and fruit buds do not grow in cities for the scavengers to destroy. Perhaps suburban amateurs will describe the good (or harm) that sparrows do in their gardens.

Charge 5. Here your correspondent modestly suggests that Miss Ormerod's researches and overwhelming evidence are nothing to his own "experience." Miss Ormerod's evidence was gathered from a hundred sources; Mr. Witherspoon's, so far as we know, in one garden. Can he give the names of gardeners under whom he was trained, and who taught him his (unsupported) doctrine that sparrows do far more good than harm in the majority of gardens and fields?—DAVIES DUFFRYN.



CYPRIPEDIUM SANDER-SUPERBIENS.

THE first Cypripedium Sanderianum hybrid which has yet appeared was exhibited by Mr. Cookson at the Agricultural Hall on August 29th, under the above name, and received an award of merit. The other species employed was C. superbiens, and the credit of the cross belongs to Captain Vipan, the hybrid having been raised by Mr. Cookson from seed supplied by the former. It is a beautiful and distinct form, the flowers being of great size, and remarkable for the very long, drooping petals, which are double the length of the lip. They are pale yellow in colour, heavily blotched with chocolate. The lip is brownish red, and the dorsal sepal, which is pointed, greenish white with chocolate lines. Fig. 31 represents this fine acquisition. Mr. Cookson has followed a distinguished lead in respect to nomenclature; but such a name as Sander-superbiens is not euphonious, and forms a quaint mixture of English—or ought we to say German?—and Latin.

AERIDES SANDERIANUM.

Two of the largest-flowered and handsomest of all Aërides are this and its near ally, A. Lawrenciæ. "Broadly speaking," says Mr. W. Watson, in a recent issue of the "Garden and Forest," "they are only varieties of the old garden favourite, A. odoratum, but their flowers are nearly as large again, and their leaves broader than the ordinary form of that plant." At Kew, A. Sanderianum is represented by a plant a yard high, clothed with healthy foliage to the base, bearing two flower-scapes, each 18 inches long and clothed with twenty-five flowers, which are $1\frac{1}{2}$ inch in diameter, creamy white, tipped with amethyst, and deliciously fragrant. It is nearly ten years since Messrs. F. Sander & Co. introduced this plant in quantity from the Philippine Islands along with A. Lawrenciæ, the first plant of which was purchased at an auction sale by Sir Trevor Lawrence for 235 guineas. It differs from A. Sanderiana in having pure white, instead of creamy white, flowers with amethyst tips.

ODONTOGLOSSUMS.

These have been in many cases heavily shaded during the past summer, but the material should be gradually dispensed with, the blinds being drawn down for a few hours only during bright sunshine. As much light as possible ought now to be admitted, and where the shading is of a permanent nature lose no time in washing the greater portion of it off. It will not be safe to remove all at once, or injury may result if bright weather follows. Shading of this nature is not, however, advisable for Orchids. Considerably less atmospheric moisture will be needed, and also about the roots of the plant, but on no account allow the atmosphere of the house to become dry, or the soil at the roots of the plants.

Press down the moss if it has grown above the base of the pseudo-bulbs. Wash the pots in which the plants are growing, as well as those upon which they are elevated. Slugs can frequently be found when turning over the plants. Wash the glass and woodwork of the structure in which they are grown, and limewash the walls. Do not allow the temperature to fall below 50° at 6 A.M. Artificial heat only will be needed during cold nights for some

weeks longer.—Specialist.

PARAGRAPHS ABOUT THE PARKS.

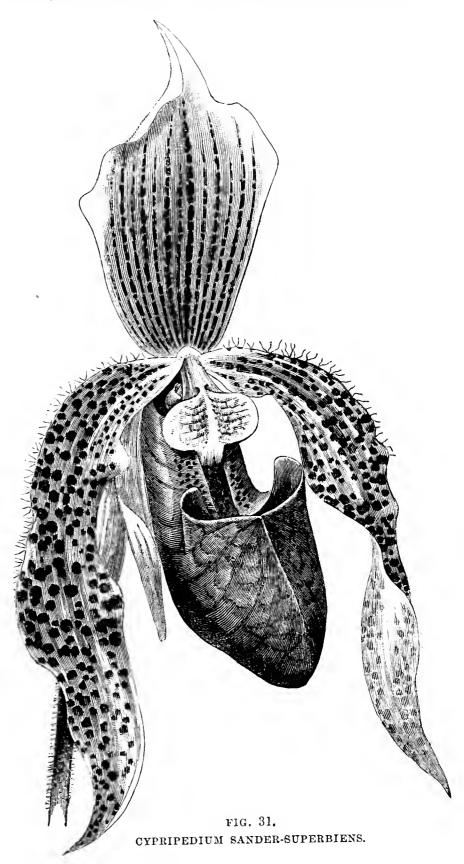
WHATEVER may be said, for or against, about the London County Council, it is generally admitted that they have effected great improvements in the parks, gardens, and open spaces of the Metropolis. They have added fresh lungs to the system, strengthened others, and improved the condition of the huge patient in a manner very pleasant to behold. True, the drought has set at naught their efforts to clothe the commons and other public places with smooth greensward, but that detracts nothing from the credit due to honest and enlightened endeavour, and the authorities undoubtedly have at the head of this important department a most competent and zealous official in Mr. J. J. Sexby.

BATTERSEA PARK.

The south-west of London has had its fair share of the benefits which followed the fall of the old Board of Works. Wandsworth Common has been quite transformed. Fresh turf has been laid, new walks have been made, old furze cleared off and young established, lakes formed, and seats provided. Battersea Park has also been improved. It has been put under the charge of one of the most capable superintendents which any of the London parks have yet had

in Mr. Coppin; the staff has been increased, cricket pitches have been re-made, lawn tennis grounds provided, and the floral attractions of the place largely augmented. Battersea has reason to be proud of its park, and very likely it is. Let us hope that the efforts of the Council have not gone altogether unrewarded by gratitude and appreciation. This park always enjoyed the reputation of being one of the most attractive in London, and of late years its claims have grown stronger. It enjoys a unique position, on one side of it swarming a dense industrial population and on the other being the river.

Visitors of a gardening turn who would like to have a good look round the park and see most of what is to be seen in the flower way,



would not err by entering at the south-west gate and following a systematic round. Perhaps they will run over it with me in imagination first. Two beautiful borders stretch away right and left on entering. They are 6 or 7 feet broad, and as long as I can remember have been one of the brightest features of the park. Although they have had the wear and tear of an exceptionally trying season they are still looking well, being bright with Dahlias, Sunflowers, herbaceous Phloxes and Anemone japonica alba at the back, and in front of these with Beet, Petunias, Stocks, Lilium speciosum, annual Phloxes, Violas, Zonal Pelargoniums, Sedum spectabile, Coleuses, Asters, Campanulas, Tagetes, Calliopses, Gaillardias, Pentstemons, and many other flowers.

The drive on the left hand may be followed as far as the north-west entrance, when a turn to the right along a broad drive near the riverside will bring us to a group of coffin-shaped beds converging to a central circular one. Before coming to them a circle is observed planted with

Begonias and various Coleuses, mixed with Lobelias. Six of the coffin-shaped beds are planted as pairs, and have filled out extremely well. One pair is planted with Begonias in the centre, interspersed with a Nierembergia gracilis, a graceful plant that likes hot weather. They are flanked by lines of Golden Harry Hieover Pelargoniums and Lobelias. A second pair are planted with blue Violas and a silver variegated Zonal in mixture, with an outer line of Iresine, and a margin of what appeared to be variegated Thyme. Less common, but even more effective, are white Antirrhinums mixed with Amaranthus melancholicus ruber, and with an outer line of Robert Fish Pelargonium. These are beautiful beds, and the combination is a very simple one. A dark Coleus would show up the Snapdragons as well as the Amaranthus does.

In passing on it is impossible to help observing the admirable neatness and order which prevail. The turf is excellently kept, the borders clean and in good order all through. Naturally the leaves are giving a great deal of trouble just now; they are falling early and rapidly, and are being raked up into heaps and burned. A very attractive corner is found near the refreshment room in the same drive. A broad border and series of beds occupy the inside of a semi-circle. If one had been tempted to think a visit at the end of August too late in a season like the present he would be undeceived by the time he had seen this picture, for it is difficult to imagine that it could ever have been more beautiful than it is now. The border is brilliant with Beet, Marguerites, scarlet and other Zonals, Calceolarias, white Snapdragons (beautiful as before), Lobelias, and Echeverias. Two or three of the beds are carpets, neat in design, well filled, and admirably kept; others are composed of hardy Fuchsias mixed with Heliotrope, and edged with Lobelia and Sempervivum tabulæforme.

At this point it will be well to turn to the right and pass through the central walk to the sub-tropical garden, which has been for many years the crowning glory of the park. It is splendidly effective this season. There is a pleasant irregularity of level and outline about the ground, and both beds and material for planting them are diversified in character. In one there is a bold group of Cannas; in another Begonias mixed with silvery Dactylis and edged with Zonals, Lobelias, and Echeverias; in a third (an oblong) Eucalyptus globulus 8 to 10 feet high rises above the marbled foliage of Abutilon Thompsoni, and there is the usual margining. Another bed quite as effective in its way as any of the others is planted with Lobelia cardinalis rising from a mass of Ivy-leaved Pelargoniums, with Violas and dwarf succulents outside. The tall scarlet spikes of the Lobelia are very striking. Then there are beds of Dahlias, beds of Bamboos, beds of carpet plants, beds of succulents, beds of Ricinus (very effective these in their greens and purples), beds of Lilium speciosum mixed with Stocks and many others which cannot be enumerated. Go and see, that is the best advice which can be given. The Battersea sub-tropical garden is as fine a feature as any park in the kingdom can boast of pessessing, and just outside it, leading to the lake, the Palm dell and grove are unique.

Bearing to the right and then abruptly to the left we get the lake on the left hand and follow it as far as the south-east gate, near which there is a very large rectangular bed filled with Phloxes, Lobelia cardinalis, Anemone japonica and its white variety, early Chrysanthemums, Gladioli, and a host of dwarfer plants. With the borders beside it, it forms a most brilliant and striking picture. A ramble up the side of the park to finish the inspection at the north-east gate will reveal many bright corners and gay borders, in fact there are few dull moments in the little tour. Battersea Park is a favourite resort of thousands of workers in the vicinity, and adds to the benefits of pure air the wholesome lesson of the beauty and cheerfulness of flowers.

If the Chrysanthemums fulfil their present promise there will be a splendid display in a few weeks' time, for there are about 2000 plants of a type which good growers admire best. They are stiff and sturdy, with stout, brown stems and substantial foliage, the growth ripening admirably. A number of buds have been taken, but it is not expected that the blooming will be appreciably earlier than usual. No matter, so long as it is good, and of that there need be little doubt. The show, we believe, opens about the middle of October.

HYDE PARK.

As every Londoner and many country visitors know there is a tremendous difference between the surroundings of Battersea and Hyde Parks, the latter being in the very heart of the fashionable quarter. It is not my intention to form any comparison between them, because they vary greatly in every way; but as a few notes have been devoted to the floral features of the one so brief references may be made to those of the other. Country gardeners often find a difficulty in arranging for a sufficient change in their flower beds to satisfy themselves and their employers season after season, and they are sometimes glad to have their attention called to combinations elsewhere, which, with a little rearrangement to meet local conditions, will provide the desired variation.

Hyde Park is extensive, and the bedding, especially near Park Lane, is splendidly carried out; but there is one little matter in which there is room for improvement, and that is in the prevailing bareness at the Marble Arch. There is a short border of flowers on the left, but it is round the corner, practically out of sight from the road, so that passersby and those entering the Park here have nothing bright and cheerful

to greet them. As a number of paths diverge just opposite the Arch there is a difficulty in providing for broad borders, but a little group of beds established on the grass just behind them might be provided, I think, and they would make the entrance much more attractive and pleasing than it is now. With a modest suggestion to that effect I pass to say a few words about some of the beds.

Those who want to see the best of them should turn to the left inside the Marble Arch, and walk down parallel with Park Lane, past Grosvenor Gate, towards Hyde Park Corner, or vice versâ. Here magnificent stretches will be found, varying in shape, size, and design in a degree sufficient to satisfy the most exacting critic. One of the first to be seen is composed of Fuchsias rising above early Chrysanthemums and Asters, with outer lines of Iresine Wallsi and Alternanthera aurea nana. This would be a beautiful bed were the Fuchsias good, but unfortunately they are somewhat thin, and this is the case in most of the other beds in which they are planted, although there are one or two noteworthy exceptions, of which more later. A second bed is composed of Abutilons, Celosias, and Dracæna rubra in mixture, carpeted with Alternanthera aurea nana, and lined with Colcus splendens, Lobelia Snowball, and L. Omen in three separate bands. This is effective, and would be more so if the Abutilons were better bloomed.

There are several examples of the Pelargonium-Viola mixtures. One is composed of Mrs. Pollock and Blue King, with Lobelia and Pyrethrum aureum laciniatum. Another is a combination of Pelargonium Princess Alexandra and Viola Lilacina, with Swanley Blue Lobelia and the Pyrethrum; but this group is nearly surrounded by trees, and it is evident that they have told against the beds considerably. They have spoiled a well-designed bed that ought to have been very attractive. It is composed of Grevillea robusta, mixed with Carnations on a groundwork of True Blue Viola, but the last named has done very badly. The outer lines are Lobelia Omen and Lysimachia Nummularia aurea. A passing tribute ought to be paid to the admirable system of naming the plants which is adopted. It must be instructive to the public and useful to those horticulturists who, not being Kew experts, are unable to recognise every plant in the world at a glance.

The main block of beds is just by the Grosvenor Gate on the Piccadilly side. There is a wide oblong stretch of greensward with a path on each side of it, and the beds are arranged in pairs, one at the side of each walk. It is well to keep the oblong on the right, going in the direction of the Corner, as then the long line of beds near the park railings may be inspected at the same time. All have done much better than the first group; with hardly an exception they have filled out well, and the designs are both varied and beautiful, so that it is a true delight to study them. All of course are not equally pleasing to one pair of eyes, but tastes differ, and what one visitor condemns another would approve.

Attracting attention is a very beautiful bed formed by the simple admixture of scarlet Tuberous Begonias and Acacia lophantha, with a groundwork of Lysimachia Nummularia aurea and an edging of Lobelia Snowball. There is nothing elaborate or difficult to imitate about this, but it would not be easy to excel it. Another that is strikingly effective is made up of splendid pyramids of Heliotrope General Garfield 4 to 6 feet high, $2\frac{1}{2}$ to 3 feet through and full of bloom, mixed with Lilium speciosum and Nicotiana affinis, the carpet being Alternanthera aurea nana, the outer lines A. paronychioides major and A. amœna. It is rich, bold, and imposing.

Two delightful beds have been formed by associating Tuberous Begonias with Grevillea robusta. One is the crimson variety Chas. Baltet, its flowers being well set off by the foliage plant, and the bed is carpeted with Harrison's Musk, a broad band of Viola Snowflake completing it. In the other the pink Begonia Lady Stanhope is used. These are two of the most successful mixtures in the park. There is one bed in which Fuchsias are growing and blooming beautifully. The tall plants, with their pendant flower-laden shoots, droop gracefully over a mixture of Abutilons, double Petunias, and Begonias, a border of Mesembryanthemum cordifolium variegatum completing an effective arrangement.

A simple combination that is likely to please most persons is a scarlet Zonal mixed with the lilac Viola Bessie Clark, these being surrounded by a band of the dwarf yellow Fuchsia Cloth of Gold half a yard across. Scarlet Begonias rising from a carpet of the golden Creeping Jenny, and margined with the bronzy Fuchsia Meteor, also look extremely well. Between and amongst these beds are huge Palms, groups of Eucalyptus globulus, hardy Fuchsias, pyramidal Heliotropes, and columnar masses of Plumbago capensis 8 feet high, all of which serve a useful purpose in breaking up the lines and imparting diversity.

Shortly after this grand group is quitted another is reached on the left, and in it a few of the best mixtures are (1) hardy Fuchsias, Lilium speciosum and Celosias, with a groundwork of blue Lobelia; (2) Ivyleaved Pelargonium Mdme. Crousse in fine masses, with early Chrysanthemums and Violas; (3) dwarf Cannas, with Acacia lophantha, Grevillea robusta, and Indiarubber plants, carpeted with Alternanthera; (4) a rose Begonia on a groundwork of Mesembryanthemum cordifolium variegatum, edged with Coleuses and white Lobelia. Soon after these beds are passed a sharp turn to the right will lead to the dell near

the Serpentine, where a winding stream meandering between Ivy-covered banks to a rocky head lined by tall Tree Ferns and lofty Musas is well worth seeing. From here to Hyde Park Corner, as well as along the Lady's Mile, there are several attractive beds and borders to be found; but probably enough has been described to serve the purpose of indicating the beauty of the great park under the masterly superintendence of Mr. W. Brown.—Wanderer.

FRUIT GATHERING TIME AT CHEALS'.

BETWEEN the end of budding time and the commencement of the lifting season there is a little lull in the fruit nurseries, not a complete one by any means, for there is plenty of work still on hand, but just a trifling relaxation of the pressure which seems almost a chronic condition in rising places. It is then that the wise man will pay his visit if he can. In early September many trees have been relieved of their golden or crimson load, gatherings having been made in order to secure fruit for the shows, but the majority remain with the greater part of their crop, and so their bearing qualities may be perceived. The season of 1893, so harrassing and even deadly to numerous light-land cultivators, has dealt kindly with those great growers Messrs. J. Cheal & Sons of Crawley. No hungry, thirsty soil is theirs, but heavy, tenacious loam, and while in thousands of places trees have languished and dropped their fruit, Conifers wilted, and shrubs shrivelled, at Lowfield their growth has been steady, substantial, and healthy. I have more than once inspected the famous nurseries, but have never seen them in such condition as they are this season. The weather has given such an opportunity for weed extermination as we have not had for many a year, and it has been taken advantage of to the full. Acre after acre may be traversed without one weed being scen. In order, cleanliness, and neatness the nurseries are perfect, while above and beyond all there are the thousands of healthy, vigorous trees which are to go forth and bring fresh credit to the name of Cheal when the season comes round.

THE OLD ORDER AND THE NEW.

It is impossible to help contrasting the present with the past. A quarter of a century ago this fruit and shrub nursery of about 100 acres, employing its scores of hands, was under farm cultivation, and for every man who then found occupation there is now work for a dozen. The value of the land has grown enormously, the prosperity of its cultivators has increased, and the condition of the workers has correspondingly improved. These are gratifying facts. Development was steady and gradual until ten or fifteen years ago, since when it has gone on with accelerated speed, good material and good workmanship securing the general recognition which has now placed the once small local firm in the front rank of British nurserymen. Though the Crawley soil is holding and stubborn, like John Bull's own character, it has sterling qualities, building up strong and seasoned growth well calculated to fight its way into matured health, strength, and fruitfulness. There is something fresh and invigorating, too, in the Crawley air, alike to vegetation and mankind, for in addition to splendid trees and brilliant flowers, Lowfield possesses in the nonagenarian parent of the wellknown brothers, a wonderful specimen of humanity. Mr. Cheal, senior, now in his ninety-fourth year, still gazes on the scenes which have been familiar to him for nearly a century with faculties undimmed, enjoys life, and astonishes the doctors, who long ago dubbed him "the evergreen," and left him to his own marvellous vital resources as requiring no help from them. To hear him speak with fatherly pride of the energetic and enterprising brothers who have lifted the business up by hard work and sound methods, and have grown grey in the work, as "my boys," and then to glance out over the acres of fruit and mentally contrast them with the old corn-growing order of things, brings home the contrast of the generations. In the hurry of progress let us not forget the firm foundations of the past.

A House of Cordon Pears.

But the present is too pressing to afford much time for retrospect. I went to Cheal's to report their work and progress up to date, and I must set about my task. First, a few words may be devoted to the house of cordon Pears, which is now one of the great features of the nursery. It is 50 feet long, 20 wide, and 12 high, the rafters going down to within a foot of the ground, where there is a continuous shutter at each side, raised in genial weather to admit a flow of pure air amongst the trees. The structure, it will be understood, is a very light one. Bush trees are planted in a central bed, and all round the house are trained cordon Pears. They have been planted out in the border and allowed to go right up the roof, which permits a run of about 15 feet. They are now in their third year, and are a very striking and instructive sight, being laden with magnificent fruit. A good deal has been cleared off, but there is still a crop hanging which speaks with eloquent voice of the benefits of the system. Here, with the trees under easy control and the blossom protected, an annual crop is insured. They not only bear splendid fruit now, but exhibit in the bold buds with which they are bristling the promise of an equal crop next season. Amongst them are new and old varieties. Duchesse de Nemours is a January Pear resembling Doyenné Boussoch in appearance, and of excellent quality. Belle de Bruxelles and Duchesse de Mouchy are both bearing well, but neither is much known generally. The latter keeps till March. Then there are Charles Cognée, a useful February Pear; Beurré Alexandre Lucas, Princess, in grand condition; Epine Dumas and Abbé Fetcl,

which has grand clusters of large fruit. Amongst the older varieties Beurré Superfin, Beurré Hardy, Uvedale's St. Germain's, Doyenné Boussoch (very fine), Maréchal de Cour, Louise Bonne of Jersey, Durondeau, Jersey Gratioli, Clapp's Favourite, Triomphe de Jodoigne, Beurré d'Amanlis, and General Toddleben are carrying splendid crops, the last-named being one of the best. There is one notable disappointment, however, and that is the delicious Doyenné du Comice, which so far does badly, the fruit being brown and scabbed. The cordon house is undoubtedly a great success, and attracts the attention of all visitors. In due time similar structures will doubtless be found in many private places.

CORDONS OUT OF DOORS.

Although the drought has been so prolonged and insects so troublesome the trees, as I have said, arc in admirable condition. The insect plague would have developed into a very serious matter but for being dealt with in a firm manner. For many weeks two hands were constantly employed in the application of insecticides, and as labour means expense the task was a costly one, but the result was that the mischief to the trees was arrested, and they have gone on well ever since. The Crawley cordons are famous, and in few previous seasons have they been seen in such splendid order. Apart from the walls, espaliers, and arches, each with its ripening burden, there are excellent crops both of Apples and Pears in the open quarters. The latter are surprisingly full, the blossom escaping injury from the spring frosts as it rarely does. A good deal was destroyed, but plenty escaped. Beurré d'Amanlis, Williams' Bon Chrêtien, Williams' Victoria, a later variety than the last named; Passe Colmar, Marie Louise d'Uccle, Fondante d'Antomne, Doyenné du Comice (exceptionally good), Durondeau (ditto), and Beurré de l'Assomption may be named as a few that are bearing heavily. These trees are not topped, but the side shoots are shortened to encourage the formation of fruit spurs, with which they are thickly studded. They are clean, vigorous, healthy, and fruitful, and no one inspecting them would hesitate to entrust his fortunes to them if he were desirous of planting. It is not in vain that Messrs. Cheal & Sons have devoted special attention to this popular and rising class.

NOTES ON VARIOUS APPLES.

"Why," said Mr. A., "don't people grow more of Hormead Pearmain?" and then he looked at Mr. J., and the latter responded, "Ah! Why?" It is one of the best Apples grown at Crawley, being a fine and constant cropper, a good grower, and bearing beautiful fruit. It is an excellent kitchen sort, and may also be used for dessert. The neglect of this variety apparently rankled in Mr. A.'s mind, for an hour or so after he returned to it, and this time clinched the matter by saying emphatically that if he were going to grow six varieties this would be one of them. Will not some growers try it on the strength of this, and report results? Then there is the Forge, a small local Apple, wonderfully heavy for its size, growing freely in almost any soil, never cankering, bearing every year, hardy, healthy, and an admirable cooker. It has exceptional colour this year, but is always attractive, though hardly large enough for market. Waltham Abbey Seedling and The Queen are yielding grand fruit on young bushes. Jefferson is a small and attractive dessert variety, the skin striped and flaked, the fruit somewhat flattened, borne freely, and of very agreeable flavour. It does well as a cordon. Landsberger Reinette is bearing fine crops both as a bush and a cordon. Sussex Nanney, a mid-Sussex dessert Apple with soft flesh, ready now, is not widely known, but merits recognition.

An Apple which is puzzling not a few experts is one had under the name of Ringer. It is not that, for although the yellow fruit bears a strong resemblance to it, it is much heavier and the stalk shorter; the tree crops better than Ringer too. Several have thought it to be Jolly Beggar, but the foliage is quite distinct from that and the stalk shorter. If it could be pronounced a distinct variety it would be well worthy of a name, for the fruit is wonderfully solid and heavy, keeping well, and the tree is a great cropper. Sandringham, Lady Henniker, Maltster, Frogmore Prolific, Margil, and Lord Lennox are all observed to be bearing well. Young trees of Lane's Prince Albert, open, clean, healthy bushes, are almost breaking down with their load of splendid fruit. The colour that many varieties possess this season is altogether exceptional. With the warm air and soil they have assumed the richest imaginable tints, Cox's Orange Pippin, Beauty of Kent, Cellini, Barchard's Seedling, Bismarck, Gascoyne's Seedling and Wealthy being particularly brilliant. The season has brought about noticeable changes in some varieties. Peasgood's Nonesuch is not so large as usual, and Ecklinville far from being so good as it generally is; on the other hand Cellini, usually one of the worst at Crawley, is grand both in crop and colour this season, and Lord Suffield, another of the troublesome ones, is also excellent in every way. A splendid stock of Bismarck arrests special attention and orders are beginning to flow in for it rapidly. Cospatrick, Newton Wonder (an improved Wellington), King of the Pippins, Betty Gecson, Claygate Pearmain, Mannington, Dutch Mignonne, and Domino successively arrest attention for their healthy growth and enormous crops. Newton Wonder, Betty Geeson, and Domino all stand very high in Messrs. Cheal's estimation, and all must grow in popular esteem from their intrinsic excellence.

THE DAHLIAS.

It would be useless to attempt an exhaustive reference to every object of interest in the fruit way at Lowfield, so I give in at once, and pass on to say a few words about the Dahlias, which constitute the other great speciality of the firm. There are several large quarters of

them, one being devoted to Shows and Fancies, another to Cactus and decorative, a third to Pompons, and a fourth to singles, besides borders of Tom Thumbs. They were in full beauty, and produced a magnificent effect, hundreds of thousands of brilliant flowers dazzling the eye. A choice dozen of the Cactus and decorative group, worth growing everywhere, are Delicata, Robt. Cannell, Mrs. Peart, Ernest Cannell, Sir Roger, Duke of Clarence, Beauty of Arundel, Bertha Mawley, Crawley Gem, Edith Cheal, Countess of Radnor, and Duchess of York. The purely "decorative" varieties will soon be out of date. Twelve splendid Pompons, chosen from a most extensive collection, are Sunshine, Arthur West, Boule d'Or, Tommy Keith, Phœbe, Geo. Brinckman, H. G. Searle, Grace, E. F. Jungker, Whisper, Eurydice, and Lady Blanche. A dozen beautiful, distinct, and free-flowering singles are Formosa, Gulielma, Northern Star, Eclipse, Amos Perry, Evelyn, Miss Glasscock, The Bride, May Sharpe, Aurora, Duke of York, and Kitty. The Tom Thumbs are flowering freely and brightly, particularly Mignon, Bantam, Houp-là, and Canary.

I had wished to make some reference to the trees and shrubs, but must leave them for the time at least. The Dartmouth, John Downie, Transcendent, and Red Siberian Crabs, Prunus Pissardi, the Thorns, the Acers, the Golden and Cornish Elms, and the Conifers are pictures of health and beauty. No one need wish for a finer stock. They form with the fruit trees a monument to the success which has followed a long and arduous struggle with a stiff, unkindly, but withal fertile soil. Energy and determination, supported by cultural skill, have proved the conquerors, and a fiftyfold increase in the productiveness of the land is at once the reward and the justification of those who have triumphed.



NATIONAL ROSE SOCIETY.

I AM confident that whatever other effect my circular may have produced, it is a pleasure to have drawn so reticent a man as Mr. Mawley into an active correspondence in your Journal. One would think from Mr. Mawley's letter on page 201 that I had issued a series of questions involving charges of the most terrible character, as his reply contains such expressions as "fearful crime," "searching examination," "spotless record," and other terms which are suggestive and certainly invite a reply.

Let us see then how others look on the management of the Society. A writer in a contemporary (whose identity I am unable to fix), under the appropriate pseudonym of "Lux," says "there is a strong clement of conservatism in nearly all these special societies, and the general plan is to get everything cut and dried at a nice tea party sort of meeting." I think "Lux" accurately describes the Committee meetings of "our beloved National Rose Society"—a stock phrase of endearment peculiar to "E. M.," who will presumably be glad to answer a few questions that I will put to the Secretaries.

1, Does either of these gentlemen know of any Society of standing whose Committee meet to transact business once a month, and manage to properly discuss the affairs and current work of the Society in the space of about one hour?

2, Do the Secretaries know of any Society whose members are enrolled without any election, who prior to enrolment are asked no questions, and for whom no one is responsible?

3, Would the Secretaries say how many inquiries they received as to the "character" of my private circular, the receipt of which inquiries they state urged them to make the circular a subject for public notice and repudiation?—CHARLES J. GRAHAME, Croydon.

TEA ROSE ERNEST METZ.

I HAVE sent some blooms of the above Rose for your inspection, and probably you will agree with me that it would be difficult to name any other kind more beautiful at this time of year.—BENJAMIN R. CANT.

[We do agree with our correspondent in this respect. The blooms were beautiful, being deep, large, handsome, delightfully fresh, and of a delicate blush pink, shaded carmine at the edge of the petals. Obviously Ernest Metz, like the majority of Roses, thrives at Colchester.]

TEA-SCENTED ROSES.

I AM much obliged to "D., Deal," for the information he gives me in your issue of last week. I have, however, been for some time familiar with the fact that L'Ideal is a Noisette (hybridised, nevertheless, with the Tea-scented class, and therefore closely allied to these); likewise that Cheshunt Hybrid—a Rose which ought, if only for its fragrance, to be valued more highly than it is by exhibitors—is a Hybrid Tea. I am interested to find that your correspondent assigns to the same category Gustave Regis, which is one of the most beautiful of modern Roses, especially when in bud. At this stage of development it rivals L'Ideal and William Allen Richardson. Noisette and Tea Roses succeed admirably in my garden (Wigtonshire) grown in the open air, and they require during the winter but little protection. Among these are those somewhat delicately constituted vo victies of the Noisette class, Maréchal

Niel and Cloth of Gold. But then we are encircled on all sides (save one) by the sea, and have from the Atlantic the mitigating influence of the Gulf Stream.—DAVID R. WILLIAMSON.

Rose-growing and Pressing in Saxony.

THE experimental Rose plantations started two years ago in the neighbourhood of Leipzig have given such brilliant results that they are, the Belgian Consul states, being extended. The plants have thriven well through the long and severe winter of 1892-93, and their condition in May left nothing to be desired. It has been shown that it was a false idea to suppose that these flowers require Oriental heat to prosper and acquire a delicate perfume; the experiments at Leipzig having proved that a cool temperature, and even a little damp, is the first condition of a good yield, whilst great heat is the enemy of Roses. A special factory has been established in the middle of the plantations by the house which made the first experiments, and it is to be put in operation this summer. Provision is made for dealing each day—we quote the Consul—"with 50,000 kilogs of leaves, "producing, at least, about 40 kilogs of oil, water, and pomade of Roses, valued at 40,000 to 50,000 marks. To start with the factory will have three boilers providing 300 square metres of heated surface, and the Roses will, immediately they are plucked, be transferred to the macerating jars. where, thanks to this procedure, they will deposit their perfume in all its freshness and delicacy. Only the quantity of leaves required at the its freshness and delicacy. Only the quantity of leaves required at the moment will be collected, a few minutes sufficing to transfer the leaves from the plants to the machines." "Commerce" of the 26th July adds: "This expedition is favourably contrasted with the procedure followed in Turkey and in France, where frequently the Roses plucked in the morning are only distilled in the evening. As to the oil of Roses produced in Saxony during last year, it is claimed that not only did it not fall short on comparison with the Turkish product, but that it was better than its rival in delicacy and strength, and the lasting character of its perfume."—("Kew Bulletin.")

A MELON NOVELTY.

ENCLOSED herewith you will find a seedling Melon plant, respecting which I shall be glad to have information. Three days ago I sent to table a very fine looking Melon Prince Arthur; when it was cut, the seeds inside were found to be germinating, and showing various stages of plant development. The plant sent was the most advanced, the stem 2 inches long, and the cotyledons well formed. What appears to be the most remarkable in connection with this matter is the chlorophyll in the leaves. How did this get there? Is it possible that sufficient light could penetrate the skin and flesh of the fruit to produce it? The skin of this Melon was particularly thin, and the flesh very transparent. Would the unusual hot sun which we have had account for the seeds germinating inside the fruit? I have frequently seen split Melons with young plants growing out of them, but this Melon was perfectly sound, very smooth, and of handsome appearance. It had been cut from the plant, and placed in a cool vinery three days previous to being sent to table. Any information respecting it will be acceptable to both my employer and myself.—Thos. Arnold, The Gardens, Cirencester House.

[The Melon plant received had a stem 2 inches long, with roots in formation and well developed cotyledons of a pale green colour. Our correspondent is no doubt right in his conjecture. The requisite conditions for germination were present—namely, heat, moisture, and oxygen gas, this being an essential constituent of water, while sufficient light from bright sun passed through the thin rind and transparent flesh for the deposition of chlorophyll in the cotyledons. The seedling was quite healthy, and would undoubtedly have grown satisfactorily if established in soil under suitable cultural conditions. Just as preparing for press a correspondent, "Muriel Grahame," informs us of a similar instance in a Lemon, green growths from the seed nearly half an inch long and roots of the same length when the fruit was cut open.]

HORTICULTURAL SHOWS.

THE last issue of the Journal of Horticulture, August 31st, contained a most interesting report of the Shrewsbury Horticultural Show (page 203), a report which I should like every individual connected with horticultural societies to read and inwardly digest. If societies and their secretaries generally would try and imitate the policy pursued by the Shrewsbury friends we should hear less of failure, and soon find a very different feeling to exist between societies and exhibitors.

In my opinion your correspondent in his report of Shrewsbury Show hit the nail on the head. If societies are to be successful they must not only gain the confidence and good wishes of the public, but must endeavour by every legitimate means in their power to retain their supporters. It frequently occurs to me that Show Committees are consumed with the idea that they are conferring a boon on the horticultural community by providing a Show, and that exhibitors ought to meekly submit, "and feel grateful" for the niggardly treatment so often meted out to them by many societies. If such societies find their entries and funds gradually declining year by year they certainly have nobody to blame but themselves. Show Committees would do well to bear in mind that they cannot very well get on without the aid of exhibitors if they would, who frequently travel many miles at great inconvenience and expense to contribute the shows.

Let societies offer the very best prizes they can, and there will be little difficulty in securing good entries and a show which a generous public will patronise and appreciate. It is a blind policy to extract the last fraction you can get from the pocket of the very men who make the show. Such niggardly treatment tends to drive exhibitors away in disgust never to return. I am pleased to know that there are societies which I could name, and that deserve all the praise that has been bestowed upon them from time to time, and which are to-day in a most prosperous condition. They have gained the confidence of the community in the first place by securing the services of the best judges they can obtain, and secondly by a liberal, generous, and considerate treatment of the exhibitors and supporters.—WM. INNES.



EVENTS OF THE WEEK.—During the ensuing week several important horticultural events will take place. The Committees of the Royal Horticultural Society will meet at the Drill Hall on Tuesday, September 12th; and on the 13th a special Show of autumn flowers and fruit will open at the Gardening and Forestry Exhibition, Earl's Court, continuing the following day. The Royal Caledonian Horticultural Society's Exhibition will be held at Edinburgh on the 13th and 14th inst. The show of Dahlias, Gladioli, and Early Chrysanthemums, which opened at the Royal Aquarium on the 6th inst., continues to-day (Thursday) and to-morrow.

- —— THE WEATHER IN LONDON. With the exception of a few slight local showers fine weather has again prevailed in the metropolis during the past week. The days have, as a rule, being bright and sunny but the nights rather cold. At the time of going to press it is fine and warm.
- ROYAL HORTICULTURAL SOCIETY.—The next meeting of the above Society will be held on Tuesday, September 12th, in the Drill Hall, James Street, Westminster. Mr. James Douglas will deliver a lecture on "Garden Phloxes and Pentstemons," and collections of these plants will be welcomed as a means of illustrating the lecture in a practical way. As the season for Gladioli is drawing to a close we have been requested by Messrs. Kelway & Son of Langport to say that their prize of a silver medal will be offered at this meeting for the best twelve Gladiolus gandavensis varieties raised from British seeds. Prizes are also offered by the Society for twelve distinct Gladioli grown by amateurs,
- —— MR. THOMAS MANNING.—After long, diligent, and faithful service as manager to the great firm of Messrs. James Veitch & Sons, Chelsea, Mr. Manning has well won the rest he will seek at the close of the present month. Few persons could possess more intimate and varied knowledge of plants and their value than Mr. Manning, and this combined with great business capacity made him a man of mark in the horticultural world. He has, "boy and man," been connected with the firm for forty-eight years. Mr. Manning will take with him wherever he may "settle down" the best wishes of a host of friends.
- We have received the first Fasciculus of that marvellous book the INDEX KEWENSIS, of which it may be said, as Linnæus and Haller said of John Ray's "Historia Plantarum," "opus immensi laboris." We have heard this described as a "Modern Steudel," and so it is in some respects; but it is that and something more, for it gives a citation of all the synonymes, with references to the pages of the works in which they are to be found, and this Steudel does not do. The title of the work is "Index Kewensis: an Enumeration of the Genera and Species of Flowering Plants from the time of Linnæus to the year 1885 inclusive, together with their authors' names, the works in which they were first published, their native countries, and their synonymes. Compiled at the expense of the late Charles Robert Darwin, under the direction of Joseph D. Hooker, by B. Daydon Jackson." It is a great work and worthy of Kew.
- MEDALS.—Now that medals are so freely provided as honours for commendable exhibits at horticultural and other shows we may appropriately refer to some artistic examples sent for inspection by Mr. J. Carter, 37, Howard Street, Birmingham, which he is now bringing before the public. The gold, silver-gilt, silver, and bronze medals are alike beautifully finished, while the various designs are highly artistic and appropriate to the objects represented so well.

- DEATH OF MR. GEORGE MARCHANT.—Though not a pushing man striving to keep his name before the public, Mr. Marchant occupied a very public position, to which he won his way by diligent work and honest endeavour. He was one of the Crimean heroes, receiving several wounds, also English and Turkish medals. He found employment in the London parks, and spent about thirty years of his life in them. For sixteen years he had charge of the Thames Embankment Gardens, first under Mr. Sinclair, then Mr. Cochrane, in the Metropolitan Board of Works days. On the County Council succeeding the Board, Mr. Marchant was sent to Ravenscourt Park, but soon returned to take full charge of the Thames Embankment Gardens. This position he held with much credit till his death, which occurred on the 28th ult. in his fifty-eighth year. A gentleman who has known Mr. Marchant and his work for years says of him, "A more conscientious worker could not be found. Faithful labour is always appreciated, and no man in the several parks was more highly thought of by his superior officer, Mr. Sexby, than was George Marchant."
- THE AGRICULTURAL HALL SHOW.—As most persons expected this speculation resulted in considerable loss—it is said upwards of £300. As might also be expected, the Council of the Royal Horticultural Society took care to secure a guarantee against bearing any share of possible loss occurring. We also learn that several trade exhibitors did little or no business to meet the considerable expense they incurred in sending large collections of produce. The Exhibition was a fine one, and it is regrettable that it did not receive a large share of public appreciation.
- DROUGHT IN FRANCE.—Mr. A. H. Pearson, writing from Angers on the 3rd inst., says:—"In passing down the boulevard here to-day I noticed several of the Chestnut trees which had gone to rest by reason of the drought, and subsequently pushed out new leaves and blossoms. One or two trees were quite white over. Is not this unusual? The pastures are in a fearful state, and the proverbial 'oldest inhabitant' never saw the Loire so low as at present." [There are numbers of leafless trees in the south of London, but France is ahead of us in having Chestnuts growing and flowering now as if in spring.]
- White Antirrhinums.—In reply to "A. D." (page 197) as to why I referred to this variety as "Iggulden's," I have to say that I believed him to be the first to introduce it to that part of the country, and I very naturally connected his name with it, not knowing any other that I could distinguish it by. It has been grown at Marston for some ten years, and I think I am correct in stating that it was in Mr. Iggulden's possession prior to that time. My only motive in writing the note (page 172) was to call attention to a very useful plant. If "A. D." had distributed the "splendid crimson" of which he writes, and I had fortunately shared in his liberality, I should certainly have spoken and written of it as "Dean's," without taking the trouble to ascertain whether or not he had a right to his name being coupled with it.—T. S.
- DROUGHT EFFECTS.—It seems almost incredible after the many fine rains that we have had in the London district, that trees should be suffering so severely from drought that at the end of August there may be seen at Strawberry Hill numerous Elms literally without a leaf on them, and this too in what is called the fertile valley of the Thames. I have rarely seen in relation to the effects of the season on trees greater contrast than was the other day found at Hackwood Park, Basingstoke, where on a solid chalk base trees and shrubs and grass were all luxuriantly beautiful, hardly a leaf having been shed. Then a few days later I looked in at Lady Freake's place, Fulwell Park, Twickenham, and there found the grass burnt brown, the trees shedding leaves wholesale, some being quite leafless, and sweeping literally going on constantly; in fact, it was just such a sight as may be looked for at the end of October; and yet the soil in this district has the reputation of being deep and retentive; but it is evident that when gravel at the base and trees are thick, the subsoil becomes so intensely dry that nothing short of a deluge of water such as a wet winter gives can fairly saturate the roots. Needless to say that this intense dryness of the soil extended to the kitchen gardens also, and rendered cultivation exceedingly difficult. It is a capital wet season position, but a very bad dry onc; and yet within 40 yards of the garden there is a small river full of water, but it might as well be in the moon so far as it affords any benefit to the trees or gardens. In all such situations the season has beyond measure demonstrated the immense need there is of an ample supply of water in dry weather, and here could a few thousands of gallons be lifted each day from the river it would be of the greatest value to the gardener.-A. D.

- NATIONAL AMATEUR GARDENERS' ASSOCIATION. The members of the above Association held their usual monthly meeting in the Memorial Hall, Farringdon Street, E.C., on the 5th inst., Mr. T. W. Sanders presiding. A lecture on "Begonias" was given by Mr. W. E. Jupp, a successful amateur grower, and a good discussion followed.
- THE TURPENTINE INDUSTRY.—Contrary to what most persons would infer, it is said on the authority of the United States Department of Agriculture, after careful tests, that tapping the Pine trees for turpentine is not injurious to the timber, and that the lumber is in no way affected by it. The turpentine industry, with a product worth 10,000,000 dollars annually, is thus a clear gain.
- Wood Wool.—In our report of the horticultural sundries exhibited at the Agricultural Hall Show last week we omitted to mention a superior kind of wood wool, which was noticeable in the excellent stand of Messrs. W. Wood & Sons of Wood Green, N. This wood wool, a sample of which is before us, is remarkably fine, and being sweet, soft, and clean, is well adapted for packing tender as well as firm fruit.
- THE TOTAL RAINFALL AT ABBOT'S LEIGH, HAYWARD'S HEATH, SUSSEX, for the past month was 0.55 inch, being 1.75 inch below the average. The heaviest fall was 0.23 inch on the 3rd. Rain fell on eight days. The highest temperature was 86° on the 17th, the lowest 43° on the 6th and 29th. Mean day temperature 75.20°, mean night temperature 53.12°, mean temperature 64.16°, which is 5.08° above the average. Where are our weather prophets who promised us a wet August?—R. I.
- NEW VIOLAS.—As so much has been written about Violas, I thought you might like to see blooms of the trio of large flowering rayless varieties I shall send out next year. The blooms sent are small, but they are larger when developed. The blue with a white centre is a cross between Ariel and Violetta, and named Pride of Etal. The white is Mrs. Scott, a seedling from Countess of Wharncliffe, crossed with Violetta. The yellow is George Lord, a seedling from Ardwell Gem crossed with Violetta. Princess May and Pure Love are miniatures; notice the Picotee edge in Pure Love. I have also a white Picotee edge, no rays at all, and so dwarf; and many fine varieties you shall see later on.—Geo. Steel. [The flowers of the first three varieties named are charming, although but medium sized. The "miniatures" are very small, but the colouring is delicate, and the Picotee edge just discernible in Pure Love.]
- ALTERATIONS IN EDINBURGH BOTANIC GARDENS. The Palm and temperate houses at the Royal Botanic Gardens, Edinburgh, have, we learn from a northern daily contemporary, just undergone reconstruction. The old Palm house was built in 1832, the newer or western half was erected in 1856. The former is octagonal in form, with a diameter of 60 feet; the latter is 100 feet long, 60 feet wide, and with an arched iron and glass roof 72 feet high. For the most part the specimen Palms and other tropical plants were placed in tubs, which had by no means an ornamental aspect. This arrangement Professor Bayley Balfour, Regius Keeper of the Garden, has now entirely abolished. The whole of the trees and plants in the temperate house and in the hotter Palm house are planted in specially prepared beds, and in consequence appear in this miniature tropical forest as if they were growing in their native habitat. The change has already told upon them in the most beneficial manner. The majority, indeed all of them, are showing signs of a vigorous life which has been unknown in the Palm house for Coils of pipes are placed along the side of the inner wall of the Palm house, and also along the iron gallery, so that in the winter an equable temperature of 50° may be maintained. The old Palm house was formerly heated from a number of small houses on the outside of the walls. These have now been cleared away, the lower walls have been opened up, and encircling the Palm house on all sides, save that by which it is joined up to the temperate house, is a handsome iron and glass annexe, which gives about 200 feet of staging, and imparts to the main building a lightness and beauty it never before possessed. Next year the range of greenhouses stretching from the herbarium to the Palm houses is to be overhauled, and the tank house may be taken up next. At this time an important re-arrangement of the heating appliances in the Garden has taken place. Formerly there were no fewer than twentytwo different furnaces and eighteen or nineteen separate stokeholes scattered all over the place. These have been concentrated into one stokehole, situated not far from the back of the Palm house. The total cost of the reconstruction of the Palm houses and the new heating arrangements has been about £3000.

- PRESENTATION AT ALDENHAM PARK GARDENS.—We understand that Mr. J. A. Cox, who for several years has served as foreman in the above gardens, was on September 1st presented with a marble clock, a set of carvers, and a dozen table knives and forks by his friends on the occasion of his leaving his situation.
- Wasps in Nottinghamshire.—Mr. J. Mallender, Hodsock Priory, Worksop, writes:—Wasp nests have been very numerous here this season. I have destroyed 115 nests within a mile radius of these gardens. I destroyed the nests in the daytime. It is an old plan, but after trying many new ways, I am most in favour of the method I have practised for more than thirty years. [Is the "old plan" a sccret?]
- ONION GUM.—A very convenient gum can be made of Onion juice. A good-sized Spanish Onion, after being boiled a short time, wil yield, on being pressed, quite a large quantity of very adhesive fluid. This, a correspondent remarks, is used quite extensively in various trades for pasting paper on tin or zinc, or even glass, and the tenacity with which it holds would surprise anyone on making the first attempt. It is the cheapest and best gum for such purposes, and answers just as well as many of the more costly and patent cements.
- THE WEATHER IN AUGUST.-Mr. W. H. Divers, Ketton Hall Gardens, Stamford, observes:—This was a very changeable month, but dry, and in this neighbourhood plant life suffered more from drought during the last week than in any previous time this year. We had twenty-one bright days. A heavy thunderstorm occurred on the 10th, and very hot weather on the 18th. The thermometer was 81° in shade at 9 A M., and registered 93° afterwards. We had a shock of earthquake at 6.41 P.M. on 4th. The barometer stood at 29.67 inches. Wind was in a westerly direction for twenty days. Total rainfall was 1.62 inch which fell on twelve days, and is 0.64 inch below the average for the month. The greatest daily fall was 0.43 inch on 11th. Barometer, highest 30:35 at 9 A.M. on 29th; lowest 29:58 at 9 A.M. on 21st. Highest shade temperature 93° on 18th; lowest 40° on 29th; lowest on grass 34° on 29th. Mean daily maximum 75.41°; mean daily minimum 53.54°; mean temperature of the month 64.32°. This is 3.92° above the average for the last ten years. The garden spring ran 15 gallons of water per minute on 31st.
- ZONAL PELARGONIUMS AT SWANLEY .- The utility and continuous beauty of these plants, both for planting in flower beds and for use in pots in the greenhouse, is recognised and admitted by everyone. Messrs. H. Cannell & Son have made a speciality of these plants, and in their hands rapid strides of improvement have been made. Enormous trusses are now produced in profusion, and the size of the individual pips would astonish most people who took the trouble to measure them. An ordinary watch is completely hidden if one of these pips is placed over it. Nothing of the beauty of the plant, be it understood, is lost from its size. Some flowers may with size become vulgar in the eyes of the fastidious, not so the Zonal Pelargonium. With it the term "vulgar" can never be named, they must always remain chaste and beautiful, the flower alike of the nobleman and the mechanic. I will mention a few of the singles which were in bloom on the occasion of a recent visit, and which I considered amongst the very best. Blue Peter, raised by that prince of Pelargonium raisers, Mr. W. B. Miller, is, though not a pure blue, unquestionably a decisive step in that direction; the flowers are medium in size, and possess a very marked bluish tinge which a clear white eye aids in emphasising. Albion stands pre-eminent amongst the pure whites, being a real improvement on Swanley Single White. Amongst the salmons Mascagni must be accorded a high place. In habit it is dwarf, bearing blooms of fair size with the utmost profusion, and of a soft silvery salmon shade with a white eye. It is certainly one of the most attractive in the collection. Mrs. French may be noted as throwing enormous trusses composed of shapely deep pink coloured pips. Miller's Favourite is a brilliant scarlet large-trussed variety, which is very striking. A very beautiful flower is found in Mademoiselle Trine. The habit of the plant is vigorous, and trusses are abundant, being composed of charming rosy magenta shaded pips. A bright scarlet worthy of special mention is found in W. P. Wright. The plant is dwarf and strong in habit, and carries its enormous trusses prominently above the foliage. It is a variety with a great future. Marquis of Dufferin is a grand magenta crimson coloured variety, with good sized pips. A distinct variety is Spotted Gem. The colour is a clear purplish pink, but the three lower petals are densely spotted with crimson. It is a very charming variety. Numerous other very beautiful varieties were in bloom, but those mentioned attracted my attention more especially.-H.

— THE "Kew Bulletin" for August, a copy of which has come to hand, contains as usual much useful information. Among other articles is a report of the "Californian Fruit Industries," and another on the "Plant Industries in the Caucasus." Other important matters dealt with include "Fibre Investigations in the United States," "Decades Kewenses, VI.," "St. Vincent Arrowroot," "Pulping Liberian Coffee," and "Henequen Hemp in Yucatan." Some miscellaneous notes are also given, and from these we extract the four paragraphs that follow.

LEITNERIA FLORIDANA, Chapm.—Dr. W. Trelease, Director of the Missouri Botanic Gardens, St. Louis, U.S.A., has forwarded to Kew a specimen of this species, found by him in Missouri. This interesting plant, previously recorded from the salt marshes of Florida only, was placed by its author in the order Myricaceæ, but raised to the rank of a monotypic order by Bentham and Hooker in the "Genera Plantarum," vol. iii., p. 396. A good figure of it is given in Hooker's "Icones Plantarum," t. 1044. It forms a shrub from 2 to 6 feet high, somewhat resembling a Willow, from which it differs in having a solitary ovule affixed laterally. From Myrica it is easily distinguished by the absence of resinous glands in the leaves, while the elongated (not globose) inflorescence separates it from Platanus.

WOOD OF ARAUCARIA.—The trank of the historic Araucaria imbricata, referred to in the "Kew Bulletin" for January last, p. 24, as having died during the previous autumn, has been cut up and a specimen deposited in the Museum. The trunk measures about 30 feet high and 1 foot 4 inches in diameter at the base. A sample of the wood of a tree of this species grown at Tortworth Court, Gloucestershire, and a walking stick made of the same wood, both presented by Earl of Ducie, F.R.S., in 1890, are shown in Museum No. 1. The wood is light, soft, and open grained, and apparently of but little value economically, though in its native country it is said to be strong and durable. The best known timber-producing species of Araucaria, however, are the Moreton Bay Pine (A. Cunninghami, Ait.) and the Bunya Bunya (A. Bidwilli, Hook). The first is a native of Northern New South Wales and Queensland, and the second grows only in Queensland. Both are trees of some 100 to 150 feet high, producing planks of very large size and light-coloured even-grained woods, suitable for furniture, flooring, and other carpentry work; some samples of the Moreton Bay Pine are prettily marked with small pale clouded knots, somewhat resembling Birds'-eye Maple. It takes a good polish. Good specimens of both these woods are shown in Museum No. 3.

- FIJI FRUIT TRADE.—In a report just issued by the Colonial Office on the Fiji Island (No. 72, 1893), the following information is given respecting the fruit trade: —The trade of the colony has advanced rapidly during the year. The green fruit trade, however, has not increased to any great extent, and the profits made from the production and export of this staple have undoubtedly fallen off. This is owing, locally, to the presence of a disease among Bananas which prevents their bearing ("Kew Bulletin," 1890, p. 272; 1892, p. 48). The Government have for some time been endeavouring to arrange for the temporary services of a pathologist to examine the causes of this disease, and if possible to provide a remedy. The trade has also been affected by the competition of the Colony of Queensland in the markets of New South Wales and Victoria. The export of green fruit to New Zealand has, however, doubled within the last four years, as has also that to Victoria. There will always be a sale for Fijian green fruit, as the quality of the Bananas produced in Fiji is admittedly superior to that of those coming from Queensland, which are often sold under the name of Fijian Bananas. A few of the "Gros Michel" Bananas suckers have been imported from Trinidad, with the view of seeing whether they resist the disease better than the locally grown "China"

— Anthracnose in Vines.—The Vine disease known by the name of Anthracnose, caused by a minute fungus called Sphaceloma ampelinum, De Bary, is well known on the Continent and in North America. As a serious disease, its presence has only been noted in England during the past year, and it is probably widely diffused, specimens have been received at Kew for determination from such distant localities as Dorking and Edinburgh. Anthracnose is an insidious disease, which in its milder forms would not be likely to arouse apprehension on the part of the cultivator, yet successive attacks for four or five years often kill the plant. The young shoots, leaves, flowers, and fruit are attacked. The disease on the young shoots appears at first under the form of minute brown spots. These soon increase in size and become sunk or depressed at the centre, the epidermis becomes broken up into minute white downy particles, and as the disease extends the

shoots become almost black, the internodes are short, and the development of the leaves arrested, not expanding, of a harsh, brittle texture, and hairy below. The present disease is quite distinct from the one known as "black rot," although the two have by some authoritics been considered to be identical. The following method of treatment has generally proved effectual in eradicating the disease: -In the spring, before the buds open, the plants should be thoroughly sponged with a 50 per cent. solution of sulphate of iron in water; the atmosphere at this time should be kept damp. When the young shoots are about 6 inches long they should be dusted with flowers of sulphur, and if the disease makes headway the dusting should be repeated, the sulphur being mixed with an equal quantity of powdered lime. Very badly diseased plants should be removed and burnt, as such are not amenable to the above or any other mode of treatment. A detailed account of this disease, also preventive methods and treatment, is given by Viala. ("Les Maladies de la Vigne." Masson : Paris.)

— STOCKS FOR PEARS.—Mr. Spencer King writes from Ipswich:
—"In my little garden I am experimenting by budding Pears of good quality on stocks which have disappointed me. Bergamotte Esperen and Fondante d'Automne both on the Quince are most disappointing, although on the Pear stock in the same garden they do well. Amongst other kinds I budded Durondeau on the Bergamotte Esperen and Fondante d'Automne, and it bears very freely, and produces thus double grafted far larger crops than the remaining original stocks. Durondeau is a magnificent Pear. My original tree is on the Quince stock trained to a wall, but in that case I seldom get a crop, as frost cuts off the blossom."

THE WEATHER IN HERTFORDSHIRE.—Mr. E. Wallis, The Gardens, Hamels Park, Buntingford, Herts, writes:—The weather during August has been of a tropical character, and quite unprecedented for the amount of sunshine, rot one full dull day occurring during the whole month. Rain fell on ten days. Maximum in any twenty-four hours was 0.32, on the 23rd; minimum in any twenty-four hours was 0.01, on the 20th; total during the month 1.74, against 3.40 of 1892. Wasps have become a plague, and notwithstanding the destruction of 450 nests they are still masters of the situation, eating and ruining the fruit before it is ripe. I find nothing to equal cyanide of potassium for the destruction of their nests.

- FRUIT GROWING IN AUSTRALIA.—Although, says an Australasian contemporary, nearly every kind of fruit procurable in Europe is extensively grown in Australia, the two leading crops are Oranges and Grapes, both of which are acclimatised fruits, the Orange having been introduced about 1817, and the Grape about seven years later. The orangeries in the Ryde and Parramatta districts are equal, as regards the size of the trees and the luxuriance of the fruit, to any in Southern Europe. In Tasmania neither the Vine nor the Orange has been successfully cultivated, but in portions of Western Australia both appear destined to become leading crops. In Victoria various efforts have been made to cultivate the Orange, but without success. In estimating the rate of production, considerable difficulty is occasioned by the absence of uniformity in the statistical returns furnished by the different colonies, Grapes being, for instance, estimated by the ton in one and by the pound in another. This fact has long been a source of complaint, but at present nothing has been done towards placing the returns on a more uniform basis.

- APPLES AND COOL CHAMBERS,—A number of experiments that have been made by fruiterers of late seem to point to the fact that when shipments of Apples from Australia to London are found to be in bad condition on arriving at their destination, the cause must be attributed to something besides faulty packing. An Australian paper says that another important experiment recently made in Melbourne strongly supports this theory. A number of fruit merchants and others witnessed the opening of a case of Apples. A consignment of similar fruit, packed at the same time and in the same way, was dispatched to England by the steamer "Orient," and the Apples arrived in bad condition. On the case that was kept at home being opened the Apples were found to be in perfect condition, showing no sign whatever of decay, and possessing their full flavour and sweetness. They had been kept where the vcntilation was by no means perfect, but where the changes of temperature did not affect them in any way. The Apples which comprised the Five Crown, Sturmer, and Jonathan varieties were packed in an ordinary fruit case, each Apple being wrapped in tissue paper, and paper shavings being used for packing. Some Pears placed in the same case with the Apples were quite decayed, but they arc said to have been overripe when packed.

—— STEAM versus Hot Water Heating.—Much has been said about the preference displayed by the florists on the other side of the Atlantic for steam heating, but Archibald Lawson of Chestnut Hill is, says the "American Florist," changing his system of heating from steam to hot water. He says that as he only has about 4000 feet of glass it does not pay to have a night fireman, and as the old system does not require such close attention as steam he thinks it will be profitable to make the change.

PRIORY, WORKSOP, NOTTS, FOR AUGUST.—Mean temperature of month, 63 2°. Maximum on the 18th, 88.7°; minimum on the 6th, 41.3°. Maximum in the sun on the 8th, 135.1°; minimum on the grass on the 28th, 32.8°. Mean temperature of air at 9 A.M. 65.8°. Mean temperature of soil 1 foot deep, 62.2°. Sunshine, total duration, 199 hours, or 44 per cent. of possible duration. We had no sunless days. Total rainfall, 134 inch. Rain fell on thirteen days. Average velocity of wind, 7.6 miles per hour; velocity exceeded 400 miles on two days, and fell short of 100 miles on twelve days. Approximate averages for August:—Mean temperature, 59.7°; sunshine, 149 hours; rainfall, 2.36 inches. Very fine and warm month. The mean temperature is higher than in any of the previous seventeen years, and the maximum is higher than in any month since 1876. Of the previous Augusts only 1883 had less rain, and of the previous twelve only 1884 had more sunshine.—J. MALLENDER.

- PINKS ON THE RIVIERA.—From time immemorial perpetualflowering Pinks have been grown on the Riviera, as they are in Italy, and especially in Spain; but until the last twenty years they were only considered as household favourites, kept in pots on window-sills or in small gardens. Since the fast trains have been catablished, which carry the Riviera flowers to Paris in twenty hours and to London in less than two days, the cultivation of Pinks, both in the open air and under glass, has, according to M. de Vilmorin in a paper read at a meeting of the Royal Horticultural Society some time ago, made a wonderful progress. Acres and acres are now devoted to the growth of Pinks about Toulon, Hyères, Cannes, Antibes, Nice, and Beaulieu. Hundreds of glass houses, or temporary structures simply made of two rows of glass frames supported by wooden rails, give to the best class of winter-flowering Pinks the help of some additional heat and of some useful shelter. But acres upon acres are grown without any glass at all, straw mats or canvas screens only being used to protect the plants from the effects of radiation, and to afford them the necessary protection against the bad effect of rain or cold dew.

- CURIOSITIES IN CLASSING AND JUDGING .- I do not know whether a very useful book could be written on this subject, but at least a very amusing, as well as suggestive, one could. I have to thank an exhibitor for troubling my mind with the topic, but it seems all the same to have some attractions. At the recent Agricultural Hall Show there was a class for a collection of Sunflowers, "annual and perennial." Note the imperative conjunction! Continuing, the schedule said, ("Helianthus, Helenium, Harpalium, and Heliopsis only), to which Rudbeckias may be added." Did this addition present itself as a sort of afterthought to the framers, and is thus added? Even if it were, why not have included Rudbeckias into the select sorts in the parenthesis? But the real fun of the thing lies in the employment of the word "only" after Heliopsis, and then Rudbeckias are added. What a bull. So much for the class, now as to the judging. An exhibitor asked me how I should interpret the requirement in the schedule "annual and perennial," and I said as an imperative requirement that both sections must be included. But the Judges actually, of the three collections staged, placed first one-admittedly a most beautiful one-that did not contain a single annual variety, whilst the second and third both fully complied with the requirements. We need a court of revision for prize schedules, and a court of appeal from improper judgments.—D.

— WILD FLOWER COMPETITIONS.—May I be allowed to endorse Mr. Alex. Dean's remarks (page 173) on this subject? I always consider it one of the most unsatisfactory classes in country shows. In many places we get over fifty entries for a bouquet of wild flowers. Now, I take it this idea of making a bouquet or bunch is intended to teach the children how to gather and arrange their flowers tastefully. I should like to know in how many cases this laudable object is attained. I venture to suggest about 5 per cent., the remainder are arranged by their parents, and very often by a gardening friend. This is successfully defeating the object in view. I often feel very sore on this point when judging, for I see all the prizes going to bouquets that have not been

made by the children. I think a little reformation in this matter should be made by the majority of committees when arranging their schedule for the next exhibition. It is a matter that can bereadily remedied. I am acquainted with one village where they have a very good method of arranging this matter. A rule is inserted in the schedule stating that the children's bouquets are to be arranged at the place of exhibition, under the supervision of a committeeman. Each child is allotted a space on the table, where there is ample room to work. Although only a village, I saw eighty of these little workers busily engaged on the morning of the show, the gentleman in charge of them sitting on the end of the table. I do not suggest this is the best method of securing a good display, for many of the bunches came out of the ordeal in a very primitive manner, while others clearly indicated they had been practising their work some time previously. At all events, the object of educating the children was attained. I cannot say my experience of committees is precisely the same as Mr. Dean's, for I know one place where ten first, ten second, and ten third prizes are awarded, making thirty in all; at another show the judges were told to place plenty of extra prizes on the children's exhibits. At a small village show, where the bouquets were somewhat numerous and the secretary the local squire, the judges were told to give prizes to all that were worth them. It is very rare one finds a class for a collection of wild flowers. Where such a class is given it should certainly be stipulated, and extra points would be allowed for the correct names of the plants staged.—JAS. B. RIDING.

CANKER IN PEAR TREES AS CAUSED BY MITES.

"M. SCHEUTEN'S account of his observations [of the Pear-leaf gall mite] was published in Wiegman's 'Archiv' for 1857, and translated into our own 'Annals and Magazine of Natural History' in the same year. The leaves of the Pear trees in his garden were attacked by black pustular inflated spots, under the epidermis of which he found the species of Phytoptus which he named Typhlodromus pyri. On examining a large number of spotted leaves in his garden, in which all the Pear trees were similarly attacked (one tree having a third of its leaves affected), he always found the same four-footed larvæ in the interior of the leaves, and, in most cases, on the exterior a species of eight-legged mite, which he took to be the perfect form of the Phytoptus. He gives figures of these, and from them it is plain that the so-called larva is a Phytoptus, and the supposed perfect form a Gamasus. These are here shown."—("Murray's Economic Entomology, Aptera," pages 340 and 341.)

Mr. Murray proceeds to discuss all the evidence for and against M. A. Scheuten's observations, and, reasoning from analogy, arrives at the conclusion that Phytoptidæ (gall mites) are invariably four-footed, and this has been accepted as authoritative by subsequent writers. But some leave a loop-hole—say, "the Phytopti, or gall mites, so far as known, have never more than two pairs of very short legs on the lower surface of the body in front." This is conclusive that little is known of the life history of gall mites from experience, except an occasional and distant observation. Such are practically worthless, for to prove anything the observations must be frequent and consecutive, embracing the annual cycle. From a cultural point of view this begins in spring or early summer, and as a gardener I prefer to commence a description of the Pear-leaf gall mite (Phytoptus pyri) from that time.

The mite lives on the small yellow shining young leaves, and causes red swollen places on the upper surface, which later on become dark red, and ultimately black. This is a common affection on the leaves of the Pear tree in this country, usually commencing at the end of May or early in June, but this year the attack began a month earlier. The spots are oval in form and of different sizes (A, fig. 32), a leaf natural size. On the under side of the leaf the spots are round at first, with a small depressed dot in the centre. This is shown in B, the under side of the leaf, natural size. Very often the blisters are close and run together, and are so numerous as to cover almost the whole surface. This, as almost every leaf on the tree may be attacked, greatly weakens the trees, and renders them unprofitable.

If a section be made through a gall, and it is examined with a lens, the cells in the middle of the leaf are seen, as at C, to be torn asunder, and in the middle of the blister, on its lower surface, is a small opening (a). This shows the condition of the gall while red, and there is neither erineum (hairs) nor mites or eggs in the interior or at its mouth, but the leaf hairs stand out from the leaf surface beyond the scope of the magnifying power for measurement. Not a mite is to be found on the affected leaf. Such is the state of affairs up to mid-July on the leaves first attacked, as well as those recently and still red. Where are the mites? Perhaps the answer may be found in the fact that while I was looking at some infested leaves overtopping a wood fence the owner of the garden suggested that the rain had washed them all away!

But the infection spreads from leaf to leaf, and shoot to shoot. Summer pruning is of no use in getting rid of mites, for they pass from the leaves first assailed to those of the young shoots springing from the axils of the attacked leaves. One such shoot is represented in D, the leaves being conspicuous by the bright red galls, and the central leaves

or growing point are galled all over. The mites also have galled the shoot at b; that is how and where canker in Pear trees caused by mites begins. Examine the galls as we may, and search every particle of leaf, not a mite is to be found. But the galls swell rapidly, assume a darker hue, and a section through a gall early in August reveals mites browsing in erineum and laying eggs. This is shown at c, in E, section through a developed gall; and examining a similar gall later, say early in September, we find the erineum gone, and the mites full fed, as shown at d. The mites go in and out by the opening, and may be seen on the leaf surface, only disturb the upper side of the gall. They are invisible to the naked eye, and only just made visible by a good pocket lens. Under a powerful microscope the mite is seen to have a lily-white body, two pairs of legs near the head, which has a pale flesh tint, and ends in a conical projection, containing the fine sword-shaped jaws and other mouth apparatus. This, shown in the figure at F, is less than 1-200 inch in length, and about 1-800 inch in breadth.

If examined microscopically later on in the summer only old mites are found in the galls. There are plenty of skins, and some long lumps, mite-like but shorter, without legs or bristles, and soon afterwards empty (and much shorter than the bodies of the mites) receptacles are

formation of the galls lurking in Pear-tree leaves in early summer? Why do they not deposit eggs in the first formed galls? What apparatus are they provided with to pierce through the lower cuticle of a leaf? and how can they deposit an egg in a hole four times less than its diameter? Why is a four-legged mite egg or bud never seen in a gall but where there are already the mites? On what do the four-legged mites subsist from the fall of until the appearance of the leaves in spring? The questions are the objections to the mites being always four-legged, and the only one met is that the mites live on the buds during the winter. If so, why are the mites never found in the buds?

2, Assuming the mite to be always four-footed, do the mites ever mate? Are not they strictly confined to parthenogenesis? Will parthenogenesis endure indefinitely?

3, Granted the mites pass the winter in the six or eight-legged state in the fallen leaves, how does it happen that if a tree is cut down or pollarded that the mites do not attack the leaves of the sprouts springing from the trunk?

4, If the mites are six or eight legged, why do they not deposit eggs in the holes first pierced? This, of course, tells against them, and is the grand secret, that is, they do, but they are not seen, for they are

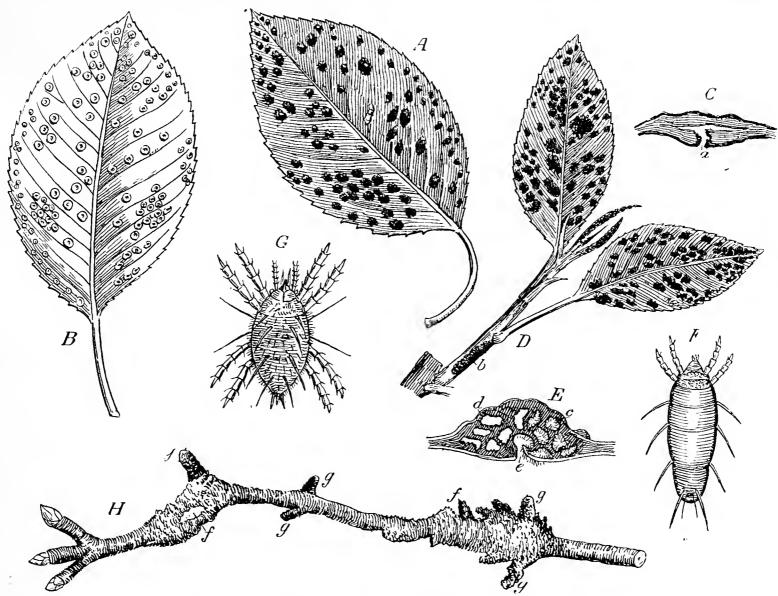


FIG. 32.—PEAR TREE LEAF GALL MITE CAUSING CANKER.

found in the galls. Do not get alarmed if cut off legs as large almost as the fingers move up and down, for they are only the belongings of enemies to the mites, which they devour and clear out of the galls, except such as escape. If the section be rather a thick one, say one-sixteenth inch, it is possible that one of these creatures may be seen in perfect condition, and it is very unsightly. A four-legged mite can parade on a joint of one of its legs easily; but keep a steady gaze, then sooner or later an active creature with six or perhaps eight legs will flit over the section—in and out, everywhere in no time, so that it is difficult to get a good examination of these interesting creatures. The best way is to immerse the section of a gall in alcohol for about a minute, but the mite is very difficult to find after the emersion. The best I have yet been able to sketch is seen at G. This is the male; the female is larger, has also eight legs, the two hinder divided into two hair-like extremities, each for steadying her when depositing eggs, and in spring a long ovipositor, very singular and not depictable. These mites are the last occupants of the galls, except the animal that clears out the four-legged mites, and may be a Cheyletus. The six and eight-legged mites are seen on the leaf at the mouth of the galls, then they are found on the trees before the leaves fall, and they are seen on the trees in spring lurking in the cracks and crevices of the bark, their favourite haunts being the cankerous places their parthenogenetic progenitors have caused, as f in H. Now we have to face a few difficult questions.

caused, as f in H. Now we have to face a few difficult questions.

1, The mite (Phytoptus pyri) and all the sub-family Phytoptidæ are four-legged. Where are they from the fall of the leaf until the

enwrapped in the substance of the gall, and are not visible because

Concluding, H shows a twig of a Pear tree cankered by the Pear-leaf gall mite. It is distorted at f, and the spurs g have been killed by the parasites. Such trees can only be cured by killing the mites. There is nothing better for all mites than syringing the infested trees with a sulphur solution, for all Arachnoidea succumb to it. It may be made as follows: Slake 3 lbs. of quicklime in an iron copper, adding 2 lbs. of flowers of sulphur and 3 gallons of water, besides that used in slaking the lime. Mix and boil for a quarter of an hour, keeping stirred all the time. Allow the mixture to settle, and when cool pour off the clear liquid, place in stone bottles, and keep well corked in a dark place. Use a pint of the bisulphide of calcium, as the liquor is called, to 4 gallons of water, applying with a syringe or engine. It may be used in winter to kill the mites in the lurking places on the trees when the buds commence swelling, or as a preventive in spring when the shoots are about 2 inches long or the first leaves about half developed, using 1 pint to 12 gallons of water, repeating occasionally. At the strength first named it must only be employed over mature foliage, say in September.

The Apple tree gall mite (Phytoptus mali) is similar to P. pyri in its effects on Apple trees in producing canker, but differs in several essential points entomologically, especially in the gall formation, which is the only part about mites which has been well worked out.—

G. ABBEY.



CHRYSANTHEMUMS IN THE PARKS.

CHRYSANTHEMUMS are somewhat extensively used for bedding purposes in many of the public parks in London, and with good effect. At Regent's Park I recently noticed several beds filled with the early flowering varieties, and these on a dull day are very striking at this time of the year. In Hyde Park, too, summer Chrysanthemums form a feature, and are usually much admired, the same applying to those in other public places around the metropolis.—C.

NATIONAL CHRYSANTHEMUM SOCIETY.

A MEETING of the General Committee of this Society was held on Monday evening at Anderton's Hotel. Fleet Street, Mr. Harman Payne occupying the chair. The minutes of the meeting of April 12th, and of the special meeting of July 21st, were read and confirmed, after which the Chairman read a suggestion from New Zealand that inasmuch as certain colonial growers were of opinion that their cultivation of Japanese varieties was little, if at all, behind the home growers, the N.C.S. should offer a medal or other prize open to all growers or societies in the Australian Colonies, these exhibits to be sent over at the exhibitor's expense, and staged at one of the Society's exhibitions. It was resolved that the matter be referred to the Schedule Sub-Committee. The Gosport, Crediton, and Tenby societies withdrew from affiliation. The Secretary announced that the receipts up to the present amounted to more than £150, and that the promises to the reserve fund had nearly all been fulfilled. An election of a member to the Floral Committee in place of Mr. E. Sanderson, deceased, was then proceeded with, resulting in the appointment of Mr. Edwin Molyneux by a substantial majority. The unsuccessful candidates were Mr. D. B. Crane and Mr. Witty.

Mr. Pearson of Chilwell and Mr. Shea being desirous of laying their

Mr. Pearson of Chilwell and Mr. Shea being desirous of laying their views before the Committee in regard to certain matters concerning the working of the Society, it was, after some discussion, resolved that the former be invited to attend one of the meetings in October, and the latter a meeting in December to do so. Eleven new members were elected, and the Port Elizabeth Chrysanthemum Society (Cape of Good Hope) received in affiliation. A vote of condolence to one of the Society's Vice-Presidents, Sir John D. Llewelyn, was passed on the

occasion of the melancholy fatal accident to his son.

COMMENTS AND OBSERVATIONS.

Some weeks ago a writer in this Journal remarked that a note-book was "a record of impressions which pass away as rapidly as they come, leaving behind them nothing but a memory." Such is not exactly the case, for "impressions" occasionally leave something more than "a memory;" but it frequently happens, as your correspondent observed, that many useful hints are hidden away between the pages of a note-book, long forgotten it may be by the owner. There are exceptions, but these only go to prove the rule, and how much important matter is thus kept hermetically sealed from the world it would be difficult to say. One thing, however, is certain, and that is if readers were to turn over the pages of their records, sifting the corn from the chaff, and let the bright light of publicity shine upon anything that might be useful to the gardening community, they would be benefactors.

In this matter I am not altogether blameless, for it is my custom to fill many note-books. Some of my observations are recorded for the benefit of the public, others sink into oblivion. For the purpose of adding to my store I, in common with others interested in horticulture, wended my way to the great Show held under the auspices of the Royal Horticultural Society at the Agricultural Hall last week, and there made a few notes, but observed more. Some of my impressions, I concluded, would be worth "putting into print," but after reading the detailed report of the Show which appeared in the Journal of Horticulture last week, second thoughts suggested themselves, and the old German proverb, "Speech is silver and silence is gold," came uppermost in my mind. However, the pleasure of writing conquered, and there can be no harm in referring to a few points that to me were specially interesting.

The first question that suggested itself to me was, Is the Show a success? From an artistic point of view it undoubtedly was, for, not even excepting the display in the Temple Gardens, it was one of the finest fruit, flower, and vegetable exhibitions ever seen in London. The exhibits as a whole were of a high-class character, and the arranging of them perfect. There were, it is true, one or two hitches in regard to the staging, but these were alluded to last week, so let them pass. Yes, the Council of the R.H.S. did their part well so far as getting together a magnificent collection of garden produce was concerned; but were their efforts appreciated? In other words, was the Show financially speaking a success? Judging by the number of visitors present on most days a negative reply might safely be given. On the opening day

the attendance was decidedly poor, and on Thursday afternoon—from 3 o'clock to 7 in the evening—it was miserably thin. There were on the latter occasion perhaps not more than 200 people—truly a sorry number for such a grand Show. It is reported that only £40 were taken at the barriers on the opening day. How does this compare with £535 taken at Shrewsbury on their opening day, and on a subsequent day £1400?

Some persons present were puzzled to know why the exhibition was so poorly attended, and were busily suggesting various causes. "The Show has not been advertised enough," mournfully observed a standholder, who parenthetically informed me that he had paid a sovereign per foot of floor for his stall; but a champion of the Agricultural Hall Company close by remarked that it was the people who did not respond. That is so, and as we all knew it was the true cause of the thin attendance. The Agricultural Hall is a grand place in which to hold a large flower show, but for this purpose the hall itself is in the wrong position. Everyone who knows the north-east of London as well as I do will agree with me that flower shows are not consistent with the tastes of the inhabitants of "Merrie Islington." The Islingtonians will flock in thousands to see a Military Tournament or a "World's Fair" with all its monstrosities; but they will not pay a shilling or sixpence to see a magnificent display of fruit, flowers and vegetables. That I predicted long ago, and, now it is too late, perhaps those responsible for the affair will agree with me. Had it been possible to have induced a member of the Royal Family or some other notability to open the exhibition formally, it might have proved some impetus to the attendance, but as it is from that point of view a failure must be recorded.

At the risk of being set down as an incurable pessimist there is another point to which I should like to refer—namely, the difficulty exhibitors had to obtain passes. Whether this was so in every case I am not prepared to say, but a report reaches me that a representative of one of the largest exhibitors had some trouble in this respect. More than one unlucky attendant with exhibits had to remain in the hall the whole day, for his ticket only permitted him to enter once. Surely this is short-sighted policy on someone's behalf, and can do no good. I could not ascertain what arrangements were made between the R.H.S. and the Agricultural Hall Company, and am therefore at a loss to know whom to blame. That matters but little, however, for the error is equally as apparent, and should not have been committed.

But while pointing out these little failings one must not forget the many good things that were observable. As already mentioned, it was a grand show, and worthy of a better attendance. Fruit formed a notable feature, the long tables of gigantic Apples of perfect shape and colouring reminded one of the splendid exhibition in the Guildhall a few years ago. The Apples, Pears, Plums, and Peaches exhibited by Messrs. T. Rivers & Son were magnificent, and had such a splendidly finished appearance about them as to "make one's mouth water." Growers no doubt made a note of the valuable Monarch Plum, which was conspicuous in this exhibit, as being one of the best late varieties in cultivation. Messrs. Bunyard, Veitch, Cheal, and Paul likewise, in putting forth their best efforts, gave visitors a proof of what they are capable of doing in growing fruit. The majority of the Apples staged were remarkable for their colouring; in a few cases the fruits were as rich-looking as Pineapple Nectarines. Some of the Apples were not quite so large as I have seen them, perhaps owing to the prolonged drought, but Mr. Woodward, Barham Court Gardens, Maidstone, staged a fruit of Peasgood's Nonesuch which, according to a notice on the exhibition card, weighed 23 ozs.

Grapes were beautifully coloured, and as a whole shown in splendid condition. This was the general verdict of many experts present. One curious fact, however, appeared to have escaped the notice of many observers, and it may be worth recording. As reported in your last issue, Mr. S. T. Wright, gardener to C. Lee Campbell, Esq., Glewstone Court, Ross, exhibited some magnificent 6 lb. bunches of Black Alicante Grapes, which for perfect finish could not be excelled. So far so good, and, as they should be, the Grapes were much admired. But when visitors read printed in bold type on a placard placed in front of the Grapes, "These Vines were winter-dressed with 'Killmright,' 4 ozs. to the gallon," it appears as if something was wrong. "Would it not have been better to have substituted 'Feedmright' for 'Killmright?'" sensibly remarked a bystander. Perhaps it would, for if Mr. Wright had dressed his Vines with the "Killmright" insecticide, it was obvious that he had also "fed 'em right!"

In glancing over the numerous cut flowers one class in the competitive section struck me as being somewhat out of the common. I refer to "a collection of Dahlias arranged for effect." There were two exhibitors in this class—Messrs. J. Cheal & Sons and Messrs. Keynes, Williams and Co. As already reported, the first-mentioned firm secured the premier award for a really meritorious exhibit. The Dahlias comprising the various sections were arranged in sprays, and being fresh and clean on the opening day made an imposing display. But was it not a little out of place to use Maidenhair Ferns and small Palms in pots among these flowers? Asparagus sprays were also employed which would pass muster, these being grown out of doors, as the flowers were; but I cannot help thinking that the Palms and Ferns looked a little ambiguous. True, nothing definite was stated in the schedule, and under these circumstances exhibitors were at liberty to use what they

like. This is written impartially, my object being to discourage the use of stove plants with outdoor flowers rather than that of fault-finding; for, as before said, Messrs. Cheal & Sons' Dahlias were deserving of the honour bestowed upon them.

Those persons who went to the Show for the purpose of seeing the Orchids, as some did, must have been disappointed, for these were not well represented. There was but one small group arranged on a table, and the few visitors present made a close inspection of them. The plants were from the rich stores of Messrs. F. Sander & Co. of St. Albans and Messrs. W. L. Lewis & Co. of Southgate, and comprised some choice species. A hybrid Cypripedium named C. Sander-superbiens, shown by that well-known amateur grower, Mr. Norman N. Cookson of Wylam-on-Tyne, Northumberland, struck me as being exceptionally beautiful. This Cypripedium, moreover, is interesting from the fact that it is the first Sanderianum hybrid yet produced. Mr. T. Statter of Stand Hall, Manchester, I noticed, also had a good hybrid under the name of Cypripedium Edwardi, the result of a cross between C. Farrieanum and C. Veitchi.

Agaves, like most succulents, are not everybody's plants, but the seedling exhibited as A. Leopold II. by W. B. Kellock, Esq., of Stamford Hill, appeared to attract more than ordinary attention. It is, as you remarked last week, "a magnificent plant with an interesting history," the details of which the raiser was good enough to describe to me as well as to others. The gist of the matter being given, however, on page 195 of last week's issue of the Journal it is needless to reiterate here. It occurred to me, though, that a great amount of patience is needed in hybridising Agaves and raising them from seed. Fifteen years it has taken to produce the plant which gained a first-class certificate, and obviously it has had every attention. Mr. Kellock informed me that he had another plant of a similar kind and from the same sowing at his home, and which he thought was the better of the two. Experts, including Mr. T. Baines, have also expressed the same opinion. When will Mr. Kellock bring it before the eyes of an admiring public?

So far as I could see your lengthy report appeared accurate in the main, but no mention is made of the two specimens of Dracæna lineata shown by Messrs. B. S. Williams, and for which a silver Banksian medal was recommended. A similar honour was adjudged the same firm for four specimen Tree Ferns of a particularly healthy appearance. Whilst on this subject it may not be out of place to ask whether an award was made to Mr. W. Cooper for the large number of greenhouses and heating appliances? No mention of such appears in any report that I have perused, and upon asking an R.H.S. official I was informed that "they had nothing to do with that division."

The competition in the plant and cut flower classes was not so keen as might have been expected. It was noticeable that in some instances there was only one exhibitor, and in others none were forthcoming. What was the cause of this? Where were our leading Begonia growers? A class for a group of Tuberous Begonias arranged with foliage plants was provided, and good prizes offered—namely, £7, £5, and £3, but not a single exhibitor was forthcoming. The same occurred in the classes for groups of Cannas, Liliums, Early Chrysanthemums, and Asters, whilst of Zonal and Ivy-leaved Pelargoniums none were shown other than in miscellaneous collections. These would have added interest to what everyone must admit was really a grand exhibition, and moreover, imparted a brightness amongst the rather dull groups of plants.

One more note and I have done with my observations this week. Who did not notice the beautiful Exacum macranthum shown by Sir Trevor Lawrence, Bart., and for which a first-class certificate was awarded? That it deserved this distinction no one can doubt, but it seems curious no one has hitherto exhibited a plant of it before the R.H.S. Perhaps it has been shown; then why not certificated ere this? It is by no means a new plant, having been figured some time ago in these pages, and I believe it was introduced from Ceylon in 1853. Better late than never.—Observer.

NATIONAL DAHLIA SOCIETY.

SHOW AT THE CRYSTAL PALACE.—SEPT. 1ST AND 2ND.

THE combined effects of the weather and the great Show at the Agricultural Hall thinned the Exhibition of the National Dahlia Society somewhat, the tabling being in excess of the demands upon it. The Islington fixture doubtless kept a number of miscellaneous exhibits away, but notwithstanding this there was an excellent display. The drought has told against the blooms somewhat, yet the majority were in excellent character. Mr. John Walker came out in splendid style, scoring a sequence of victories in the smaller classes. Why does he not throw down the gauntlet in the largest ones? The premier class brought some excellent stands, and Mr. Turner's victory was thoroughly deserved.

Novelties continue to pour in. On this occasion no less than eighteen certificates were awarded. We are not going to say that any one of the dozen and a half did not deserve to be honoured, but buyers will begin to despair of keeping pace with the new varieties if they continue to be turned out at this rate.

SHOW AND FANCY CLASSES.

The principal class was that for sixty blooms, Show and Faney intermixed, and there were three competitors. Mr. Turner won with

a very even and excellent collection. The flowers were not exceptionally large, but they were as neat, even, and fresh as could be wished. The back row blooms were George Gordon, Miss Cannell, Jas. Vick, Maud Fellowes, Imperial, John Walker, Clara, John Hickling, W. Keith, Seraph, Jas. O'Brien (Fancy), Wm. Rawlings, Rev. J. B. M. Camm, Gloire de Lyon, Hy. Walton, Professor Fawcett (self), a yellow, rose-tipped seedling, Jas. O'Brien (self), Duchess of Albany, and a crimson seedling. Middle row: R. T. Rawlings, Hugh Austin, Wm. Powell, John Standish, Professor Fawcett (Fancy), Matthew Campbell, Geo. Rawlings, Grand Sultan, Comedian, Agnes, Shirley Hibberd, Primrose Dame, Mr. W. Slack, Crimson King, Julia Wyatt, Richard Dean, Mrs. Langtry, John Bennett, Burgundy, and Alice Emily. Front row: Willie Garrett, Purple Prince, Sunbeam, Dazzle, Mrs. Gladstone, Ruby Gem, John Keynes, a buff seedling; Herbert Turner, Mr. Harris, Mrs. S. Hibberd, Nellie Cramond, Flag of Trucc, Comedian, Diadem, Goldfinder, a seedling, Kathleen, Mrs. Hodson, and Colonist. A heavy and fine lot of flowers from Messrs. Keynes, Williams, & Co. secured the second prize, Arthur Ocock, T. W. Girdlestone, Eclipse, Richard Dean, Gloire de Lyon, Henry Bond, and Rebecca being a few of the best of them. Mr. M. V. Seale was third.

Messrs. Keynes, Williams & Co. did better with forty-eight, defeating the Slough grower in this class. Probably there were not many points between them in either case, and it was the better finish of the flowers which gave them the award. In their back row the Salisbury florists had Geo. Gordon, J. T. West, Miss Cannell, Colonist, Harry Keith, Jas. O'Brien, Henry Bond, Mrs. Glasscock, Dandy, Arthur Ocock, Gloire de Lyon, J. T. Girdlestone, Buffalo Bill, Dandy (sport), Jas. O'Brien and Rebecca (sport). The first named was a splendid bloom. In the middle row they had Mrs. Gladstone, Mrs. Foreman, R. Dean, Mrs. Stancombe, Mrs. J. Downie (sport), Thos. Hobbs, Mrs. Langtry, Wm. Powell, Thos. Goodwin, Gaiety, Jas. Cocker, Duchess of Albany, Rev. J. B. M. Camm, Wm. Rawlings, Peacock and Majestic. In the front row were John Hickling, Joseph Ashby, T. J. Saltmarsh, Nellie Cramond, Robina, Harrison Weir, Willie Garrett, Wm. Jackson, M. Campbell (sport), Ethel Britton, Crimson Globe, Frank Pearce, Mr. Harris, Mrs. W. Slack, a crimson seedling; and Hy. Walton. Mr. Turner's best flowers were Geo. Gordon, Miss Cannell Shirley Hibberd, R. Dean, Crimson King and Wm. Keith. Mr. Scale was again the design of the control of Wm. Keith. Mr. Seale was again third, showing, as before, much smaller flowers than his rivals. There were five stands of thirty-six, and that from Mr. John Walker, which was first, was without doubt one of the very best in the Show. The well known Thame grower has rarely put together so heavy, even and well-finished a collection. His back row flowers, Seraph, Prince Bismarck, Majestic, Crimson King, J. T. West, Harry Keith, Mrs. D. Saunders, W. Rawlings, Hercules, Arthur Ocock, Maud, and Jas. Cocker were all splendid flowers, and most of the others were very good, notably T. J. Saltmarsh, Duke of Fife and Purple Prince. Mr. Humphries was second with a stand quite good enough to win in ordinary competition, but for all that he was well enough to win in ordinary competition, but for all that he was well beaten by Mr. Walker. He had no exceptional flowers, but all were fresh, even, well coloured, and finely finished. Mr. S. Mortimer was third with bears blooms and Mr. S. Mortimer was third with heavy blooms, and Messrs. Saltmarsh & Sons fourth. Mr. Walker won again with twenty-four, this time defeating four strong opponents. He had a splendid stand, though relatively hardly so good as his other. W. Rawlings, Gco. Rawlings, T. J. Saltmarsh and A. Rawlings were four of the best examples. Mr. Humphries was second with smaller but good flowers, Messrs. Saltmarsh, & Son third and Mr. Mortimer fourth. The best stand of twelve came from Mr. A. Rawlings, who had W. Rawlings, J. T. West, Geo. Rawlings, Rev. J. B. M. Camm, Maud Fellowes, Willie Garrett, Mrs. Langtry, Harry Keith, Mr. Glasscock, R. T. Rawlings, Professor Fawcett (self) and Mrs. Gladstone in excellent order. Mr. H. Harris was second with much smaller blooms, but even and fresh, Messrs. Cheal & Son third, and Mr. Tranter fourth.

The amateurs came out bravely in the class for twenty-four, no less than six competing. Mr. West, gardener to W. Keith, Esq., Cornwalls, Brentwood, was as usual to the fore, and he was placed first for a very fine stand, the flowers being well developed, clean, fresh, and excellently finished. The back row flowers were Willie Garrett (very good), Mrs. Gladstone, W. Keith, J. T. West, G. Rawlings, Maud Fellowes, John Standish (very fine), and Majestic. Middle row: Matthew Campbell, Harry Keith, Frank Pearce, Arthur Rawlings, John Britton, W. Rawlings, Clara, and Sunbeam. Front row: Victor, Wm. Powell, E. Shecrman, John Walker, Shirley Hibberd, Ethel Britton, Hy. Glasscock, and J. C. Vaughan. Mr. Arthur Ocock, gardener to Mrs. McIntosh, Havering Park, Romford, also had an excellent stand, though his flowers were hardly so smooth and well finished as Mr. West's. He was placed second, and his best examples were Geo. Rawlings, Mr. Glasscock, Arthur Ocock, and the Rev. J. B. M. Camm. Mr. Thos. Hobbs, Easton, Bristol, was third with very neat flowers; and Mr. W. Mist, Collingwood, Ightham, fourth. Six also competed with twelve blooms, the first prize going to Mr. Vagg, gardener to J. Theobald, Esq., M.P., Havering, Romford, who had excellent examples of Geo. Rawlings, Maud Fellowes, W. Rawlings, Arthur Ocock, J. Rawlings, Duke of Fife, Mrs. W. Slack, T. J. Saltmarsh, W. Garrett, R. T. Rawlings, Prince of Denmark, and Mrs. Gladstone. Mr. T. Anstiss, Brill, Bucks, was a very good second; Mr. Hopkins, New Passage, Bristol, third; and Mr. S. Cooper, Hamlet, Chippenham, fourth. Mr. G. Boothroyd, 17, Orchard Place, Chichester, had fair flowers of Jas. Cocker, Duke of Fife, Ethel Britton, John Walker, Mrs. Gladstone, and W. Rawlings in the class for six, and won from Messrs. Whceler, 53, Bell Street, Henley-on-Thames; J. Gilbert, Brooklands, Freshwater, Isle of Wight; and J. Cousens, Langley Burrell.

The single variety classes were about the average as to quantity and quality. The best six of any dark variety came from Mr. J. Walker, who had Prince of Denmark in beautiful order. Messrs. Keynes, Williams & Co. were second with Niobe, and Mr. Humphries third with Wm. Rawlings. There were nine stands in all. Mr. West showed Mrs. Gladstone finely in the light class, and was placed first, Mr. Humphries being second, and Messrs. Saltmarsh third with the same variety, one other competing. Mr. Walker had a good stand of yellows, being easily first with a splendid box of John Hickling. Mr. Humphries was second with R. T. Rawlings; and Mr. Mortimer third with John Hickling; two others competed. There were only two stands of tipped flowers, Mr. Mortimer being first with Mrs. N. Halls, and Mr. Seale second with Mrs. Saunders. A neat box of Frank Pearce secured Mr. Humphries the first prize for striped varieties. Mr. Walker was second with Matthew Campbell, and Mr. Seale third with Hy. Eckford. Mr. Turner had a lovely box of Miss Cannell in the class for edged flowers, and was placed first. Mr. West was second with J. T. West, and Mr. J. R. Tranter third with Florence Tranter. There were four other boxes. Mr. Mortimer had the best six of John Walker, Messrs. Humphries and Such following; six competed.

CACTUS AND DECORATIVE.

There were three very good stands of eighteen Cactus and decorative varieties, the flowers being very good all through. Messrs. Cheal and Sons were placed first, having the following varieties in very fine condition—Beauty of Arundel, St. Catherine, Black Prince, Professor Baldwin, Honoria, Duke of Clarence, Mr. Tait, Christine Cheal, Ernest Cheal, Delicata, Lancelot, Countess of Radnor, Sir Roger, Josephine, Countess of Gosford, Bertha Mawley, Duchess of York, and Robert Cannell. Messrs. Keynes, Williams & Co. were second with a fresh, well-coloured stand, in which Apollo, Countess of Pembroke, Dawn, and Lady Penzance were conspicuously good. Mr. Chas. Turner was third. There were six stands of twelve, and they made a brilliant display. The best of them was that from Mr. Geo. Humphries, who had Juarezi, Amphion, Sidney Hollings. Duke of Clarence, Bertha Mawley, Baron Schröder, St. Catherine, Robert Cannell, May Pictor, Kynerith, Countess of Radnor, and Professor Baldwin, in splendid order, the flowers being fine and admirably coloured. Messrs. Paul & Son, the Old Nurseries, Cheshunt, were a good second, but their flowers were somewhat lumpily arranged, and would have shown to much greater advantage if they had been better displayed. Mr. J. Stredwick was third with a very neat stand, and Mr. E. F. Such fourth. Messrs. Keynes, Williams and Co. won from two competitors with twelve true Cactus varieties, and their stand was a delightful one. It was composed of a fine crimson seedling named Gloriosa, albeit with a leaning to the decorative group, Kaiserin, Duke of Clarence, Countess of Radnor, Miss Violet Morgan, Robert Cannell, Delicata, Apollo, Bertha Mawley, Countess of Gosford, Chancellor, and Lady Penzance. Messrs. Cheal & Sons were second with Robert Cannell, Delicata, and Professor Baldwin very good, and Mr. M. V. Seale a close third.

In the amateurs' class for twelve varieties of Cactus, six blooms each, Mr. J. West was placed first for splendid flowers of Joseph Chamber-lain, Glory of Brentwood, Blanche Keith, Duke of Clarence, Charles Rolfe, Marchioness of Bute, Bertha Mawley, Mrs. Keith, and four promising seedlings. Mr. Stredwick received the second prize with six varieties, three blooms of each: there were eight competitors. Edward Mawley, Esq., was awarded the first prize in another class for large and bright blooms of Duke of Clarence, Bertha Mawley, St. Catherine, Juarezi, Delicata, and Professor Baldwin. Mr. W. Hopkins, New Passage, near Bristol. took the second prize, and Messrs. Cooper and Fowler the third and fourth.

Pompons. For twenty-four varieties in bunches of ten blooms each, Messrs. J. Cheal & Sons were deservedly awarded the first prize for well formed flowers of Boule d'Or, Grace, E. F. Jungker, Darkness, Ringdove, George Brinckman, Arthur West, Fairy Tales, Admiration, Lady Blanche, Sun-Brinckman, Arthur West, Fairy Tales, Admiration, Lady Dianche, Bunshine, Rosalie, Martial, Tommy Keith, Marion, Isabel, Favourite, Whisper, Eurydice, Iolanthe, Eva Goldfinch, Phœbe, and Cecil. Mr. Charles Turner was a good second, Little Lady, Captain Boyton, Isabel, Irene, and Janet being particularly prominent in his stand. Messrs. Keynes, Williams & Co. were placed third, and an extra prize was awarded to Mr. M. V. Seale, both staging excellent examples. With twelve varieties in bunches of ten blooms each three competed, the premier award falling to Mr. George Humphries for a most even and brilliant stand, consisting of Little Duchess, Darkness, George Brinckman, Arthur West, E. F. Jungker, Red Indian, Mabel, Lilian, Phœbe, Lorna Doone, and Whisper. Messrs. Paul & Son, Cheshunt, received the second award, Mars, Lady Jane, and Red Indian being the most prominent. Mr. E. F. Such was placed third for a very fair collection.

In the amateurs' class for six varieties of Pompons in bunches of ten blooms each, there were three collections staged. Mr. J. T. West received first honours for Arthur West, Mary Kirk, a seedling (brilliant red), Winifred, Eva, and Tommy Keith. Messrs. J. Stredwick, Silver Hill, St. Leonard's on Sea, and Mr. William Mist, Sevenoaks, received the other awards in the order of their names. In the class for a similar number of varieties, but six instead of ten blooms to form a bunch, there were again only three exhibits, the prizes falling to Mrs. S. Cooper, Hamlet, Chippenham, Mr. C. Osman, South Metropolitan District Schools, and Mr. W. C. Pagram, Weybridge, Surrey, who were placed first, second, and third respectively.

SINGLES.

The singles made, as they invariably do, a very attractive feature. In the nurserymen's class for twenty-four varieties, twelve blooms each

there were only two collections staged, these coming from Messrs. Cheal & Sons and Mr. M. V. Seale. They ran each other very close for premier honours, which were finally awarded to the first named firm, who staged bright and fine blooms of Evelyn, Lowfield Beauty, The Bride, Yellow Satin, Miss Linnaker, James Scobie, Annie Hughes, Duchess of Fife, Gulielma, Amos Perry, W. C. Harvey, Eclipse, Kitty, Lady Whitehead, Miss Roberts, Cleopatra, Ruth, Miss Glasscock, Duchess of Anhault, Northern Star, Formosa, Duchess of Albany, Marion Hood, and Victoria. Mr. Seale's collection was well deserving of the second place, as the form in many varieties was most perfect; the varieties were Annie Hughes, Miss Henshaw, Huntsman, James Scobic, Amos Perry, Mrs. J. Coninck, Florrie Fisher, Alfonso, W. C. Harvey, Miss Linnaker, Lady Whitehead, Duchess of Westminster, Miss Jefferies, Duchess of Fife, Mrs. Gordon, Duchess of Albany, Alice Seale, Northern Star, Duchess of Anhault, Victoria, Cleopatra, Gulielma, and Miss Ramsbottom. There was a falling off in one or two bunches in the front, otherwise the collection might have taken higher honours. Three collections of twelve varieties were staged, and Mr. George Humphries was well ahead with the following collection-Florrie Fisher, James Scobie, Amos Perry, Mrs. W. C. Harvey, Gulielma, Cleopatra, Miss Henshaw, Eclipse, Miss Roberts, Miss Gordon, Duchess of Albany, and Duchess of Fife. Messrs. Paul & Son and Mr. E. F. Such took the other awards in the order of their names.

In Class 23, six varieties in bunches of ten blooms of each (amateurs), T. W. Girdlestone, Esq., was the only exhibitor, and received the first prize for Demon, Yellow Satin, Kitty, Ruth, Gris de lin, and Daisy. Mr. Mawley was the only exhibitor in the corresponding class for six blooms to form a bunch. He had Duke of York, Amos Perry, Rosebank Cardinal, Miss Roberts, Enchantment, and Yellow Satin, to which was awarded the first prize. With twelve varieties of six blooms Mr. T. W.

Girdlestone was the only competitor, and received the premier award for Mikado, Maize, Demon, Cinderella, Little Frank, Sunningdale Scarlet, Dearest, Prince of Orange, The Yellow Dwarf, and Awdry.

A class was provided for fancy singles, six varieties in bunches of ten. Mr. Girdlestone was first with M.C.C., Tommy, Phyllis, Splash, Irene, and Houri, all striped, splashed, or flaked flowers, and decidedly attractive. Messrs J. Cheal & Sons were second with Jas. Scobie. Stars attractive. Messrs. J. Cheal & Sons were second with Jas. Scobie, Stars and Stripes, Gulielma, May Sharp, Miss Glasscock and Victoria, also a good stand. Mr. Seale was third with Jas. Scobie, Mr. Rose, Mrs. Barker, Duchess of Albany, Victoria, and Gulielma.

CERTIFICATED VARIETIES.

The following novelties received certificates:—May Sharpe (Cheal), a Fancy single, buff with crimson centre, splashed and flaked with the same colour; Mrs. Harris (Cheal), a small Fancy single, very pale lilac, the margins deep carmine; M.C.C. (Girdlestone), a Fancy single, yellow, flaked with vermilion; Tommy (Girdlestone), a very large Fancy single, yellow, with broad crimson flakes and splashes; Phyllis rancy single, yellow, with broad crimson flakes and splashes; Phyllis (Girdlestone), a Fancy single, white, suffused and splashed with rosy magenta; Mrs. A. Peart (Ware), a fine white Cactus, which should turn out an acquisition; Matchless (Perkins), a very fine dark purple Cactus; Scarlet Perfection (Perkins), a beautiful round-flowered single, very rich in colour; Purple Prince (Perkins), a ruby-purple Cactus of the true type; Beauty of Wilts (Pictor), a beautiful and very distinct Cactus, the upper florets broad and flat, the lower tubular and pointed, colour brilliant orange vermilion one of the greatest acquisitions of colour brilliant orange vermilion, one of the greatest acquisitions of recent years so far as the flower is concerned; Lady H. Grosvenor (Keynes), a pale yellow Cactus, lower florets blush; Lady Penzance (Keynes) a beautiful pale yellow Cactus of great size; Chancellor (Keynes), magenta Cactus; Lilacina (Cannell), rich mauve decorative; Rowena (Turner), a charming Pompon, with yellow flowers, heavily tipped with brownish red; Captain Boyton (Turner), a Pompon, very dark blackish purple, perfect shape; and May Hillier (West), an orange salmon Cactus, very large fine flowers.

MISCELLANEOUS.

Messrs. W. Paul & Son, Waltham Cross, had a table of cut Roses in stands and baskets, admirably arranged, as is usual with them. Messrs. Laing & Sons sent a stand of hardy flowers, well representing the extent of their resources, being extremely diversified; and they also had a large group of their splendid Tuberous Begonias, which was greatly admired. Messrs. J. Peed & Son had three very attractive tables, two being filled with hardy flowers and Dahlias, and the other with stove and greenhouse plants. The latter was particularly pleasing, the centre consisting of a harmonious combination of Odontoglossum grande, Eulalia japonica zebrina, Crotons Countess, Aigburthensis, volutus, and Sceptre. Messrs. Cannell & Sons occupied their old position, and were represented by some beautiful Cannas, such as Progression, Alphonse Bouvier, C. Jacob, and J. D. Cabos, also by the charming bronzy orange coloured Begonia Fashion, and an extensive display of Cactus Dahlias, amongst which Cannell's Gem (a distinct and beautiful terra-cotta coloured sort), Lilacina (a decorative variety, with rich mauve flowers), W. H. Cullingford (a light salmon scarlet), Robt. Cannell, Ernest Cannell, and Mr. J. Budde were very prominent. Mr. T. S. Ware had a very large and fine group of Dahlias, the centre being raised in the form of a large shield of blooms, and long lines of others stretching away right and left. Cactus and Pompon varieties formed the greater part of it, but singles were also well represented. Amongst the Pompons was a new variety named Florence Woodland, bright yellow tipped with rose, very pretty and distinct. There were also several new Cactus and decorative sorts, amongst them being Mrs. Peart, claimed to be the long-expected white Juarezi; John Melville, orangescarlet; and J. T. Barber, rich crimson.

HORTICULTURAL SHOWS.

MOSELEY BOTANICAL GARDENS, BIRMINGHAM. AUGUST 29TH, 30TH, AND 31ST.

PRIZES were offered for collections of Apples and Pears, and three collections of 120 dishes each were staged. Messrs. Bunyard & Co., Maidstone, Kent, were first with a splendid collection of first-class quality. Mr. J. Watkins, Pomona Farm, Withington, Hereford, was a good second with fruits not quite so large, but very bright in colour. Messrs. Lane & Son, The Nurseries, Great Berkhamstead, were third with also fine fruit, but not so well up in colour as the two former. In the class for six dishes of Apples, eight fruits of each, Messrs. Bunyard and Co. were first with Stone or Loddington, Peasgood's Nonesuch, Potts' Seedling, Warner's King, Lord Suffield, and Cox's Pomona. This firm was also first for six dishes of Pears, with grand specimens of Dr. Jules Guyot, Pitmaston Duchess, Grosse Calabasse, Marie Louise d'Uccle, Beurré Clairgeau, and Williams' Bon Chrêtien. Other classes were also well filled. It was freely acknowledged to be the finest display by far ever seen in the midlands, and will give a considerable impetus to

hardy fruit culture in the district.

The next feature of the Exhibition were Dahlias, which made a fine display. Four collections in competition were staged, each 15 by 4 feet, and Messrs. Perkins & Sons, Coventry, were first; Messrs. Harkness & Sons, Bedale, second; Mr. G. Maylett, Worcester, third; and Mr. Wm. Shaw, Kidderminster, fourth. These exhibits made up a most attractive bank of Dahlia blooms of all kinds, which were greatly admired. In the class for thirty-six blooms of Dahlias Messrs. Heath and Son, Cheltenham, were first with Mrs. W. Slack, Prince of Denmark, Constancy, Harry Keith, Miss Cannell, Mrs. Saunders, George Rawlings, Maud Fellowes, W. Jackson, Vice-President, R. Dean, Mrs. Wyndham, Rev. J. B. Camm, Majestic, Wm. Keith, Mrs. George Rawlings, Crimson King, Mrs. D. Saunders, T. J. Saltmarsh, Henry Walton, R. T. Rawlings, Eclipse, Harrison Weir, J. T. West, William Rawlings, Mrs. Langtry, Colonist, Mr. Harris, Mrs. Gladstone, Miss L. Large, Flag of Truce, Willie Garratt, Mrs. J. Downie, Lustrous, and Henry Bond—fine, even, well finished blooms. Mr. John Walker, Thame, was second; Mr. George Maylett, Worcester, third; Messrs. Kimberley & Son, Coventry, fourth; and to Mr. W. Shaw, Kidderminster, an extra prize was awarded. For twenty-four blooms Mr. John Walker was first; Messrs. Heath & Son second; Messrs. Harkness & Sons, Bedale, third; Messrs. Kimberley fourth; and an extra to Mr. Shaw. Stove and greenhouse flowers in collections, some excellent Roses from Messrs. Harkness and Son, Townsend of Worcester, and Perkins of Coventry, and various other exhibits in competition were staged. Mr. John White, nurseryman, Worcester, staged a large non-competitive group of Cactus Dahlias, Begonias, Gladioli, and herbaceous and annual flowers and some fruit—a bright and effective display, to which a large silver medal was awarded.

There was also a fine display of vegetables, special prizes having been offered by Messrs. Sutton & Sons (seven exhibits), Mr. T. Wilkins, gardener to Lady Theodore Guest, taking the first prize with one of his customary superb collections, and for twelve massive Onions, in

twelve varieties, a handsome large silver medal was awarded.

BATH.—AUGUST 30TH, 31ST.

THIS popular autumn fixture was favoured with better weather than usual, and it is to be hoped the Committee had good reasons to congratulate themselves upon the attendance of visitors on both days. The arrangements at Bath are always worthy of high commendation, and left nothing to be desired on this occasion. Messrs. Pearson and Jeffery are

arrangements at Bath are always worthy of high commendation, and left nothing to be desired on this occasion. Messrs. Pearson and Jeffery are the Secretaries, and these gentlemen did their work well.

Fuchsias come first in the prize list, but better displays of these have been seen at Bath in former years. Mr. J. Lye, gardener to the Hon. Mrs. Hays, Market Lavington, the veteran grower and raiser of Fuchsias, was well first for nine grand specimens, averaging about 9 feet in height, and perfect pyramids. The varieties consisted of Novelty, Louisa, Balfour, Duchess of Fife, Elegance, Pink Perfection, Charming, Lye's Favourite, Abundance, and Mrs. Rundle, all raised by Mr. Lye. Mr. G. Tucker, gardener to Major Clarke, Trowbridge, was second, his collection comprising an extra good pyramid of Doel's Favourite. The third prize went to Mr. F. A. Lewis, gardener to W. March, Esq., Bath, who had neat well flowered plants. The first prize for six Fuchsias was well won by Mr. W. Marchant, gardener to Jerome Murch, Esq., Bath, who had highly creditable specimens of Charming, Bountiful, Lye's Favourite, Finale, Arabella, and Doel's Favourite. Mr. J. H. Wilcox was second. For four Fuchsias Mr. G. Snell, gardener to Mrs. Counsell, Bath, was a good first; the second prize going to Mr. H. Marchant, gardener to Mrs. Doherty, Bath; and the third to Mr. W. A. Burford. The best single plant of any light variety was shown by Mr. G. Tucker, who had Arabella in good condition. Mr. J. Lye was second in this class, and first for a dark variety, showing in the latter instance a grand pyramid of Charming.

Fairly good prizes were offered for stove and greenhouse plants, and with these Mr. J. Cypher, Cheltenham, was most successful. His

Fairly good prizes were offered for stove and greenhouse plants, and with these Mr. J. Cypher, Cheltenham, was most successful. His first prize collection of flowering and ornamental foliaged plants comprised a fine Bougainvillea, a good Ixora Williamsi, noble Kentias and other Palms, and richly coloured Crotons. Mr. J. F. Mould, Pewsey, was the other prizewinner in this class. Mr. Cypher exhibited in the class for fine-foliaged plants and won. Mr. J. Deacon, gardener to Herbert Harris, Esq., Chippenham, also staged good fine-foliaged plants, and was second, Messrs. E. Cole & Son, Bath, being a good third. Mr. G.

Tucker had the good fortune to be bracketed equal first with Mr. Cypher for six flowering plants, but this decision was not generally approved of. Mr. Cypher had a very fine specimen of Bougainvillea glabra, Clcrodendron Balfourianum and Statice profusa being also fresh and good. Mr. Tucker's best were Ixora Morsei and Stephanotis floribunda. Messrs. Cypher and J. F. Mould were respectively first and second in both classes for Ericas, the plants shown being fresher than might have been expected so late in a forward season.

Exotic Ferns are always remarkably well shown at Bath. The first prize for twelve varieties was won by Mr. G. Tucker, who had Gymnogramma sulphurata, Gymnogramma argyrophylla, Cheilanthes hirta, Dicksonia antarctica, Asplenium nidus avis, Lomaria gigantea, and Adiantums Farleyense, gracillimum, and concinnum. Mr. J. Deacon was a good second, and Messrs. E. Cole & Son third. The best six Ferns were shown by Mr. W. Marchant, who had moderately large and very fresh specimens of Polypodium effusum, Pteris tremula Smithiana, and Adiantums Farleyense, gracillimum, cuneatum, and decussatum. Mr. T. Truckle was second and Mr. H. Marchant third. Mr. Truckle was first in the class for one Fern with a grand plant of Davallia Mooreana, Mr. G. Tucker being second with a good Gymnogramma argyrophylla. Zonal and other Pelargoniums were very well shown, as also were Tuberous Begonias, Cockscombs, Liliums and Petunias. Mr. Cypher was the only exhibitor of six Orchids, and received a first prize for Calanthe veratrifolia, Cattleya aurea, Vanda cærulea, Cypripedium insigne, Oncidium incurvum, and Dendrobium Phalænopsis Schræderiana.

There has been a very marked improvement in the style of groups of plants arranged for effect on a space not less than 100 square feet, though Mr. J. Cypher was easily first. No attempt was made to form a formal background, or such as some judges consider absolutely necessary; but instead of this there were three fairly large groups with elegant central Palms and a series of smaller groups or mounds in front, all being lightly connected with small Ferns, Mosses, and similar plants. The groundwork of the mounds consisted largely of Maidenhair Fern, springing out from which were Orchids, Francoas, elegant Crotons, and other plants. Altogether this was a very charming arrangement. Messrs. Cooling & Son were a good second, a series of groups in front of an undulated background being the style adopted in this case. Rather too many plants were used, but on the whole the effect was very pleasing. Mr. J. Deacon was placed third for a good lot of plants lightly arranged.

Cut flowers occupied a good portion of a large tent and made a very beautiful show. Gladioli were finely shown by Mr. A. A. Walters, Bath, who was first, Mr. T. S. Tottle, Taunton, being second, and Messrs. G. Cooling & Son third. With twenty-four Dahlias, Mr. G. Humphries, Chippenham, was well ahead, the second prize going to Mr. J. Newman, jun., Bath, and the third to Mr. S. Cooper. For twelve Dahlias, Mr. F. Lindsay, Frome, was easily first, and Mr. T. Haskins second. Mr. Humphries was first for Fancies, Mr. T. Haskins second, and Mr. W. Smith, Kingswood, third. Single Dahlias were very showy, and with these the prizewinners were Messrs. Humphries, T. Truckle, and A. A. Walters in the order named. Remarkably good were the Roses, though the judges had no difficulty in awarding the first prize for twenty-four varieties to Dr. Budd, Bath. This capital exhibit consisted of Mrs. J. Laing, Alfred Colomb, Paul Neyron, Prince Arthur, La France, Louis Van Houtte, François Michelon, Mrs. Baker, Harriet Schultheis, Camille Bornardin, Marchinness of Dufferin, Madame Victor Verdier, Ouegn of Bernardin, Marchioness of Dufferin, Madame Victor Verdier, Queen of Queens, Star of Waltham, Marie Van Houtte, Gustave Piganeau, Catherine Mermet, Duchesse de Morny, Edith Gifford, Marie Margot, Maréchal Niel, Duchess of Bedford, Comtesse de Nadaillac, and E. Y. Teas. Mr. T. Hobbs, Bristol, was a good second, A. Hill Gray, Esq., Bath, was third. Another excellent stand of blooms was staged by Dr. Budd in the class for twelve; Messrs. G. Cooling & Son were a good second. With twelve Teas, A. Hill Gray, Esq., was first, having splendid blooms. Dr. Budd was second, and Mr. T. Hobbs third. Zonal Pelargoniums made a fine display, and with twenty-four bunches of these Mr. G. Humphries was first. Messrs. Cooling & Sons were second, and Mr. E. Hall third. Asters were numerous and good, and with these the principal prizewinners were Messrs. W. J. Jones, H. Hooper, A. A. Walters, and S. Every. Mr. F. Hooper, Bath, was first for Hollyhocks, and Mr. W. Smith second. Herbaceous flowers in bunches were grandly shown. With these Mr. M. Pritchard, Christchurch, was first, Mr. A. A. Walters second, and Messrs. Cooling & Sonsthird. The first prize for twenty-four bunches of annuals was well won by Mr. A. H. Newman, Bath, Mr. F. Hooper being second, and Mr. G. Garraway, Bath, third. Mr. Kitley, gardener to E. Hall, Esq., Yeovil, was first for twenty-four bunches stove and greenhouse flowers, Mr. H. Marchant being second, and Messrs. E. Cole & Son third. Mr. F. Case took a first prize for a hand bouquet, Mr. G. Hallett being second. Very well arranged was the first prize vase shown by Mr. J. Cypher, R. B. Cater, Esq., being a very creditable second.

Fruit was shown in splendid condition. Three remarkably good collections of twelve dishes were staged, only a very few points separating them. Mr. W. Nash, gardener to the Duke of Beaufort, Badminton, was rightly placed first, having extra fine Alicante and fairly good Muscat of Alexandria Grapes, pretty Golden Gem and Hero of Lockinge Melons, good Dymond and Violette Hâtive Peaches, Humboldt and Victoria Nectarines, large Williams' Bon Chiêtien Pears, Brown Turkey Figs, and Worcester Pearmain Apples. The second prize went to Mr. C. Warden, gardener to Sir F. R. Bathurst, Salisbury, whose best dishes were Alicante Grapes, Lord Palmerston and Sea Eagle Peaches, and Flemish Beauty Pears. Mr. W. Strugnell, gardener to W. H. Long, Esq.,

M.P., Rood Ashton, followed very closely. Five competed with eight bunches of Grapes in four varieties, and it was no easy matter to decide which were best out of the three leading collections. Mr. W. Taylor, gardener to Alderman Chaffyn, Bath, was placed first, his Gros Maroc and Alnwick Seedling being very fine, but the Black Hamburghs were not so good in colour, and Muscat of Alexandria not fully ripe. Mr. C. Warden was lucky in being placed second, for good as his Grapes were the most even and really the smartest exhibit was staged by Mr. W. Nash, who came third. The Alicantes staged by both Mr. Warden and Mr. Nash were very good in every way. Mr. T. Jones, Bath, was well first for three bunches of Black Hamburgh, Mr. Nash being second, and Mr. J. Atwell, gardener to J. B. Brain, Esq., Clifton, third. other class for black Grapes, Mr. Marsh, gardener to Miss Marriott, Bath, had grand bunches of Alicante, Mr. Nash being a good second with the same variety, and Mr. J. B. Payne, gardener to the Lord Bishop of Bath and Wells, who also showed really good Alicante, third. the Muscat of Alexandria, Mr. W. Iggulden, gardener to the Earl of Cork, Frome, had the honour of beating the redoubtable Mr. W. Taylor, Mr. T. Jones being third. Mr. Taylor's bunches and berries were very fine, but Mr. Iggulden's fairly large bunches were much the ripest. In the any other class for white Grapes, Mr. Marshall, gardener to J. Dale, Esq., Clifton, was first with grand Buckland Sweetwater, and Mr. J. Atwell second with the same variety, the third prize going to Mr. Warden for pretty bunches of Mrs. Pearson. In the local class for Grapes many good bunches were shown, Mr. Marsh being first with Alicante; and Mr. J. Tickell, gardener to Mrs. Stoddart, second with good Muscat of Alexandria.

Melone were not particularly well shown, and with these the principal prizetakers were Mr. R. Hill, Chippenham; Mr. S. Hodges, gardener to J. Fortt, Esq., Bath; and Mr. C. Gliddon, gardener to Mr. Waller. Peaches were both numerous and good, Messrs. T. Jones, H. Hopkins (gardener to H. Prodgers, Esq.), and J. Ricketts taking the principal prizes. Few Nectarines were shown, Mr. Strugnell taking the first prize, this exhibitor also being suecessful in three different classes for Plums. Filberts and Cobnuts were remarkably good, and so also were the Apples and Pears. In these classes the judges acted very inconsistently, sometimes going for quality and sometimes for great size. A grand dish of Peasgood's Nonesuch, staged by Mr. J. B. Payne, caused quite a sensation. The heaviest fruit weighed 22 ozs. and the rest were nearly as heavy, all being of good form and beautifully coloured. In addition to taking a first prize a silver medal was also awarded this exhibit. Special prizes were offered for Melons by Messrs. Sutton & Sons, and good fruits were staged. The principal prizewinners were Messrs. Adlam, Allen, Pymm, staged. The pri and C. Gliddon.

Vegetables were never before so extensively shown at the Bath autumn show, several seedsmen offering prizes for collections and single dishes. Mr. G. H. Copp, gardener to W. E. E. Erlc Drax, Esq., Sherborne; Mr. T. Wilkins, gardener to Lady Theodore Guest; Mr. F. Williams, Mr. G. Garraway, and Mr. J. Hall divided honours very evenly, all showing remarkably well.

Non-competitive exhibits included an excellent display of hardy trees and shrubs, Gladioli, herbaceous flowers, Dahlias, Liliums, and Alpines staged by Messrs. Robert Veitch & Son, Exeter; a fine exhibit of single and double Tuberous Begonias by Mr. B. R. Davis, Yeovil; two large stands of garden Roses, and some fine Apples by Messrs. G. Cooling

and Sons.

SANDY.—AUGUST 31ST.

In the park of Sandy Place, by kind permission of Mrs. Foster, the Sandy and District Floral and Horticultural Society held its twenty-fifth annual Exhibition on the above date. For many years past this Show has been held on the last Friday in August, but this season the day was changed to the last Thursday, with the consequence of losing several of its most valuable exhibitors, more especially in the classes for stove and greenhouse plants. Notwithstanding this, however, the Show was an excellent one, some splendid produce being staged. About two o'clock in the afternoon—the time at which the visitors from some distance away usually arrived—the rain commenced to descend in torrents, and continued to do so for some considerable time, completely spoiling the grass for walking, as it was thoroughly soddened by the downpour. This, on the first occasion of the change of day, was most unfortunate, as instead of getting an increased number of visitors, as the Committee hoped and expected, there was doubtless a large falling off in the The arrangements of the Show were complete and good, attendance. much credit being due to E. T. Leeds-Smith, Esq., the Hon. Secretary Mr. William Green, Secretary, and the Committee of Management for the zeal and energy they had displayed in bringing together such an excellent and thoroughly representative exhibition. Let us hope that the Show was as great a success from a financial point of view as it most undoubtedly was from the horticultural standpoint. We append a list of prizewinners in the principal classes, the awards being made by the following gentlemen:—Mr. J. Myers, gardener to Earl of Sandwich, Hinchingbrook House; Mr. Kipling, gardener to Lord Lytton, Knebworth. Cut flowers, Mr. W. Finch, gardener to Mr. Marriott, Coventry; Mr. R. Cut howers, Mr. W. Finch, gardener to Mr. Marriott, Coventry; Mr. R. Carter, gardener to Capt. Duncombe, Waresley Park. Fruit, Mr. G. Norman, gardener to the Marquis of Salisbury, Hatfield House; Mr. Maycock, gardener, Luton Hoo. Vegetables, Mr. Landers, gardener to Mr. S. Whitbread, Southill Park; Mr. W. Ratchelous, the Nurseries, St. Neot's. Cottagers' tent, Mr. G. R. Allis, gardener to Major Shuttleworth, Old Warden; Mr. W. J. Empson, gardener to Mr. A. H. Wingfield, Ampthill House.

In the class for ten distinct stove and greenhouse plants in flower

there were two competitors, Mr. Finch, gardener to J. Marriott, Esq., Coventry, who was placed first with fine specimens, and Mr. George Redman, Eynesbury, to whom the judges awarded the third prize. The winner's exhibit was composed of Clerodendron Balfourianum, Statice imbricata, Ixora Duffi, I. Williamsi, I. javanicus floribundus, Dipladenia amabilis, Erica Marnockiana, E. Aitoniana Turnbulli, Allamanda grandiflora, and Rodeletia speciosa major, all of which were grand examples of good culture and thorough training. Mr. Dale, gardener to Mrs. Foster, Sandy Place, was accorded the first position or twelve Zonal Pelargoniums, showing clean, well flowered plants of the following varieties:—Gambetta, Mrs. Robertson, Hermia, Queen of the Belgians, Laura Strachan, Thetis, Henry Jacoby, Madame Thibaut, Ianthe, Lucy Bosworth, Rev. F. Atkinson, and Lord Chesterfield. The second and third prizes were awarded to Mr. Empson, gardener to Mr. A. H. Wingfield, Ampthill, and Mr. Redman in the order of their names. Though only three exhibits were staged in this class the competition was most keen, the plants in each case being highly creditable. Empson was awarded the first prize for a group of plants, which included Palms, Crotons, Achimenes, Liliums, Ferns, and Tricolor Pelargoniums. Mr. Claydon, gardener to Mrs. Astell, Woodbury Hall, Sandy, was In the class for six foliage a good second, and Mr. Redman third. plants, distinct, Messrs. Empson, Claydon, and Redman were again awarded the prizes in the order in which they are named.

The second prize only was accorded in the class for six stove and greenhouse plants in flower, and it was given to Mr. Claydon, who staged Stephanotis floribunda, Anthurium Andreanum, cathartica, Dipladenia amabilis, and Plumbago capensis alba. In the class for six Coleuses in distinct varieties Mr. Redman was first and Mr. Empson second. The winner's plants were small, but of excellent shape and fine colour. Mr. Claydon was a worthy first for six stove and greenhouse Ferns, his plants being magnificent examples, which reflected high credit on the grower. The exhibit comprised Adiantum grandiceps, A. farleyense, A. formosum, A. gracillimum, A. cuneatum, and Dicksonia antarctica. The second prize was taken by Mr. Empson with fine plants, and the third by Mr. Redman. E. T. Leeds-Smith, Esq., Sandy, was placed first for six hardy Ferns, the third prize being taken by Mr. Redman. Mr. Claydon gained the premier award for six pots of Achimenes, staging healthy and profusely flowered examples. The third prize was won by Mr. Redman. For four Cockscombs Mr. Claydon was again first with beautiful examples, Mr. Redman being second, and Mr. A. Burgess, Wimpole, third. In the Redman being second, and Mr. A. Burgess, Wimpole, third. In the class for six Begonias in flower, distinct, Mr. Claydon was a good first, and Mr. Addington, St. Neot's, second. Mr. Finch was first for a specimen stove or greenhouse plant in flower with Erica Marnockiana Mr. Finch was first for a in grand condition. Mr. Finch was also first for a specimen foliage plant, staging Dracæna indivisa lobata in very fine form.

The cut flower classes were not as a rule keenly contested, though some very handsome blooms were shown, particularly amongst the Gladioli from Messrs. Burrell & Co., and the Roses from Mr. George Moules, Hitchin. In the class for twenty-four bunches of herbaceous plants, Messrs. Laxton Bros., Bedford, were an excellent first. Amongst the flowers in this stand were Anemone japonica, Helianthus multiflorus plenus, Lychnis chalcedonica plena, and Chrysanthemum maximum. Mr. Hunt, Sandy, was awarded the second prize for a highly creditable exhibit. For twelve bunches of Pompon Dahlias, six blooms in each bunch, Messrs. J. Burrell & Co., Howe House Nurseries, Cambridge, were placed first with a fine stand, which was composed of Cupid, White Aster, Mabel, Favourite, Whisper, Isabel, Fairy Tales, Admiration, Phoebe, Red Indian, Darkness, and E. F. Junker. Mr. R. Burgin, Eynesbury, was placed second with a creditable exhibit. Messrs. J. Burrell & Co. were again awarded the first prize in the class for twelve bunches of Cactus Dahlias, six blooms in each bunch. The following were the varieties staged: Experite Marchiness of Parts Palest. were the varieties staged:—Kynerith, Marchioness of Bute, Robert Maher, Baron Schröder, Juarezi, Baldwin, Amphion, Delicata, H. Freeman, Duke of Clarence, Bertha Mawley, and Black Prince. In the class for twenty-four spikes of Gladioli, in not less than eighteen distinct varieties, Messrs. J. Burrell & Co. were placed first, their stand including some magnificent spikes of beautifully coloured blooms. Amongst the best may be mentioned Le Vesuve, Rosalind, Baroness Burdett Coutts, Delicata, Madeline, Glow, Hilda, Formosa, and Letitia. Mr. S. Wilkinson, was placed third. Mr. George Moules, Hitchin, easily carried off the highest award for six Roses in distinct varieties, staging some beautiful blooms.

Fruit was finely staged, though it was not very extensive; but this may perhaps be accounted for by the fact of the great Show at the Agricultural Hall being open at the same time, and thus drawing many of the exhibitors southwards as far as London. Mr. G. R. Allis, gardener to Major Shuttleworth, Old Warden Park, Biggleswade, was awarded the first prize and a silver medal for a collection of fruit of eight distinct Dishes of Apples, Pears, Plums, Peaches, Nectarines, and Grapes Black Alicante and Foster's Seedling comprised the exhibit, which was a meritorious one, the value of which would have been much enhanced had Mr. Allis troubled to give the specific names in each case. James, Stevenage, was a good second; Mr. Empson a close third, and Mr. Burgess fourth. In the class for six distinct kinds of fruits Mr. G. Cranfield, Cambridge, was deservedly accorded the first place, showing black and white Grapes, Melon, Peaches, Apples, and Figs. Mr. C. Forbes was a fairly good second, and Mr. R. Carter third. Mr. Allis was first in the class for any black Grape other than Hamburgh with two bunches of Black Alicante, Mr. Empson being second with Madresfield Court, and Mr. Moore third. In the class for two bunches of Black

Hamburgh Grapes Mr. Moore, St. Neots, was first with splendid examples; Mr. G. R. Allis second with good bunches, and Mr. Cranfield third. Mr. Empson was first for two bunches of Muscat of Alexandria Grapes, staging a highly creditable pair; Messrs. Forbes and Cranfield being second and third in the order of their names. Mr. James was awarded the first prize for a dish of Figs grown out of doors with fine fruits of Black Ischia. Mr. James was again first in the class for a dish of dessert Plums, staging highly creditable fruits of Lawrence's Gage, the second, third, and fourth prizes going to Messrs. Burgess, Claydon, and Maudlin. The competition was remarkably keen in this class, fifteen dishes of Plums being staged. Mr. Claydon, with beautiful fruits of Pond's Seedling, took the premier award in the class for a dish of culinary Plums; Mr. Wilkinson being second, Mr. Allis third, and Mr. Wade fourth. The exhibits in this class numbered ten, so that competition again ran very keen. The class, however, which brought the highest number of exhibits was for a dish of eight dessert Pears, seventeen competitors being represented. Mr. James was awarded the first prize, Mr. Empson being second, and Mr. Hobbs, St. Ives, third. Mr. Empson was first in the class for five culinary Pears, Mr. James second, Dr. Swain, Three Counties Asylum, third, and Mr. Wade fourth.

Vegetables, as may have been expected, were not largely shown, but those staged were most of a very high order of merit. This was particularly the case with the Onions, Carrots, and Turnips. Celery was exceptionally good, and some of the Red Cabbages staged were enormous. In the class for a basket of vegetables in twelve kinds, Mr. Empson was first with a clean well-grown collection, which included Potatoes, Onions, Turnips, Tomatoes, Celery, Globe Artichokes, Cauliflowers, Carrots, Marrows, and Cucumbers. Mr. Burgess was a very good second, Mr. G. Wood being third, and Mr. F. Faints, Hertford, fourth. Mr. Carter was accorded the first prize for a basket of six kinds of vegetables. This exhibit was composed of Potatoes, Onions, Turnips, Tomatoes, Peas, and Cauliflowers. The second prize was won by Mr. Andrews with a good basket. For a collection of Potatoes, to include three round and three kidney varieties, named, six tubers of each, Mr. T. Clark, Huntingdon, was first with The Queen, Suttons' Satisfaction, Uncle John, Lord Tennyson, Reading Russet, and Reading Ruby, all of which were in excellent condition. Mr. Hemmants, Peterborough, was deservedly accorded the second prize.

Messrs. Cutbush & Son, nurserymen, Highgate, arranged a very effective group of greenhouse and stove plants, in which Crotons Queen Victoria, Disraeli, Majesticus, Mrs. Dorman, Dracæna Doucetti, Abutilon Souvenir de Bonne, and Palms were very striking and effective. Messrs. Laxton Brothers, Bedford, staged a collection of blue Sweet Peas and a magnificent cross of white flowers. Mr. Willcock, nurseryman, Bedford Road, Sandy, exhibited a group of foliage plants, in the arrangement of which much taste was displayed; the clean healthy Palms were a particularly noticeable feature in this group. The three last-named exhibits were not for

competition.

BRIGHTON.—SEPTEMBER 5TH AND 6TH.

THE autumn Exhibition, held under the auspices of the Brighton and Sussex "New" Horticultural Society, took place on Tuesday and Wednesday last, when an exceptional display of produce was staged. The Show, which was held in the Corn Exchange and the Dome, was of unusual dimensions; so numerous in fact were the exhibits that it was found necessary to erect three tents to provide adequate space in which to place them. As has been said, the display was in every way a grand one, and when it is mentioned that six exhibits were arranged in the class for a group to be arranged for effect in a space not exceeding 150 square feet, and twenty-nine dishes in the class for dessert Pears, some idea will be conveyed of the magnitude of the Show. The Judges had a very hard task in adjudicating on the stands, but their awards appear to have given every satisfaction. Great credit is due to Mr. Mark Longhurst, the Secretary, Mr. Lewis, and other members of the Committee for the industry they must have displayed in the arrangements of the Show, which were in every way complete.

In the class for six stove and greenhouse plants in bloom the first prize went to Mr. T. Portnell, gardener to Sir A. Lamb, Bart., Beauport, Battle, who staged good specimens of Bougainvillea glabra, Allamanda magnifica, Lapageria rosea, Erica Irbyana, Dipladenia Brearleyana, and Erica Aitoniana Turnbulli. The second prize was awarded to Mr. A. Offer, gardener to J. Warren, Esq., Handcross Park, Crawley; Mr. E. Meachen, gardener to Mrs. Armstrong, Woodslee, Withdeane, being a close third. The competition in the class for six stove and greenhouse foliage plants was keen, Mr. Offer was accorded the premier position; the second and third prizes were awarded to Mr. E. Meachen and Mr. W. Peel, gardener to Miss Todd, Sidford Lodge, Shirley, Southampton, in the order named. For six stove and greenhouse Ferns Mr. Offer was deservedly accorded the first prize with splendid examples, the second prize going to Messrs. W. Miles & Co., nurserymen, Hove; third, Mr. W. Peel. For a specimen foliage plant Mr. Offer was first with fine plant of Croton Warreni, Mr. W. Peel being second, and Mr. Portnell third. Mr. Offer was again first for a specimen flowering plant, showing Lapageria rosea in grand condition, Mr. L. Budworth, gardener to C. Hill, Esq., Rockhurst, West Hoathley, second with a good Dipladenia hybrida; third going to Mr. W. Peel.

In the class for six Tuberous-rooted Begons the competition was

very keen, Mr. Head, The Drive Nursery, West Brighton, being a good first with finely flowcred plants; the second prize being won by Mr. Jas. Dawson, Silverhill, St. Leonards, and the third by Mr. E. Meachen. Mr. E. Mcachen was first for six Fuchsias, showing Grand Duchess Maria,

Mrs. Rundle, and Mrs. Burroughs; Mr. J. Hill, gardener to M. Wallis, Esq., Withdean, being a good second. Mr. Murrell, gardener to Mrs. Esq., Withdean, being a good second. Mr. Murrell, gardener to Mrs. Macdonald, Manor House, Preston, was first for six Zonal Pelargoniums with excellently bioomed plants; Mr. Meachen was second, and Mr. H. Head third. Groups were well shown, six competitors staging exhibits in the leading class. Mr. Wills was awarded the first prize for a beautiful arrangement. Amongst the best of the plants were Palms, Francoa ramosa, Tuberoses, Celosias, Carnations, Crotons, Eucharises, with a groundwork of Ferns. Mr. W. Peel was a very close second. Tuberoses Liliums Crotons, Palms and Amerallies were noticeable in Tuberoses, Liliums, Crotons, Palms, and Amaryllises were noticeable in this exhibit. Mr. E. Meachen was a very close third. In the class tins exhibit. Mr. E. Meachen was a very close third. In the class for a group arranged in a space not exceeding 80 square feet, Mr. G. Sims, gardener to C. J. Inwood, Esq., Dyke Road, Brighton, was placed first for a beautiful group, Palms, Liliums, and Begonias being particularly prominent; Mr. Budworth was second with a somewhat heavy arrangement, and C. W. Catt, Esq., Middle Street, Brighton, being third. For a group of Ferns, Rev. Sir G. C. Sheffner, Lewes, was first, Messrs. W. Miles & Co. second, and Mr. G. Miles third.

Cut flowers were very largely shown, especially Dahlias, which were exceptionally fine. In the class for a box of stove and greenhouse flowers Mr. Portnell was first. This exhibit included Vallota major, Statice Gilberti, and Anthurium Scherzerianum amongst others. Mr. Horscroft, gardener to T. Potter, Esq., Hapstead House, Ardingly, was second, and Mr. H. Garnett, gardener to R. G. Fletcher, Esq., Preston Park, third. Mr. Archer, gardener to Miss Gibson, Hill House, Saffron Walden, was first in the class for a box of cut blooms in twenty-four distinct varieties. Amongst the most prominent in this stand were Allamanda Hendersoni, Eucharis amazonica, Dipladenia amabilis, Lapageria alba, and Ixora Williamsi. Messrs. J. Cheal & Son, Crawley, were successful in the classes for single, Pompon, Cactus, and double Dahlias. In the class for twenty-four single Dahlias they staged a grand collection, amongst which The Bride, Amos Perry, Miss Henshaw, Formosa, amongst which The Bride, Amos Perry, Miss Henshaw, Formosa, Cetewayo, and May Thorpe were conspicuous. Mr. E. Such, nurseryman, Maidenhead, was second. In the class for Pompon Dahlias Messrs. Cheal staged Sunshine, Admiration, Isabel, Favourite. and Arthur West in exceptionally good form. Mr. Humphries, nurseryman, Chippenham, was second, and Mr. E. Such third. Amongst the best of Messrs. Cheal's Cactus blooms must be mentioned Robert Cannell, Black Prince, Delicata, Duchess of York, Sir Roger, and Josephine. Mr. Humphries was second, and Mr. Such third. In the class for twenty-four Show and Fancy varieties Messrs. Cheal & Son showed, amongst others, Wm. Rawlings, J. T. West, Goldfinder, Mrs. Jefford, Mrs. Kendal, and Crimson King. Mr. Mitchell, gardener to Sir Jas. Colquhown, Bart., Hastings, was a good second, and Mr. Jas. Dawson third. The classes for herbaceous flowers were very keenly contested. Messrs. Garroway, Bath; Goldsmith, gardener to Sir E. Loder, Horsham; Manton, gardener to Mrs. Clifford Bonner, Bolney; and E. Such being amongst the most successful competitors. Roses were fairly well shown by Messrs. Garroway, T. Durrant; Young, Eastbourne; Geo. Piper, Uckfield, and Woollard, Lewes The table decorations were very beautiful, and highly creditable to the various exhibitors.

The display of fruit was a grand one, the entries being large in almost every class. The Grapes were fine, the bunches as a rule being of good size, symmetrical in shape, and of perfect finish. Peaches were also good, the colouration in some of the fruits being quite exceptional. Melons were shown in excellent condition, as also were Plums and Green Gages. In the four classes devoted to Apples the entries reached the good total of sixty-four, and the fruit being of superb quality the competition ran very high and close. But it was in the class for a dish of dessert Pears that the exhibits reached the highest total, there being twenty-nine dishes staged. Some fruits of Souvenir du Congrès, shown by Mr. Spottiswood, The Gardens, Queen's Park, Brighton, were deservedly awarded the premier position. They were in excellent condition and beautifully finished. The second prize was accorded to Mr. Goldsmith, and the third to Mr. J. Collins. In addition to these prizes some of the exhibits were of such merit that the judges strongly recommended that extra prizes should be given. The number of fruits to compose a dish in the above class was six, so that the exhibits took up a very large amount of tabling.

Vegetables were not staged in such great numbers as fruit, but the quality throughout left little to be desired. This was particularly the case in the classes for French and Runner Beans, these being shown in strong force and first rate quality. Beet was grand, clean shapely roots being staged. There were five collections staged in the class for nine distinct kinds of vegetables, some good produce being exhibited. The first prize went to Mr. Garroway, Bath, who staged Autumn Giant Cauliflowers, the Lyon Leeks, White Plume Celery, Webb's Giant Runner Beans, Oxonian Tomatoes, Abundance Potatoes, Duke of Albany Peas (perhaps the only weak point), and Pragnell's Exhibition Beet. Mr. A. Ward, Muntham, Horsham. was placed first for a collection of vegetables in six kinds. This exhibit consisted of Vicar of Laleham Potatocs, Perfection Tomatoes, Sutton's Al Onions, Snowball Turnips, Mammoth Cauliflowers, and Intermediate Carrots, which together formed a highly creditable exhibit. The special prize offered by Messrs. J. Cheal & Son for a collection of vegetables brought only one competitor, Mr. Sands, gardener to T. Bannister, Esq., Hayward's Heath, being successful. In the class for a collection of Potatoes in six distinct varieties Mr. Kemp, gardener to R. S. C. Dickens, Esq., Horsham, was placed first out of the nine competitors, the exhibit being an excellent one in every way. The following varieties were staged by the winner: Sutton's Best of All

Satisfaction, Beauty of Hebron, Early Puritan, Schoolmaster and Snow-

Miscellaneous exhibits, although not very numerous, were good. Messrs. J. Cheal & Sons arranged a large table with Apples, Pears, and Dahlias. Amongst the best of the Pears were Williams' Bon Chrêtien, King Edward, and Belle de Bruxelles; and of Apples Queen, Cox's Orange Pippin, Yorkshire Beauty, King of the Pippins, and Mère de Ménage. Messrs. E. D. Shuttleworth & Son, Peckham Rye, and Fleet, Hants, showed a charming table of plants, prominent amongst which were Crotons, Carnations, Liliums, and Ferns. Messrs. Balchin and Son, Hassocks Nurseries, had a stand devoted to bulbous roots, which produced an excellent effect; and Messrs. Tilley Bros., Brighton, one of bulbs and horticultural sundries.

ROYAL AQUARIUM.—SEPTEMBER 6TH, 7TH, AND 8TH.

An exhibition of early Chrysanthemums, Dahlias, and Gladioli was held at the Royal Aquarium, Westminster, on the above dates. The principal class for Chrysanthemums was for twenty-four bunches, not less than three flowers in each bunch. There were two competitors, and the first prize went to Mr. E. F. Such, Maidenhead, for a charming collection of fresh blooms. Mr. Davis was second. Mr. H. Shoesmith, gardener to W. Hodgson, Esq., Shirley Cottage, Croydon, was first with twelve blooms of Madame C. Desgranges, showing fairly developed flowers for the season. Mr. W. C. Pagram, gardener to A. F. Hobhouse, Esq., The Whin, Weybridge, was awarded the second prize. Mr. Shoesmith was given the third prize for a dozen blooms of Mrs. Burrell. For twelve blooms of any large flowering variety except Madame C. Desgranges, Mr. J. Agate, Havant, was first. The second prize went to Mr. A. McMillan, gardener to Jas. Curie, Esq., Trinity Cottage, Edinburgh.

Mr. D. B. Crane, Archway Road, Highgate, secured the premier prize for twelve Pompons, three flowers of each, Miss Debenham, St. Peter's, St. Albans, being second. Mr. W. C. Pagram was first with six bunches of Madame C. Desgrange, and Mr. Shoesmith second. The same exhibitors secured the prizes for six bunches of any yellow variety of Madame C. Desgrange. There were also only two competitors in the class for six blooms, distinct, these being Mr. McMillan and Mr. Agate. The prizes were awarded as their names are given. Mrs. Walter Mole, High Street, Hemel Hempsted, was first for a stand of Chrysanthemums for table decoration; Mr. W. Smith, Romford, second; and Mr. D. B. Crane third. A silver medal was also awarded the last-named exhibitor for twelve bunches of Chrysanthemums.

Dahlias formed the bulk of the exhibits. There were two competitors in the class for twenty-four bunches of single Dahlias, these being Messrs. J. Cheal & Sons, Crawley, and Mr. F. W. Seale, Sevenoaks. Mr. G. Humphries won the first prize for twelve bunches of single Dahlias, Mr. E. F. Such being second. Messrs. Keynes, Williams & Co., Salisbury, secured the first prize for twelve bunches of Cactus Dahlias, showing fine blooms. Messrs. J. Burrell & Co., Cambridge, followed closely with a stand of fresh flowers, the third prize going to Messrs. Cheal & Sons.

Pompon Dahlias were very good in all classes. For twenty-four bunches Messrs. J. Cheal & Sons were placed first for a splendid stand of flowers. The most conspicuous in this collection were Marion, Cecil, Whisper, Eva, Sunshine, Admiration, and Ariel. Mr. C. Turner, Royal Nurseries, Slough, was a close second with very fine flowers, the third prize going to Messrs. Keynes, Williams & Co. Messrs. J. Burrell & Co. had the best stand of twelve bunches, Mr. G. Humphries following. In the amateurs' and gardener's classes Mr. J. J. West, gardener to W. Keith, Esq., Brentwood, was first with six bunches of Pompon Dahlias, the second prize going to Mr. Richard Burgin, Eynesbury, St. Neots. The last-named exhibitor had the best six bunches of singles in this section, Mr. E. Mawley, Rosebank, Berkhamstead, following; the third prize going to W. Mist, Esq., Ightham, Sevenoaks. Mr. West was first with six bunches of Cactus Dahlias in this division, Mr. Mawley being second, and Mr. William Hopkins, New Passage, Bristol, third.

The Show and Fancy Dahlias were remarkably fine and even. For sixty blooms of not less than thirty varieties Mr. C. Turner was placed first with an excellent stand. Messrs. Keynes, Williams & Co. followed closely, showing splendid flowers, the third prize going to Mr. J. Walker, Thame. There were five competitors in this class. Messrs. Keynes, Williams & Co. were, however, first for thirty-six blooms, distinct, amongst which William Powell, Pelican, James Cocker, T. W. Girdlestone, Rebecca, and William Rawlings were conspicuous. There were two blooms of Arthur Ocock, and labelled thus, in this collection, but this matter appears to have been overlooked by the Judges. Mr. J. Walker, Thame, was second, the third prize going to Mr. C. Turner.

Walker, Thame, was second, the third prize going to Mr. C. Turner.

Messrs. Saltmarsh & Son, Chelmsford, secured the first prize for
twenty-four Dahlias, Messrs. Humphries and Rawlings following. Mr.
West was placed first with twenty-four blooms in the gardeners' and
amatcurs' division, Messrs. A. Ocock and Burgin following in order of
their names. Mr. Ocock was first with eighteen blooms, the second
prize going to Mr. West, and the third to Mr. W. Mist. Mr. Thomas
Vagg, gardener to J. Theobald, Esq., M.P., Bedfords, Havering, near
Romford, was first with twelve blooms, distinct; Messrs. J. Gurney
Fowler, South Woodford, and W. Hopkins being second and third.
Messrs. Gurney Fowler, T. Vagg, and W. Hopkins secured the prizes
for six blooms.

Messrs. J. Burrell & Co., Howe House Nurseries, Cambridge, were the only exhibitors of a collection of Gladioli, but for which the first prize was awarded. The spikes were, on the whole, very fine. Mr. C. J. Waite, gardener to Col. the Hon. W. P. Talbot, Glenhurst, Esher; and Mr. C. Osman, South Metropolitan District Schools, Sutton, Surrey,

secured the special prizes offered by Messrs. Sutton & Sons for a collec-

tion of vegetables.

Miscellaneous exhibits were not so numerous as we have seen them at the Aquarium. Messrs. J. Laing & Son had a large collection of hardy flowers, for which a silver medal was awarded. The same firm also sent a very fine collection of Apples and Pears, comprising about ten dishes (silver medal). Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, staged a splendid collection of Dahlias of various kinds, arranged in a most effective manner. A silver-gilt medal was awarded. Mr. W. Piercy, West Road, Forest Hill, S.E., sent some early flowering Chrysanthemums. Messrs. Kcynes, Williams & Co. staged Show and Fancy Dahlias, as also did Messrs. Saltmarsh & Son. Mr. J. B. Payne, gardener to the Lord Bishop of Bath and Wells, The Palace, Wells, Somerset, was awarded a silver medal for a dish of remarkably fine and well coloured Peasgood's Nonesuch Apples, the heaviest of which weighed 22 ozs. Mr. A. Rawlings, Romford, Essex, had a number of Dahlias, and a silver medal was awarded. Messrs. Perkins & Sons, S. Mortimer, T. S. Ware, and other growers sent some new Dahlias to be inspected by the Floral Committee; but when our reporter left no certificates had been awarded.



FRUIT FORCING.

Peaches and Nectarines .- Larliest Forced Trees .- These are assumed to consist of very early varieties which were started from December 1st to the new year. The trees have now shed their leaves, and, if infested with red spider or brown scale, they may be syringed with water at a temperature of 140°. It must not, however, be used injudiciously; if too hot it will injure the young wood and buds, and if lower in temperature it is innocuous as regards scale and red spider about to hybernate. The trees should be loosened from the trellis and tied in bundles for facilitating cleansing operations, then wash the woodwork with soap and a brush, also the ironwork, reaching every angle and crevice. Limewash the walls, and if required paint the wood and ironwork. Pruning will consist of thinning the shoots where crowded or too weak for carrying fine fruits, no shortening being necessary, except for shoots unduly long or for the production of growths for extension. The trees may be washed with a softsoap solution, 3 ozs. to a gallon of water, or dressed with an approved insecticide, being careful not to dislocate the buds. Tie the trees to the trellis loosely, leaving sufficient room for the swelling of the branches and shoots; remove the loose surface soil down to the roots, and supply a top-dressing of rather strong turfy loam with a fourth of well decayed manure admixed, and afterwards sprinkle a handful (about 4 ozs.) over a square yard of the following mixture: bonemeal three parts, and kainit one part, leaving it there. Avoid heavy surface dressings, they only exclude air and render mulchings of little value by burying the roots too deeply. If the lights have been removed they need not be replaced until the weather become colder and the borders have been thoroughly moistened by the autumnal rains.

Second Early-forced House.—The trees are shedding the leaves, but there must not be any attempt at their forcible removal. When the leaves have fallen treat the house and trees the same in every respect as

detailed in the preceding paragraph.

Succession Houses.—Any trees that have a tendency to over-luxuriance should, as soon as the wood gets sufficiently matured, have a trench taken out about one-third the distance from the stem the trees cover in extent of trellis and quite down to the drainage, so as to detach all roots, and this may be left open for a fortnight and then be filled in firmly; or when the leaves give indications of falling the soil may be removed down to the roots with a fork and picked from amongst them, laying in the roots in fresh compost, and making quite firm. Good loam, rather stiff, with about a sixth of old mortar rubbish, form a suitable compost. A watering being given the roots will soon work freely in the fresh material, and the fruits invariably set and stone well afterwards. The above plan is more especially necessary with young trees, the taking out of the trench being very effectual in assisting them to ripen the wood thoroughly. Lifting and root-pruning generally should be deferred until the leaves give indication of falling, for if practised too early there is danger of causing the sudden collapse of the foliage and the shrivelling of the wood.

Late Houses.—The bright weather has greatly assisted late Peaches and Nectarines, which are not only much earlier in ripening than usual, but something wonderful in size and beauty, and where proper supplies of water and nutriment have been provided during growth the fruits are singularly juicy and high flavoured. Gladstone is unquestionably one of the finest late Peaches, and though not high coloured has a rather firm flesh and travels well. Late Peaches will, no doubt, be scarce this year through their ripening being accelerated by the hot summer, and the wood is more advanced in ripening than in ordinary seasons. A free circulation of air and the necessary supplies of water are necessary, but a rather drier condition at the roots is desirable when the fruit is ripening. Keep the growths thin, stop any growing shoots to about 15 inches and all laterals closely to one joint as growth is made.

Pines.—Young Pine plants always present a luxuriant appearance at this season under proper treatment, this arising from the beneficial effects of natural causes so important in cultivation. Those influences being now on the wane, greater care will be necessary in the management to prevent the growth becoming soft, and measures should be taken to consolidate it by a drier atmosphere, and, if necessary, artificial heat. Syringing will only be needed occasionally, and it should be done early in the afternoon of bright days. Water must only be given when absolutely necessary, then afford a plentiful supply of weak liquid manure in a tepid state. The bottom heat should be kept steady at 85°, or between 80° and 90°. Particular attention must be paid to the ventilation, which is very important at this period of the year. Plants in a luxuriant condition should have air at 80°, above which ventilate liberally, especially on warm sunny days, and close the house for the day at 80°. The night temperature ought to be maintained at 65°, allowing 70° to 75° by day artificially.

Fruiting plants must not further be detained in structures indiscriminately, but should be brought together in a house suitable for finishing the fruit well. Plants that are intended for starting into fruit early in the year should be selected from those that were started last spring, and be arranged, not later than the end of this month, where they can rest for six weeks. Those on which the fruit is swelling must be encouraged with a liberal amount of heat and moisture, keeping the night temperature from 70° to 75°, and that in the daytime from 80° to 90°, closing the house at 85° with sun heat.

THE KITCHEN GARDEN.

Ridney Beans.—Frosts have already injured Runner Beans growing in rather low positions, and if this important crop comes to grief soon then the late Kidney Beans will be all the more appreciated. Water has been needed by the latter lately, and a light moulding up helps to keep the plants unright, and steady. In many cases it would now well keep the plants upright and steady. In many cases it would pay well to board round the breadth of plants and to cover with either spare pit lights or with mats during cold nights. More Beans should also be sown in 9-inch pots, these being filled with rich loamy soil. Place nine seeds in each pot, and put the latter either in a cold pit or in the open for a time, transferring to shelves in forcing houses before cold weather sets in. Sion House is still one of the best for pot culture, but Ne Plus Ultra and Canadian Wonder are also switable. Ultra and Canadian Wonder are also suitable.

Cabbage.—Plants obtained by sowing seed about the middle of July are plentiful and strong, and unless thinned out will soon spoil each other in the seed beds. They may not be much too early, and the first favourable opportunity should be taken to plant out a good breath. first favourable opportunity should be taken to plant out a good breath. The best sites for spring Cabbage are quarters newly cleared of springsown Onions. When the latter are harvested, remove the rubbish and weeds and draw drills 20 inches asunder for the stronger growing varieties of Cabbage, from 15 inches to 18 inches apart being ample for the less vigorous kinds. Water the seed beds and drills a short time prior to planting if necessary. The plants will then draw readily, and may be quickly planted with a dibber. Make the soil firm about the roots, and give a watering. If the ground is ready for the plants prick them out 4 inches asunder each way, and when they touch each other transplant with a trowel to their winter quarters. Club-root, or ambury, is very troublesome in some gardens, and if the plants when drawn are found to have a swelling on the root growths, cut it cleanly off, and then dip in a puddle of clayey soil, soot, lime and water, so as to well coat the root. the root.

Cauliflowers.—Plants from seed sown on a warm border about the middle of August are likely to attain too large a size to winter readily. Pricking them in beds where they can be eventually covered with frames of some kind will check them; but it will be a good plan to sow more seed on shallow beds surmounted by a frame, the lights not being put on much before cold frosty weather prevails. Seed may also be sown on a warm border, the strongest of the plants thus obtained being eventually placed singly in 3-inch pots and wintered in pits and frames. Early Snowball, Early Dwarf Erfurt, Early London and Veitch's Autumn Giant are useful varieties.

Endive.—This succeeds best on warm, light, and not too poor ground. Plants put out now should be located where they can be protected with boards and mats during frosty weather, and should we have a favourable autumn they may yet attain a good size. Leave some plants rather thickly, or from 4 inches to 6 inches asunder each way in

the seed beds, and according as they progress self blanching will take place.

Lettuce.—Strong plants of Black-seeded Brown Cos are very serviceable in the autumn. A few at a time should be tied up moderately tightly, and the hearts will then blanch. Where there are breadths of nearly full grown Lettuce plants of any variety, make some provision for protecting them when frosts prevail. Quite young plants are very much hardier than those nearly full grown. Now is a good time to sow seed of Black-seeded Brown Cos, Hick's Hardy Cos, Hammersmith Green, All the Year Round, and other well known hardy Lettuces on a border

where the plants can remain all the winter.

Parsley.—A scarcity of Parsley proves a source of much worry to a gardener, and every precaution should be taken to guard against failures. The commoner or least curled strains are the hardiest, but these have been largely superseded by more delicate though superior kinds. Strong plants can be rendered hardier and better by being cut over at once, and the crop of young leaves that follow will prove serviceable. Any plants that have not been raised long enough to develop great heads may well be left alone. Before frosts cripple the plants enough should be lifted and either replanted in a frame or pit in good soil, or else in deep boxes or pots filled with good loamy soil.

Select strong plants, pull off the strong outer leaves, and replant somewhat thickly. For a time longer they may be kept in the open, or if in pits or frames uncovered, as it is only during the most severe weather that protection is needed. Branches of fruit trees sometimes afford sufficient protection to save the Parsley underneath when all the rest has been killed. It is advisable, therefore, to form beds or a few circles under some of the moderately low trees by the side of garden walks.



APIARIAN NOTES.

NOTES FROM THE MOORS.

WE are now enjoying beautiful weather, and although most of the Heather is past, there is still much for the bees to add a little more weight to their already abundant store. Two months have elapsed since the bees were brought here, an enormous amount of Heather and Thyme being in bloom; but for the first month the weather was so stormy and of a wintry character that the hives declined in weight, the bees in a great measure getting no more honey than was sufficient to carry on breeding. From the time they were set down until September 4th scarcely a day passed without one or more swarms issuing, and queens are still piping yet. I have proven much, but learned little, although matters are widely different from what is generally taught. These, with other things connected with bees, including Punics, I shall refer to at an early date, which will be both instructive and interesting to be known. I am anyious to get home with the interesting to bee-keepers. I am anxious to get home with the bees, but the great heat in the hives, and honey being still carried in in considerable quantity, preclude the possibility of doing so for some time. The present is the longest Heather season on record.

Bee-keepers will be looking to their own interest if they during this month make sure that queens are all youthful and fertile. Remove all superfluous drone comb, substitute full sheets of foundation, and feed with sugar till the hive is filled with worker comb. Bees winter better on sugar than honey, so bee-keepers have the option of securing more honey and healthier hives.

Pollen—Bees Flying.

I have been much interested at seeing the bees break the rule of gathering pollen from one sort of flower or grass only. I have witnessed them frequently work alternately on different species of both flowers and Grasses.

Some years since I gave my observations and opinion upon this subject to the effect that bees were guided to their hive by possessing a knowledge of the points of the compass, and not that of any land or other mark. I have for some time past been giving the subject more thought and attention, and my opinion is that magnetic influence is the principal guide of the bee, both outside and inside the hive, and that the eyes are of most use to the insect in her flights in the field, and that their antennæ regulate every movement.

THE AGE OF THE BEE.

We have had this subject so often under consideration that it is almost useless to say a word more upon it to refute the erroneous impression that bees live about six weeks only, were it not to point out to bee-keepers that these strong colonies are the result of having two queens' progeny living at one time, not by art, but by a natural act of the bees changing their queens without swarming about midsummer. The bees are still further preserved by being kept much within doors through stress of weather, and being well found in stores the season throughout, being exactly in a similar condition to that which we have so long advised to be done by careful manipulations, and introducing young fertile queens at the proper time.—A LANARKSHIRE BEE-KEEPER.

TRADE CATALOGUES RECEIVED.

P. Barr & Son, King Street, Covent Garden, London. — Daffodils, Hyacinths, and other Bulbs.

F. Besuard, à Paris, 28, Rue Geoffroy L'Asnier. — Catalogue of Spraying Apparatus, and Garden Appliances.

R. & G. Cuthbert, Southgate, N.—Bulbous Flowering Roots.

L. Delaville, 2, Quai de la Megisserie, 2, Paris.—Bulbs, Plants, &c.

E. P. Dixon & Sons, The Yorkshire Seed Establishment, Hull.—

Bulb Catalogue. W. J. Godfrey, Exmouth, Devon.—Spring Flowers.
Harrison & Son, Leicester, Flowering Bulbs and Roots.
W. E. Martin, Hull.—Dutch, French, and Cape Bulbs.
Benjamin Soddy, 243, Walworth Road, S.E.—Winter and Spring

Flowering Bulbs.

E. Webb & Sons, Wordsley, Stourbridge.—Bulb Catalogue.



*All correspondence should be directed either to "THE EDITOR" or to "THE PUBLISHER." Letters addressed to Dr. Hogg or members of the staff often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Bee subjects, and should never send more than two or three questions at once. All articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post, and we do not undertake to return rejected communications.

Violas (C. B.).—We are glad to hear that Violas prove so satisfactory in your garden in a large manufacturing town. With deep rich soil and early planting they succeed almost anywhere where flowers can grow. Your letter shall be forwarded to Mr. William Dean.

Exhibiting Celery (Cymru). — You ask if in a collection of vegetables, no "roots" admissible, Celery would be disqualified. We see so many curiosities in schedules and judging that we cannot foresee what strange things may happen, but we know that Celery is not a root crop, and would consequently be ineligible for the class described.

Stocks for Fruit Trees (R. Smith).—The sentence you quote appears incomplete. We understand by it that maiden Apple trees may be had and grown on both the Paradise or Crab stocks, Cherries on the Mahaleb. Paradise stocks, as you probably know, have a tendency to subdue vigour in Apple trees, and the Mahaleb is supposed to have a similar effect on Cherries. The Crab is promotive of free growth in Apples.

Spraying Machine (J. C. C.).—The knapsack pump Eclair with a Vermorel spraying nozzle is an excellent apparatus for distributing the copper solution and Paris green mixture, and is sold by Messrs. Charles Clark & Co., Windsor Chambers, Great St. Helen's, London, E.C., who have advertised the Eclair in our columns. Spraying fruit trees for the prevention and destruction of fungal and insect pests is far less practised in this country than on the continent and other countries, and several crops suffer in consequence.

Transplanting Dicksonia antarctica (J. C. C.).—The plant may safely be moved, just as growth starts in the spring being a good time; but with care they may be successfully transplanted now. Plants in rockwork usually move with a compact mass of roots. With these placed in firm soil, kept duly moist, and the stem syringed, the plant will suffer little from the removal. We have found such plants improve after removal because of new roots having fresh compost to ramify in. We have also known plants cut off at any desired point above ground, and the stems well and firmly inscrted in good soil grow freely and satisfactorily.

Sweet Peas and Asters (A. E.).—It is only in the deepest and best soil coupled with early sowing that Sweet Peas have proved even moderately good this year in the South of England. Asters also need rich moist soil for full development, and, considering the season, the blooms you send are quite as good as could be expected from plants in "cloddy soil." Under more favourable conditions you may expect to have blooms quite up to the market average, but you should endeavour to have them above the average, in fact as good as it is possible to produce them. There is always a demand for the "best" of everything when relatively inferior produce is a drug in the market. Your soil must be brought into a good state of mechanical division, then when it is also enriched it will grow Sweet Peas and Asters well.

Chrysanthemum Leaves Infested with Mildew and Thrips (Amateur). — The leaves not only have been but are infested with mildew, the brownish spots being due to this cause where the fungus has been arrested in growth but not destroyed by the bisulphide of calcium solution. This has probably been too weak, or the leaves may have been damp when it was applied, otherwise it is a specific for the ordium stage of the fungus. It would be desirable to repeat the application for the destruction of the mildew. The only insects we can find on the leaves are the larvæ of thrips, and they are not red but yellow. The perfect insects are not present. They have, however, been on the leaves, for there are several pupa cases, from which they have emerged at no distant date. There is no trace of eggs, so that the present generation being destroyed the plants may remain clean. Dusting with tobacco powder is a good means of keeping Chrysanthemums free from insects and mildew, the tobacco being fatal to aphides and thrips, and the sulphur it contains to mildew and red spider. Anti-blight powder has also been found to keep the plants clean. It would be better known and more largely used if more generally advertised.

Roses and Liliums (F. J.).—The Rose leaves are infested with the black fungus. Burn all the leaves and prunings, and apply a fungicide early in the season. Roses in poor dry soil, or exhausted with age, are more liable to fungoid infestation than are healthy and well-grown plants or bushes. Liliums are usually repotted annually, after the stems have died down in the autumn, removing the old soil and dead fibres, but not the white fleshy roots, the pots being plunged over the rims in cocoa-nut fibre refuse. Many are plunged in cold frames, but more in the open on a thick bed of ashes, provision of some kind being afforded for throwing off heavy rains. We have seen fine Liliums, however, grown without repotting, but simply removing some of the old and adding fresh soil, following with rich top-dressings and liquid support in summer. Under this treatment the drainage must be in an efficient state. Why not try both methods, and thus gain information of the most practical kind? but we should repot the majority of the Liliums.

Apple Benoni (D. E.).—Though you have not seen any mention of this Apple in our columns previous to last week, it has been mentioned all the same and figured. Perhaps you are a comparatively new reader. We reproduce the illustration. The fruit was grown at Chiswick, and the following remarks accompanied the figure:—"The crop was one of the best, and the tree is one of the healthiest growers in the collection, being upright in habit, and hence well suited to borders in gardens. Mr. Barron regarded it as one of the best varieties for following the summer Apples such as Mr. Gladstone, Red Astrachan, and others, and preceding the regular autumn Apples. The quality of the Chiswick

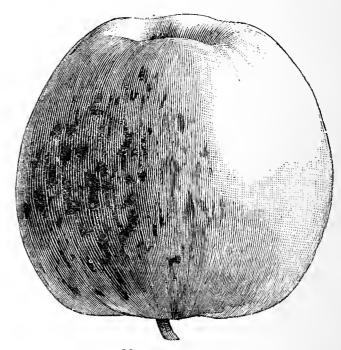


FIG. 33.—APPLE BENONI.

fruit was good, pleasant, and refreshing, but we have tasted fruits richer from Sawbridgeworth, while in Kent we have heard the variety is not regarded as superior. Soils and circumstances have their influence on fruits; but, generally speaking, Benoni may be regarded as a September Apple well worth growing." It is an American variety, and was introduced to this country by Mr. T. Francis Rivers.

Amateurs' Classes (Richard Powell).—According to this definition of an amateur—"A person who cultivates a garden for pleasure and not for gain"—neither of the men to whom you allude was eligible to compete in the amateur classes, as both of them worked for wages. There is another broad distinction in the schedules of some very large shows—namely, that all persons who are not nurserymen are regarded as amateurs, but this is rarely if ever the case in connection with local exhibitions. Why one of the men whose occupation you describe was admitted and the other excluded is a question beyond the power of ordinary intelligence to explain, and we can only refer you to the extraordinary intellects in your locality.

Timber Measurement (M.).—Procurc "Hoppus's Measurer," F. Warne & Co., Bedford Street, Covent Garden, London, it costs two or three shillings, and you would probably find "Nesbit's Practical Mensuration," 3s. 6d., "Key," 5s., useful; it is published by Longmans, 39, Paternoster Row, London, E.C. You ought by aid of the Hoppus to readily master the measurement of timber. In measuring for sale do it yourself; we have more than once detected buyers of timber making mistakes in the girth. The value of timber is very much a local matter, and you will do well first of all to thoroughly master its measurement and then attend a few timber sales to acquire some knowledge of its value. Coppice or underwood also vary according to locality. We have sold Ash and Chestnut in Kent for hop poles for £40 an acre, but the price has fallen of late years. We have also in Sussex sold Oak and Hazel copse wood for £3 and £4 an acre. So you see the range is a wide one. This is a matter requiring full knowledge of local requirements, of markets, and of the purposes for which different sorts of wood may be used. No book would give you such information.

Grape and Rhubarb Wine (J. M. L.).—A very good wine can be made from Grapes which do not attain their perfect maturity in the open air in this country. The fruit should be allowed to hang as long as it is likely to derive any benefit in the way of ripening, and when it is ready the bunches are to be gathered and laid carefully, so as not to bruise the berries. The berries are to be picked separately from the stalks, discarding all that are in any way decayed. Measure the fruit as it is put into the fermenting tub, and to every 15 gallons of fruit add 1 gallon of soft water. Stir and bruise the fruit, and after standing for twenty-four hours, strain and press the fruit through a hair cloth or coarse canvas bag, subjected to pressure. Now test the liquor by the succharometer and bring up the gravity to 120 by the addition of sugar, every pound of sugar raising the density 35 or 36. Let the whole be well stirred, and add 1 oz. of argol to every 3 gallons of must. Stir the must every day, morning and evening, and when the density falls to 80, and the fermentation becomes languid, the cask is to be bunged up, and the wine bottled off in the month of March following. Rhubarb wine is very palatable, but as it contains exalate of lime it is injurious to some constitutions, and should not be regularly used without consulting a medical man. To make 10 gallons of wine take 60 lbs. of the stalks of the leaves of Rhubarb unpeeled. Cut these in pieces and bruise them with a mallet, or pass them between rollers such as a wringing machine without cutting them. Put them in a fermenting tub, and pour 5 gallons of cold water over them, leaving them to macerate for twelve or sixteen hours; then press the whole, returning the juice which has been expressed to the fermenting tub. Add 30 lbs. of sugar, or as much as is necessary to raise the gravity to 110 if a sparkling wine is desirable, and to 120 if a still wine; also 4 ozs. of powdered argol, and enough water to make the quantity of liquor up to $10\frac{1}{2}$ gallons. Cover the tub with a blanket and place it in a temperature of 55° or 60°. Stir it occasionally for three days to encourage the fermentation, and then strain it through flannel into a cask, which must be kept full to the bung till fermentation ceases. As soon as the gravity of the wine is reduced to 40 the cask may be removed to the cellar and the bung fixed firmly in. In a month or six weeks the wine may be fined, and drawn off into a clean cask or returned to the same one after being properly The cask may now be finally stopped close and left till the time of bottling. If a sparkling wine is desired it must be bottled in March following with the corks safely wired; but if a still wine it should remain in the cask at least a twelvementh before being bottled. In the absence of a saccharometer you must be guided by your judgment in the procedure, but an instrument can be had for about 3s. 6d. from Messrs. Cetti, Opticians, Brook Street, Holborn, London.

Names of Fruits.—Notice.—Special attention is directed to the following decision, the object of which is to discourage the growth of inferior and promote the culture of superior varieties. In consequence of the large number of worthless Apples and Pears sent to this office to be named, it has been decided to name only specimens and varieties of approved merit, and to reject the inferior, which are not worth sending or growing. The names and addresses of senders of fruit to be named must in all cases be enclosed with the specimens, whether letters referring to the fruit are sent by post or not. The names are not necessarily required for publication, initials sufficing for that. Only six specimens can be named at once, and any beyond that number cannot be preserved. (J. Smith).—A, Brockworth Park. The others not ready for naming. You should attach the number more securely, or wrap each specimen in paper, with the number, not a letter, marked inside. (F. J. Gray).—1, Gloria Mundi; 2, King of the Pippins; 3, Northern Greening; 4, Winter Greening; 5, Sturmer Pippin; 6, Blenheim Pippin. (Richard C. Long).—1, Gloria Mundi; 3, Striped Beefing; 6, Greenup's Pippin. The others too imperfect for naming. (W. Strugnell).—1, Maréchal de Cour; 2, Althorp Crasanne? 3, Easter Beurré; 4, Beurré Sterckmanns; 5, Beurré Capiaumont; 6, Beurré A. Lucas. Graft the trees of all those of which you have sent a list; they are worthless. Pears cannot be named with certainty when they are quite green and hard. (A. H. L.).—1, Louise Bonne of Jersey; 2, Maréchal de Cour; 3, Gravenstein; 4, Duchesse d'Angoulème; 5, Margil; 6, New Northern Greening. Pinning numbers in the eyes of fruits is a very bad practice. (P. Morris).—1, Emperor Alexander; 2, quite decayed; 3, Yorkshire Greening. (F. Jellico).—Lord Suffield; very fine. (W. Spencer Payne).—69, Keswick Codlin; 70, Baldwin. (James Smart).—1, Court Pendu Plât; 4, Small's Admirable; 6 and 9, Tower of Glamis; 7, Blenheim Pippin; 14, Coe's Golden Drop. (J. S. B.).—1, Nouvelle Fulvie; 2, Allen's E

Names of Plants.—We only undertake to name species of plants, not varieties that have originated from seed and termed florists' flowers. Flowering specimens are necessary of flowering plants, and Fern fronds should bear spores. Specimens should arrive in a fresh state in firm boxes. Slightly damp moss, soft green grass or leaves form the best packing, dry wool the worst. Not more than six specimens can be named at once, and the numbers should be visible without untying the ligatures, it being often difficult to separate them when the paper is damp. (W. M. B.).—Cratægus coccineus. (W. G. S.).—Ranunculus parviflorus, a British plant. We have pleasure in naming plants for regular subscribers. (Cymru).—1, Asplenium flaccidum; 2, Thunbergia alata; 3, Lonicera brachypoda aurea reticulata; 4, Berberis vulgaris; 5, Begonia Evansiana; 6, Summer Savory (Satureia hortensis). (Somerset).—Probably a Solanum, but specimen had only one withered flower; 2, a Pentstemon, but flowers too withered to identify species.

COVENT GARDEN MARKET.—SEPTEMBER 6TH.

Market still heavily supplied; prices virtually unaltered. FRUIT.

	s.	d.		d.	1	0	1.	s.	d.
Apples, per bushel	1	0 t	to 6	0	Lemous, case 1	0 (Oto:	15	0
,, Tasmaniau,per case	0	0	0	0	Oranges, per 100	0 ()	0	0
" Nova Scotia, brl	. 0	0	0	0	Peaches, per doz	1 6	3	8	0
Cherries, half sieve	0	0	0	0	Plums, per half sieve	1 (3	2	6
Cobs	28	0	30	0	St. Michael Pines, each	2 ()	5	0
Gooseberries, half sicve			0	0	Strawberries, per lb	0 (0	0	0
Grapes per lb	0	6	1	6	, -				
			∇E	GET	ABLES.				
	s.	d.	s.	d.		s. d		s.	d.
Asparagus, per bundle	0	0 t	0	6	Mustard and Oress, punnet) 2	to	0	0
Boons Kidney nor 1h	Ω	2	Ω	4	Oniona bunch	า ?	:	A .	5

		•			12220				
	s.	d.	s.	d.		s.	d.	s.	d.
Asparagus, per bundle		0 to	0	e	Mustard and Oress, punnet	0	2 to	0 0	0
Beans, Kidney, per lb	0	3	0	4	Onions, bunch	0	3	0	5
	1	0	0	0	Parsley, dozen bunches		0	3	0
Carrots, bunch	0	4	0	6	Parsnips, dozen		0	0	-
Cauliflowers, dozen	2	0	3	0	Potatoes, per cwt	2	0	4	
Oelery, bundle	1	0	1	3	Salsafy, bundle	1	0	_	6
Ooleworts, dozen bunches	2	0	4	0	Scorzonera, buudle	1	6	0	0
Oucumbers, dozen	1	6	3	0	Seakale, per basket		0	0	0
Eudive, dozen	1	3	1	6	Shallots, per lb	0	3	0	0
Herbs, bunch	0	3	0	0	Spinach, bushel	8	0	0	0
Leeks, bunch	0	2	0	0	Tomatoes, per lb	0	3	0	4
Lettuce, dozen		9	1	0	Turnips, bunch		4	0	6
Mushrooms, punnet	0	9	1	0					
_									

AVERAGE WHOLESALE PRIOES.—OUT FLOWERS. Orchid Blooms in variety.

	s.	d.	s.	đ	T. Control of the Con	s.	đ.	s.	d.
Arum Lilies, 12 blooms					Marguerites, 12 bunches	2	0	to 4	0
Asters (French), per bunch			1	3	Mignonette, 12 bunches	2	0		0
" (English) doz. bches.	3	0	5	0	Myosotis, dozen bunches	1	6	3	0
Bouvardias, bunch		6	1	0	Orehids, per dozen blcoms	3	0	12	6
Oarnations, 12 blooms	0	6	2	0	Pelargoniums, 12 bunches	6	0	9	0
Carnations, dozen bunches	4	0	8	0	Pelargoniums, scarlet, doz.				
Chrysanthemums, dozen					bunches	3	0	6	0
bunches	4	0	6	0	Primula (double), dozen				
Chrysanthemums, doz. bls.	1	0	2	0	sprays	0	6		0
Cornflower, dozen buuches.	1	0	2	0	Pyrethrum, dozen bunches	2	0	_	0
Eucharis, dozen		6	4	0	Roses (iudoor), dozen		6		6
Gardenias, per dozen		0	4	0	" Red, doz. bunches	4			0
Lilium lancifolium, dozen					" Tea, white, dozen	1	0	_	0
blooms		0	3	0	" Yellow, dozen	2	0	_	0
Maidenhair Fern, dozen					Tuberoses, 12 blooms	0	4	0	6
bunches	4	0	6	0	L				

	-	-	-				
	\mathbf{P}	LAN	TS	IN POTS.			
	d.		d.	S.	đ.	s.	d.
Arbor Vitæ (golden) dozen 6	0 t	0 12	0	Ficus elastica, cach 1	0	to 7	6
Aspidistra, per dozen 18		3 6		Foliage plants, var., each 2	0	10	0
Aspidistra, specimen plant 5	0	10	6	Fuchsia, per dozen 4	0	-	0
Asters, dozen pots 3	0	6	0	Hydrangea, per dozen 12	0	24	
Balsams, per dozen 3	Û	6	0	Ivy Gerauiums 4	0	6	0
Campanula, per dozen 9	0	18	-6	Lilium lancifolium per doz. 12	0	18	-
Chrysanthemums, per doz. 4	0	9	0	Lilium Harrissi, per dozen 12	0	24	
,, large plants, each 1	0	2	0	Lycopodiums, per dozen 3	0		0
Dracæna terminalis, per				Marguerite Daisy, dozen 6	0	12	
dozen 18	0	42	0	Mignonette, per doz 4	0	-	0
Dracæna viridis, dozen 9	0	24	0	Myrtlcs, dozen 6	0		0
Euonymus, var., dozen 6	0	18	0		0	15	
Evergreens. in var., dozen 6	0	24	0	" (specimens) 21	0	63	
Ferns, in variety, dozen 4	0	18	0	Pelargoniums, scarlet, doz. 2		-	0
Ferns (small) per hundred 4	0	6	0	Rhodanthe, per dozen 4	0	6	0



WEEDS.

"No one knows the expense of cleaning a foul farm till they have tried it," said a sound practical farmer once, when discussing ways and means for cleaning a dirty farm. Many such farms will be falling in hand this Michaelmas. Entirely are we in sympathy with the landlord, agent, or home farmer who has to take and make the best of them, as has fallen to our lot to do many a time. How any man, but especially a tenant farmer, can suffer land for which he pays rent to become foul with weeds is a matter beyond our comprehension. It is a shameful thing for which there can be no excuse; suicidal on the part of the tenant, harmful to the landlord, and not unfrequently a nuisance to an entire parish, as, for example, in the case of the tenant of a hill farm, whose landlord held him to the conditions of a lease so far as rent was concerned, while the price of corn became ruinously low. The rent was high, the tenant was angry, he foolishly let his land get so foul with Thistles that in the last year of his tenancy they ran to seed among the spring corn in such quantities that in a high wind the seed was blown far and wide over the neighbouring farms.

That farm came into our hands at Michaelmas so dirty that much of it had to be fallowed in the following year, and we were thought fortunate in being able to re-let it after a year of persistent cleaning. Cropping in anything like the regular fashion was out of the question. Ploughs, harrows, horse hoes, cultivators, hand forks, and hand-picking were all brought into action. Couch fires were set going whenever it was possible, much rubbish was carted to heaps and so burnt; by the autumn we had some fair crops of Mangolds and Swedes, and the whole of the land was cleaner and more thoroughly tilled than it had been for many a day. No very close computation of the actual cost was ever gone into. It had to be done, we had several other farms in hand, and were able to spare horses and implements from them occasionally to get through what was nothing else than estate improvement.

It is by no means intended to infer that work thus done was at all thorough and complete. That was impossible. Thistles would be coming from seed for some time subsequently. Worse than Thistles was the Charlock, of which a fresh crop follows every ploughing for years after land is once infested with it. Its seed appears to retain vitality for an indefinite period, in all kinds of soil. A meadow which had been laid down to grass for some ten or twelve years was drained last winter; this summer hundreds of plants of Charlock sprung up over the drains. In dealing with this pest the only safe plan is to destroy every young plant of it upon its first appearance on a farm; once suffer it to mature a crop of seed and its eradication is practically impossible. Much may be done to reduce it by stirring the land repeatedly in autumn after harvest, just waiting long enough each time for the plants to appear, and then shallow ploughing or even horse-hoeing at once. present autumn is most favourable for this and every form of cleaning; not a chance for autumn tillage should be lost, everything else that can be kept in abeyance for it should be. On light land much of the Charlock plant may be destroyed among spring corn by a light harrowing after the corn is well up. This is a critical operation, requiring care and judgment, or the corn suffers. Best of all, for a field foul with Charlock, is to bring it under a six-years course, so that five years out of the six it is in temporary pasture. By using Grasses of vigorous growth, with Clovers in well balanced proportion, and by keeping soil fertility fully sustained, the seeds are very productive, and the disheartening and costly contest with the Charlock is avoided. Here is the mixture which has been found to answer so well in Essex for such pasture :-

						lbs.
Perennial Rye Grass	•••	•••	•••	•••	•••	13
Italian Rye Grass	•••	•••	•••	• • •	•••	5
Cocksfoot	• • •	• • •	•••	•••	• • •	5
	•••	•••	•••	•••		3
Meadow Foxtail		•••				2
Red Clover (broad)		•••	•••			$\bar{3}$
Perennial Clover (b)		•••		•••		3
White Clover	.000	•••		•••	•••	$\frac{3}{2}$
A 1-:1 (1)	•••	•••	•••	•••	•••	_
	•••	•••	•••	•••	• • •	2
Trefoil (or Lucerne)	•••	•••	•••	• • •	•••	2
						_
Total qua	intity	per ac	ere	•••	•••	40

On the other hand, when pasture is very foul with Knapweed, Ox-eye, Buttercup, and Yellow Rattle it may become necessary to pare and burn the sod to get rid of the pests. Under good management there is no reason why the land may not then be broken up and relaid down to pasture with a corn crop. Cows will touch none of such weeds, but they may and do eat unwholesome plants which do harm to the milk. Professor McConnell has recently, in the "Agricultural Gazette." called attention to an instance of this at Tawny Hall, Epping, where, in skilful hands, great difficulty has been found all the summer in getting the butter to come. His explanation is so clear and withal so important that we quote it :-- "The excessive drought had rendered it necessary to give the cows access to land which had always hitherto been mowed for hay, and it was noticed that a plant similar to Parsley or Dwarf Hemlock was growing in a portion of this. The cowman recalled to

mind that an old herbalist had told him that this plant would prevent the butter from coming, and it was resolved to try the effec's of shutting the animals out of the parts so affected. The effect was almost immediate, as in a week or so the cream had come back to its normal characteristics. The plant proved on examination to be the Pepper Saxifrage (Silaus pratensis), an umbellifer, and in some of the 'Floras' it is noted as stopping the milk if eaten in a large quantity, and of tainting it if a small quantity is consumed. But it is noticeable that it is not mentioned in any dairy work known to me, while the harm that it does may be enormous. In this case it affected the milk of some seventeen cows all summer in such a way that there was an immense loss of butter, which would not 'come,' and, therefore, was lost in the buttermilk. There was nothing of the nature of a smell or taint, for the butter was first-class af er it was made; but the p'ant seemed to affect the cream globules in such a way as to prevent them from uniting."

WORK ON THE HOME FARM.

Poultry require special attention just now in preparation for winter, and next spring also. As the egg supply falls off, and moulting is likely to commence, old hens must be got rid of. The term is appropriate, for if sold they bring about a shilling apiece; exceptionally good hens may be worth twice or three times as much, but anything like a profit on them is out of the question. The best purpose the home farmer can turn them to is to send them to the stock-pot, beginning this as they cease laying. A word of caution is necessary in this matter to the person in charge of the poultry, that none but perfectly healthy hens Twice in our experience has soup been spoiled by a taint are so used. from unhealthy old hens, heedlessly sent to the kitchen with the foolish notion that anything does for the stockpot. A good home farmer makes a point of seeing that all farm produce sent to the kitchen is sound, sweet, and wholesome. But he cannot always be on the spot, and cooks will send at all hours for articles unordered at the proper time. So far as is possible let the bulk of the household supply be sent in early in the day, a second regular journey being made after the afternoon milking. Send up the order-book with the morning delivery, and while quietly striving to enforce systematic action, avoid friction. Remember before all things to keep the promotion of your employer's comfort and convenience in view, and take especial care always to have a surplus supply of everything—no light matter this, but entirely possible. implies no waste, because all surplus produce can be sold, dealers being only too eager to purchase the excellent produce of a well-managed home farm.

Select pullets from March, April, and May broods for supplying winter eggs, as well as for eggs next spring and summer. Take care to have enough to insure a full supply; keep them apart from the chickens kept for killing for table, so that no valuable birds are killed by mistake. If other breeds or more young birds of any sort are to be purchased now is an excellent time to procure them. There are always plenty offered for sale in the advertisements in "Poultry," and we have reason for entire satisfaction with chickens through that agency. Select also stock hidden poultry consider and trackers and trackers and trackers are the satisfaction. birds of other poultry, especially geese and turkeys. As turkey poults come in for table they are much in request, the best birds being killed first, hence the importance of timely selection.

METEOROLOGICAL OBSERVATIONS.

OAMDEN SQUARE, LONDON. Lat.51° 32' 40" N.: Long. 0° 8' 0" W.: Altitude. 111 feet.

DATE.		9 A.M.						IN THE DAY.				
1893.	Barometer. Rea Level and Sea Level and Level a		Direc- tion of	Temp. of soil	Daro	Tem- ture.		ation rature	Rain,			
September.	Barc at 33 Sea	Dry.	Wet.	Wind.	1 foot.	Max.	Min.	iIn Sun.	On Grass.			
Sunday 27 Monday 28 Tuesday 29 Wednesday 30 Thursday 31 Friday 1 Saturday 2	Inchs. 30·144 30·279 30·336 30·177 29·980 30·044 30·112 30·153	deg. 60.4 58.9 60.1 60.3 61.1 58.2 63.3	deg. 54.8 54.4 53.2 56.4 58.2 57.1 58.4	W. N.E. N.E. S.E. S.W. E. W.	deg. 61·7 60·6 59·9 60·9 61·7 62·0 61·4	deg. 64 9 71 0 72 0 76 6 73 7 67 2 72 4	deg. 47·7 47·8 44·8 57·1 55·0 55·4 58·1	deg. 95·1 115·9 115·0 119·8 117·7 83·6 1:0·8	deg. 43·2 43·7 39·0 52·1 51·2 55·8 54·6	0.040 		

REMARKS.

REMARKS.

27th.—Fine and bright up to 4 P.M., then rain; fine after.

28th.—Dull early with gleams of sun during the moning; bright 1.30 to 3 P.M., then dull to 5 P.M.; rest of the day fine.

29th.—Bright and sunny throughout; fine night.

30th.—Overcast in morning; sun at 10.30 to 2; then overcast, with some sun at times during afternoon; fine night.

31st.—Spots of rain and dark at 9 A.M.; bright sun at 9.45 and till 5 P.M.; then overcast and spots of rain at 5.25 P.M.; fine evening.

1st.—Rain early (2.30 A.M.), dull at 9 A.M., and throughout until 5.15; then sunny; fine night.

2nd.—Dull early; bright sun at 9.45; fine and bright after; fine night.

Another generally fine week; temperature falling slightly, but still a trifle above the average.—G. J. SYMONS.



As we arrive at the autumn it is well to review the difficulties experienced, the successes noted, and the failures, in some instances so painfully apparent, among vegetable crops during the phenomenal spring and summer of the present year. In doing this we cannot fail to be impressed by many significant lessons which must be fraught with useful suggestions for future elucidation. The difficulty of maintaining a constant supply of vegetables was perhaps never more keenly felt than during June and the early part of July, and although since that time this trouble has not been entirely absent (on account of the comparative failure of some crops which are usually reliable ones), yet the greater variety of vegetables in season during late summer, together with a timely, though only moderate fall of rain, and the refreshing effect of heavy night dews, combined to bring about a vastly improved state of affairs.

Vegetable Marrows have been a more abundant crop than I have previously known them to be. From a very early date they have been in evidence on all sides. I find that plants set in the ordinary garden soil, with no other preparation than that of placing a few spadefuls of rich manure underneath, have yielded far better than others growing on raised beds of manure or leaves. This is doubtless accounted for by the fact that much less difficulty is obtained in keeping the former sufficiently moist at the roots during a season of tropical weather, unless the ingenious practice of a Warwickshire amateur gardener is resorted to—viz., that of watering by means of a syphon, which this year has been constantly working on his Marrow bed. Pen-y-byd is, I think, the best variety to grow for table use, the quality being far superior to that of any other.

Peas have by no means been so good as usual. When mulchings and heavy waterings were resorted to well filled pods resulted; but under the best cultural conditions the season was a short one on account of the arid atmosphere which prevailed for a long period. I never remember seeing so few good dishes of Peas staged at cottagers' shows as during the present season. Sharpe's Queen and Stratagem have proved the most productive with me. Early in the season I had several splendid rows of William Hurst, which is an excellent variety to succeed American Wonder or Lightning. The great advantage of sowing Peas in shallow trenches has been clearly apparent, and wherever cultivators have to deal with a light ground I strongly advocate the adoption of this practice, because when the work is well done a greater depth of soil is obtained than in deep trenches, as well as ample facilities for watering.

Turning to Potatoes, a far more favourable condition of affairs can be recorded. Early crops were somewhat undersized, especially in the case of Ashleaf Kidney. Sharpe's Victor was, however, very early and good in every way, the season appearing to suit it exactly, as during wet summers this variety is not superior in quality unless left in the ground till the tubers are fully grown. Puritan and Snowdrop afforded large clean tubers in succession to those first named. Late Potatoes, when grown on deep, well cultivated soils are furnishing grand crops. The tubers are large, clean, and of the highest quality, there being a marked absence of blotches and other disfigurements so frequently noticed when heavy crops are lifted. It is really a most encouraging sign, as the crops are being lifted, to note how easily they are separated from the dust-like soil, exhi-

biting clean, firm skins without a trace of disease. Satisfaction, Late Rose, Best of All, and Brinkworth's Heavyweight are particularly good. The latter variety will, I think, to a great extent supersede Magnum Bonum on account of its superior quality when cooked.

Where Onions escaped the ravages of maggot during the spring months the crops have been good, the bulbs having ripened splendidly. From an exhibitor's point of view perhaps we have seldom been favoured with such a fine Onion season; deep, rich soil, special attention to watering, and abundance of sunshine being the three principal conditions necessary for the production of gigantic bulbs. For home use I know of none better than Veitch's Main Crop and Banbury Improved White Spanish. These two varieties have with me been highly satisfactory, although our soil is by no means an ideal one for the growth of this crop. It is only by deep digging, manuring heavily, and giving frequent dressings of soot that good results can be obtained.

The early and main crops of Carrots must be mentioned as particularly satisfactory. Early Gem proved well worthy of the high praise bestowed upon it. Early Nantes, which we grew to give a succession of young roots, did not behave well, great loss being experienced through a bad attack of grub, which I find is most difficult to keep at bay when the Carrots are thinned as required for use. The holes thus left where the roots are drawn afford a convenient opportunity for the parent fly (Psila rosæ) to deposit its eggs. Where practicable it is, therefore, better to quite clear a sufficient space at each pulling, even though by so doing a few small roots have to be sacrificed. Too much praise can scarcely be given to Matchless Scarlet. From a sowing made on land occupied by Celery last year we have now a bed which brings out many flattering remarks from visiting gardeners. A gritty, yet rich soil with a fine deep tilth is evidently well adapted to the growth of Carrots. Beetroot on an adjoining quarter has also, notwithstanding the season, made good progress, sound roots of the right size for table being plentiful.

The production of really good Cauliflowers has been a matter of great difficulty. Hundreds of plants which during ordinary seasons might have been depended upon to give good heads, have this year either bolted, gone blind, or provided the cultivator with only puny heads. Early London was a great offender in this 1espect; Walcheren and Extra Early Autumn Giant are, however, now supplying good heads, and the older type of Autumn Giant promises to be fairly good, but rain is at present much needed to assist them. The demand for good Turnips has been a thorn in the side of innumerable gardeners. It is only by watering a portion of the crop regularly that we have been able at times to secure presentable roots. Successional batches of Little Pixie Cabbage have proved invaluable by planting them only a foot asunder, and compact heads have been obtained from a limited space at a time when it was by no means an easy matter to induce the coarser growing kinds to heart. Thought and labour were, perhaps, never in greater demand among British gardeners to enable them to successfully cope with the difficulties of the situation than during the past summer, and I believe thousands will join with me in expressing the hope that their brains and physical energy will not again be so severely taxed for many years to come.

Although the labour of summer has been great, the outlook for the coming winter, as far as garden crops are concerned, is promising. Good crops of roots are ready for storing under conditions favourable to good keeping. Borecoles and Broccoli have made firm growth, which is not likely to be easily injured by severe frosts, should they come. We have had opportunities innumerable for destroying each crop of weeds in a young state, and our gardens ought now to be in a clean and sweetened condition, so that with the timely rains of the autumn and frosts of the winter we may look hopefully forward for brighter prospects if not lighter labours in time to come.—H. D.

AN ENTHUSIASTIC VETERAN.

ALL who know him, whether personally or only by report and through his writings, must admit that he answers to the description of my title, not as a mere fanciful dreamer seeing all things through rose-coloured glasses, but as a downright hard worker whose achievements justify his aims, and whose life work has been productive of results by which the community at large has been

greatly benefited.

As a teacher of horticulture, Robert Fenn was one of that staff of grand old gardeners who in the Cottage Gardener did such a noble pionecr work for its advancement. It was over the characteristic signature of "Upwards and Onwards" that most of his striking and original contributions appeared, and though since he retired from actual practice he has not written so frequently, he is as active as ever, and his occasional notes, too, are as welcome as ever to readers of the Journal of Horticulture. They may be brief, but they are very much to the purpose; so effective was that last one on "Anti-blight Powder" that it brought to a climax the long pending intention of a pilgrimage to Sulhampstead (as our leader has it) by two other gardeners whose claims to be regarded

as veterans also are fairly admissible.

The morning after the publication of that article we were on our way to Cottage Farm; a hearty greeting had we from the writer of it on our arrival at Theale Station. We were soon at the cosy home of our host, giving due admiration on our way to the transparent waters of unpolluted Thames in such striking contrast to the pea-soup-like appearance of it that morning in cockneydom; then we enjoyed the pleasant country lane, with its overhanging trees, and the fresh green herbage of the rich pastures on each side of it. Soon were we among the cider casks and seedling Potatoes discussing a point of practice at almost every step, listening to anecdotes of bygone days, telling us of persistent effort and of many a triumph over difficulties. The raising of seedling Potatoes by the veteran appears now to be confined to the crossing of species, a by no means unimportant matter in view of the possibility of an infusion of greater power of disease resistance. In the past it must have been a heavy matter, involving much labour and almost incessant attention. That it was done, and done well, we know; precisely how has yet to be told. One thing that is clear is that Mrs. Fenn has been no mere silent worshipper of her clever husband; she has worked with him, doing her part and something more, for not only has she tested almost innumerable seedlings, cooking, as she told us, as many as 300 of the sorts on trial in a season, but she has evidently entered with her whole heart into the work, watching the progress of each batch of seedlings, and cheering her husband with the loving sympathy of a true wife. As she came down the garden to us, while we were among the Potatoes, we were listening to the story of how in digging up a certain batch of seedlings one was found apparently with nothing but stem and roots. The roots had been followed to the depth of the digging-fork, "handle and all," quite in the contrary direction to the aspirations of "Upwards and Onwards," who was about to give it up as a bad job, when, as he told us, with the cheering cry of "Dig away, Bob!" from his better half came the incentive to go a bit deeper, with the result of the unearthing of a cluster of Yam-like tubers almost a foot in length.

In the garden we saw among many kinds, all free from disease, such splendid varieties as Eliza Fenn, Lady Truscott, Reading Russet, Reading Ruby, and others. There was no blight and no supertuberation, the foliage supported by short Pea boughs, and dressed with the blight-preventing powders, was perfectly healthy. Not a disease spore had laid hold of it, and the tubers were clear-skinned and ripe for lifting. For four consecutive years has Mr. Fenn kept disease off the Potatoes by the persistent use of the powder, puffing it over the growth from the carliest stages of growth onwards till the tubers are sufficiently mature for lifting. He evidently wants no dates for his dressings; he lives among his crops, and anticipates their wants. Hitherto he has used the bellows for this work; but telling us to wait a bit, he ran off down the garden—yes, positively ran—quickly returning with some powder in a fine sieve to illustrate his remarks about the ease of application of the powder to the surface of the leaves, which he is positive is the only part in danger. Certainly there were his Potatoes without a blemish in tuber, stem, or leaf. Has he not sufficient reason to be positive? More than this, he holds that by the maintenance of the foliage in perfect health there is a more full development of tubers and greater bulk of crop, and he

Surely it will be admitted that Mr. Fenn has devoted his life to a work of national importance by the improvement he has wrought in a staple article of food? He has given us Potatoes which are the perfection of size, form, and quality, which are literally flourballs from the present time till the new Potatoes

come in again. He has improved the old hollow-eyed type out of cultivation, and now, as a fitting crown and finish of his work, he is showing in an easy, simple, and certain manner how to prevent disease from attacking the foliage. He has kept his Tomatoes equally healthy, the foliage being a bright green, the growth vigorous, and the crop excellent. To ordinary attention is added an occasional puffing of powder over the whole of the growth, as being all that is necessary to keep off disease.

Evidently both Robert Fenn and his "Missus" are nothing if not original—that was apparent everywhere, even at table where we were regaled with most excellent fare consisting of home-cured bacon, home-made bread and cider, his seedling Cabbage, First-and-follow-on, of singularly delicate flavour, and above all some superb Eliza Fenn Potatoes. After seeing the ample store of jams, and the barrels of various home-made liquors, we saw the fruit trees mostly laden with a heavy crop of fruit. Both young and old trees of "Pay the Rent" had plenty of fruit upon them, as have several other kinds. The trees are everywhere—in the orchard, plantation, garden, and along the margin of the grass land. Some had been headed down and regrafted, no worthless sort being kept, every tree being known and cared for as an individual. Just so is it with the numerous ornamental trees given to Mr. Fenn by his numerous friends; a watchful eye is kept upon every one of them, and needful attention paid to their requirements.

Of the grass and arable land mention will be made in another Of fruit and vegetables much more might be said, for Mr. Fenn has a marvellous fund of anecdote and reminiscence in connection with his life's work most pleasant to hear, and much of which is worth recording. Quite delightful was it to listen to him, as he unconsciously showed how he is and has been held in honour by good men and true. Perhaps one of the greatest compliments ever paid him was when Mr. Paterson, feeling that his end was drawing nigh, sent him all his untried seedlings. They were carefully tested, and the produce of one of them was sent, after Paterson's death, to his son, with a note to the effect that it was valuable, and should be taken care of. That Potato was the famous Paterson's Victoria. Quaint old Chaucer taught that truth and honour were the essential characteristics of a gentleman. In our friend these high and noble qualities are eminently conspicuous, combined with kindly feeling, earnestness of purpose, energetic action, and-well, just a tinge of enthusiasm; they have made Robert Fenn to be held in general esteem, and a man whom the three pilgrims, in common with many others, are proud to term their friend.-EDWARD LUCKHURST.

THERE were three of us. One a gardener developed into a farmer of a somewhat advanced type, also steward, surveyor, farm and garden instructor, and I know not what besides; one a philosopher who would not wear a collar to save his head, and whose cook I would not be for £500 a year; and one a scribe who was made to feel rather small early in the day. He is getting on in years, and his beard is white, but his head scarcely "turned a hair." The philosopher is just the reverse—beard brown, head white. On his being asked for an explanation of the phenomena he came down a crusher, in the words of an old Scottish divine—"Men with white beards and dark hair work most with their jaws, while men with white heads and dark beards work most with their brains." It was useless for the victim to plead his still tongue as against the philosopher's great conversational power; the farmer shook his sides like a John Bull in ecstacies, and the poor scribe appeared to settle into a brown study, not moving his beard till—well, till dinner time. The philosopher was there too, very much there, and made one wonder why his beard had not turned white years ago. Was it dyed? Now the scribe has had his little revenge he will proceed with his narrative lightsomely and according to the weather.

"Why, the man's writing nonsense!" someone says. Yes, he is; and the man who says so is reading it, though he has plenty of substantial fare all around him. "Oh! I am so sorry you were in the village public house the other night," remarked a good lady to have bother. her butler. To which he replied, "Yes, my lady, I was, the first time for twelve months; but where do you think the gossip was when she saw me there?" If I am told of the shoals of faults in this free and easy communication I shall know somebody has "been there," as the cockney gossips say "a reading of it," for which

purpose it was written.

We met at Westbourne Park—not a lordly demesne, but simply the well-known ticket station of the Great Western Railway. It was a hot day, and the philosopher was found wrapped in woolall wool—for he abhors cotton, and thinks it kills people. On his white head he had a thick heavy dark cloth cap—to draw the heat, most people would have thought. Oh, no! "Woollen cloth keeps out the heat and cold alike, and the body exactly at the right temperature to the fraction of a degree." Happy man! But the burly farmer takes his eye—and fills it; the first meeting after more than twenty years. "Why it can't be the same young man of the old days! yet it must be. But how you've grown!" and then it was a comfort for a quiet man to ensconce himself behind a newspaper in the most far away corner possible to escape the battle of the tongues as they fought out the claims of Potatoes and Tulips, for one of the combatants is great on one, while the other seemed "gone" on the other. This Tulip and 'taty war was continued till the end of the journey, and only ceased when the scribe shouted-"There he is! don't you see him on the platform, in the cream-coloured hat? that's Fenn!" He had come to meet the pilgrims. What a change from the man in wool! Here was our host in his white blouse—indeed white, almost from head to foot, looking as cool as a Cucumber, while he gave to his friends the warmest of welcomes, as is his wont. "And now we have to get home," quoth he. "Here is the cart for three, and the waggonette is coming." The cart seemed to tempt the farmer. It was a genuine country article that had, no doubt, carried many a load of Potatoes, and had a seat across it for three. Away jogged Fenn and the farmer, as happy a pair as the man in charge had ever seen safely set down at Cottage Farm.

There are two ways to Sulhampstead from the station. One over the bridge to the left, eventually skirting the park—"Fenn's coach road;" the other to the right through the village of Theale along the Bath Road to the "Three Kings and Jack's Booth"—a wayside house that marks the turning to our rendezvous. And here was made a discovery. When the farmer left London he had as much thought of seeing the Queen as his sister, but here he discovered her as the happy landlady of "Jack's Booth." No, you have not caught us, Mr. Watchful Reader, as the butler was caught—in the public house. We did not go in with the farmer, but on the return journey waited outside for him like strict TT.'s.

Cottage Farm is a truly rural home two miles from the station. As auctioneers would say, "It stands in its own grounds of 15 acres," a picturesque and fertile little property, which has been greatly improved by Mr. Fenn since he purchased it some fifteen years ago. We enter the orchard gate, and find thrifty well fed trees laden with excellent fruit. By a well contrived system farmyard drainage and sewage are conveyed to the trees by channels cut in the grass, the land gently sloping, and the trees in turns are given a treat. Of one tree of Cox's Orange Pippin its owner is particularly proud. He brought it with him from Woodstock, but before then exhibited fruit from it at one of the Royal Horticultural Society's Shows. Mr. Ingram of Frogmore invariably won with "Cox's," but that year Mr. Fenn was told, prior to the judging, he was going to beat the Queen. "No," he replied, "that will never do; tell the Judges from me that Mr. Ingram must have the first prize." It was so decided, but the money for an extra first was sent to the parson's gardener who refused to be placed before the gardener to Her Majesty; "and here," he says, holding up his hand, "is the result of it"—a massive gold ring that his then employer, Mr. St. John, obtained for him. Then the wearer of it goes on to tell that the raiser of the Apple was his friend residing near Slough, and he pressed Mr. Cox to place it in the hands of Mr. Charles Turner for distribution—a scrap of history relating to the best dessert Apple grown in this country.

The barn is a feature at Cottage Farm—a great gaunt old time wooden structure with a thatched roof. It is a museum of curiosities—a conglomeration of bags, boxes, and tubs with cider and wine-making appliances all round. Apples, Pears, Plums, Brambles, and even the purple-fruited Berberries are all turned to account; fermentation is active in tubs and barrels, and the brewer bustles about to show us his work and ways. As blithsome as a boy and happy as a prince is Robert Fenn in his rare old barn.

But I must cease. The gardener-farmer said he should write something, and we must not both tell the same story, or if we do not tell it in the same way, on the latter point of which there is little to fear. He will no doubt tell about the Potatoes and general crops, and perhaps of the home-grown dinner which the philosopher appeared to enjoy as well as his mundane friends. There is perhaps one thing he (the G. F.) will not think about—the early history of our host himself. It was a happy thought that led someone to ask, after a taste of Berberry port, "Where did you spring from, old fellow, and where were you trained?" "Spring from, why I sprang from Bury St. Edmunds, and I should have bought the jail there awhile ago if there had been a bit more land with it. As for training, I was sent to a jeweller's shop in Kensington, and have snatched fruit from a nursery where the museums now stand. But the jewellery trade didn't suit me, and I didn't mean to have it, so commenced saving my sixpences to run away, and run away I did. I spent a fortnight in the London Docks looking for a berth on board ship, but in a weak moment lent all my money, and have not seen the borrower from that day to this. I was sought after, caught, and carried home; then

packed off to Oxfordshire to look after chickens, pheasants, and other pets belonging to a young gentleman. That was Mr. St. John, who became Rector of Woodstock, and I remained with him more than fifty years, rising from boy to man, becoming gardener, steward, and general factorum, doing everything for him within the rubric."

It seems our old friend made himself as useful as he possibly could in every way until he became indispensable. That is the way to get on in the world. It is said he became more like master than man, engaging schoolmasters and curates. We did not ascertain if this were true; but we did ask if he preached. "No, that would have been out of order; but I read the lessons, and I read them now in church on Sundays." He is, to speak colloquially, "one of the old sort"—a monarchy-man, church-and state-man, and in all his acts a gentleman; given to hospitality, ready to help rich and poor alike. He has tried to do good, and has done good in his day and generation. Such is Robert Fenn, the pioneer in the improvement of the Potato, a worthy member of the community, and one of the happiest men alive. He makes his friends happy too, and his "missus" helps him. There was just one bright link missing from the cottage; rosy-cheeked Alice was not at home. She had crowded the place with jams and jellies, then gone to London for a change.—The Scribe.



CATTLEYA AUREA.

This magnificent Cattleya is unusually fine this season, the continual sunshine suiting it admirably. There can be no doubt a strong moist heat and plenty of light and sun are required to grow this species properly, and it well repays the trouble taken in its culture by the gorgeous flowers so freely produced under these circumstances.

CATTLEYA GASKELLIANA.

This favourite species also is now in full beauty, and it is very valuable on account of its flowering after C. Mossiæ is over. There are some splendid types now in cultivation, many of them coming near to C. gigas in size, and very richly coloured. If the plants are removed to a cooler and drier atmosphere while in bloom it will serve the double purpose of ripening the bulbs and conserving the flowers over a longer period than would be the case if they remained in the house where grown.

ONCIDIUM INCURVUM.

This very distinct and pretty Oncidium is now flowering freely. It is one of the best of the small-flowered species, not unlike O. ornithorynchum in habit, but the blossoms are larger and the growth is rather more robust. The spikes on well-grown plants attain a height of fully 30 inches, and are much branched and very elegantly arched. The flowers are white, freely spotted and barred with purply rose, and remain a long time in good condition. It is very easily grown in an ordinary compost, and a temperature slightly higher than that usually given to cool house Orchids.—H. R. R.

ORCHIDS AT HIGHBURY.

According to a daily contemporary, Mr. J. Chamberlain, M.P., unlike many amateurs of floriculture, has ample means at his disposal for the gratification of his hobby. It is stated that Mr. Chamberlain now has about 5000 plants of all kinds, and from all parts of the Orchid-producing world, and, of course, the number is being continually added to. They fill thirteen of the eighteen glass houses ranged along the side of the handsome yet unpretentious residence. When Mr. and Mrs. Chamberlain are in London a box of beautiful blooms is sent every week for the decoration of their house in Prince's Gate. In addition, two flowers of the kinds best adapted to the buttonhole are sent every day, and it is with one of these that the famous politician generally makes his appearance in the House of Commons.

DISA LACERA.

This has repeatedly been described as the "blue Disa," and generally excites some interest. The flowers are small, of a bluish purple hue, and are produced on a slender scape without leaves. Alone it is not a very conspicuous plant, but associated with others the flowers have a good appearance, owing to their distinct colour, though this is by no means the brilliant blue some might be led to

expect from glowing descriptions given in past times of the blue Disas at the Cape. It has, no doubt, been carefully determined, but several reliable authors mention D. lacera as having white or whitish flowers. A few weeks ago I saw a plant of it in full flower.—Specialist.

AN EXPERIMENT WITH SHANKING GRAPES.

The above heading will no doubt catch the eye of some readers who have racked their brains to find a method for preventing shanking in Grapes. Let me at the outset disclaim any pretension of having solved the problem, because the same treatment applied under different conditions might produce totally different results. The Vines under notice are probably about forty years old, with their roots in a narrow inside border passing to an outside border. The varieties are Black Hamburgh except one Muscat Hamburgh and one Muscat of Alexandria. The house a lean-to adjoins the hall, which makes the use of strong natural manures objectionable. The outside border, originally a deep oblong space filled with fairly good soil and without any separating wall, is joined to a lawn, the latter having about a foot of light soil resting on a bed of clay. A few years ago an attempt was made to bring the roots nearer the surface. The old soil was taken out down to the clay, and a compost of chopped turf, half-inch bones, and old lime rubbish used in its stead, but with no appreciable effect with regard to the shanking.

Last year about a dozen bunches were left unthinned, and these bunches had not a shanked berry in them. It was at once decided that this year's crop should be left entirely unthinned. Anticipating the extra strain such a proceeding would entail on the Vines, steps

were taken to meet it in the following manner.

In the early part of November the borders were lightly forked over, and a heavy dressing of fresh cow manure applied. This was removed in February, and another supply afforded, which remained till the first week in May, when it was taken off and the borders again forked over. From that time till the fruit began colouring, the undiluted drainings of a cowshed were regularly poured on the borders. Tuesday and Friday in each week were the appointed

days for this purpose, and adhered to.

The result of this treatment is a magnificent crop of good bunches with medium-sized berries (no puny stoneless ones), excellent in flavour, but, as might be expected, deficient in colour. Against this defect I may add that they are much thinner-skinned than any Grapes I ever tasted. There are a few shanked berries here and there, but there are also dozens of bunches without a shanked berry in them, whereas in previous years there was not a bunch but was more or less affected by the disease. That dispensing altogether with the scissors has had something to do with the result I have no doubt; but my belief is that poverty at the root is the chief cause of shanking, and after the above experience I am more than ever inclined to agree with the Scotchman's sage remark that "Muck's the gardener."—Thos. Richardson, The Gardens, Simonside Hall, South Shields.

[We should like to hear what some of our Grape-growing readers have to say on this subject. We are inclined to think that Mr. Richardson, who gives such a clear account of his experiments, may, if he wishes, have Grapes free from shanking on thinned bunches in some not far distant future.]

HARDY FLOWER NOTES.

It is with mingled feelings of joy and of sadness that we view our own and other gardens when September has begun its brief course. The sadness comes unwillingly, but we cannot but fear that frost may come suddenly, depriving some gardens of their beauty. We are fain, however, to drink deeply of the cup of true pleasure while we may. Roses have been blooming with a freedom rarely seen; Dahlias of various types have been brilliant in many gardens, and a beautiful band of flowers of many kinds which the florists art has made almost perfect have come and gone. As we look on these flowers we feel constrained to think with gratitude of the good and true florists who have sought to give better form and colour to the wildlings of Nature. Many of our garden flowers have been improved by art. Look upon the old white Phloxes, and compare them with such varieties as Panama, perfect in form and with larger flowers of purest white; or compare the beauty of some of the old scarlet forms with such fine plants as Flambeau or Toreador, and we are forced to admit the gain is great. Nor is there any real antagonism between the hardy flowers fresh from Nature's hand and those subjected to the florists' art; they dwell happily together. The charming Violetta and the beautiful Violas of the present day are welcome here beside such untutored flowers as the little Viola Zoysi or V. biflora. The garden in the autumn has much of interest besides those plants of improved form. All aglow with colour have been the golden composites which are, perhaps, too numerous, but whose beauty we cannot fail to recognise. Sunflowers, from the great flowered annual forms, which one would think were those of which Browning spoke when he said—

"Fancy the Pampas' sheen!
Miles and miles of gold and green,
Where the Sunflowers blow
In a solid glow,"

to the tall, but miniature-flowered Helianthus giganteus or the graceful decapetalus; Heleniums, with charming flowers, graceful Coreopsis, golden Coneflowers, and those Silphiums which prove not true to their name of the Compass Plant; these, with many others of similar hue and form, seem to have revelled in the sunlight of this brilliant year, and as the sun's rays shine upon them they seem

to be returning some of the brilliancy they have received.

Among the most graceful of these Sunflowers is one which is grown under the name of Helianthus Buttaris (?), and which I saw in flower this year again. The habit of the plant is much like that of H. decapetalus, but it is taller in growth, slightly more graceful, and producing more flowers, which are barely 3 inches across. Looking at the plant one was forced to grieve at the fact that unless it could have been shown as a whole its beauty could never be properly seen at a flower show, and thus its graces could not be revealed to the people at large. Another beautiful yellow composite-for, despite some adverse criticism, I am still disposed to claim some beauty for the plant—is Chrysogonum virginianum, a flower not likely to be much seen at exhibitions, and one which, I fancy, one learns to appreciate from seeing day after day in bloom for months together. Here, in a rather low and damp position, and receiving a good supply of water in the dry season, a plant has, for two or more years, become more and more attractive in my eyes. It is neat and dwarf in habit; in some books the height is given as 6 inches, but here it grows to 10 or 12 inches. The leaves are rather ovate and serrated, and the flowers, though small, being barely $1\frac{1}{2}$ inch across, are pretty in colour, being a bright yellow, approaching orange. It is a native of the United States, but I can find no record of the date of its introduction. The free and continuous flowering habit of C. virginianum, blooming as it does from May onward, will always render it acceptable in the garden of hardy flowers.

While the yellow composites are perhaps predominant in the autumn, we must strive to give other shades of colour and other forms of flower to adorn the borders, and, so far as regards colour, the fine blooms of Rudbeckia or Echinacea purpurea are always objects of admiration. It is gratifying to find that it is being increasingly grown, and that wherever seen it is much admired. flowers, which are about 4 inches across, are what one might call a red purple, and are tipped at the ends with a greenish or grey-green colour. This is a defect, but it is possible that this might disappear in the case of some of the plants raised from seed, and it is to be hoped that this improvement may be attained. The leaves are rather rough and slightly toothed, and the plant grows in some cases 5 or 6 feet in height. There seem to be at least two distinct forms grown under this name, and the plant is said to vary much from seed. Any that I have seen may be divided into two varieties, one with broader leaves and petals, and more robust in growth, and Some three another considerably inferior, although very pretty also. or four Echinaceas are in cultivation, but purpurea, or what passes as such, is the one most frequently met with. It thrives freely in any good open soil, and can be increased by seeds or division. More might be said about these desirable plants, but others must have

notice at the present time.

Exceedingly useful in the autumn, and valuable from its contrast in colour and form with the composites, is one of the numerous varieties of the Veronicas—V. corymbosa, which, with its corymbose spikes of deep purple-blue flowers, is extremely attractive and distinct. The name is given with all reserve, as the Veronicas are in hopeless confusion; but it came to me from a Dumbartonshire garden under this name, which is quite applicable. I should, however, be glad if anyone who can recognise the plant from this brief description can give me any further information about it, and correct the name if erroneous. It must not, however, be confounded with V. corymbiflora, a dwarfer species or variety, and one of the most valuable of our autumn flowers for the rock garden. V. corymbosa grows here rather less than 2 feet in height, but in strong soils should grow rather taller. The leaves, which are of the usual Veronica type, are bright green above and slightly downy below. It grows freely in ordinary soil, and requires no care. According to Paxton, V. corymbosa is synonymous with V. polystachia, which, it appears, was introduced in 1817, but whence no information is given. A note on hardy flowers at the beginning of September, when this is written, would be incomplete without at least a passing reference to the simple beauty of the hardy Cyclamen in full blossom on the rockery. Here the marbled foliage and charming flowers of

C. hederæfolium and C. græcum form objects of the greatest beauty. They grow well under the shade of trees or at the base of rockwork, and are benefited by the addition of lime to the soil. No one can fail to admire the grace of these little flowers, drooping their heads from stems uplifted above the marbled leaves. The only depreciating remark that can be applied to them is that the flowers "are small." This is true when compared with the greenhouse varieties of C. persicum; but beauty does not exist only in large flowers, and the modest worth of these hardy "Bleeding Nuns" will endear them to all who grow them.

It has fallen to the writer more than once to speak in favour of the Meadow Saffrons, and once again he would plead for recognition of their value. Early as they have been this season, coming when other flowers were plentiful, they have yet been very attractive in their various forms. The rosy purple flowers of Colchicum autumnale have been far surpassed in beauty by the rose-coloured C. byzantinum, which is almost perfect in form, while this again has been eclipsed by the ruby flowers of C. speciosum rubrum and C. veratrifolium of Tulip-like size; and these, in turn, have yielded to the superior charms of the magnificent C. speciosum maximum, the gem perhaps of all with the exception of C. Sibthorpi, which I have not as yet had the good fortune to possess, but which I hope will adorn my garden another year. Very beautiful, too, have been the double forms of C. autumnale, the rosy purple one forming a charming tuft through a carpet of the foliage of Anemone coronaria, and the double white flowering later and coming into bloom with the beautiful Crocus speciosus, the first of the genus to flower this autumn here.

The earlier Michaelmas Daisies have been for some time in flower, and with other plants have softened the glare of the yellow flowers; while the Kniphofies or Tritomas, which are flowering unusually well in my garden this season, have added variety to the scene.—S. Arnott, Dumfries.

SOFT VERSUS HARD COLD WATER.

I AM sure many readers of the Journal have been waiting anxiously to see whether Mr. Dunn would accept "W. P. W.'s" invitation, and give us the benefit of his ideas, and I am equally certain many must be astounded to read them in the face of present day facts. I would not have thought it possible to find anyone who would dare to advance such a theory as Mr. Dunn's in the horticultural press. I am inclined to think your correspondent has only put forth a small skirmishing party, while his heavy guns are still in the rear. I may perhaps be a somewhat dull reader, but after going carefully over Mr. Dunn's communication twice I fail to find a single point which will hold water. I am one of those cultivators who do believe cold hard water is something more than slow poison to plants, and will now relate a few stubborn facts.

When I first started on my gardening career it was impressed upon me very forcibly never to give Cucumbers, Vines, and plants water which had been taken direct from the tap, but always to make sure it was somewhere near the same temperature as the house, and for that purpose we used to add hot water out of the boiler. I came to look upon this addition of hot water as absolutely necessary, but was destined to change my ideas. Having entered a market growing concern, what did I see? Simply nothing else but cold water being used, and the crops—well, they were far superior to anything I had seen in private gardens. I have seen such results where the plants and trees have only received cold hard water that for a long time past—to adopt a soapy phrase—I have used no other. I do not mean to say I drench my houses during the dead of winter, but after March it is invariably applied to all the plants growing therein. Our Cucumbers are "hosed up" during the summer months every morning at 6 A.M., the borders and whole house from roof to floor completely drenched. We are compelled to use it at this early hour because it comes from the main of the water company, and after the carts commence watering the roads our pressure is considerably reduced. Is the water cold? So cold that one's thumb gets quite numb with it. In the afternoon the houses are drenched through again. This is all the "soft" water the Cucumbers receive. I have never grown better fruit or heavier crops. I have a friend who is obliged to rise at 4 A.M. to get his houses "hosed up" before the water carts start.

grown better fruit or heavier crops. I have a friend who is obliged to rise at 4 A.M. to get his houses "hosed up" before the water carts start.

The Palms grown for market and nursery purposes are all treated to a similar routine in many of our large establishments. I know one very large firm who use the hose at the end of March, and keep using it continuously till the following winter. Even Mr. Dunn must admit the Palms sent into Covent Garden Market are unsurpassed for colour and general appearance. It is very evident some plants thrive a long while on Mr. Dunn's "slow poison." I doubt very much whether the Heaths so largely grown by some firms ever have soft water; their engines pump it into tanks, but the men use it as fast as it is pumped, so it cannot be

exposed to the air for any length of time.

I will now quote an instance of Grape culture. At one of the largest Grape growing establishments in this country, where tons of fruit are grown and sent to various parts of the country, and even to New York, hard cold water is alone used, and there are few Vines cropped so heavily. The houses have to be strutted up owing to the weight of the crop. In this particular instance rain water is not saved, and absolutely no water is given to the Vines but that lifted by engines.

I could enumerate many more instances in different branches where the much despised cold hard water has to be used, and is used most successfully. I entirely differ with Mr. Dunn as to plants treated with hard water looking pale and sickly. I do not find it so. The majority of my Chrysanthemums are watered with the hose, and they do not present the appearance your correspondent would have us believe they do under such treatment. Mr. Dunn's experience with insect pests is also somewhat novel, especially when I remember plenty of Peach houses where the foliage is kept green and healthy by no other means than cold water. I take it I have proved by actual practice that Mr. Dunn is "whimsical," and certainly in my opinion his ideas on the subjects of which he writes are out of date.—J. B. R.

CAMPANULA NITIDA ALBA.

C. NITIDA, or C. planiflora as it is sometimes called, has been in cultivation for more than a century. It is a North American species,

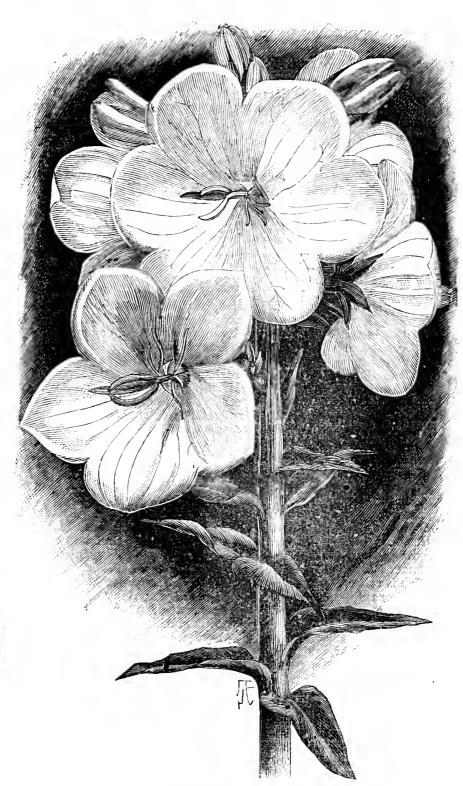


FIG. 34.—CAMPANULA NITIDA ALBA.

and differs considerably in habit and appearance from most of the European species. The short stiff leaves are arranged in dense rosettes. From these rise the spikes, 6 to 9 inches high, of large salver-shaped flowers. The latter, which open one at a time, are about 2 inches in diameter, and of a fine violet colour with a smooth shining surface. The plant is peculiar for the rigidity of all its parts. It succeeds well as a pot plant when grown in a mixture of good loam and leaf soil with a few pieces of soft sandstone intermixed. In many places it can be grown successfully in the open border or rock garden, but some growers have a difficulty in keeping it in these positions. C. nitida alba differs only from the type in having white instead of violet flowers. The illustration (fig. 34) has been prepared from a plant that was recently flowering in the Royal Gardens, Kew.—A. B.



NATIONAL ROSE SOCIETY.

EVERY man has a perfect right to his own opinion, whether he be Mr. Grahame, his anonymous friend, or "E. M." Now my opinion on the Mr. Grahame, his anonymous friend, or "E. M." Now my opinion on the question of Mr. Grahame's circular is briefly this. That the result of the inquiries made in that circular having been published in one of your contemporaries since I last wrote you on the subject, no further correspondence on my part is needed.—E. M., Berkhampstead.

[Nor, we think, on Mr. Grahame's part either, and the present discussion is now closed.]

ROSE THE BRIDE.

ACCORDING to my experience The Bride is a stronger grower than Niphetos, and in some respects a fuller and better Rose. In growth and the construction of its flowers it closely resembles its parent, Catherine Mermet. The greater number of petals in the flower than Niphetos possesses is in favour of its lasting longer, but the flowers have not the pure whiteness of Niphetos. The greenish tint, however, is not objectionable in either wreaths or bouquets. We have lately had occasion to use it for these purposes, and good full flowers are lovely. It will never supersede Niphetos in my opinion for market purposes, for although it is a stronger grower it does not flower so profusely; in fact, it possesses the character of its parent in this respect in a marked degree. -Rosa.

ROSA POLYANTHA (FAIRY ROSES).

THESE charming Roses should be extensively grown if only for their marvellous autumn flowering qualities, for they are particularly bright in appearance at this period of the year. If well treated they make strong bushes, the ends of every shoot being crowned with a profusion of bloom, embracing in their varieties shades of colour varying from pure white to yellow, pink, and deep scarlet. For bedding and massing purposes they are admirably adapted; yet up to the present their qualities in this direction have been overlooked. For forcing purposes, for bouquets or buttonholes, they are also useful, and should be extensively used by persons interested.

The following are the best varieties, yet there are many others well worthy of cultivation:—Anna Marie de Montravel, purest white, well formed; Golden Fairy, nankeen yellow, a miniature Wm. Allen Richardson; Etoile d'Or, canary yellow; Mignonette, soft rosy pink, very beautiful; Georges Pernet, rosy peach; The Pet, pure white, very large clusters; Blanche Rebatel, bright carmine.—J. E. MERRYWEATHER.

A NEW HYBRID ROSE.

A RECENT number of the "Garden and Forest" contained an illustration of a "New Hybrid Rose," with which the following particulars were given:—"In the year 1891 Mr. Jackson Dawson fertilized a flower of Rose Wichweigen with a little of Carlot Toward Towar of Rosa Wichuraiana with pollen of Général Jacqueminot, and in December he planted four seeds which resulted from this cross. The seedlings appeared in January, 1892, were grown in pots during the summer and wintered in a cold pit. All bloomed in June of this year, which is rather remarkable, since few seedling Roses bloom before the second or third year. These plants differ materially, although they all show to some degree the trailing habit of the seed parent. One of them has single pale pink flowers, borne in clusters, and is intermediate in habit between the two parents. Another one bore double flowers of a pale flesh colour, which did not open well, owing to damp weather. The third one has a prostrate habit, with rosy pink flowers borne in clusters of four or five from every joint of its last year's wood. It received a first-class certificate from the Massachusetts Horticultural Society at its Rose Show in June. The fourth plant (which is the one referred to as being illustrated) is not as prostrate in habit as Rosa Wichuraiana, and its broader leaves have a glossy surface. The solitary flowers are very double, and in shape and colour resemble those of Souvenir de la Malmaison, although they are smaller. The plant continues in bloom a long time and promises to be very useful.'

VEGETABLE CULTURE IN ADVERSE SEASONS.

DURING the past two seasons the cultivation of vegetables has been a difficult task, and whilst the struggles with the dry weather are fresh in the minds of gardeners in their efforts to keep the table well supplied with tender produce a few notes on some of the most useful kinds

may be of service. Evidently many gardeners have succeeded in producing first-class produce, judging from the excellent dishes staged at the shows during the past summer, and no doubt equally good vegetables have been grown in various parts of the country and not taken to shows. Gardens lying in low positions have had the advantage of those on higher ground, and in many cases the latter slope as well. In such the retention of moisture is of paramount importance. Exceptionally dry springs, accompanied with cutting east winds, followed by months of drought, are the most unsuitable to the free start of the f unsuitable to the free growth of vegetables. What, then, does recent

experience teach us? I think two most important lessons-namely, the necessity of deep cultivation and mulching.

By deep cultivation I do not mean turning up the subsoil and placing it on the surface, especially where it is of a cold retentive nature, but thoroughly loosening and mixing with it garden refuse, if in a charred state so much the better, and then turning over the surface soil upon it. This, if done when the ground is tolerably dry, during the autumn or winter months, and allowed to remain with a rough surface so that the weather can act upon it, will produce a good seed bed in spring. Never work the land while it is in a wet condition, or the evil effects will be felt during the whole of the following season.

Mulching during the dry months of summer will prove to be of the greatest value. Mulch with manure, decayed leaves, half-decayed straw, or grass from the lawns after mowing; failing these form a dust mulch by continually plying the Dutch hoe between the crops. This is of more value on light soils than continued drenchings of cold water from

POTATOES.

As Potatoes are the chief mainstay of every garden I will deal with them first. This is the proper time to select the seed tubers for next year, and great care should be bestowed upon them. Medium-sized sets are the best, and if placed thinly in boxes or cool sheds, and kept safe from frost during the winter, but given as much light as possible, a good

beginning will have been made towards the next season's work.

The ground will next require attention. If stable manure is to be used apply it in the autumn or early spring, thoroughly mixing it with the soil to a good depth, whether it be light or heavy; but, if heavy, leave the surface as rough as possible. The weather acting upon it will pulverise and make it suitable for planting in due time.

Previously to planting the seed tubers should be examined, and if more than one or two shoots are prominent reduce by removing them to that number. If seed is scarce they may be cut in two leaving one

to that number. If seed is scarce they may be cut in two, leaving one sprout on each section; but I prefer to plant medium-sized whole tubers with sprouts on them a quarter or half an inch long, not pale in colour, but dark green. If the soil is heavy spread over the surface cinders and leaves of any kind. If artificial manures are to be used, sprinkle them in the drills before planting, and a small quantity of dry lime is of service in keeping worms away and the skin of the Potatoes clean. To avoid disease plant in rows 24 inches apart for early and 30 inches for late sorts, the former 12 inches asunder in the drills, and the latter Close planting often means the reverse of a heavy crop of fine tubers. Remove some of the haulm in a young state if any of the roots appear crowded with it. Well ply the hoe between the rows early, and keep the crop clean.

Early sorts may be planted in February if protection can be given from frosts during the first part of May; but the middle of March is soon enough in exposed situations, and not later than the 20th April for late sorts. A change of seed is highly beneficial. All should be lifted and stored during dry weather if possible. Some of the best varieties are Ringleader, Early Puritan, Rivers' Royal Ashleaf, and Myatt's Ashleaf for early use. Second early: Windsor Castle, Early Regent, Snowdrop, and Beauty of Hebron; Triumph, Magnum Bonum, and Clarke's Maincrop Kidney for late use, with Vicar of Laleham as a coloured companion. It is a good cropper and shapely.

PEAS.

This is a very important crop, and a wise selection of varieties must be made, with good ground for growing them. We sow early sorts on warm, sunny borders, midseason and late ones in trenches, not as prepared for Celery, as I think these are usually made too deep. If the trenches for Peas are 8 inches deep in the first instance they will do. Throw out the soil on each side evenly, place in a good dressing of well-decayed manure, and well mix it with the soil at the bottom of the trench. If left in an undisturbed mass, and a hot season follows, the manure dries up, but if well incorporated with the soil it does not. One inch of soil must be placed in the trench afterwards and trod down a little. Upon this sow the seeds evenly and thinly, covering with 2 inches of earth; thus an open trench is left 5 inches deep. In the summer I prefer to cover the seeds deeper. When the Peas are 2 inches high or so, if they appear to be at all crowded, thin them out a little before drawing the soil to each side of the rows. This will prove a good means of support. Staking ought not to be delayed. The sticks should be put in very firmly, according to the height of each variety, not omitting to use a few small branches. If any variety is thought to be behind the time at which produce is wanted, topping the plants will cause them to pod more quickly.

Avoid watering Peas unless it can be constantly attended to. Even

then I doubt its benefit. Better than watering is mulching after a good rain. Leaves, half-decayed manure, or lawn grass should be placed on the surface of the soil on each side of the rows to a depth of 2 inches. There is no question as to the benefit the plants derive from this operation, but it should not be too long delayed, or its use will be of little avail. If the rows are 6 to 9 feet apart, with such crops as Potatoes, Cauliflowers, or Spinach between, the sun acts on both sides, and fuller

crops of Peas result.

There are so many varieties that a good selection should be made. Of first earlies Laxton's Earliest of All, Dickson's First and Best, William I.; of second earlies Champion of England, Duke of Albany, and Royal Jubilee; for late use Veitch's Perfection, Autorat, and Ne Plus Ultra are good. No garden should be without the last named, as it withstands mildew till the crop is nearly all gathered. Sowings may

be made in the autumn, but I prefer to sow in pots or turves in spring and plant out in favourable weather if early Peas are urgently required. Ashes, soot, and lime scattered around the rows in spring will prevent slugs destroying the plants. Mildew is often very troublesome, during a dry summer especially; the best preventive is to sow those sorts which resist it the best, and avoid the use of cold water.—G. GARNER.

(To be continued.)

PARAGRAPHS ABOUT THE PARKS.

REGENT'S PARK.

As most people who have a geographical knowledge of London and its suburbs arc aware, Regent's Park is situated in the north-western portion of the metropolis, and is of easy access from all parts. Visitors from the north arriving at King's Cross, St. Pancras, or Euston Stations, can reach Regent's Park in a few minutes, either by the Underground Railway to Portland Road Station, or by omnibus along the Euston Road. Similarly those who arrive in the metropolis from the south side will find that many 'buses from Charing Cross and the Strand pass this park, in which may be found the famous Zoological Gardens, and also the Gardens of the Royal Botanic Society. The park is a large one, and is a popular resort of many Londoners.

The summer bedding in Regent's Park is always well done, and this year proves no exception to the rule. Some borders and occasional beds may, of course, be found in various parts of the park, but the principal bedding is to be seen near the entrance, a few hundred yards from Portland Road Station. Immediately inside the gates the visitor comes upon a series of beds well filled with plants. Traversing the walk on the right a number of standard and pyramid Fuchsias sunk in the turf in clumps attracts attention, the plants being well grown and profusely flowered. These are usually a feature here, and are greatly admired. Opposite to a group of Fuchsias is a clump of foliage plants comprising tall specimens of Dracæna lineata, Bamboos, Cycas revoluta, and Tree Ferns. Being slightly shaded by trees, these have done well during the past summer, and doubtless imparted a cool appearance, if such were possible, on the oppressive days of August. Last week when I saw the plants they were as fresh looking as when under glass.

A noticeable feature in this park, as it is in others in and around the metropolis, is the excellent manner in which plants are arranged in the beds. Now and then some fastidious person takes exception to certain combinations, but these instances, as they should be, are rare. Taken as a whole the bedding in the London parks is exceptionally well done, and many a gardener might glean a few useful hints by paying an annual visit to them. The plants, moreover, flourish amazingly considering the fact that the atmosphere is not always of the purest kind, and as regards the arrangements but little fault can be found. These remarks apply to the park now under notice, and Mr. W. Jordan, the Superintendent, has cause to be proud of the result of his labours this year.

There are some charming beds on each side of the walk to which allusion has been made. One filled with Begonia semperflorens rubra and Königa maritima variegata and Dactylis glomerata variegata is very attractive and worthy of imitation. A similar shaped bed filled with Begonia semperflorens rosea and Mesembryanthemum cordifolium variegatum is also good. The Begonias are covered with pink blossoms, which form a pleasing contrast to the yellowish foliage of the Mesembryanthemum. By the way, it is noted that the various forms of Begonia semperflorens are used extensively for bedding in all of the metropolitan parks, and for which purpose they are apparently well adapted. These Begonias are likely to prove dangerous rivals to the tuberous-rooted section.

At the end of the walk referred to a large corner bed on the right is noticeable for the manner in which the plants are arranged. The background is filled with huge Palms, over the leaves of which Tropæolums have grown, and are flowering profusely: Near to the front are masses of Lilium tigrinum, standard Fuchsias, Ivy-leaved Pelargonium Abel Carrieri, Begonia semperflorens rosea, and Veronica Andersoni. These plants are placed in bold clumps, which show to perfection their characteristics and adaptability for the purpose. Those persons who are fond of neat, formal combinations would perhaps find little in this bed to admire, but to others who, like myself, prefer artistic arrangements, there is much that is worthy of admiration.

Leaving this corner group and turning to the left more beds of various shapes may be seen: They are all well filled with plants of different kinds, and for the second week in September are most effective. Two beds in particular, however, attract one's attention, these being what a lady would term "lovely." One of these beds presents a fairy-like appearance. It is round in shape, and would remind one of a bride's bouquet had it been raised a little. During the whole of my travels in gardens I have never seen a similar arrangement. The centre is filled with Dactylis glomerata variegata and Lilium lancifolium album, amongst which were plants of Asparagus plumosus, the sprays of the latter giving the whole a light graceful appearance. The bed is edged with a row of Begonia Worthiana, outside which is a ring of deep green Saxifraga. The opposite bed to this, of a similar size

and shape, is devoted to Begonia semperflorens rosea and Königa maritima variegata, from which rise plants of the charming Eulalia gracillima.

The vases filled with flowering and ornamental foliage plants are not the least striking feature in this park. This year these must have caused much labour in watering, but it has apparently been well done, for the plants have made vigorous growth. A huge clump in the centre of the "flower garden" is particularly noticeable. This is perhaps 15 or 20 feet high, there being a very large stone vase in the centre of a raised bed, although this is hidden from view. The vase is filled with variegated Abutilons, Eucalyptus globosa, fine Zonal Pelargoniums, and Grevillea robusta, the sides being draped with Tropæolums, Ivy-leaved Pelargoniums, and other drooping plants. Around these come Palms, Abutilons, huge Zonal Pelargoniums full of bloom, and various other plants, the whole making a striking effect. There are several smaller vases, and these likewise make an imposing display.

Reference should be made to two clumps of succulents, Saxifragas and Sedums, which doubtless interest many visitors. These are formed near two walks and beneath the shade of trees. All the plants, moreover, are named, the labels being well and distinctly written so that anyone might without difficulty ascertain the appellation of any particular plant. The ground in each bed is covered with Sedums and Saxifragas, amongst which S. lactea and S. Aizoides, are conspicuous, and from these rise clumps of Agave americana and its variegated variety, Echeverias, Sempervivums, and other succulent plants. All are arranged with excellent taste, and if less showy than some of the other bads are none the less interesting.

Much more could be said in regard to the bedding in Regent's Park, but space is limited, other parks have yet to be mentioned. A note should be made, however, of the many charming beds of Celosias, which at this period of the year are exceptionally bright and attractive. Lilium tigrinum is also used with good effect in many beds, and the same may be said of other Liliums. Early Chrysanthemums, too, must not be overlooked, and it would be well if these were as extensively used for bedding purposes in private gardens as they are in the parks. They also make a splendid show on the numerous borders, and likewise do huge clumps of Nicotiana affinis and various autumn flowering plants.

FINSBURY PARK.

This is another popular open space of northern London, and is situated close to Finsbury Park station on the Great Northern Railway. Tram cars and 'buses also pass the park by the Seven Sisters Road and Green Lanes, which may be easily reached from the centre of the metropolis. It is much smaller than Regent's Park, but the bedding is always effective, and to Chrysanthemum growers Finsbury Park has long been known. The culture of the Chrysanthemum is encouraged here. A huge glass structure nearly 100 feet in length is now being erected as a show house for the plants by the London County Council. When finished it will be a very fine building, and one in which the plants, of which more than 3000 are grown, will be seen to advantage. For the benefit of the uninitiated it may be mentioned that this structure for the Chrysanthemums is situated near the Manor House entrance, which tram cars from the city and other points pass every few minutes during the day.

Much of the bedding in this park is to be found not far from the Manor House. On entering at this point the visitor is brought face to face with an imposing bed of green and purple-leaved Cannas, Gladioli in variety, Eulalia gracillima, and other plants, the edging being composed of Chamæpeuce, Cineraria maritima, and Begonia semperflorens alba. Near by are several beds devoted to carpet bedding, and the Alternantheras are richly coloured this season. A series of beds of different shapes flank each side of a walk which lead to the right from this entrance, and these are filled in charming manner. Two beds devoted to Begonia Worthiana, pink and white Pelargoniums, with dot plants of Acacia lophantha, and edgings of blue Lobelia are most attractive. It is impossible to describe the pretty effect which these beds produce, and to realise the value of the combinations they must be seen.

Cannas are well employed in this park, and with the addition of Verbena venosa make several simple though attractive beds. Begonia semperflorens rubra is also used with good effect, the foliage being a rich bronzy colour in the open air, which enhances its appearance considerably. A bed planted with B. semperflorens atro-purpurea and variegated Pelargoniums likewise commands attention, and the same applies to beds filled with pink Ivy-leaved Pelargoniums, dark Tuberous Begonias, and dot plants of Grevillea robusta. Fuchsias are freely used in some beds, and in others single Petunias are flowering most profusely. These are easily grown plants, and, as a ru'e, they are most effective during the end of the summer and in the autumn.

In what is known as the "Surprise Garden," from the fact that visitors not acquainted with its whereabouts come upon it somewhat suddenly when near the lake, some good bedding is noticeable. This garden is on the top of the hill, and is surrounded by masses of shrubs, a broad wall passing through the centre. The beds on each side arc similar in shape and size, and are planted alternately with the same

kind of plants. Those at the back are chiefly filled with Cannas, Sweet-scented Tobacco, and other tall plants, the beds near the front being devoted to dwarfer plants and carpet bedding. The latter is very fine, the designs being well worked and the foliage of the plants richly coloured. One bed is so good that it may be individualised. The ground is covered with Antennaria tomentosa and the design made with Alternanthera versicolor and A. aurea nana. The centres of the division are occupied with Dracenas and Grevillea robusta, and there are also dot plants of Sempervivums and Pachyphytums. An edging of Echeveria secunda glauca completes the arrangement, which is most effective.

Other beds in this portion of the park are also specially attractive, and are much admired by visitors. A circular bed of Begonias, Grevillea robusta, and Ageratum is noticeable as being an excellent arrangement—simple though effective. The same can be said of a Begonia semperflorens rubra, Veronica Andersoni, Ageratum, with an edging of blue Lobelia and Mesembryanthemum cordifolium variegatum. Some beds planted with Centaurea candidissima and Verbena venosa are also pleasing in appearance, and one filled with pink Ivy-leaved Pelargoniums pegged down, mixed with Acacia lophantha and Begonias, is unusually showy.

Dahlias are grown in huge clumps, and are flowering well this year, the double forms being particularly good. The borders are very gay with large masses of Portulacas, Phloxes, Helianthuses, Liliums, and other autumn flowers, whilst during the summer the annuals are generally seen to advantage here. On the grass some fine clumps of the autumn flowering Crocuses are noticeable, these being in full flower. Notwithstanding the trying summer Finsbury Park has well maintained its reputation for bedding this year, and the whole reflects credit upon Mr. Melville the Superintendent.—OBSERVER.

ABOUT APPLES AND PEARS.

As there is nothing more important in connection with hardy fruit growing than the knowledge of local suitability, it may be well to say that we are midway between Durham and Newcastle, or between the Tyne and Wear. This also might be noticed, that we are some ten days later than are districts that lie on the southern suburbs of Edinburgh. The years 1891 and 1892 being each cold and wet makes the present year's results of more than average value, as it has proved to us which varieties of Apples and Pears require the least sun to mature their fruit puds. Hereabouts, where there has been failure, it has not been owing to heavy cropping last year, as we were not so favoured, but solely due to weakness in resisting frost or to unripe wood following the previous sunless season.

The Cellini, which I consider the hardiest of all Apples, has once again demonstrated that it knows nothing of bad years. With us this useful Apple is an unfailing bearer. Regarding Lord Suffield, which is frequently alluded to as subject to canker, it is surprising to find how short a distance between orchards evidences this failing. On my place it does remarkably well, whereas with my neighbour, who has a thinner soil with a dry gravelly subsoil, Lord Grosvenor is his continuous sheet anchor. I prefer Lord Suffield, as the fruits are more shapely, and up to the present on my forty sixteen-year-old trees they remain healthy and clean. Stirling Castle is also a great favourite, but, being a tree of slow growth, it not only (like Lord Suffield) requires a free stock but may be planted closer than many others. Of course, both these Apples also do well on the Paradise, but for market growing I prefer the former. This year Potts' Seedling, another sterling variety, has been a failure, and I am of the opinion the failure has been solely due to insufficient sun last season. The more vigorous trees have not only been quite barren but the fruit on those more matured has been much short of its true character. Here Warner's King has failed through the same cause, the trees making far too much growth for bearing after such conditions. Bramley Seedling has likewise had no chance this year, but from what I saw of it at Mr. Merryweather's Southwell nurseries, this most certainly is an Apple that I shall not willingly discard.

Following such a summer as the present these two grand Apples will, I expect, next year amply compensate. After ten years' fair trial I am quite out of heart with Worcester Pearmain, but I am glad to find, with a more congenial home in the sunny south it continues to give satisfaction. It crops far too lightly for market purposes in this neighbourhood. Just noticing that Beurré de l'Assomption, Souvenir du Congrès, Marie Louise, and Marie Louise d'Uccle Pears have done best on the wall, and that the latter with Williams' Bon Chrêtien and the Hessle have done best in the open, I shall at present conclude, leaving a few further remarks on Apples to a future occasion.—Joseph WITHERSPOON.

SCARCITY OF DESSERT APPLES-BENONI.

AMONGST fruiterers in the southern towns there has been for the past few weeks a great demand for good dessert Apples. Quarrendens and Irish Peach were soon over. The last-named is not much cared for, being too soft and not bright enough in appearance. No matter how good in quality an Apple may be, if it has not colour as well it does not meet with favour in the market. Growers for sale have not in the past paid nearly as much attention to dessert varieties as they have to those belonging to the kitchen section. The result is that where really good cooking Apples could be bought for 1s. 6d. per bushel, dessert sorts were

fetching 6s. for the same quantity. A large grower and dealer had to commence selling his Blenheims and King of the Pippins three weeks ago. Even Cellini has been in great demand. All the Worcester Pearmains and Lady Sudeley were snapped up at once. A variety named Nanny Apple meets with much favour. Dr. Hogg describes it as being found about Havant and other districts in West Sussex and the borders of Hampshire. It is an Apple deserving attention; it has a bright cheek and is really good in flavour. Dr. Hogg says it is in use during October. This year it was used in August — another proof of the peculiarity of the season. Pineapple Russet deserves more attention than it receives; it has a flavour peculiarly its own. The tree is a straggling grower, and does not fruit freely until it attains some age.

There is a splendid opening for an enterprising person to plant dessert Apples to follow the earlies and be out of the way of the usual autumn and winter kinds, such as Cox's Orange Pippin. One of the best dessert Apples that I know for filling the blank in late summer is Benoni, the American variety figured last week. With me it carried an extremely heavy crop of handsome fruit. In shape it resembles well grown fruit of King of Pippins, but is perhaps rather broader at the base while it is heavily striped with red on a yellow ground. It was ready to gather this year early in August. The fruit is crisp yet sweet, in fact it has almost all the properties required in a degreet Apple in fact it has almost all the properties required in a dessert Apple. The habit of growth is of the right kind, upright, yet vigorous. It is just the sort to plant numerously in a limited space, and with a prospect of a good return for capital and labour expended.—E. MOLYNEUX.

FERTILISERS AND FEEDING STUFFS BILL.

THE following correspondence has been sent to us on the above measure, and we place the letters before our readers. There are obviously two sides to the question, and both of them important :-

> 30, Wood Street, Cheapside, London, E.C. 21st August, 1893.

SIR,—As Solicitor for the Nursery and Seed Trade Association (Limd.), which was formed for the protection of their trades, I have been requested to inquire whether the "Fertilisers and Feeding Stuffs Bill," which has been before the Standing Committee of Trade, is likely to become law this session, and whether it applies to horticultural manures. If the latter is the case, I am instructed to point out to you that such manures are sold by the wholesale and retail seedsmen, florists, and nurserymen in packets, varying in price from 6d. to £1, in the same condition as they receive the same from the manufacturers of such manures

If the Bill does apply to such horticultural manures as sold in packets, and every retailer is bound to give a certificate according to the first section of the Act, please permit me to point out that the trouble in so doing will be so great that it must put an end to the retail packet trade. I am also instructed to inquire whether it is not possible that the Act can be amended by providing that the certificate by the retailer shall be dispensed with if the packets are sold with the name and trade mark of the manufacturer thereon.

It will be impossible for a retailer of such packets to have them

analysed at his own cost.

I enclose you the names and addresses of the President and Committee of the Nursery and Seed Trade Association (Limd.), and I am requested to ask whether you are willing to receive a small deputation from them upon the subject in question if the proposed Act of Parliament is intended to include horticultural manures. Your reply will be esteemed a favour.—I am, Sir, Your Obedt. Servant, CHARLES BUTCHER.

The President of The Board of Agriculture,

4, Whitehall Place, S.W.

Board of Agriculture, 4, Whitehall Place, London, S.W 24th August, 1893.

No. 23,877.

SIR,—I am directed by the Board of Agriculture to advert to your letter of the 21st inst., addressed to the President on behalf of the Nursery and Seed Trade Association, and in reply I am to say that the President was inclined to view with favour a proposal to exclude sales of very small quantities of horticultural manures, say not exceeding half a hundredweight, from operation of the Fertilisers and Feeding Stuffs Bill; but the general feeling of the Standing Committee, to which the Bill was referred, was so distinctly adverse to any such limitation that an amendment moved in that direction was negatived without a division.

The Board have reason to think that the matter will again be brought forward at a later stage of the Bill, and in that event the matter will certainly command very careful consideration at the President's hands. In the circumstance the Board do not think it is necessary that the Association should be put to the trouble of personal attendance. They are well aware of the importance attached in many quarters to secure such limitation of the operation of the Bill as is above suggested, and the fact that the Association concur in thinking that some such arrangement is necessary will be kept fully in mind.—I am, Sir, Your Obedient Servant, T. H. Elliott, Secretary.

Charles Butcher, Esq., 30, Wood Street, Cheapside, E.C.

[This measure, brought forward by the President of the Agricultural Department (Mr. Gardner), was on Wednesday, Sept. 6th, revised by the Grand Committee of the House of Lords, Viscount Cross in the chair.

Mr. Gardner watched the proceedings. On the motion of the Lord Chancellor it was agreed that the seller of any artificial fertiliser shall state in the warranty he will have to give under the Bill that the percentages of nitrogen, phosphates, and potash contained in the product are "at least" what he has promised. On behalf of the Agricultural Department, the Earl of Ribblesdale proposed a new sub-section giving middlemen the same rights against wholesale dealers as retail buyers will have against them. This was unanimously agreed to, and several minor changes having been made, the Bill was returned to the House.

A DAY AT BUNYARDS'.

READERS of Blackmore in general, and those connected with fruit in particular, are well aware that in the Medway Valley there are many acres of land whereon fruit is grown for the market. Times and manners have changed somewhat since "Alice Lorraine" was written, and it is quite possible that there are no Martin Lovejoys now to be found in that fertile vale, but as good fruit is grown as Martin grew, and there is far more of it. Close to the particular portion of the valley where Maidstone lies are the various nurseries of Messrs. Bunyard & Co., and they are a very remarkable example of the law of development which has affected fruit growing in England. The principal nursery adjoins Barming station on the L.C. and D. Railway. Mention of this line is generally accompanied by a gird at its directors; but I refrain from following the example, not because I have not experienced hard seats and slow time, but because it would be a waste of space. I can only say that if you are going to pay the Allington nurseries a visit book to Barming from Victoria or the City on some Thursday morning when there is an extra attractive number of the Journal to study, then perhaps the weary time will be beguiled and the nurseries reached with the natural sweetness of your disposition unsoured.

Barming is a quiet station, and there is no need for surprise if a visitor finds that he has the whole platform to himself and the entire staff to wish him a cheery good morning (as though he were in the habit of going to Bunyards' every day) and take his ticket. If he crosses the line and passes through a little swing gate he is in the nursery and amongst the fruit at once. I suppose I need hardly say that this is an improvement upon going to Maidstone and having to work back two or three miles by road. This has been done, but never without a profound and comprehensive disgust taking possession of the doer after the truth had come home to him. Before the round of the nursery is completed most people have had enough pedestrianism for a time without tacking on the unnecessary miles. There are now about 100 acres, besides land elsewhere under Strawberries and shrubs. Mr. George Bunyard is an able and far-seeing man. He has kept himself on the front of the wave which has swept ignorance and prejudice before it and taught that good fruit can be grown in our own country as well as abroad. He has built up a huge and prosperous business by sound knowledge, great yet prudent enterprise good work and unwearied perseverance

enterprise, good work, and unwearied perseverance.

Allington without Mr. Bunyard can hardly be called itself, and my visit happened to be paid when a temporary but distressing indisposition prevented him from doing the honours of his nursery. But he has a manager of admirable qualities in Mr. Buss, who is well fitted to take command when his chief is hors de combat. Incidentally I might remark on the good spirit prevailing between employer and employed in the Bunyard nurseries. "I have first-rate men," "We have a first-rate master." Such are the expressions of mutual esteem and respect that are heard; and there is little doubt that the existence of these cordial relations has much to do with the excellent qualities of the trees sent out. Mr. Bunyard has set his heart on supplying the best material, and his assistants do their best to support his wishes.

THE CORDON-STANDARDS.

In making a few jottings of the nursery and its contents, I will draw attention first to a class of tree that has become very popular and grows yearly in favour. "Amateurs' standards" is the term by which the trees are known at Allington. They might be called cordon-standards, in their younger days at all events, for then they combine the two systems. Most fruit growers are aware that the stems of standards on the Crab stock are feathered for a year or two in the nurseries in order to thicken them, and that eventually the shoots are removed. The amateurs' standards here referred to are budded on the Paradise stock, and fruit spurs form on the stems, yielding produce while the head is developing. It might almost be said that stem and head act as a brake on each other. The branches have no tendency to become luxuriant owing to the check imparted by the fruiting of the stem spurs. They develop steadily and sturdily; but when they have gained strength, solidity, and maturity, the brake begins to act the other way, the stem shoots weaken, and eventually they are cleared, leaving the standard with a good head of fruiting branches. This is the theory of the matter, and the practice well supports it. The trees are never staked. There are great numbers of them standing up stiff and straight in different parts of the nursery lined with fruit, and it is not surprising that visitors take to them.

THE "GRIDIRONS."

The Bunyard gridirons are very different articles to those of the ironmonger. They are dwarf trees with two horizontal shoots right and left, from which spring uprights a foot or so apart. These are cordonised, to coin a word, the side shoots being pinched and spurred so as to keep

the trees thin and admit abundance of air. There are plenty of these fruiting freely, the Apples on the Paradise, and the Pears on the Quince, many varieties being represented. Owners of villa gardens would find such trees admirable for forming a dividing line between flower and vegetable quarters, while in larger places they would play the part which espaliers do now in some instances, coming in very useful for the sides of walks, and for filling up blanks on walls. This is an excellent class of tree, not taking up a great amount of room, but giving a little freer play for inherent energy than horizontal cordons.

SOME WONDERFUL MAIDEN PEACHES.

Mr. Bunyard's practical manager takes great interest and pride in his work, but I doubt if there is anything which he regards with greater complacency than a large quarter of maiden Peaches. These young trees, budded last year, have been stopped and have pushed about a dozen shoots each, the whole framework covering a space 3 to 4 feet across and high. They have made wonderful progress, and must have enormous root power. The shoots are very stout and clean, and triple buds are plentiful. It is not easy to credit that such strong planting material could be evolved so quickly, but the facts are there. With good management after planting these could very quickly be developed into well furnished fruiting trees, and that at a first cost almost absurdly low.

THREE PROMISING NEW PEARS.

There were two new Pears fruiting well to which I would call special attention, because from their seasen of maturity, fine appearance, and good flavour they should prove valuable in private, and perhaps also in market gardens. One is called Beurré Mortillet, and I find it referred to as follows in the firm's catalogue of last year:—"Very large; exhibited very finely by Messrs. Veitch at Crystal Palace Show, 1890; not yet proved; very handsome." It is proving to be an acquisition on trial. It is ready in September and October, and has excellent quality. The fruit is very large and richly coloured; it is peculiar in appearance, having very prominent fleshy folds at the stalk. But the second novelty, Marguerite Marrillat, is still more promising. It is also, 1 understood, a continental variety, introduced by the Chelsea firm. It is ready now, and is very luscious and melting. It is very large, heavy, and brightly coloured, ridgy, and uneven in outline. The variety bears freely, and makes a fine cordon. It will be surprising if this does not become a very popular Pear. It is finer in appearance than Williams' Bon Chrêtien, and does not "go" like that favourite sort. A third Pear novelty worth mentioning is Dr. Jules Guyot. This has a Williams' look about it, but is claimed to be an improvement on Bon Chrêtien, being larger, finer in appearance, and free from spotting.

THE NEWER APPLES.

I may as well begin with Bismarck, for if I did not I should soon drift into it. There is one stretch of about 2000 which is very impressive, the trees being vigorous and healthy, merging naturally, as is the way of this grand variety, into a pyramidal habit. The planting bushes are very fine. There is plenty of large and richly coloured fruit, but a great deal of it has been almost cooked by the excessive heat. Lady Sudeley is conspicuous by its upright, stay-at-home habit, and by its peculiarity of bearing towards the tips of the shoots, requiring hardly any pruning, merely thinning. It has borne its beautiful fruit well this year. Wealthy is grand both in size and colour. A seedling of much promise has been raised by crossing Cellini and Blenheim. It has large fruit of the well-known Blenheim form and full of ruddy colour. Young bushes are cropping well, and the fruit, I was informed, keeps till after Christmas. Of another Apple which is under trial much cannot be said at present. It is a Tasmanian, sent over by a brother of Mr. McIndoe. It resembles Grenadier in growth and Bismarck, so it is said, in fruit. It is so precocious that according to report it bears well on wood of the previous year. Well, we shall see. May it realise the rosiest anticipations, and prove to be another Bismarck.

THE OLDER APPLES-TREES AND FRUIT.

The firm showed at the Agricultural Hall what splendid exhibition trim they are in this year, and they have some magnificent fruit still to come. I am going to say a word about some of the most popular sorts, here referring to the tree, there to the fruit. One batch of two-year-old Potts' Seedling, 6 to 7 feet high and furnished with stout side shoots, numbers about a thousand, and there is about the same number in a quarter of Gascoyne's Seedling, standards, with fine heads developing. Of standard Bramley's there are about 3000, all excellent trees, and it is interesting to note this grand orchard variety fruiting very well in a young state on the Paradise, but it will not do this on some heavier soils. Two-years-old Yellow Ingestries—or Summer Golden Pippin as it is called in Kent—is largely grown both as a bush and standard. There are thousands of Ecklinvilles; this is not the great Irishman's best year, the fruit being scabbed and specked, but our Kentish friends know its great merits too well to desert it. Pyramidal Grenadiers are grand trees, and the fruit is enormous in size as well as being perfectly clean. As grown at Maidstone it is a high class Apple.

Lane's Prince Albert only needs mention, for it is invariably good, but planters should not ask for this as a standard. It is naturally suited for bush culture and to get it up is worked on the Goff. Colonel Vaughan is fruiting finely as a cordon. The fruit is of unusual size, beautiful in colour, very juicy and refreshing. It is a dessert variety worth growing. Frogmore Prolific is in admirable order, and so are New Hawthornden

and King of Tompkin's County. Mention of the last two reminds me how widely they differ in their adaptability to cordon culture. New Hawthornden, with Grenadier, Lord Suffield, Stirling Castle and others, make admirable cordons, but the King will not stoop to so modest a position. Cox's Pomona and Baumann's Red Winter Reinette display the most brilliant of colours. Two high-class dessert varieties which ought to be better known are Rosemary Russet and Egremont Russet. The former comes in with Sturmer and has delicious flavour, while the latter has soft yellow flesh of very agreeable quality. Worcester Pearmain is in magnificent condition. There never seems to be enough of this variety to meet the market demands, and 8s. a bushel is the tempting return which two well-known growers have received. Market men are taking this hint and planting extensively. Golden Spire, Queen Caroline, Lord Derby, Mère de Ménage, and Washington form an excellent quintette to finish with, and all are finely represented. Of the last named, with its beautiful appearance and good flavour, there are some splendid pyramids and it also succeeds as a standard.

STOCKS-MANURE AND WEEDS.

There have been some complaints of the stocks not doing well this year, but, despite the drought, those at the Allington Nurseries are in splendid condition. The Nonesuch has done better than the English Paradise. There is a piece of 35,000 recently budded that forms a striking sight. The ground is well fed. A great deal more value is attached to cloth bits (not shoddy) than most people would give, and a far higher price is paid for it than the majority would be inclined to part with. It is a sustaining and lasting manure. As to weeds, Mr. Buss's proud claim that a barrowload could not be found in the whole 100 acres was readily admitted. The land is thoroughly clean, and the whole place in admirable order. Good soil, kept free from weeds and judiciously fed, is one of the secrets of Mr. Bunyard's extraordinary success.—W. P. W.

[Mr. Bunyard has sent us very fine samples of Kentish fruit, with others of the same varieties grown under less favourable conditions. The former may be taken to represent profit in fruit culture, the latter the reverse—the produce it may be expected of exhausted trees that cumber the ground.]

SUBURBAN SPARROWS.

"DAVIES DUFFRYN" (page 214), wishes to know how sparrows behave in the suburbs of towns. The cheeky birds in my garden are quite opposite to those in Mr. J. Witherspoon's. His sparrows appear to be pets, but mine are decidedly pests. They eat, or pull in pieces, what they ought to leave, and leave untouched what they ought to eat. They appear disgusted with caterpillars, and to have no taste for aphides. They attack yellow Crocuses voraciously, and either do not like to see two flowers open at the same time, or prefer seeing the petals littered on the path. It is the same with Primroses, which the scavengers will not let alone.

They play havoc with the buds of fruit trees of all kinds—"a worm in them!" say their sentimental friends. So far as I am concerned it might as well stop there as the buds be torn off; but I do not believe in this worm theory. It seems a handy refuge for the destitute who do not know what else to say. Were there worms in the Crocus petals?

I bought four dozen young fruit bushes about ten years ago, and have certainly not had 4 lbs. of fruit from them during the whole of that time. If the scoundrel sparrows do not tear off all the buds in spring they take all the fruit that appears long before it is ready for use. It is wrong and cruel to shoot the birds, say their warm defenders, and fruit should be netted against them. Then is it not wrong to deprive them of food and starve them to death? I should prefer to be shot quickly than starved to death slowly; but we cannot shoot in small suburban gardens, where the sparrows appear to be alike masters and scourges.

They take away filth, says their champion. Are flowers and fruit filth? These they assuredly take or destroy, and they do not interfere with caterpillars and insect pests. Mr. Witherspoon is no doubt a very clever man, but he clearly does not understand suburban sparrows, and if he had them to deal with I suspect he would not care in the least

who diminished their numbers.

There are also, as I know, thousands of sparrows not of the caterpillareating kind in the country, but they devour Peas and grain voraciously, and strip fruit trees and bushes of buds. They are an intolerable pest in many places, and a price has to be put on their heads. Even bird lovers and humanitarians who see this depredation of the shoals of birds raise no protest against the practice any more than they would against killing rats and mice if they did half so much mischief as the sparrows.

If these could be evenly distributed all over the country there might be less to complain about, but I am inclined even then to imagine that a number could be disposed of with advantage. I have read somewhere of a happy time when every rood of land maintained its man, and am inclined to think that one sparrow to the rood would be ample, and that one could be very well dispensed with. My unfortunate share is approximately about 200 to that extent of land, and I should be well pleased for Mr. Witherspoon to have the whole of them if I were sure they would change their tactics with the change of scene, or under the good influence of his well-behaved pets, for I do not wish him any harm.

—An Afflicted Suburban Amateur.



THE WEATHER IN LONDON.—Fine dry weather still continues in the metropolis and the south generally. Saturday last, however, was decidedly cooler than it had hitherto been for several days. Since then the nights have been rather cold. At the time of going to press it is bright and clear.

- DURHAM, NORTHUMBERLAND, AND NEWCASTLE HORTI-CULTURAL SOCIETY. — We are informed that the officials of this Society sent a beautiful wreath on the occasion of the funeral of Lady Armstrong, at Rothbury, on the 6th inst. Mr. Elliot and Mr. Bertrand, Lord Armstrong's head gardeners at Jesmond and Cragside respectively, were among the chief mourners. Lady Armstrong took great interest in gardening, and possessed considerable knowledge of plants and their culture.
- Honours to a French Horticulturist.—We understand that Mons. Edouard André has been appointed as Chevalier of the Order of Leopold. M. André is a landscape gardener, a traveller, a botanist, a Professor in the National School of Horticulture at Versailles, and one of the editors of the "Revue Horticole."
- —— REV. LEONARD BLOMEFIELD.—The death of the Rev. Leonard Blomefield, who was the oldest Fellow of the Linnean Society, took place recently. Mr. Blomefield was in bygone days known as Leonard Jenyns, he having assumed the name Blomefield at a later period. Mr. Blomefield, who was elected a Fellow of the Linnean Society so far back as 1822, was ninety years of ago at the time of his death.
- AN INTERNATIONAL EXPOSITION, it is stated, will be held in the city of San Francisco, State of California, beginning on January 1st, 1894, and continuing for six months. The classification will include Department A—Agriculture, food and its accessories, forestry and forest products, agricultural machinery and appliances, horticulture, viticulture, and pomology. Mr. M. H. dc Young is the Director-General and President of the Executive Committee.
- —— CHEAP APPLES.—Fruit is said to be so plentiful in Lincolnshire this year that growers are experiencing the greatest difficulty in disposing of the produce of their orchards. The markets are so glutted, especially with Apples, that the sales in many cases have not realised sufficient to pay the expenses of sending to market. Plums also have been a bad trade, and those that were damaged at all by wasps have been practically rendered unsaleable. The average price of Apples is about 2d. per stone. This, however, applies to inferior fruit; the better samples realising fair prices.
- PANSIES.—Is it generally known how rapidly Pansies reproduce? I broke up an old bed a fortnight ago, and made a new one with the seedlings I found in it. Some of these are already in flower, and the bcd promises in another fortnight to be a mass of bloom. Of course they have been having as much water and almost as much sun as they could possibly require.—A. C.
- —— CHEAP MUSCAT GRAPES.—It is stated on good authority that fair samples of Cannon Hall Muscat Grapes were sold in a fruiterer's shop in the metropolis the other day for 8d. per pound. The Grapes had been grown in Jersey, and although the bunches "were rather small," it is said that the berries were large, "the colour fairly good, and the flavour well developed."
- IMPROVING THE QUALITY OF FRUITS.—Nothing is more common, in conventions of fruit growers, than to hear one man say of a certain variety that it is tasteless and worthless, while the following speaker may laud that variety as one of the highest flavour and best quality. The truth is, says "Mcehan's Monthly," that ripening fruit is an art, which is only to be learned by intelligent experience. Some kinds of fruit require to be gathered a little before ripe, in order to produce the highest flavour, while others require to be dead ripe on the trees before they are gathered. Again, to get the best quality some require to be ripened in a dark and cool place, while others require a warmer and lighter situation. All this has to be learnt by experience, and one of the pleasures of amateur gardening is to study these points, with the view of the production of the best class of fruit.

- GARDENING APPOINTMENT.—Mr. R. Griffiths, from Glewston Court Gardens, has been appointed gardener to Miss Bernard, Over-Ross House, Ross, Herefordshire.
- PLUM CULTURE IN CALIFORNIA.—Some people in this country have but a very faint impression of the immensity of the fruit interest in California. Take, for instance, the Plum. One single grower, says the "Hanford (California) Journal," has 544 acres planted with the Prune variety. On this tract alone are 66,000 trees.
- Gardening in India.—It is stated "that Mr. J. M. Henry, for the last fourteen years Superintendent of the Baroda State Gardens, has now been transferred wholly to the landscape department, and will devote the whole of his time to that work, under the direction of Mr. W. Goldring, who remains in England for eighteen months before returning to India to carry out the many new parks and pleasure grounds H.H. the Gaekwar contemplates making throughout his extensive territory for his people."
- Potash and Peach Yellows.—Mr. B. Von Herff, 93, Nassau Street, N.Y., contends that a want of potash in the soil produces frequent and disastrous results to the Peach grower. All diseases or any disease troubling the Peach grower can be found in soils abounding in potash; and, moreover, it is so well known that the manifestation known as Peach yellows, and similar manifestations in many other trees, are produced by root fungus, that there is no need to call in the lack of any mineral ingredient to account for them. When it comes to the question of a good fertiliser for the Peach, kainit or potash salts may take a place among valuable articles. Anything that may aid in checking fungus growth may be useful aside from fertilising properties. Kainit may do this. Even boiling water poured freely around the roots of fungus-infested trees has been found excellent.
- DISEASES OF GLOXINIAS.—In France Gloxinias have been considerably injured by various diseases. The exact nature of the troubles does not seem to be very well understood, as some are supposed to be due to fungi, and others to bacilli. The remedies proposed are not always efficient, but good results appear to follow the use of some of them. The presence of so much disease can partially be explained by the fact that when the young plants are moved from the propagating house to their flowering quarters the sudden change in temperature weakens them and lowers their powers of resisting disease. The change should be made as gradual as possible. Another suggestion, according to the "Garden and Forest," is found in the fact that Gloxinias which are grown in new houses, or in houses before unoccupied by them, are quite free from disease, while their successful cultivation is an utter impossibility in houses which have been filled by them year after year. Great care in growing only healthy plants will undoubtedly soon become a very important factor in their cultivation, for these plants now appear to be the prey of an ever-increasing number of enemies.
- SAND-BINDING GRASS.—The Marram Grass (Psamina arenaria). the seed of which was first introduced into the colony of Victoria by the Government Botanist, Baron von Müeller in 1883, has been proved to be the most effective sand stay ever planted. Practical evidence can be seen of its value in the miles of sandhills now reclaimed by the Marram plantations, sown under the direction of Mr. S. Avery, the park ranger. So complete has been the reclamation of the lands, says a New Zealand paper, that, where a few years ago not a sign of vegetation was to be seen, there now exists a succulent Grass, eagerly devoured by cattle, and growing to a height of 4 feet. Marram Grass is practically indestructible -burning, cutting, or eating off only makes it thrive-whilst in exposed shifting sand it propagates as surely as in the most sheltered position. The Grass for transplanting has been supplied by the Port Fairy Borough Council not only to the Governments of Victoria and New South Wales, but to numerous municipal bodies and private individuals in all the Australian colonies, New Zealand, and Tasmania, and in no single instance has it failed to thrive. The Grass is supplied at the actual cost of digging, packing, and carting to the wharf or railway station, Port Fairy, which does not exceed 25s. per ton. The following directions how to plant Marram Grass have been prepared by the park ranger :-The Grass to be planted in rows at a distance of 6 feet apart, the space between the plants to be at least 2 feet. The depth to which each plant is put into the sand depends on the nature of the sand. If in sand not likely to drift for two or three months, 9 inches will be deep enough; but in very loose and shifting sand the Grass should be placed from 12 inches to 15 inches deep. A "plant" consists of as much Grass as a man can conveniently hold in his hand.

- —— DEATH OF MR. CHARLES VERDIER. Rosarians and others interested in horticulture will regret to hear of the death of Mr. Charles F. Verdier, which occurred a week or two ago. A gentleman who knew Mr. Verdier for forty years writes that "he has died ripe in years and honours."
- —— SPECIES OF OAKS.—According to an American contemporary, "Prof. H. M. Ward states that there are probably more than 300 species of Oaks (Quercus), of which the majority belong to North America, Europe, China, Japan and other parts of Asia. There are none in Africa south of the Mediterranean region, nor in South America or Australia. Some remarkable species are found in the Himalayas, and many in the Malayan Archipelago."
- DESTROYING WEEDS.—Several correspondents have written to "Meehans' Monthly" recently, as to how to destroy noxious weeds. Poison Ivy, Dock, Canada Thistle, and Dandelions are the subjects of these varied inquiries. Intelligent gardeners know that no plant can live long without leaves. If, therefore, a plant is cut off to the ground soon after making leaves in the spring, it is generally destroyed at once; but sometimes another or second growth will appear, of a more or less weak character, and if this is again cut, the plant will surely die. Nothing is easier than to destroy these weeds when this principle is kept in mind. The writer of this paragraph has known a whole half acre of Canada Thistle entirely eradicated by having a boy cut them beneath the ground with a knife early in spring. Very few produced leaves the second time, but these were again cut as soon as perceived, and the result was to eventually destroy every plant.
- ENGLISH CARNATIONS IN AMERICA.—Writing from Wellesley, Massachusetts, to an American contemporary, "T. D. H." says :- The English type of Carnation has failed in every trial here, undoubtedly owing to the marked dissimilarity of climate and also to the fact that in each country varieties suited to a special plan of culture have been selected. In that country the plants are layered in the autumn, wintered in a cold frame, and grown in pots the following season for the next winter's bloom. Here also selection has been in the line of a particular mode of cultivation, but the plant is different and characteristically American. Cuttings are rooted in January, planted out of doors in May, and are in bloom by the second week in July. I recently had the pleasure of seeing a splendid collection of Miss Fisher, white; Hector, scarlet; and Nobscot, scarlet, in bloom and loaded with flower buds, while along with these were another lot of imported varieties layered last autumn, which were very much later and did not look at all promising. There are no good rose-coloured varieties as yet, but two on trial look encouraging. These are Ada Byron and Nicholson. An elegant yellow-flaked variety also promises to be a good summer bloomer. If neatly staked, as these plants were, they make a fine appearance, and at the same time the flowers are kept from injury by heavy showers of
- APPLES IN AMERICA.—The following extract from a transatlantic contemporary will give readers an idea as to what the Apple crop is in America this year: - "The prospective crop of Apples, commercially considered, as indicated by returns of our correspondents for July, will be light, and in many sections a complete failure. The high returns in June from districts then in bloom have been materially lowered for July, the set has been poor, and the drop, still continuing, severe. Thus in Maine and New York the percentages are lowered twenty-two and nineteen points respectively. These States are by far the most important of the eastern Apple district, and failure there makes the sustained percentages of New Hampshire, Rhode Island, and Connecticut of little significance as regards surplus production, though it are also shown in Vermont, Massachusetts, and Pennsylvania. In New Jersey, Delaware, and Maryland a fair to good crop is expected. The percentage in the latter State, however, has been reduced sixteen points by the dropping of immature fruit, and is liable to still further reduction from the same cause. Virginia has sustained her percentage, and will probably have half a crop. In the Ohio Valley and Missouri fruit belt things have gone from bad to worse. The frequency of the word 'failure' in the notes of the correspondents throughout these sections ominously emphasises the exceedingly low condition, as shown by the percentages. Michigan has declined twenty points since the June report. The high condition of Apples in the Pacific coast region still continues, and a good crop is confidently expected. The fruit is dropping somewhat in Oregon, where the decline since June, though slight, has been greater than in Washington and California."

—— PRICES FOR POTATOES.—It would appear that in some parts of the country farmers are obtaining fair prices for their Potato crops. An auction of 150 acres of growing Potatoes was recently held at the Stewponey Hotel, in the Stourbridge district, when 9 acres of Bruce and Magnum Bonum Potatoes realised £17 5s. per acre, these being offered by Mrs. Giles of Ashwood; and 111 acres of Magnum Bonum and kidney Potatoes, belonging to Mr. T. Dorrell of Enville, made £17 per acre; and 11 acres of Magnum and Stourbridge Glory Potatoes, belonging to Mr. G. Elwill, £15 5s. per acre.

- THE EVENING PRIMROSE AS A VEGETABLE.—The "Lyon Horticole" has a long and interesting chapter on the great value as a vegetable of the common Enothera biennis, the very common weed known as Evening Primrose. Though introduced, it says, from America as early as 1614, it has only recently been known as a kitchen vegetable. It says that it is becoming wild in France, and is known by the common name of Donkey Flower. It questions the accepted origin of the name, and contends that the botanical name is rather derived from onagra, and not, as generally supposed, because the roots exhale the odour of wine. From the shape of its roots it is called in France the Leg of St. Anthony. However, it is as a vegetable that we have to do with it. If the seeds are sown as soon as they ripen young plants grow at once, and the plant throws up flower shoots early next year. This is the case with all plants known as biennials; but if we save the seed and sow it in the spring at the same time as we do Salsafy, Parsnips, and similar biennials, the plants make roots only that season instead of flowers. The author of the paper compares the roots with the Salsafy in value. It is stored away for use from November to April. Under good culture, it states, the roots develop to quite a large size. It also states that it is far superior as a vegetable to the recently introduced Stachys from Japan.

- ROOT FUNGUS.—Intelligent raisers of trees and plants must be familiar with the work of root fungus, and with its effects on the foliage. In most cases the result is to turn the leaves from deep green to a golden yellow, as in the Peach, the Norway Spruce, and the White Pine. In the Carnation the glaucous grey green is changed to a sea green, and so on with other things. The rapidity with which the mycelium, or "spawn," as gardeners term it, travels under ground is wonderful. In a bed of Carnations planted out in early spring for removal in the fall to the Carnation house the writer saw a circle containing a few less than 100 plants infected, and which had to be This fungus had started from some half-decayed wood, and then had radiated some 15 feet to the circumference of the circle infesting every Carnation root in its march, and this 15 feet had been all developed in four months certainly, and probably much less judging by the fact that the leaf tint had all been completely changed. Just how the change is effected so as to give the yellows to the Peach, Spruce, Pine, and other plants, is not known. No trace of the original fungus can be found in the woody structure, yet the wood impregnated with some deleterious substance is capable of carrying the disease to other plants by inoculation. But the fact remains that root fungus is the primary cause.—(" Meehans' Monthly.")

- A CROP OF FINE APPLES.—Wells Palace and some part of the grounds are surrounded by a moat and high wall. Against a sunny portion of the latter, and within a few feet of though well above the water, Mr. J. B. Payne, the head gardener in charge of the place. some years since planted several Apple and Pear trees. From the first these trees thrived and fruited well, and I have seen several good crops of fine fruit on them. Apple Peasgood's Nonesuch has repeatedly been very fine, but this year the crop quite eclipsed anything seen on the tree before, and, as far as my experience goes, anything of the kind ever seen elsewhere. Early in August I counted sixty-two fruits on the tree, every one of which were quite equal to taking prizes at leading shows in the west of England. Recently Mr. Payne exhibited twelve of the fruits at Bath, and it may safely be asserted, nothing else in a generally excellent Show attracted so much attention. At one time I saw not less than a dozen policemen discussing the merits of this particular dish of fruit, and the member of the force who happened to be in charge of that end of the tent was quite delighted when a medal, in addition to the first prize, was awarded to Mr. Payne. Those twelve fruits weighed in the aggregate 15 lbs., the heaviest being 16 inches in circumference, and weighing 22 ozs. All, in addition to being large and well formed, were richly coloured. Mr. Payne has good cause to be proud of his production. -W. lggulden.

- School Gardens.—I was much interested in Mr. Wright's article on this subject (page 201). He correctly remarks that it is not a "novel idea," for I well remember thirty-seven years ago the schoolmaster of the national schools at the village of Rocester in Staffordshire. Mr. Jenkins, suggesting to some of us lads that we should make flower borders round the playgrounds. As space was limited and many wished to take part in the work it was arranged that a lad of the "first class" (no "standards" then) should make and keep the portion allotted to him; having his "chum" for assistant. I remember it gave some of us a good deal of pleasure, and brightened up the barren yards during the summer. Nor were the girls forgotten, for we made their borders too. About a dozen of us each had a plot of ground in a field for growing vegetables, but there was not any provision for instruction, so we were dependent for this on our respective "dads." Truly this is very meagre compared with the splendid facilities afforded to the present school boys of Surrey, still it was a step in the right direction; and probably one of the earliest attempts to instil a love for gardening into the minds of the youths of the working class, and as such is, I think, worthy of being placed on. record.—T. S., Henbury Hill.

CLERODENDRON TRICHOTOMUM.

WHEN flowers of this fine hardy Clerodendron were exhibited by Messrs. J. Veitch & Sons, Chelsea, at the recent Agricultural Hall Show they attracted much attention, and the Floral Committee of the Royal Horticultural Society awarded a first-class certificate. As a rule the blooms appear in September, and, as will be seen by referring to the illustration (fig. 35), they are produced in terminal cymes. They are white with a reddish purple calyx, and are fragrant.

Clerodendron trichotomum is native of Japan, and was introduced many years ago, but it does not appear to be generally grown. It is a vigorous growing shrub, frequently attaining a height of 8 feet in sheltered positions. The leaves are dark green and comparatively large, being about 6 inches in length and proportionately wide. This species is sometimes described as a greenhouse plant, but it is quite hardy, and forms a striking feature in a shrubbery at this period of the year.

ROYAL HORTICULTURAL SOCIETY.

SEPTEMBER 12TH.

THERE were comparatively few exhibits at this meeting, and the attendance was not very large. Fruit was, however, well represented, and there were some good collections of Roses and Dahlias. Orchids were likewise fairly well shown.

FRUIT COMMITTEE.—Present: P. Crowley, Esq. (in the chair); Messrs. John Lee, T. F. Rivers, Harrison Weir, G. Bunyard, J. Cheal,

W. Warren, A. Dean, H. Balderson, J. Smith, G. Norman, W. H. Divers, G. Wythes, T. J. Saltmarsh, and J. Wright.

Mr. W. H. Divers, The Gardens, Ketton Hall, Stamford, sent a seedling Peach raised from the Byron Nectarine, fruits medium sized, round in the standard like Green Misnance for the standard greatly and the standard greatly and mottled like Grosse Mignonne, a freestone of excellent quality, ripening several days later than Lord Palmerston. The variety is named Duchess of York. An award of merit was unanimously awarded, another year's trial being thought advisable before granting a first-class Messrs. Robert Veitch & Son, Exeter, sent their new Peach Late Devonian, rather small dark coloured fruits grown in the open air and not in the best condition, some being distinctly over-ripe. No award was made. Mr. J. Miller, The Gardens, Ruxley Lodge, sent dishes of splendid Peaches grown against an open wall, and a cultural commendation was unanimously awarded.

Mr. Walter Weir, Acton Park Gardens, Wrexham, sent bunches of his new Grape Cape Muscat, berries black, ovoid, of good size, and well coloured. It is a very refreshing Grape with a combination of Muscat and Black Hamburgh flavour, and the crackling skin of Lady Downe's Seedling. The seed was received by Mr. Weir from the Cape, hence the name given to the variety. The bunch somewhat resembles Alicante. An award of merit was unanimously awarded, and still higher honours

may be in store if better specimens should be forthcoming.

Mr. J. B. Payne, Palace Gardens, Wells, sent twelve magnificent fruits of Peasgood's Nonesuch Apple, gathered from a tree trained against a cold, damp stone wall supporting a terrace, aspect south-east. The tree has been planted seven years, and covers a space 17 feet wide and 14 feet high. The crop this year was thinned to sixty-two fruits, none weighing less than 1 lb. The fruits sent would much exceed that weight, and were beautifully coloured. No other kind of fruit had been found to succeed against the wall. A bronze Banksian medal was unanimously recommended.

Messrs. W. E. Browne & Son, The Nursery, Wells, sent a dish of very large Apples named Monster Pippin, for a certificate, but it was determined to be Warner's King; also a dish of Bartlett's Glory a splendid Apple resembling Cellini in appearance, but much larger and firmer, six fruits weighing 7 lbs.; in season from November till January. It was raised by a market gardener, whose name it bears (award of merit).

Messrs. T. Rivers & Son sent a box of Golden Transparent Plum, a seedling of good size and delicious flavour, a freestone, full of honey-like juice. It was regarded as the richest yellow Plum ripening at this season of the year, and a first-class certificate was awarded.

Dr. P. H. Emerson sent a collection of Melons grown in the open ground in a sheltered garden near Broadstairs, Kent. Belgrade (Cantaloup) was small, but better in quality than many that have been before the Committee as grown under glass. A vote of thanks was accorded, also to Mr. W. H. Pitcher, Albury House, Surbiton, for firm fleshed Tomatoes, and to Mrs. Crawford, Galton, Reigate (Mr. W. Shawgrove, gardener), for ripe and good second crop fruits of Strawberries Black Prince and Vicomtesse Hericart de Thury. Mr. Shawgrove also sent seven Pears, grand fruits of Doyenné Boussoch, Beurré d'Anjou, Marie Louise, Beurré Diel, Maréchal de Cour, Doyenné du Comice, and

the ordeal at Chiswick as good croppers with handsome tubers of high quality when cooked.

A number of coloured illustrations of fruits by Mr. Oster, draughtsman to Messrs. J. & A. Cheal, were placed on the table. Some of the fruits were very well represented, and with practice Mr. Oster may develop into an excellent fruit artist.

FLORAL COMMITTEE.—Present: W. Marshall, Esq. (in the chair); Messrs. Chas. T. Druery, H. B. May, R. Dean, G. Stevens, Frank Ross, J. D. Pawle, J. T. Bennett Pöe, Charles Noble, and the Rev. H. H. D'Ombrain.

Messrs. H. Cannell & Sons, Swanley, sent a collection of Cactus and decorative Dahlias comprising many new varieties of merit. The best amongst these were W. H. Myers, Duke of Clarence, Mrs. Douglas, Mrs. Hawkins, Maid of Kent, Princess Christian, Robert Maher, Claribel,



FIG. 35.—CLERODENDRON TRICHOTOMUM.

Fondante de Cuerne. A cultural commendation was unanimously awarded. Rev. J. H. Brown, Bedstone Rectory, Shropshire, had splendid fruits of Lane's Prince Albert Apples, not in the best of colour, but unusually large, well meriting the cultural commendation recorded. Mr. W. Bannister, The Gardens, Cote House, Westbury-on-Trym, sent twelve dishes of Pears, well grown, but not nearly so large as Mr. Shawgrove's (cultural commendation).

Messrs. T. Rivers & Son staged twenty-five dishes of fruit, including Apples, Pears, Plums, and Peaches, very fine specimens indeed, some being seedlings, and a silver Knightian medal was unanimously recommended; also to Messrs. John Laing & Sons, Forest Hill, who sent ninety dishes of Apples and Pears, the leading varieties being represented in a bright and good condition.

Messrs. Sutton & Sons sent splendid Onions of the variety A1, which received the highest number of marks of merit in the Chiswick trials, and a first-class certificate was at once awarded; also for dishes of their Windsor Castle and Triumph Potatoes, after passing with credit through

Kentish Invicta, and Cannell's Gem. An award of merit was adjudged for the last named variety, and a small silver Banksian medal was recommended for the whole. Messrs. W. Paul & Sons, Waltham Cross, sent a charming collection of Roses, including ten boxes of blooms, as well as various miscellaneous bunches. The flowers were delightfully fresh for the time of year, and it is not often that one sees such fine blooms in September. Particularly good were L'Ideal, La France, Clio, Pride of Waltham, Mrs. Jowitt, Grace Darling, Danmark, Star of Waltham, W. A. Richardson, White Lady, Ella Gordon, Eclair, Marie Van Houtte, and Duke of York, the last named being a new China Rose. A silver Flora medal was recommended. Messrs. T. H. Crasp and Co., Clyne Valley Nurseries, Swansea, sent some bunches of Asters and Celosias, the flowers being fresh and brightly coloured. A bronze Banksian medal was recommended. A box of new single Dahlias came from T. W. Girdlestone, Esq., Sunningdale, and for four of these awards of merit were adjudged. They were Golden Locks, Phyllis, Demon, and "M.C.C."; descriptions of these will be found elsewhere. The best of

the other varieties were Puck, Cinderella, Jack Sheppard, Yankee, and Splash. Mr. May, gardener to Captain Le Blanc, Northaw House, Potter's Bar, sent a dozen blooms of Dahlia Mrs. Le Blanc, a fine double

white, but no award was made.

Messrs. J. Veitch & Sons, Royal Exotic Nursery, Chelsea, sent a box of hybrid Streptocarpus, the blooms, which were rich and varied in colour, having been cut from plants grown from seed sown in January of this year. The same firm had a box of Rhododendron javanicojasminiflorum hybrids, the most conspicuous of which were Monarch, Empress, Lord Wolesley, Aurora, Ophelia, Princess Royal, and Souvenir de J. S. Mangles. A vote of thanks was accorded for these charming flowers. A collection of Cannas came from the gardens of the Society at Chiswick, and the flowers of these were exceedingly bright. The best were Gloire d'Empel (Vilmorin), Alphonse Bouvier (Lemoine), Star of '91 (Allan), and Quasimodo (Vilmorin). An award of merit was adjudged for the latter, which is described elsewhere. Messrs. Stuart and Mein, Kelso, had a few bunches of Pentstemons, and Dr. P. H. Emerson, Claringfold, Broadstairs, sent some Tuberoses that had been grown in the open air.

Messrs. Dobbie & Co., Rothesay, contributed a collection of Violas, French Marigolds, and single Dahlias, and a silver Banksian medal was recommended. Amongst the Violas Sunrise, Rob Roy, Lucy Ashton, White Duchess, Lemon Queen, Dawn of Day, Duchess of Fife, and J. B. Riding were the most conspicuous. The Dahlias were attractive, especially Wilie Fyfe, Marion, Lucy Gray, and James Cook. The same firm sent a collection of new type of "Single Cactus" Dahlias, which attracted attention. These flowers are small with narrow petals, and are richly coloured. Roses and hardy flowers were well shown by Messrs. G. Paul & Son, The Old Nurseries, Cheshunt, and a silver Flora medal was recommended. Among the Roses La France, E. Y. Teas, Eclair, Madame de Watteville, Duchess of Albany, and Général Jacqueminot were most noticeable, although the whole of the flowers were very fresh. An award of merit was adjudged for Noisette Rose Adeline Viviand Morel, which is described below. Messrs. Paul & Son also had two boxes of Phloxes, and an award of merit was given for Moliere, a very bright and distinct variety. The same firm also sent plants of Clematis Davidana, an herbaceous species that is not seen so frequently as it might be.

ORCHID COMMITTEE.—Present: Messrs. S. Courtauld (in the chair); Jas. O'Brien, J. Douglas, A. H. Smee, W. H. White, E. Hill, T. W. Bird,

H. Ballantyne, J. Jacques, and Dr. Masters.

Messrs. Sander & Co. had one of their familiar collections—choice, bright, and interesting. Habenaria carnea, for which they received a certificate a fortnight ago, was prominent in it; and there was also a pan of H. militaris, affording an opportunity of a comparison between the two forms as to size. H. carnea is about twice the size of the other. They also had Aërides Lawrenciæ, Warscewicziella Wailesianum, Miltonia Morelliana, and Cypripedium L'Unique (Lindleyana × Schlimi alba). The St. Albans firm also exhibited Bilbergia Saundersi and Cucuma Bakeriana in bloom (silver Flora medal). C. L. M. Ingram, Esq., Elstead House, Godalming (gardener, Mr. Bond), sent Cypripedium Adonis × (hirsutissimum × Curtisi) and Cattleya Alexandræ, Linden's Messrs. Hugh Low & Co. had a charming little group, in the magnificent Stanhopea Amesiana was very conspicuous. Its which the magnificent Stanhopea Amesiana was very conspicuous. ivory white glistening flowers, with their powerful and delicious Hyacinth-like perfume, were extremely beautiful. Cypripedium Brayanum, C. picturatum, and several other attractive forms were also in the collection, at the back of which was Lilium nepalense, the chocolate, green-tipped species, for which the firm received a certificate four years ago (silver Banksian medal). Messrs. Veitch & Sons contributed four Orchids, for three of which they received honours—an excellent record. They are described below. N. C. Cookson, Esq., Oakwood, Wylam-on-Tyne (gardener, Mr. Murray), sent Cattleya-Lælia Clive. R. J. Measures, Esq., Cambridge Lodge, Camberwell (gardener, Mr. Chapman), sent Cypripedium Schomburgkian, C. Hebe, and several others (bronze Banksian medal). T. Statter, Esq., Stand Hall, Manchester, received a vote of thanks for an interesting collection of Cattleyas, including Leopoldi, Stand Hall var., Parthenia X, Victoria Regina, Statteriana, and others.

CERTIFICATES AND AWARDS OF MERIT.

Canna Quasimodo (Vilmorin).—This a grand Canna sent from the gardens of the R.H.S. at Chiswick. The flowers are large, bright scarlet

with a well-defined yellow margin (award of merit).

Cypripedium × Aphrodite (Veitch & Sons).—A very remarkable and beautiful hybrid, the result of a cross between C. Lawrenceanum and C. niveum, the former being the pollen parent. The dorsal sepal is almost orbicular, the petals short and extremely broad, being about an inch across, the lip short and blunt. The colouring throughout is white or ivory, suffused with rose and dotted with chocolate. The form exhibits a peculiar combination of the form and colour of the parents (first-class certificate).

Cypripedium Clotilde Moens (L'Horticulture Internationale).—A cross between C. Leeanum and C. Haynaldianum, distinct, but leaning to Leeanum in general expression. The dorsal sepal is white with a central bar of brownish red, the basal portion green. The twisted petals are green towards the base dotted with brown, the apical area light

purple (award of merit).

Cypripedium Leonæ (H. S. Leon, Esq.).—A cross between C. callosum (pollen parent) and C. insigne Chantini. It is noteworthy for its very long broad lip, the central portion of which is green dotted with

brown, the margins pure white. The petals are blunt and the lip

reddish brown (award of merit).

Cypripedium ano-superbiens (Sir Trevor Lawrence, Bart).-This, a cross between C. cenanthum, and C. superbiens, is a very bright and handsome form. The prevailing colour is a brownish red, this suffusing petals and lip. The former are broad and spreading, the latter somewhat pointed. The dorsal sepal is broad and beautiful, being heavily lined with chocolate dots and suffused with rose. Margin pure white (award of merit).

Dahlia Cannell's Gem (H. Cannell & Sons).—This is a small flower of the Cactus type, colour deep red. It is described as a "Pompon Cactus" (award of merit).

Dahlia Demon (T. W. Girdlestone) .- A handsome single Dahlia of

a very rich dark maroon, with a fine yellow disc (award of merit).

Dahlia Golden Locks (T. W. Girdlestone).—A very bright yellow single Dahlia, with flowers of perfect form and a good size (award of merit).

Dahlia M.C.C. (T. W. Girdlestone).—A distinct single Dahlia, and one that is likely to become popular. The flowers are large, and the colour a pretty mixture of gold and scarlet (award of merit).

Dahlia Phyllis (T. W. Girdlestone).—This is a pretty single variety with flowers of good size and form. The ground colour is a dull white

flaked and spotted with magenta crimson (award of merit).

Læliv-Cattleya Epieasta (J. Veitch & Sons).—Another bigeneric hybrid, and very bright. The parents are Cattleya Warscewiczi and Lælia pumila, the former being the pollen parent. It has the Lælia The flowers are large and brilliant, the sepals and petals being

rosy mauve, and the lip rich purplish carmine (award of merit).

Lælio-Cattleya Nysa (J. Veitch & Sons).—The same pollen parent was used for this—viz., Cattleya Warscewiczi, the female being Lælia crispa. The sepals and petals are soft pinkish lavender, the crisped lip purplish

carmine (award of merit).

Phlox Moliere (G. Paul & Son).—This is an attractive variety with

fine trusses of flowers, and a rich pink shade (award of merit.)

Rose Adeline Viviand Morel (G. Paul & Son).—This is a charming Noisette Rose with miniature rich yellow blooms, margin of petals tinted carmine (award of merit).

FRUITS.—A first-class certificate was awarded to Messrs. T. Rivers and Son for Golden Transparent Plum, awards of merit to Mr. W. H. Divers for Duchess of York Peach, also to Mr. Walter Weir for Cape Muscat Grape, and to Messrs. W. E. Browne & Son for Bartlett's Glory Apple, as described in our report of the Fruit Committee.

At the afternoon meeting Mr. J. Douglas read a paper on "Garden Phloxes and Pentstemons," which was listened to by rather a small though appreciative audience. There were not so many of these flowers exhibited at the meeting as might have been expected, and had there been more they would have done well to illustrate Mr. Douglas' remarks, which it need hardly be said were of a practical nature.

PINKS.

THIRTY years ago the Pink was in its zenith of glory, but since that period it has gradually declined, until at the present time one can seldom sec a good collection. It is very difficult to account for this change; but I am inclined to think it has been caused by the introduction of so many new plants. At the present day many people do duction of so many new plants. At the present day many people do not know anything at all about the show or laced Pinks. Most gardeners grow a few border varieties to yield blooms for cutting, and beyond that no special attention is paid to the plants. There is quite as much enjoyment to be derived from growing a collection of Pinks as from Carnations. There is a variety of colours and markings to obtain that will give the true florist plenty of labour to attain.

September is the proper season to commence their culture, and to be a successful Pink grower it is necessary to start with young plants. In bygone days the old florists used to carry out most elaborate directions when preparing the soil for their Pink beds; but I think the major part of those directions can be dispensed with, for, given a good fertile soil enriched with manure, there need be no difficulty as far as soil is concerned. At the same time poor ground requires the addition of some rich manure. The latter should be dug in some weeks previous to planting; but where this has not already been done it must be attended to before the plants are obtained. A cold wet soil requires a little more manipulation than a light one. Raised beds are the best in such places, and if 6 inches above the level of the ground it will be ample. Some people plant their Pinks in October, others even wait till the spring, which is a mistake. I like planting in September for two reasons; firstly, because the soil is generally in good condition then, and the plants can make new roots before severe frosts set in; and secondly, because most of the plants obtained from nurseries are ready during this month.

The plants may be 12 inches asunder each way. Place each plant a little deeper in the soil than it was before, and press the latter firmly. A light mulching of short manure will help the plants. Should the frosts cause any of the Pinks to rise out of the soil the grower must press them down again. I append the names of a few reliable varieties:—Boiard, Beauty of Bath, Beauty, Emerald, George White, Godfrey, James Thurston, Modesty, Irene, Ernest, Mrs. Campbell, Nellie, Pilot, Rosy Morn, and William Paul.—Jas. B. Riding.



NATIONAL CHRYSANTHEMUM SOCIETY.

I do not know who is responsible for the wording of the last paragraph re N.C.S. on page 224 of your last issue, but the impression it conveys is distinctly incorrect, as my offer was in response to a personal invitation by the Secretary. Kindly correct.—Chas. E. Pearson.

CHRYSANTHEMUM SHOW AT BORDEAUX.

THE 118th Exhibition of the Horticultural Society of the Gironde will be held on the 11th to the 18th November next. It will be devoted to Chrysanthemums and fruit, in the former of which are classes provided for plants in pots, seedlings not already in commerce, cut blooms, &c. Entries must be made by the 30th prox. The Secretary is Mr. G. Michel.

EARLY FLOWERING CHRYSANTHEMUMS.

Visitors to the recent Aquarium Show, and especially such as are interested in the Chrysanthemum, must have felt much disappointment at the meagre and far from satisfactory display that the early varieties made on that occasion. When we think that we have now hundreds of varieties to choose from, is it not strange that the exhibits were almost wholly confined to old-established sorts? As is usual at the September Exhibition, there were a few of the later sorts prematurely pushed into bloom to provide examples for the Show board; but this is a mere comment by the way.

In the best collections novelties were scarce, and the competitors seemed to prefer to rely upon varieties of old standing, the principal ones being the Desgranges family, Early Blush, Mrs. Jolivart, St. Mary, Golden Fleece, Fiberta, Mrs. J. R. Pitcher, Higham, Mr. Selby, Little Bob, Blushing Bride, Pynaert van Geert, and the like. The only flowers of modern introduction were Arthur Crépey (a small yellow Japanese), Gustave Grunerwold, Samuel Barlow, and Mr. E. Rowbottom, the last two receiving first-class certificates.

Perhaps the prize list was not sufficiently attractive to induce exhibitors to stage the best new varieties of recent introduction, but even if it had been I cannot help feeling that it is anything but encouraging to arrange Chrysanthemums beside the glowing brilliant colours of the Dahlia and Gladiolus. It makes them look tawdry, washed out, dingy flowers, and out of place with such gay companions close at hand. Seen beneath a dull November sky of the orthodox peasoup-coloured hue the Chrysanthemum is intensified in colour, or is apparently so, and possesses a charm which it never seems to have at any other season of the year. It is invaluable then; but when Dahlias, Asters, Gladioli, and other flowers can be had in galore, the question arises, Are Chrysanthemums wanted? I for one cannot help thinking— No! and the more strongly if the dull unattractive washed-out blooms we saw on the solitary table devoted to Chrysanthemums at the Aquarium last week represent all that is fairest to look upon in the way of early flowering Chrysanthemums.-P.

THE ROMANCE OF A GARDEN.

In an fold-fashioned garden, sufficiently modernised to prevent the existence of too much shade at the expense of light and air, we are at once, as I often feel myself, in the present and in the past. Surrounded, not too closely, by the venerable trees which our grandsires planted and our fathers greatly loved, each of these perhaps having through long associations with human experiences a history of its own, we breathe a tranquillity as if of other days. To watch from day to day, as the lover of Nature who possesses such a garden can always do, the development, so beautiful in its indefinable gradations, of plants and flowers; to witness the Enotheras or Evening Primroses unfolding their beauties when they are touched by the cool, freshening, energising twilight, while they kept folded by day under the influence of the sun; to behold in early dew-glittering hours of summer the fresh splendours of the Lily, the Carnation, and the Rose; this, more than all Romeo and Juliet romances, constitutes, to my consciousness, the purest poetry of life. It is not long since a great general, to whom I have often spoken, with his perfect approval, of the mental elevation which horticulture can confer, said that flowers were to him the very fragrance of an existence that had seen much of strife, and the conceptions to which I have given expression are the echo of his words.

At no period are our gardens more luxuriant in their aspect than At no period are our gardens more luxuriant in their aspect than during the tranquil season of autumn. Then the dark Roses, no longer scorched by the withering heat of summer, assume their exquisite velvety hue, not difficult to discern, but difficult to define. Then, in my own garden at least, every aged tree is covered to a height of 15 feet with the glorious blossoms of the great Tropæolum, the Scarlet Runner, and the fragrant Sweet Pea, the last mentioned blooming—in consequence of the prevention of seed pods—from the end of June in consequence of the prevention of seed pods—from the end of June till the beginning of December, when the frost comes suddenly and cuts it down. Here also, at this season, border Carnations, the yellow Germania, crimson Clove, the pink-hued Raby Castle, and the fragrant white Gloire de Nancy, combine with the autumnal Roscs by which they are surrounded to produce a splendidly artistic effect

The Carnation has been described by the Dean of Rochester as "First Lady-in-Waiting to the Rose;" but during the last month, notwithstanding all her efforts to keep pace with her, the queen of flowers has been completely in the shade. Twice during the seasons of summer and autumn does the Rose assume the royal sway; during her period of repose the Carnation reigns supreme. But both have powerful rivals in Lilium auratum and Lilium speciosum, which contribute powerfully to the fragrance and beauty of the garden in their season.— DAVID R. WILLIAMSON.

LITTONIA MODESTA.

ALTHOUGH this Littonia is said to have first flowered at Kcw about forty years ago it does not appear to be generally grown in gardens,

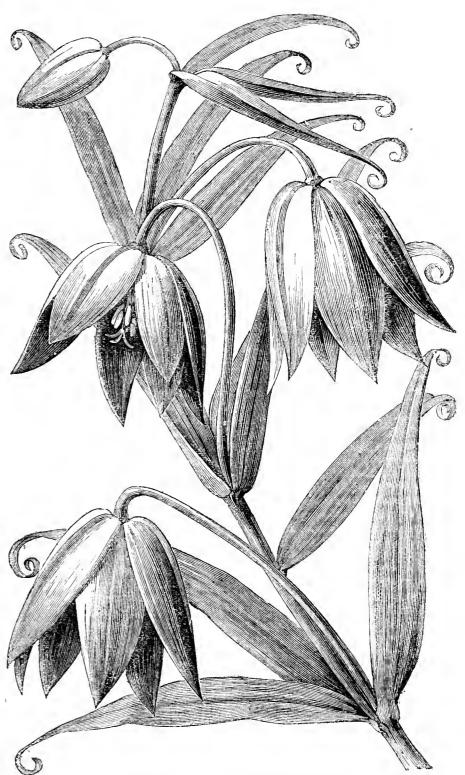


FIG. 36.—LITTONIA MODESTA.

inasmuch as a young gardener writes to say that he has "never seen a specimen, and should like an illustration of it to appear in the Journal." We comply with the request, and add a few particulars concerning the

Although nearly related to the well-known Gloriosa superba, this little plant is quite distinct enough to take generic rank, and though of an unassuming character as its name indicates, it is of graceful habit, and the freely produced flowers are brightly blurred. Littonia modesta is a native of Natal, where it was found by Mr. John Sanderson during a journey in 1851 from Port Natal to Maritzburg. In habit it is much like the Gloriosa, having tapering leaves terminating in a tendril-like point, which aids it in climbing stems or twigs. The flowers are borne in the axils of the leaves, are drooping, and bright orange coloured. The tubers are of peculiar shape, brownish, and have been compared to a Spanish Chestnut, and the manner of growth is very curious. It has been grown in a stove and in cooler quarters, but an intermediate temperature and sandy soil seem to suit it best.

"ART OUT OF DOORS."

This is the title of a work by Mrs. Schuyler van Rensslaer, and produced by T. Fisher Unwin in a form which reflects the highest credit upon the skill of the publishers. Those who have any acquaintance with New York will at once perceive that the authoress is, by name at least, connected with families of genealogies sufficiently traceable to have become historical in the oldest of the United States.

The book is written in the spirit of an enthusiast, and in a style which is flowing and agreeable, though here and there are traces of journalese that might have been corrected with advantage before the issue of the collected articles. Why, we ask, has the good old-fashioned word "mark" gone completely out of use now-a-days in favour of the words "emphasize," and "accentuate?" Nobody "marks" or "intensifies" an idea or feature in these advanced days, he always "emphasizes" or "accentuates" it. There is everything to be said in favour of enriching a language with equivalents, but in the effort to make the new comers take root writers use them with a persistency that becomes monotonous, and without always a delicate sense of what is appropriate. It may be becoming in Mr. Gladstone when making some of his oratorical flights to vary his diction with such high sounding terminology as those words above mentioned, but in more simple styles such as this one treating of gardening the older ones would have been as good or better. So, too, with many writers on gardening; no opportunity is lost of dragging in the word "environment" by way of making a small subject bigger, instead of being content with the words "surroundings," "situation," position," or the simple word "place."

Mrs. Schuyler van Rensslaer, as we said before, writes very pleasantly

Mrs. Schuyler van Rensslaer, as we said before, writes very pleasantly and voluminously upon the subject of landscape gardening, which is clearly a favourite one with her. She lays down, too, certain principles, but they are usually of a very broad and indefinite sort, and so variable with the conditions of each case as to be scarcely of any service to a novice. Indeed, without diagrams it is difficult to see how such an intricate subject could be made intelligible except to an expert. The first condition is that the materials upon which the landscape artist has to work are known. In the absence of this, the most that can be done is to indicate the most glaring faults to be avoided. As Mrs. Van Rensslaer says, the art is a difficult one, being the offspring of these latter and more highly cultured days, and therefore still in its infancy. There must be much more æsthetic cultivation of the people before the landscape-gardening enormities of the present become offensive and unpalatable. In her condemnation of the use of masses of highly coloured plants everywhere, she is amply justified, as it is but rarely that these are sufficiently subdued. Her quotation of a French artist's definition of ordinary peoples' idea of gardening is quite in keeping with the interest she shows in promoting the art. This is "the clearing up of spontaneous vegetation followed by the accumulation of strange and dissimilar objects."

In the chapter entitled "A Word for Books," Mrs. Van Rensslaer makes out a very good case in opposition to those who attack the scientific names of plants as being unwieldly and unpoetical. In some cases the vernacular names may be superior to the scientific, but in most cases they are no better or even inferior, and of course are unintelligible beyond their own frontiers. It is difficult to see why "goose foot," or "fat hen" is more euphonious than Chenopodium, or "Flower of the West Wind" than Zephyranthes. Indeed the scientific names being Latinised are better suited for the sweetness and dignity of verse than the local ones. Want of familiarity, that is want of knowledge, forms in nearly every case the ground of objection to them.

"Art Out of Doors" is written for Americans and for the climatic conditions prevailing in the United States, and therefore cannot be accepted by English people except in a qualified way. It is, however, very agreeable and instructive reading for those who are interested in the domestic life of our kinsfolk across the water, as we can note therein how the habits of our ancestors have become modified by the force of altered circumstances upon a new continent.

HORTICULTURAL SHOWS.

DERBY.—SEPTEMBER 6TH AND 7TH.

This was the annual meeting of the Derbyshire Agricultural and Horticultural Society. The entire Show was an improvement on former meetings, and the horticultural department was 50 per cent. better than it was last year. The display was certainly excellent, admirably arranged in three tents, so constructed that while each tent contained mainly a separate section, all three were connected, and the entire exhibition could be inspected as a whole under one roof, or rather, connected series of roofs. This is a first-rate plan at a combined meeting of horticulture and agriculture especially, but it is also worthy of adoption for any horticultural exhibition.

of adoption for any horticultural exhibition.

The exhibits in the section for gentlemen's gardeners were arranged in a commodious circular tent, the centre being devoted to plant groups, tastefully enclosing a bold mass of Palms. The effect as a whole was

exceptionally fine, the Palms forming a capital background to every group, while giving due importance and height to the centre. Admirably was the entire space filled in response to a generous offer by the Committee of twice the amount hitherto given. Class 1, open to all England, brought five groups into competition, the whole of them displaying much skill both in culture and grouping. The first prize was well won by Mr. J. Ward, gardener to G. H. Oakes, Esq., Riddings House, with a charming group, in which lightness, elegance, and tasteful blending of colour was exceedingly well done. There was very little blossom, the rich foliage of Crotons, with the brighter hue of Grasses, and the greenery of Palms and Ferns, combined in perfect taste to form an artistic arrangement entirely worthy of the £20 awarded it. Mr. Cypher of Cheltenham came second, a really good second, the veteran exhibitor having no reason to be ashamed of being beaten by so able an adversary as Mr. Ward. Mr. Webb, Kelham Hall, Newark, was third with also a fine group, having Palms and green Dracænas springing out of a well blended undergrowth of Ferns, Grasses, Caladiums, and small highly coloured Crotons, and most remarkable of all was the fourth prize group from the fact of the winner being Mr. Shakespere of Tibshelf, a working collier.

For twelve stove or greenhouse plants Mr. Finch of Coventry was first with large, well-finished specimens, Erica Marnockiana, Crotons Prince of Wales and Queen Victoria, Erica Atoniana Turnbulli and Ixora being the most noteworthy as noble specimens in perfect condition. Mr. Vere, gardener to — Gisbourne, Esq., Allestree Hall, was second. He also had a first prize for grand specimen Lycopodiums. For a collection of Ferns Mr. Ward was first with some magnificent plants, the perfection of high culture and finish; Mr. Vere being second, a Pteris argyrea in his group being very striking. There were only two entries for baskets of plants, both being so good that the merit was almost equal. Mr. Ward was first and Mr. Vere second. Roses were not well represented, only six stands being shown. For twelve, Mr. Robinson was first, Mr. Carrington second, and Mr. Henson third. Most of the blooms were inferior, and none call for special mention. In the class for six blooms the same three exhibitors were in competition, the first prize going to Mr. Henson, the second to Mr. Robinson, third Mr. Carrington. Dahlias were also in moderate numbers, calling for no special mention. Mr. Carrington was first with a grand dozen of doubles, second for six, and first with a good stand of Cactus Dahlias. Mr. Henson won a second, third, and fourth prize in this class, and Mr. Robinson two thirds. Mr. Carrington was well to the front for twelve Zonal Pelargoniums, Mr. Henson taking first prize for double Pelargoniums. Verbenas and Gladioli were moderately shown, and with Asters Mr. Robinson's first prize stand had some perfect blooms. For hand bouquets Mr. Robinson took first honours, Mr. Henson second, Mr. Carrington third, and Mr. Bolas fourth. Mr. Bolas also second, Mr. Carrington third, and Mr. Bolas fourth. had first for a tastefully dressed epergne.

In the fruit classes Grapes made a grand display, most of the bunches being exceptionally fine and well finished. For two bunches of Black Hamburgh Mr. Campbell had perfect samples, large in bunch and berry, of splendid colour and finish. Mr. Woodward was second with fine well shouldered bunches, Mr. M'Vinish a close third, and Mr. Evans fourth. Mr. M'Vinish had two grand bunches of Muscats, and was an easy first, Messrs. Innes & Co. of Littleover being a good second, Mr. Billings third with small highly coloured fruit, and Mr. Campbell fourth. For black Grapes other than Hamburghs Mr. Campbell's two bunches of Gros Maroc were magnificent, the berries being enormous. The champion prize for the finest two bunches of Grapes in the Show was also awarded to these splendid examples of skilful culture. Mr. M'Vinish was second with his excellent Alicante, and Messrs. Innes & Co. were third with enormous bunches of Gros Guillaume. For white Grapes other than Muscats Mr. Billings was first and Mr. Read second. In the competition for the Mayor of Derby's (W. H. Marsden, Esq.) special prizes Mr. M'Vinish was first with splendid bunches of Black Hamburgh, Muscat of Alexandria, and Alicante, Mr. Campbell being second, and Messrs. Innes third.

Mr. Ward's first prize Tomatoes were twelve perfect specimens, Mr. Webb was second, and Mr. M'Vinish third. They are mentioned here as they were placed among the fruits. Pears were a small class. There was a fair display of Melons, Mr. Billings taking first honours with a fine example of Reid's Scarlet-flesh, Mr. Evans being first with a greenfleshed variety. Mr. Ward's fine plate of Peaches easily won the first prize; Mr. Webb was second, and Mr. Woodward third. Mr. Campbell had a first prize for the only plate of Nectarines shown. Among other fruit Mr. Read's Pond's Seedling Plums are worthy of special mention; they were shown in his first prize collection of fruit.

Collections of vegetables made a good display, a common fault being in the usual direction of excessive size. Mr. Ward was first, Mr. Read second, and Mr. M'Vinish third. Collections of eight dishes of Potatoes were a remarkable feature, the whole of the six entries being splendid examples of skilful culture. The names of the prizewinners were not appended, but the first prize went to eight grand plates of Reading Ruby, Wormleighton Seedling, Prizetaker, Sutton's Seedling, Reading Giant, Reading Ruby, Satisfaction, and Windsor Castle.

Section 2, for persons not employing a gardener, contained some produce of much excellence. Taking them as we went round, the most noteworthy were hand bouquets decidedly superior to those in the first or gardeners' section. Roses were more numerous in this class. Dahlias were very fine, the first prize flowers of Mr. J. Wood being grand specimens. There was also a creditable display of Asters, Gladiolus, Pansies, Marigolds, and baskets of cut flowers. Grapes were well shown,

so, too, were Apples, Cucumbers, and Tomatoes. The vegetables shown in this section were highly creditable, most of the classes being well filled, many of the vegetables being good in quality, but the Cauliflowers were too large. Collections of herbs were excellent.

In the cottagers' section there was an imposing display of vegetables, upwards of fifty plates of Potatoes being among the more conspicuous features. Cabbages, Carrots, Parsnips, Turnips, Vegetable Marrows, and Onions all being superior examples of high cultivation, and the collections of vegetables, of which there were nine, were also of remarkable excellence.

BIRKENHEAD AND WIRRAL.—SEPTEMBER 7TH AND 8TH.

THIS Exhibition, in connection with the Agricultural Show, was held on the above dates at the Bidston Show Ground, and was a decided advance on previous years, both as regards the entries and the general excellence of the exhibits. Fine weather prevailed on the first day, and

in consequence the attendance was very large.

For five foliage and five flowering plants, Mr. A. Brown, gardener to Geo. Webster, Esq., was first with a very good collection, the best flowering plant being Ixora coccinea, and foliage, Croton Rothschildianum. Macgregor Laird, Esq., was a good second. For a group of plants arranged for effect, Mr. J. Bounds, gardener to A. L. Jones, Esq., Aigburth, took first honours, Mr. E. Bradshaw second, and Macgregor Laird, Esq., third. They were much after the style of the smaller groups which have been from time to time commented upon in the Journal. For three stove or greenhouse plants in bloom, Mr. A. Brown was first, having a fine Ixora coccinea. For a similar number of foliage plants the same exhibitor was again successful, also for one greenhouse plant in bloom, one stove plant in bloom with a very fine Dipladenia, one foliage plant, three Ferns and one Fern, three Tuberous Begonias, three Pelargoniums, and one Fuchsia, a most creditable performance, those competing against him having plants of the highest The second prizes were taken by Macgregor Laird, Esq., for the three foliage plants, greenhouse plant in bloom, three stove and greenhouse plants in bloom, and three Tuberous Begonias. Mr. J. Bounds was second for three Ferns, the prize for one Palm going to Mr. J. W. Totty, gardener to W. Laird, Esq. Mr. A. J. Stanley, gardener to J. R. Callander, Esq., took the prize for three Coleuses, and Mr. J. Bounds for table plants. Bounds for table plants.

Cut flowers, particularly Dahlias and Asters, were splendidly shown, and the competition was keen. For the best bouquet the first prize was won by Mr. S. Johnson, the second going to Mr. J. Williams, gardener to C. J. Procter, Esq., the latter winning in classes for sprays for ladies and buttonhole bouquets for gentlemen. Mr. R. Brownbill, gardener to J. C. Sinclair, Esq., was successful with six Roses; Mr. C. Terry, gardener to C. H. Skelsey, Esq., had the best three blooms. For twelve Cactus Dahlias Mr. A. J. Stanley was an easy winner, his blooms being fresh, solid, and very fine in colour. Mr. J. H. Bennett was second. The same exhibitor was also first for six Cactus Dahlias. The prizes for twelve Dahlias and six other than Cactus were taken by Mr. J. Lee twelve Dahlias and six other than Cactus were taken by Mr. J. Lee, the second going to Mr. J. Clarke. The prizes for six Gladioli, six Asters, and six outdoor cut flowers went also to Mr. Lee. For twelve Asters J. Howell, Esq. (gardener, F. Davies), was first; and for six Asters and twelve varieties outdoor cut flowers Macgregor Laird, Esq., was successful. The prizes for Hollyhocks and Everlasting Flowers went to Messrs. T. Brocklebank and Williams. The awards for twelve, six, and three varieties of cut flowers grown indoors fell in each instance to Mr. R. Pinnington, gardener to Mrs. Banner, Blacklow House, Roby, with a choice collection, the second prizes going to Messrs. Brown and

Bounds.

For six dishes of fruit Mr. M. Hannagan, gardener to R. C. Naylor, Esq., Hooton Hall, Cheshire, was first, the collection being very fine in every respect. The second prize was won by Mr. G. McCreadie, gardener to J. W. Haigh, Esq. For a collection of hardy fruits the first prize was secured by Mr. C. Worker, gardener to Mrs. Blomfield. Second Mr. Hannagan. Mr. R. Brownbill won with two bunches Black Hamburgh, small in berry, but well coloured. Mr. Ferguson, gardener to Mrs. Paterson, Rock Ferry, was second. For two bunches of Grapes, any other black. Mr. J. Bichards, gardener to Mrs. Friend, was first any other black, Mr. J. Richards, gardener to Mrs. Friend, was first with fine Madresfield Court, Mr. R. W. Hudson being second with same variety. The first prize for two bunches of Muscats was well won by Mr. J. Barker gardener to Alderman Raynes, Rock Ferry, with well finished samples, whilst Mr. McCreadie won for any other white with Buckland Sweetwater. With six Nectarines Mr. Hannagan was the only exhibitor. In the class for Peaches Mr. R. Pinnington won with a grand dish of Gladstone, large in size and fine colour. The prizes for scarlet-flesh Melons went to Messrs. Ferguson and Pinnington, and for green-flesh to Messrs. Hannagan and Pinnington. Apples were especially fine, the prizes for six dessert going to Mr. John Clarke, six Lord Suffields to Mr. W. B. Burnham; whilst for six of any other culinary variety the first and second exhibits of Peasgood's Nonesuch, staged by Messrs. Williams and Hannagan, were much admired. Messrs. Ferguson and Lee won with dessert Pears, and Mr. T. Watkinson with Plums.

The collections of vegetables were all of the highest merit and made a most extensive display. For eight distinct kinds Mr. S. Salisbury, gardener to C. H. Carson, Esq., secured the leading prize, the Cauli-flowers and Carrots being particularly fine. The second prize went to Mr. J. Williams for smaller produce. In the open class for eight distinct kinds, Mr. McCreadie was successful also with a fine exhibit. Tomatoes were well shown, there being eighteen exhibits entered in class for twelve fruits. Mr. McMaster, gardener to Sir Ughtred K. Shuttleworth, Ganthorpe Hall, Burnley, was successful with fine, fresh and even fruits of Perfection. For six, T. Brocklebank, Esq., was placed first. Potatoes made a great display, being of excellent quality throughout. For twelve white rounds and same number of kidneys the prizes went to Mr. James Ismay, and for corresponding classes for coloured Potatoes to Mr. Thomas Woolrich. Onions, Leeks, and Shallots were in abundance, the prizes going to Messrs. McCreadie, Richards, J. Piggott, Mrs. G. Cooke, and Mr. Woolrich in the order named. Beans, Peas, Celery, Cucumbers, Cauliflowers, Vegetable Marrows, Lettuce, Cabbages, Beetroots, Parsnips, Turnips and Carrots were well shown.

Messrs. Webb & Sons of Stourbridge were awarded a gold medal for

an extensive assortment of agricultural seeds, vegetable seeds and dried specimens of various Grasses, which made an imposing stand. Another representative stand was arranged by Mr. H. Middlehurst, Manchester Street, Liverpool, and a silver medal awarded. Messrs. Dickson (Limited), Chester, also took honours with a tent filled with choice collections of stove and greenhouse plants, Dahlias and herbaceous cut flowers, which were much appreciated. Other exhibitors were McHattie & Co., Chester, with a display of seeds and natural Grasses.—

R. P. R.

EARL'S COURT.—SEPTEMBER 13TH.

A VBRY attractive display was got together on this occasion, the drawback being that it was too large, so much tabling being in demand that the marquee was too full to afford much room for promenading, and even under this condition of affairs overflow space had to be found in another part of the building. Dahlias were a great feature, the groups of them being extremely beautiful. Asters, Helianthuses, and hardy flowers generally were also in good force, and the fruit exhibits

were an attraction in themselves.

There were three stands in the principal Dablia class—that for sixty blooms, Show and Fancy, and Mr. C. Turner followed up his Palace victory by scoring with an excellent stand, his flowers being in splendid condition. They were very smooth, even, fresh, and well coloured, the best being William Keith, Mrs. Saunders, John Hickling, George Rawlings, Grand Sultan, Kathleen, Richard Dean, and Clara. Messrs. Keynes, Williams & Co. had distinctly smaller flowers, and they were perhaps hardly so smooth as those of Mr. Turner, but in other respects they were excellent, colour and cleanliness being irreproachable. They were excertent, colour and creaminess being interpolations. They were placed second, and the third prize was given to Mr. Mortimer, a point being strained in his favour, as he had James O'Brien (self) and Duchess of Albany (self), which are duplicates, in his stand. Messrs. Saltmarsh & Son had a beautiful stand of twenty-four, the flowers being Saltmarsh & Son had a beautiful stand of twenty-four, the flowers being Saltmarsh. delightfully fresh, clean, and fine. Perfection, Harry Keith, Peacock, and Colonist were extra good. Mr. Arthur Rawlings was second, and Mr. G. Humphries third.

In the amateurs' class for twenty-four, Show and Fancy, Mr. J. T. West, gardener to W. Keith, Esq., Cornwalls, Brentwood, won with an admirable box, the flowers being very smooth and even. Mrs. Gladstone, Geo. Rawlings, Harry Keith, Lustrous, and Prince Bismarck were a few of the best. Mr. Hobbs, St. Mark's Road, Euston, was second, and Mr. Vagg, gardener to W. Theobald, Esq., M.P., Bedfords, Romford, third. With twelve, J. G. Fowler, Esq., Glebelands, South Woodford won, and he had an admirable box, all the flowers being shapely, fresh clean, and bright. Mrs. Gladstone and Maud Fellowes were perhaps the two best. Mr. W. Hopkins, New Passage, Bristol, was second with

smaller blooms, and Mr. Cooper, Chippenham, third.

Messrs. Keynes, Williams & Co. had the best of four stands of eighteen Cactus or Decorative, nearly all their varieties being of the true Cactus type. Delicata, Lady Penzance, Apollo, Sir Roger, Bertha Mawley, and Gloriosa were particularly noticeable. Messrs. Cheal and Sons followed, their best being Robt. Cannell, Ernest Cannell, Kaiserin, Sir Roger, and Bertha Mawley. Messrs. Burrell & Co. were third. The best amateur's box of Cactus was that from Mr. Brown, gardener to M. W. Morris, Esq., Oak Lodge, Horley, who had very fine clusters of Kynerith, Professor Baldwin, and Delicata amongst others. Mr. J. Stredwick, Silver Hill, St. Leonards, was second, and Mr. West third. The latter was first with Pompons, Messrs. Cooper and Stredwick following. All were very good stands, Mr. West's flowers being charming in the extreme. There were four collections of twenty-four charming in the extreme. Pompon varieties in bunches of ten (nurserymen), the best being that of Mr. C. Turner, whose flowers were in perfect condition. Eric, Rosalie, Mars, Eurydice, Rowena, and A. West were exceptionally good. Messrs. Cheal & Sons were a close second with delightful clusters, and Messrs. Keynes, Williams & Co. were third. Only one stand of twelve singles turned up out of seven entries, and that came from Mr. Girdlestone. It was a beautiful box, and well merited the first prize.

Prizes were offered for a collection of Dahlias grouped for effect,

and they made a magnificent display, all being arranged with taste and informality. Messrs. Cheal & Sons were placed first and the award was undoubtedly correct, although Messrs. Keynes, Williams & Co. made a good fight. The Crawley firm had employed singles and Pompons with admirable taste. Messrs. Paul & Son, Cheshunt, were third.

Mr. Wythes appeared to have made a special effort in the class for a

collection of stove and greenhouse flowers, and won with consummate ease. He had splendid clusters of Nerine Fothergilli major, a new and beautiful blush-coloured Dipladenia named Lady Louisa Edgerton, Dendrobium Phalænopsis Schröderiana, Aërides Lawrenciæ, Hymenocallis macrostephana, and several Bouvardias. It was a splendid box. Mr. J. Prewitt was second; and Mr. Gibson, gardener to T. F. Burnaby Atkins, Esq., third. Messrs. Paul & Son won with a collection of Michaelmas Daisics; Messrs. Burrell & Co. being second, and Mr. Such third. Messrs, Burrell were first with Sunflowers, being followed by Messrs. Paul and Such. Three out of four stands of hardy annuals were disqualified, and to the other, that of Mr. Salmon, the third prize was awarded. Messrs. Saltmarsh & Son won with Asters; Mr. Walker being second, and Mr. Humphries third. Mr. Such won with early Chrysanthemums, having large and beautiful bunches; and Mr. Vince,

Highgate Cemetery, was second.

There was some excellent fruit. Mr. Woodward, gardener to R. Leigh, Esq., Barham Court, Maidstone, won with three dishes of Peaches, having splendid fruit. Mr. Carr, gardener to Mrs. Clarke, Croydon Lodge, second; and Mr. Potter, gardener to Sir Mark Collet, Bart., Kemsing, third. Mr. Sanders, The Gardens, Paulton, Romsey, Hants, had the best single dish, a grand one of Sea Eagle; Messrs. Woodward and Wallis (gardener to Ralph Sneyd, Esq.), being second and third with the same variety. There was only one dish of second and third with the same variety. There was only one dish of Nectarines, this coming from Mr. R. Edwards, Sevenoaks, and the second prize was awarded. Mr. Woodward won with three dishes of dessert Apples, having Cox's Orange fairly good, and Ribston and Washington excellent. Mr. P. Cavanagh, Roehampton, was second, and Mr. Potter third. There were seven other competitors. Culinary varieties were still better. Mr. Woodward won again, having magnificent fruit of Stone's Peasgood's and Warner's King. Mr. Nicholson. cent fruit of Stone's, Peasgood's, and Warner's King. Mr. Nicholson, gardener to J. W. Melles, Esq., Chingford, was second; and Mr. Cavanagh third. Mr. Woodward had some splendid Pears, and won easily from Messrs. Potter and West, gardener to H. J. Wigram, Esq., Salisbury. The Maidstone grower had splendid fruit of Pitmaston, Marguerite, Mairillat, and Souvenir du Congrès. Mr. MeIndoe, gardener to Sir J. Pease, Bart., M.P., Hutton Hall, Guisboro', won with a collection of cooking and market Plums; and Mr. Potter was second. Mr. McIndoe scored two other victories with Plums, winning with three dishes of both dessert and cooking varieties. excellent fruit in both. The minor awards went to Mr. T. A. Hester,

gardener to W. G. Dawson, Esq., Plumstead, and Woodward.

The non-competing exhibits were extensive and beautiful. Mr.

J. Walker of Thame had a splendid collection of Dahlias and Asters, for which he received a silver-gilt medal; but many would have liked to see him tackling Mr. Turner in the sixty class. Mr. Mortimer also had a large collection of Dahlias, and received, as he deserved, a silver medal. Messrs. J. Laing & Sons put up one of their best efforts in the way of Begonia groups, the material and the arrangement being of equal excellence (gold medal). Mr. Turner supplemented his victories in competition with a fine display of Show and Fancy Dahlias (silver medal). Miss Cole received a silver medal for table decorations. Mr. T. S. Ware put together a very fine collection of Dahlias, Cactus, single and Pompon, arranged in a pleasantly informal manner, and very beautiful (gold medal). Mr. J. R. Tranter showed Asters and Dahlias (bronze medal). Messrs. J. Veitch & Sons had a box of their beautiful hybrid Streptocarpus, and a first-class certificate was awarded for the excellence of the strains. Mr. J. B. Payne, gardener to the Lord Bishop of Bath and Wells, The Palace, Wells, received a silver medal for a very fine dish of Peasgood's Nonesuch Apple grown on a cold damp wall. Mr. Maher, gardener to A. Waterhouse, Esq, received a bronze medal

Messrs. Cannell & Sons were represented by a brilliant collection of dwarf Cannas (silver medal). Messrs. Saltmarsh & Son were awarded a bronze medal for Asters and Dahlias. Mr. Walter Salmon, the "postman florist," had a beautiful collection of Dahlias and other flowers (silver medal). Mr. T. A. Hester had a very extensive display, comprising ornamental Gourds and forty-five dishes of Apples (silver-gilt medal). Mr. Wilkins, Inwood House Gardens, Henstridge, had some magnificent Onions—Somerset Hero, Prizewinner, Ailsa Craig, and Lord Keeper being very noteworthy (silver medal). Messrs. Paul & Son, Cheshunt, were awarded a silver medal for a large and fine collection of Apples and Pears. Messrs. S. Spooner & Son had an excellent display of Apples and Pears (silver-gilt medal). Mr. Such received a silver, and Mr. Humphries a silver-gilt medal for Dahlias, both representative collections. Mr. Poupart, of Twickenham, sent Apples, Pears, and Plums, which were very fine (silver-gilt medal).



HARDY FRUIT GARDEN.

Strawberries .- New plantations will require the soil loosening between the plants with the Dutch hoe, not only to destroy crops of seedling weeds that spring up rankly after showers, but also to encourage the growth of the plants as much as possible before winter.

Late Planting .- Plants for furnishing a fair amount of fruit next season may still be planted, but such should have been specially prepared for the purpose, either by being rooted and kept moist in pots or turves, or well-rooted isolated plants obtained from between the rows. Such plants, carefully and quickly inserted, will be little if at all inferior to those planted earlier. If sufficient plants are not by these means secured the best of the smaller-rooted runners may be lifted and replanted 6 inches or so asunder in nursery beds, where they may remain through the winter, planting permanently in rows in the spring. plants placed out late in open quarters or rows often succumb to adverse weather, because they are not established enough to bear in winter and spring sudden climatic changes.

Cleaning Strawberry Quarters.—Except where fresh plantations have not already been formed, and all the plants required secured, it is not advisable to delay removing the runners and cleaning between the rows to this late period. Even when many plants are wanted much may be done to relieve the stools by detaching the runners immediately the young plants have become rooted. Remove all weak and crowded plants, especially clearing away those from near the old stools, so that the latter may receive a fair share of light and air to mature the Weeds often grow too freely in Strawberry beds, but they should be cleared away.

Mulching.—To replenish the impoverished state of the ground between the oldest stools somewhat, and assist the plumping up of bold crowns during the autumn, it is desirable to afford a light mulching, about an inch thick, of partially decayed stable manure. A similar

application may also be afforded new early-planted beds.

Outdoor Figs.—Gather ripe Figs as they become ready, which may be known by the fruits drooping, the skins being slightly cracked and juice exuding therefrom. In this condition the fruits are delicious. Stop all shoots which are extending too far or for which there is not sufficient space to lay them in without being shaded by others. Thin crowded shoots, removing weak spray and strong, gross, soft growths. Retain all short-jointed shoots unstopped, as these, well ripened by exposure now to sun and air, will prove to be the most fruitful parts in the succeeding seasons.

Outdoor Vines .- Attend well to the roots of Vines now ripening fruit on walls, so that they do not suffer from lack of moisture, occasionally supplying liquid manure or soapsuds as additional support. White Grapes will need plenty of light to assist them to ripen, black varieties colouring best under the slight shade of foliage. Expose the current year's wood to light and air in order to ripen it and plump up the buds. Reduce lateral growths as becomes necessary.

Stopping Secondary Growth on Wall Trees. - Summer pruning duly carried out on Plum, Apple, Pear, Cherry, and Apricot trees will have resulted in many cases in secondary growth being made, this starting from the upper buds of shoots that have been shortened. If the summer pruning was dealt within an intelligent manner no harm results from new shoots starting and elongating from the upper buds at this season, provided they are stopped to one leaf when six full sized ones have been made. If not checked such shoots go on growing, appropriating an undue share of sap which is intended by the stopping to be concentrated on the lower buds, those developed in the axils of the leaves left at the first or summer pruning.

Preparation of Ground for Planting Fruit Trees.—A friable condition of the soil at the time of planting will conduce much to the readiness with which trees can be planted. It is important, therefore, to commence the work of preparing the ground forthwith. In most cases either deep digging or trenching will be needed so as to loosen the soil to a depth of 2 feet, manure consisting of decayed stable manure being added if poor; but none if the ground is fairly rich and fertile. Early preparation permits of the surface soil becoming ameliorated and the bulk consolidated; besides, where extensive planting may be contemplated there will be considerable advantage in having the sites in readiness, so that planting may be expeditiously performed when the most favourable opportunities arise as the trees are losing their leaves.

FRUIT FORCING.

Vines.—Early Forced and Potted Vines.—There must not be any further delay in the pruning of Vines intended to ripen their fruit by the end of April or beginning of May, and in cleansing the house and Vines, so as to have all in proper working order. Vines in pots should have the laterals cut off close to the canes, but do not injure the main Shorten the canes to about 8 feet, or lower according to the disposal of the plump eyes or the length required, and dress the cuts with Thomson's styptic or patent knotting to prevent bleeding.

Young Vines.—Every encouragement must be given for ripening the wood and plumping the buds. This can only be properly effected when the foliage is kept elean and healthy to the last. Laterals produced after this time tend to retard the ripening of the wood, therefore remove or keep them closely pinched. Where laterals have been allowed to extend considerably they should be shortened by degrees, so as to remove them altogether without starting the principal buds or those on the cane. Maintain a rather warm well ventilated atmosphere until the canes are ripe, which may be accelerated by having a temperature of 85° to 90° from sun heat, opening the ventilators fully at night. Any supernumeraries intended to produce fruit next season should have the laterals cut away to the principal buds, not, however, all at once, but gradually, leaving sufficient lateral length as an outlet for any excess of sap.

Late Houses of Black Hamburghs. - The Grapes are now well advanced in colouring. The ripening must be thorough or the Grapes will not keep well, and to effect this a gentle warmth in the pipes is necessary, to admit a free circulation of air, and to maintain the night temperature at 60° to 65°. A little artificial heat during the day will also be of benefit in allowing of free ventilation and making the

most of sun heat. Hambur, hs colcu, and finish best beneath a gool spread of foliage, as also does Madresfield Court, but it is as well not to encourage lateral growth now; at the same time it must be borne in mind that the tendency to shanking is accelerated by large reductions of foliage, and equally so by sudden fluctuations of temperature. air should be admitted through the top and bottom ventilators until the Grapes are ripe. If there is any deficiency of moisture in the borders it will be better to give a supply now than at a later period, covering with some dry material, so as to prevent damp rising. A free circulation of air, however, is the best safeguard against the Grapes damping, for the fungal germs that produce spotting and decay require a still and damp air for seating and germination.

Outside borders will in most instances be sufficiently moist—if not they must be watered, and unless the weather set in unusually wet they need not be covered at present; but glazed lights, shutters, or tarpaulin should be in readiness for placing over them, so as to throw off continued heavy rains. Where the borders are well raised above the surrounding level, have a good slope, and are composed of porous material over thorough drainage it is not necessary to cover them; but the Grapes sometimes decay wholesale when the borders are very rich

and close and soddened by heavy rains.

Late Muscat Houses.-The Grapes are close upon finishing, but they are not by any means matured, as they will continue to acquire colour and quality as long as the leaves are green. There must not be any attempt at removing the leaves, but allow them to remain until they part naturally at the base of the footstalks from the shoots. The bearing shoots should be given plenty of space, so that throughout their growth every leaf will have full exposure to light. Where the Grapes are not now ripe the night temperature ought to be kept at 65° to 70°, and the heat should be turned on in good time in the morning, so as to allow of an increase of ventilation, and the temperature be raised to 70° to 75°, and kept at 80° to 85° from the sun. The heat should be kept up by reducing the ventilation, with the declining sun, and the temperature allowed to gradually decline at night, only keeping sufficient warmth in the pipes to prevent its undue recession, and to allow the top and bottom ventilators to be left open to a slight extent. This will insure a circulation of air, and prevent the deposition of moisture on the berries during the night. If the latter occurs the Grapes must inevitably spot. The border must not be allowed to become dry, affording the needful supplies of water on fine mornings when air can be freely admitted. After the Grapes are thoroughly ripe and finished, a temperature of

50° to 55° is necessary for the keeping of Muscats in good condition.

Houses of Thick-skinned Grapes.—Late Grapes generally require fire heat during the ripening period, so as to insure a circulation of air, and this they should have until thoroughly perfected. This ought now to be quite complete to insure sound keeping; where it is not the house should be treaced similarly to Muscats, with the difference that being mostly black Grapes, they must have a good spread of foliage over them. A temperature of 50° to 55° is necessary after the Grapes are ripe for the benefit of the Vincs, and the conditioning quality so essential to use in such varieties as Gros Colman and Gros Guillaume.

Cucumbers.—Autumn Fruiters.—Afford these every attention, supplying tepid liquid manure copiously. Remove superfluous laterals, guarding against an overcrowded growth; also avoid overcropping, not allowing the fruit to hang on the plants after it becomes fit for use, and take off staminate blossoms and tendrils. Maintain a genial condition of the atmosphere by damping the floor and paths in the morning, afternoon, and evening, syringing the plants only in the early afternoon of bright days. Look over the plants twice a week for stopping the shoots one or two joints beyond the show of fruit, removing bad leaves, and retain no more foliage than can be fully exposed to light. Earth up the roots as the plants advance in growth, only just covering them each time as they show at the sides of the hillocks or ridges, the soil being placed in the house some time previously to be warmed before used. Supply water as required, not allowing the plants to flag for lack of it, nor making the soil sodden by needless applications, always having it of the same temperature as the house.

Winter Fruiters.—Put the plants in large pots, plunging in a bottom heat of 80° to 90° until established; then raise them near the glass, maintaining a temperature of 70° at night, 75° by day, with an advance from sun heat to 85° or 90°. Where fermenting materials are used for bottom heat, they must be in preparation, throwing into a heap, applying water if necessary, and turning over to induce fermentation and dissipate noxious gases before making the beds. If plants have not been raised seed may be sown at the beginning of next month, and the plants from this sowing will produce fruit in February and onwards; but it is no use attempting to winter such plants without the

command of plenty of heat and a light structure.

Plants in pits and frames must be carefully watered, and only sprinkled lightly on bright days. The foliage should be kept thin, removing bad leaves and cutting out exhausted growths to give place for young bearing shoots, and close early with as much sun heat as is safe. The temperature may be increased to 95° or 100° after closing, and to secure a suitable heat at night (65°) and on duil days (70° to 75°) renovate the linings as necessary, and employ night coverings.

Melons.-When the latest plants are well up the trellis and showing fruit blossoms, these should be fertilised daily, the atmosphere being kept rather dry, and a little ventilation given constantly, so as to insure a circulation of air and prevent the deposition of moisture on the flowers. Stop the shoots at the time of impregnating the blossoms one joint beyond the fruit. When a sufficient number of fruits are set on a plant,

remove all the staminate and pistillate flowers, reducing the fruits to three or four on a plant, which must not be overburdened with fruit. Earth up the plants after the fruit is fairly swelling, and be careful in syringing the foliage, only using it lightly on bright afternoons, but maintain a genial condition of the atmosphere by damping the floors and similar surfaces in the morning and afternoon. Do not give too much water at the roots, but encourage root action by moderate moisture in the soil, with fresh additions of warm soil as the roots protrude. Maintain a temperature of 70° to 75° by day artificially, and 80° to 90° through the day from sun heat, with a night temperature of 65° to 70°.

In order to advance the ripening and enhance the flavour of late fruits maintain a brisk heat by day with enough ventilation to insure a circulation of air constantly, keep water from the house after the fruit commences ripening, and do not afford any at the roots, or only to prevent flagging. The October fruiting plants will be swelling their fruits, and must be assisted with tepid liquid manure whenever they become dry. Keep the laterals well in hand, also a sharp look out for canker at the collar, and rub quicklime into the affected parts until dry, and repeat as necessary. If there be any fear of cracked fruit cut the shoot or bine about half way through, a little below the fruit. This will check the flow of sap, but the chief cause of cracking is a hard rind acted on by a close atmosphere, causing the deposition of moisture on the fruit during the night. As a preventive of both canker and cracking ventilate freely and keep the air dry, and supply water sparingly at the roots.

Plants in pits and frames will not require further damping on the foliage, and should only have sufficient moisture in the soil to keep the leaves from becoming limp or flagging. The growths should be kept rather thin and the fruit well elevated above it—say on reversed flower pots, each fruit being placed on a piece of slate. Apply good linings, so as to finish the fruits satisfactorily, which requires a warm and dry atmosphere with free ventilation. After lining the beds a little air should be admitted constantly to prevent injury from steam.

PLANT HOUSES.

Crotons.—Well furnished plants that are to be increased in size may be placed into pots one size larger than those they now occupy. Plants that have become leggy may have their tops re-rooted, and these if properly treated during the autumn and winter will make excellent specimens early another season. All well coloured side shoots from plants that have been cut back may be rooted in small pots. These small plants will be found invaluable for furnishing purposes during the winter. Plants that it is necessary to increase in size should have a warm moist atmosphere, while those that are large enough and highly coloured may have a more airy position to prevent them starting again into growth. Those that are subjected to this treatment last much longer than others that are grown in a close moist atmosphere. A little chemical manure applied occasionally to the surface of the soil will be found beneficial to all plants that have their pots full of roots.

Allamandas.—The dwarf A. Williamsi will become a popular plant. It grows and flowers freely in a small state, and will, therefore, prove invaluable for decemetive purposes.

prove invaluable for decorative purposes. Well flowered plants can be produced in 5-inch pots. A. Hendersoni for supplying a large amount of bloom is certainly unsurpassed. Plants that have been growing and flowering for the greater part of the season should have liquid manure freely given them, or chemical manure applied to the surface every week. It is a mistake to allow the shoots to grow thickly together until they become crowded. This prevents the thorough maturation of the wood, and unduly shades the plants that are grown beneath them. The flowers on the plants are much smaller in consequence, and are often deficient in colour. Plants that are to be started early in the year should be kept drier at their roots, and slightly cooler after this month to harden and mature the wood. An early rest is essential if the plants are to start freely into growth when introduced into heat and flower early on short-jointed wood.

Stephanotis floribunda.—Plants that have made good growth and finished flowering should be subjected to cool airy treatment; in fact, the plants are better grown for some weeks without the aid of artificial heat. Give air liberally during the day when fine, but towards evening close or partially close the structure in which they are grown. Syringe the plants once daily to keep the foliage clean, and mulch the border or surface of the pots with manure to prevent evaporation. All weak growths may be entirely removed from plants that display a tendency to be crowded. Full light and plenty of air amongst the shoots are necessary to ripen and harden the wood, for upon its thorough matura-

tion the number of flowers produced another year will depend.

Gloriosa superba.—Plants that were started early into growth will show signs of going to rest. Keep plants in this condition drier at their roots, but do not unduly dry them. Water ought to be gradually withheld, and more air given until the growing stems have died away and the tubers are thoroughly matured, when they may be stored away in any place where the temperature ranges from 50° to 55° if kept dry.

Adiantum cuneatum.—Any plants that are intended for yielding foliage for cutting as long as possible should not be grown in a high temperature, and a liberal supply of air must be admitted to them. These plants have done well with us this year, and they have been grown for some months past in cold frames fully exposed to the sun. Fronds produced by this method are of the sturdiest description, light in colour, and last well in a cut state. Seedlings of both this and Pteris established in pans and boxes should be placed singly or two or three together in

small pots. If they are shaded and grown in a warm and moist atmosphere for a time they will soon become established and be very suitable for many forms of decoration. It will be necessary to harden them gradually before they are used. Spores of any kinds of Ferns may now be sown in pans or boxes, the surface of the soil need not be made too fine. After sowing cover with glass and place the boxes in a moist shady position.

shady position.

Caladiums.—Plants that have been in cool houses and are beginning to fade may be stored away to rest. Do not withhold water all at once. Place the pots containing the plants where the temperature will not range lower than 55° where they will be perfectly safe until they are required for starting again into growth. When sent to rest too rapidly and kept cool afterwards the tubers are almost certain to decay; they

should be well matured before they are finally stored away.

Poinsettias.—If properly treated these should be of the sturdiest description, and some care is needed not to excite them again into growth. Soft growth made after this period is seldom sufficiently ripened to produce large bracts of the finest colour. Very frequently a mistake is made when these plants are removed from cold frames by keeping them in too close and confined an atmosphere. Directly they finish their growth more heat may be given to develop their bracts. The same treatment applies to Euphorbia jacquiniæflora.

Ixoras.—Plants that have but recently flowered should have the most careful treatment. Their foliage must be free from insects, and the plants exposed to every ray of light possible to harden their wood before the winter. Plenty of air ought to be admitted, and a drier atmosphere maintained; but at the same time do not starve the plants, or more injury than good will result. Syringe thoroughly once a day.



APIARIAN NOTES.

USEFUL HINTS.

At this season it is perhaps desirable to warn bee-keepers against introducing queens, or joining swarms having two queens, rashly. I admit that alien queens can be, and are, joined to a hive safely without caging, and I could cite many cases where only a second or two expired between the deposing of the queen regnant and the introducing of an alien one which was well received; but the mishaps by reckless introduction which I am cognisant of are by far too numerous to warrant me in advising the introduction of queens without the use of a cage. It is the health and unmaimedness of the queen that is conducive to profitable bee-keeping, and in the absence of these a breakdown in the hive is sure to occur sooner or later, and at a time when the loss is irreparable. Therefore use every precaution before introducing queens or joining

swarms together.

The balling of queens is, in my opinion, entirely due to stranger bees; at least, I have never witnessed a case otherwise. There are different phases of balling, but the most prominent one is when the bees favourable to the queen discover one or more fractious bees they immediately ball her. If the disloyal bee or bees are kept outside the queen is safe, but if one or more get near her she is either maimed or stung to death. Therefore select a young queen and cage her for twenty-four hours, releasing her at dusk. Young bees at this season are doubtless not to be despised, neither are much older ones; both make capital stocks. It is the care and judicious management of these that determine our future success with either—not their age. One great thing with all queens is to take care and not stimulate these to breed at this season. All their strength and egg-laying power is best to be conserved till spring, the season that is most required for profitable bee-keeping.

If there is a paucity of bees in the hive containing a young queen, it rather taxes the powers of an aged one (intended to be deposed) to fill a few frames with brood, and place in the hive containing young queen intended for stock. Hives that require to be fed now, and not having a ventilating floor, should, immediately the feeding is past, have a clean dry board substituted, and, indeed, should be continued at intervals throughout the winter. A ventilating floor obviates all that, and conduces to having healthy

bees, and many of them.

ROBBER BEES.

Robber bees are now on the alert. Keep a strict watch over all weaklings, and contract entrances according to the strength of the colony. Be careful neither to spill about nor expose syrup nor feeders. These are the things that decimate the bees, and those who have for years advised the autumnal stimulative feeding of hives must have, in their ignorance of the proper management of bees, practised some or all of the above. For many years it has surprised me why bees required feeding in autumn to stimulate

breeding, when our own hives, as well as those in the whole district were overflowing with bees. A clergyman of my acquaintance used to say, "Instead of requiring to feed to cause breeding I would rather feed to reduce the population of the hives, as they are by far too strong."—A LANARKSHIRE BEE-KEEPER.



*All correspondence should be directed either to "THE EDITOR" or to "THE PUBLISHER." Letters addressed to Dr. Hogg or members of the staff often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Bee subjects, and should never send more than two or three questions at once. All articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post, and we do not undertake to return rejected communications.

Solanaceous plant (Somerset).—Having seen a fresh specimen of the plant referred to last week, we are able to state that its name is Nicandra physaloides.

Cucumber Classification (J. McLeod).—If the disputants who aver that the Cucumber is not a vegetable will exhibit a brace in a collection of fruit they will receive a lesson that they will not be likely to forget — namely, the disqualification of the collection. There is no time for answering your other questions as we are preparing for press.

Stationary Chrysanthemum Buds (G. B. A.).—Cut off and burn all the tops that contain buds such as you have sent, and which have remained stationary for about six weeks. It is impossible they can develop. They contain a destructive enemy, microscopical drawings of which, by Mr. George Abbey, will shortly be published, and these, with the narrative pertaining to the discovery, cannot fail to prove of great interest to Chrysanthemum growers all over the world.

Tuberous Begonias (W. Clibran & Sons).—The box arrived as we are preparing for press. The flowers as a whole are very beautiful, but many of them had separated from the stalks, the names thus becoming detached. It was not so, however, with the single variety oculata, small, single, with a clear white disc, very distinct and pleasing. The double Golden Nugget is very rich and good. The names were separated from the others, and mixed indiscriminately, while the flowers were bruised and shaken through insufficiently close packing.

Planting Lilies of the Valley (Enquirer).—The advice to which you refer is sound. We have known them to grow very well when planted in the autumn, also in winter, but the weather may be such as to cause blanks and weak growth. The most extensive and successful cultivators take pains in the preparation of the soil, and plant when it is in the best planting condition in early spring. Flowering crowns are not the best for establishing permanent beds. The Victoria Lily is a fine variety as grown by Mr. Henry Hawkins at Twickenham.

Cider and Perry Refuse as Manure (J. W., Pershore).—One of the best of British gardeners who resides in a perry-making district says "the must or refuse from perry and cider mills is useless as manure." "Farmers," he goes on to say, "take care to keep cattle from it, or they would certainly eat it at great risk to life. There was a case last year of a pig dying soon after eating a quantity. It very soon goes to nothing on the land. Poultry are fond of scratching it over for the 'pips.' These germinate freely on the heaps the following season, and are planted out by some farmers to form stocks for grafting and budding. I have seen it used for mulching newly planted fruit trees, but it is not so good as short mauure."

Grapes Rusted and Shrivelled (Enquirer).—No matter how much water you have given the border, if it still remain dry, as you say is the case, it obviously has not had enough. It is impossible for any Vines to produce any other than small ill-coloured inferior Grapes in dry soil. If a thousand gallons are necessary for moistening the soil they must be given, and after the border is moist, not before, a liberal application of strong liquid manure would have a beneficial effect. We suspect also there has been errors in management other than letting the border get so dry, in respect to ventilation and general routine. You cannot materially improve the Grapes this year, but you may improve the Vines for future bearing, and this is necessary.

Kalosanthes coccinea (J. G.).—Water should be gradually withheld now and the plants placed in the sunniest position you can find. Flower buds will then form in the tips of those shoots that are strong The plants should be kept dry rather than wet through the winter. You ask if the "number of shoots should be reduced and the plants repotted" without giving an idea of the number and character of the growths or the size of the pots. Do not, however, shift them this autumn, and thin out any growths that are weak and crowded. This is all we can say in the absence of a description of the plants.

Celery Leaves Decaying (J. W. H.).—Although the green leaflets are spotted and the spots extend so as to destroy the tissue and leaflets are spotted and the spots extend so as to destroy the tissue and ultimately the stalk, there are no fungal threads surrounding the brown spots on the green part, nor are there any bacterial germs between the cell walls or in the cells. The stem with withered leaves is sound in the centre, but the cells below the skin or epidermis are quite empty, and as the cell walls are unpierced we conclude that the withering is due solely to evaporation. The spots on the green leaflets appear to have been caused by particles of nitrate of soda or some such substance resting upon them. Rust at the roots is generally caused by an excess of organic acids or the use of soapy manure at the bottom of the trenches. Rust in the leaves and stalks is caused by a fungus, but there is neither the Uredo nor Puccinia form of rust in the specimen examined. is neither the Uredo nor Puccinia form of rust in the specimen examined.

Withholding Water from Cattleyas (T. J.).—Water should be withheld grudually from these plants, beginning to do so as soon as the pseudo-bulbs are fully developed and display signs of ripening, and finally given only sufficiently often to keep the pseudo-bulbs from shrivelling. How long water can be withheld depends largely upon the house in which the plants are grown and the atmospheric conditions maintained as regards moisture. Simultaneously with a diminished supply of water at the roots and moisture in the atmosphere more light and air should be admitted to the plants. The Oncidiums you mention are only of slow growth; they do not under the best systems of culture appear to increase materially in size. We prefer to grow them in small baskets or pans, because they are less liable to suffer by an insufficient supply of water during the season of growth. If you place the plants in baskets do not take them off the blocks, but insert them into the baskets and fill in with fibry peat and charcoal in lumps. A little moss during the season of growth is also an advantage. We should advise you to leave them as they are until the spring. By Withholding Water from Cattleyas (T. J.).—Water should be We should advise you to leave them as they are until the spring. By no means should too much peat and moss be placed about the roots. These plants do best suspended moderately close to the glass.

American Baldwin Apple Trees (G. G., South Wales).—This Apple does not usually succeed in this country, except in warm soils and sheltered situations. It does well on the colite in Huntingdonshire where the soil is of a warm silicious nature with gravel beneath, and it would probably succeed in similar soil with a warm site in South Wales. The bushes are most likely to thrive, but it would have been better had they been on the English Paradise instead of the Crab stock. Trees on that stock do not transplant so readily as those on Paradise, but there is no danger of safe removal whilst the trees are young. Unless they have grown vigorously and do not ripen the wood well it would not be desirable to transplant them this autumn, though it may be done another year if you wish to check growth and induce fruitfulness. The tree intended for a standard ought to grow until it has formed a stout stem to the required height, and then have the top taken off so as to induce side shoots, keeping all but three at the upper part stopped with the object of strengthening the stem. Cut the stopped growths away in the autumn and shorten the three extension shoots to about 6 inches, then by taking two growths from each the following year the formation of the head will be laid.

Names of Fruits.—Notice.—Special attention is directed to the following decision, the object of which is to discourage the growth of inferior and promote the culture of superior varieties. In consequence following decision, the object of which is to discourage the growth of inferior and promote the culture of superior varieties. In consequence of the large number of worthless Apples and Pears sent to this office to be named, it has been decided to name only specimens and varieties of approved merit, and to reject the inferior, which are not worth sending or growing. The names and addresses of senders of fruit to be named must in all cases be enclosed with the specimens, whether letters referring to the fruit are sent by post or not. The names are not necessarily required for publication, initials sufficing for that. Only six specimens can be named at once, and any beyond that number cannot be preserved. (F. Jordan).—1, Quite rotten; 2, Rotten; 3, Beurré Diel; 4, Quite misshapen; 5, Rotten; 6, Winter Greening. It is essential that good sound typical fruits be sent, not blemished and decayed specimens. (C. J. F.).—Fearn's Pippin. (W. W. W.).—Warner's King. (S. W. Fitzherbert).—1, Cobham; 2, Blenheim; 3, character undeveloped; 4, Gloria Mundi; 5, Alfriston; 6, Trumpington, perhaps, but an imperfect specimen, the others fine. (A. H. L.).—1, Golden Russet; 2, Van Mons Leon Leclerc; 3, Bergamotte Esperen; 5, Napoleon. These names are approximate, the character of the fruits not being developed. (J. D.).—1, Beurré Clairgeau; 2, Summer Franc Real; 3, Rymer; 4, Cellini; 5, Greenup's Pippin; 6, Fearn's Pippin. (A. B.).—There is no character about the fruits sent. Some if not all are probably local seedlings, and never had names. Nor are they worthy of being distinguished and perpetuated. (Richard C. Long).—We are sorry to disappoint you, but it is impossible for anyone to name fruits accurately when their characters are quite undeveloped: The specimens you send, most of which are inferior, are weeks if not months from maturity. If the trees in your orchard are old several of the varieties will probably

not be worth naming. Those you send are, as a whole, much below average merit. Your object is a worthy one. By far the best way of improving the local fruit supply is to urge the planting of young trees of approved varieties in the best soil and positions available. (Andover).—Letter mislaid, but this reply will be recognised. The very large red Apple is Tibbit's Incomparable, and the Pear is a splendid specimen of Souvenir du Congrès. (J. U.).—Doyenné Boussoch. (P. M.).—1, Cox's Pomona; 2, probably local and worthless. (J. S. B.).—1, Pitmaston Duchess. The others are quite hard and will not be in condition for naming for some weeks. We have many times stated that Pears should be sent when showing signs of ripening, as flavour is a factor in determining their nomenclature.

Names of Plants.—We only undertake to name species of plants, not varieties that have originated from seed and termed florists' flowers. Flowering specimens are necessary of flowering plants, and Fern fronds should bear spores. Specimens should arrive in a fresh state in firm boxes. should bear spores. Specimens should arrive in a fresh state in firm boxes. Slightly damp moss, soft green grass or leaves form the best packing, dry wool the worst. Not more than six specimens can be named at once, and the numbers should be visible without untying the ligatures, it being often difficult to separate them when the paper is damp. (J. G.).—Silvery-leaved plant, Alchemilla sericea; berried shrub, Pyrus (Aronia) probably a variety of arbutifolia; trailing plant, Linaria Cymbalaria. (Tom Jones).—Gongora Loddigesi. (A. B.).—1, Impatiens Hawkeri; 2, Abutilon vexillarium. (F. D.).—Allamanda Hendersoni. (L. P.).—Æschynanthus cordifolius. (L. P.).—Æschynanthus cordifolius.

TRADE CATALOGUES RECEIVED.

G. Bunyard & Co., The Old Nurseries, Maidstone, Kcnt.-Fruit

H. Cannell & Sons, Swanley, Kent.—Book of Reference in Horticulture.

Hogg & Robertson, 22, Mary Street, Dublin.—Bulbs for Planting in Autumn and Spring.
George Phippen, Reading.—Bulb Catalogue.

Chas. R. Shilling, Hartley Nurseries, Winchfield, Hants.—Trees, Shrubs, Roses, Fruit Trees, Plants and Bulbs.

Robert Sydenham, Tenby Street, Birmingham.—Unique Bulb List, with "How I Came to Grow Bulbs."

E. Webb & Sons, Wordsley, Stourbridge.—Selected Seed Corn.

COVENT GARDEN MARKET.—SEPTEMBER 13TH.

Market still heavily supplied; prices virtually unaltered.

Apples, per bnshel	$\begin{bmatrix} 28 & 0 & 30 & 0 \\ 0 & 6 & 1 & 6 \end{bmatrix}$ Plums, per half sieve . St. Michael Pines, each .	1 6 2	0
	VEGETABLES.		
Beans, Kidney, per lb. Beet, Red, dozen. Oarrots, bunch Cauliflowers, dozen Oelery, bundle Ooleworts, dozen bunches Oncumbers, dozen Endive, dozen Herbs, bunch Leeks, bunch Lettuce, dozen Mushrooms, punnet	0 4 0 6 Parsley, dozen bunches . 2 0 3 0 Parsnips, dozen	0 3 0 2 0 3 1 0 0 2 0 4 1 0 1 1 6 0 0 3 0 8 0 0 0 3 0	0 5 0 0 6 6 0

AVERAGE WHOLESALE PRICES .- OUT FLOWERS.

Orchid Blooms in variety.

	s.	d.	s.	d		8.	d.	s.	d.	
Arum Lilies, 12 blooms	2	0 to	4	0	Marguerites, 12 buuches	2	0	to 4	0	
Asters (English) doz. bches.	3	0	6	0	Mignonette, 12 bnnchcs		0	4	0	
Bouvardias, bunch		6	1	0	Myosotis, dozen bunches			3	0	
Carnations, 12 blooms	0	6	2	0	Orchids, per dozen blcoms			12	6	
Carnations, dozen bunches	4	0	8	0	Pelargoninms, 12 bunches	6	0	9	0	
Chrysanthemums, dozen					Pelargoninms, scarlet, doz.					
bunches	4	0	6	0	bnnches	3	0	6	0	
Ohrysanthemnms, doz. bls.	1	0	2	0	Primnla (donble), dozen					
Jornflower, dozen bunches.			2	0	sprays		6		Θ	
Eucharis, dozen	1	6	4	0	Pyrethrum, dozen bunches	2	0	4	0	
Gardenias, per dozen	2	0	4	0	Roses (indoor), dozen		6		6	
Lilinm lancifolinm, dozen					" Red, doz. bunches	4	0	6	0	
blooms	1	0	3	0	" Tea, white, dozeu	1	0	2	0	
Lilium longiflornm, perdoz.			6	0	"Yellow, dozen	2	0	4	0	
Maidenhair Fern, dozen					Tuberoses, 12 blooms	0	4	0	6	
bunches	4	0	6	0						

		PLAI	(TS	IN PUIS.				
8.	d.	s.	d.		. d.	. s.	d.	
Arbor Vitæ (golden) dozen 6	0	to 12	0			to 6		
Aspidistra, per dozen 18				Ficus elastica, each 1				
	0		6	Foliage plants, var., each 2			0	
	0	6	0	Fuchsia, per dozen 4	0	_	0	
Balsams, per dozen 3	G	6	0	Ivy Geraninms 4			0	
Campanula, per dozen 9	O	18	0	Lilinm lancifolinm per doz. 12				
	0	9	0	Lilinm Harrissi, per dozen 12			-	
" large plants, each 1	0	2	0	Lycopodiums, per dozen 3			0	
Dracæna terminalis, per				22028			0	
dozen 18	0	42	0	and the second s	0		0	
Dracæna viridis, dozen 9		24	0	Myrtles, dozen 6		_	0	
Euonymus, var., dozen 6	0	18	0	Palms, in var., each 1			0	
Evergreens, in var., dozen 6		24	0	" (specimens) 21	0		0	
Ferns, in variety, dozen 4		18	0	Pelargoniums, scarlet, doz. 2	0	4	0	



FARM HOMESTEADS.

WHEN the Scotch farmers came south after Essex farms, one of the first things asked for was additional farm buildings. They, at any rate, were fully alive to the importance of an ample provision of shelter for their herds if not for their flocks; they had it, and it must have contributed greatly to the success of their venture. In making such provision of outbuildings that are absolutely necessary a landlord enables his tenant to turn his holding to full account—aye, and to turn his live stock to full account also. To an able man the concession is positively more important than a reduction of rent, because it enables him to do his best with the stock-to afford it protection from cold and wet in winter, from extreme heat and flies in summer. If it were possible to obtain a return of the actual number of animals lost annually from exposure to wet and cold we have no doubt it would astonish everyone connected with agriculture. But though it is not possible the fact remains that losses do occur frequently, the cause being usually attributed either to black leg or to hoose, and probably with some truth, but exhaustion and low condition more often than not induce disease.

Early in the present year we had a complete set of new outbuildings erected for a tenant in time to be of use to him during summer. On a recent visit we were delighted to see a number of the best calves in the hovels that we had seen this season. They had never been out, but had been kept in and reared by the grazier's wife, and much credit are they to her. Nothing could be more satisfactory than their sleek, healthy condition. Home-bred and home-reared in the right way they are bound to prove profitable, such animals always being in demand; always commanding a price above, sometimes much above ordinary market rates. For another tenant who milks thirty cows a new house and set of outbuildings are to be built on a holding of about 200 acres. This farm is worthy of mention as a compact holding, recently arranged with an eye to general utility. Its lower boundary is in the heart of a valley by a road leading to a railway station, and the land stretches right up one side of the valley to the hill top, where there is connection with another public road. The rich grazing land in the valley is watered by a brook, and there are pools of sufficient capacity in the upland meadows.

In selecting the site of the homestead water was a primary consideration. A boring tool failed to reach water after several trials; the brook was therefore turned to, the necessary levelling showing that an hydraulic ram was practicable, so that by means of it and a filter bed the homestead will be well supplied with wholesome water, a matter of even more than usual importance, as this is a dairy farm, where cheese-making will be the chief thing. To avoid all risk of taint the dairy and cheese rooms will be on the north side, and the farmyard and outbuildings on the south side. On the ground floor there will be an entrance hall, having on the north side a sitting-room, behind which there will be a cheese-room, binding-room, and dairy; on the south side will be the kitchen, connected by a passage running past the larder to a back kitchen; and at the back of the house there will be a broad covered way from the back kitchen to the dairy. The upper floor will have six bedrooms, and will contain a bath-room; in fact all necessaries to form a comfortable, convenient house, without any superfinous rooms. Water will be laid on, drainage well done, and the

whey will go through a pipe from the dairy to a cistern by the

The outbuildings will consist of a cow house for thirty cows; this will be a span-roofed building, with a passage down the centre between the stalls. There will also be a loose box for calving, two calf hovels, four large piggeries, stabling for three horses, shed for store cattle, 18 feet wide, with the yard side open, a meal-room, chaff-room, granary, fowl house, and open shed for carts and implements. The cost of such a homestead depends mainly upon the building materials, which range from costly dressed stone downwards to simple s'ud and plaster, representing two extremes, only desirable under stress of local circumstances. There appears to be no material equal to corrugated iron sheeting for cheapness, utility, and durability. As roofing for a granary it is objectionable, because it becomes cool with such rapidity of an evening that the moisture of the warm interior air is condensed, and there is often so much dripping of water from the roof upon the stores as to become a nuisance.

WORK ON THE HOME FARM.

Frequently have we heard the remark that this has not been a favourable season for the use of "artificials." Our one failure was upon some pasture where, owing to the draining, the chemical manure could not be used till the drought had set in. But where it was used early it answered well enough for pasture, and its beneficial influence upon root crops was never more remarkable. Swedes, Mangolds, and Potatoes have all thriven wonderfully, and we were not surprised to hear from a correspondent to whom we recommended what we term our County Council mixture, that he has a crop of Potatoes of remarkable abundance, yielding a peck of tubers to a plant. With land made thoroughly clean now and ridged by double-breasted ploughs, we can next spring apply manure to the furrows, plant the Potatoes, and split the ridges over them, feeling assured that the soil is well stored with fertility. For Mangolds and Swedes the mixture may be sown broadcast after the muck is placed in the furrows, a top-dressing of nitrate of soda being applied after the plant is up and growing freely.

Lct yards, hovels, and all means of shelter for cattle for winter be now made ready for use next month. See that drains are in order, that the water supply is ample, and that the surface of all inner walls is limewashed. Litter is likely to be so scarce next winter that we advise all home farmers to collect all the tree leaves they can, to get bracken from the woods, and any sedges, rushes, or coarse grass that can be had. Reduce the head of stock well within reasonable limits; keep no unsound or delicate animals through the winter; calculate ways and means closely, and prepare for a long hard winter. If the weather proves mild and open so much the better; but a prudent man makes provision for the worst, and it is only in doing so that he can feel safe. We much fear that heavy losses of young stock are likely to occur in the coming winter, and so many are now in terribly low condition. We saw a herd of thirty or forty calves a few days ago that had been bought cheap! All of them were "bags of bones," and hardly any of them are likely to live through the winter.

METEOROLOGICAL OBSERVATIONS.

CAMDEN SQUARE, LONDON. Lat. 51° 32′ 40" N.; Long. 0° 8′ 0" W.; Altitude, 111 feet.

DATE.			9 A.M	•						
1893.	meter o, and Level.	Hygromet		Direction of soil per			Tem- ture.	Radi: Tempe		Rain.
September.	Barom at 32°, Sea Le	Dry.	Wet.	Wind.	1 foot.	Max.	Min.	In Sun.	On Grass.	1
Sunday 3 Monday 4 Tuesday . 5 Wednesday 6 Thursday . 7 Friday . 8 Saturday . 9	Inchs. 30·288 30·239 30·047 29·860 29·763 29·774 29·908	deg. 65·1 58·8 59·1 64·4 69·7 61·3 56·6	deg. 57·2 56·1 55·4 58·0 64·4 57·1 51·1	E. E. E. S. W. S.W.	deg. 61.0 61.1 60.2 60.6 62.0 62.1 60.2	deg. 72.9 70.4 78.1 81.6 77.3 69.2 64.8	deg. 52·3 48·9 46·1 52·2 61·9 52·9 49·9	deg. 119.8 102.9 108.4 117.6 123.4 118.4 112.1	deg. 46·1 43·6 40·4 47·0 58·8 48·3 45·9	0.036 0.199

REMARKS.

REMARKS.

3rd.—Fine and bright throughout.

4th.—Fog at 8 and misty at 9 A.M., bright sun 9.35 and up to 1 P.M., then overcast; bright again after 3 P.M.; fine night.

5th.—Bright and sunny throughout; fine night.

6th.—Bright early and up to 5 P.M., then overcast; fine evening.

7th.—Fiue and bright at 9 A.M. and during the morning; overcast at times in afternoon, but generally sunuy; fine night.

8th.—Rain at 9 A.M., bright sun 10 A.M., rain and slight thunderstorm at 11.45 to 0.30; bright at 0.50, spots of rain at intervals in afternoon and much sun; fine night.

9th.—Bright sunny morning, but more or less dull during morning, fine afternoon and

9th.—Bright sunny morning, but more or less dull during morning, fine afternoon and evening.

Another generally fine week, with the temperature even higher than in the previous one, and considerably above the average.—G. J. SYMONS.



OT for many years past has such a favourable season for growing Tomatoes in the open air been experienced as during the summer now drawing to a close; and never probably has such a collection of varieties, or selections, been seen fruiting together as in one of the trial grounds of Messrs. Sutton and Sons, Reading. Nearly 200 reputedly distinct sorts, obtained from various sources in this country, also from France and America, have been grown under absolutely identical conditions from beginning to end, the collection forming a veritable museum of the beautiful, wholesome, and popular esculent. The plants have been thoroughly well grown, too, throughout their career, with the object of developing to the fullest possible extent their leading characteristics; and it has only to be stated that twelve plants represented the minimum number of any variety, while of some there were at the least five times that number, to show that there were thousands in the aggregate, the whole forming something like a forest of sturdy tree-like plants laden with scarlet, crimson, and golden fruit.

There were, it may be truly said, Tomatoes of all colours, shapes, and sizes yet produced, from the miniature Currant varieties, with elegant drooping racemes of coral-like berries or yellow beads, to the huge corrugated American monsters, weighing 1 lb. or more. Mentioning these it may be well to dispose of them at once. However they may be valued in the land of big things they are clearly out-distanced according to our standard of merit in Tomatoes by varieties which have been raised at home, or at least improved by rigid selection. There is not one of the newer Americans that is worthy of a place by the side of our best varieties, while most of the older introduced sorts which did good service in past years are out of date. However much we are indebted to our transatlantic friends for teaching the value of Tomatoes, and leading the way in their popularisation, also furnishing us with improvements on the old stock, we are now undoubtedly in advance in the question of varieties, and growers who want the best obtainable have no occasion to go out of England for them. That is a fact which no one can gainsay who has examined carefully, and without prejudice, the great Reading collection.

What there is in store for us from the "other side" time alone can tell, but we do not want varieties of rampant growth which concentrate their resources on one or two unwieldy corrugations, leaving a residue of clustered deformities in the struggle for existence. We rather covet plants of sturdy habit and prolific in smooth firm fruits, uniform in character from base to summit. If large fruits are wanted for exhibition they can be had by a good choice of English varieties, and such cultural methods as successful growers adopt in thinning and supporting the crops. If mediumsized produce is preferred for market, say averaging about half a dozen fruits to a pound, there is no difficulty in obtaining them, nor is there any lack of small-fruited varieties for ornament and use, or both combined. Plenty could be found for all purposes in the great trial in question, as good, it may be safe to say, as could be procured from any part of the world, and whatever our shortcomings may be in other respects, it is at least satisfactory to feel that England is in the ascendant with Tomatoes.

Some catalogue illustrations that are published of plants bearing

clusters of fruit close to the ground are regarded by many persons as exaggerations, and allegations have been heard of such plants growing only in the artist's brain. No doubt many hundreds of persons have had the pleasure of inspecting the collection under notice, and they would have no difficulty in finding row after row in which the plants were bearing huge clusters of fruits so low down that it would be difficult to place the hand under them without its coming in contact with the soil. That habit of bearing was not the exception but the rule with some of the varieties, notably Exrliest of All, which justifies its name, and Main Crop, the bulk of the clusters of large handsome fruits on this sturdy grower being produced on the lower part of the stems from just above the ground to a height of 2 feet. An acre of such plants and crop would be worth at least £100 if the produce were sold for 2d. a pound. Both those are outdoor varieties of sterling merit when well grown during a favourable season, and there are not many seasons in which the fruit of the former especially would not ripen outdoors in appropriate positions if the plants were rightly prepared and managed. Errors in either or both those respects are accountable for many breakdowns with Tomatoes outdoors and under glass as well. Of that there can be no manner of doubt, but it is one of the most difficult things in the world to make many of those who fail believe it, and so much the worse for them. They honestly think that everything which could be done has been done when the plants or crops have failed, and are also thoroughly convinced that whoever had attempted the work in the same house or outside plot the same season must have failed also. very much mistaken. Half the failures with Tomatoes even outdoors are the result of mismanagement, and a great deal more than half of those under glass are brought about by the "cultivator." The sounder the methods of cultivation the less the liability of the plants to fungoid, bacterial, or any other attacks.

In all the thousands of plants at Reading there was scarcely a failure, except in some inherently weak varieties; and if a plant here and there of the strong should have "gone off," and been found full of bacteria, while those near and all around remained healthy, the victim would have been probably planted with the roots either too dry or the soil in the pot a soddened mass. Many a so-called mystery is traceable to a simple cause, and so-called small mistakes often lead to great losses. As with individual plants so with a houseful. Make an initial mistake, and the seed is sown of ulterior collapse. The plants, when microscopically examined, are found eaten up by some parasite or micro-organism, and the fiat goes forth that these are the cause of the trouble. No; in most cases they were the results of some cultural mistake. The plants were brought into a condition favourable to seizure, and were seized. Microscopists who are not cultivators may not admit this dictum, but cultivators who are microscopists take care not to condemn it; on the contrary, they urge the best of culture for preventing insidious attacks. Why were the Reading plants so healthy and so heavily fruited down to the ground? Because no mistake was made by the grower, and the climatic conditions were favourable to their prosperity. Under glass the climate is very much what man makes it when he has the means at command, and outdoors, though he must take the climate as it comes, he may enable his plants to withstand adverse conditions by good work in preparation, or render them liable to failure through erroneous methods.

The Reading practice is very simple but very sound. If the cultivator were asked to describe it he would probably begin with a few negatives: - "Do not raise the plants too early and grow them tall and tender for planting out, as if you do you will only at the best get a few trusses of fruit at the top of lanky stems. Do not add fresh manure to the ground in spring, but give what is needed in the way of enrichment in the autumn, then the soil will be fertile yet sweet at planting time. Do not plant deeply to make tall plants look a little sturdy or to save stakes. Do not let lateral growths extend, but pick them out as soon as seen to

concentrate the resources on the main stem-leaves, and fruit, and do not top the plants till they attain the required height."

After telling you what not to do, he would, in his quiet firm way, tell you what he does, and what others should do. "Sow thinly about the middle of March, and keep the plants growing steadily and sturdily close to a glass roof, so that they will have short jointed stout stems and thick leaves. In due time gradually inure them to the full exposure for which they are intended, and which they should endure without a leaf suffering. Have them dwarf when planted out towards the end of May, or when the weather is safe, with the leaves resting on the ground, and they will be ready for work forthwith. Though the plants are stout enough to stand alone, yet as stakes will be needed provide them at once, and there will be no root disturbance. See that every plant is in the right condition as to root moisture, neither too dry nor too wet, and plant shallow. The roots should be in the warmest soil, and the deeper they are sunk in the ground the colder is the medium surrounding them. We want them to start growing at once, not stand as if paralysed for a month, thus losing precious time that can never be regained. Forcing the growth under glass too early in the season, to be chilled and checked later, is exactly the wrong way; it is a bad beginning, and we have no right to expect it can lead to a good ending-healthy plants bearing full crops of fruit for ripening as soon as the weather will permit." Such in effect is the routine, and it will be conceded that it embodies sound cultural principles, and it certainly answers well. The plants are grown a little more than a foot apart, in rows 3 feet asunder, across a series of long narrow beds. Each plant is confined to a single stem, and topped at a height of about $3\frac{1}{2}$ feet, no laterals being allowed to extend, and, as producing stem-leaves, and fruit alone, there appears to be no overcrowding, though some of the robust varieties were evidently not amenable to such restricted culture in this country.

The collection is grown, like collections of everything else by Messrs. Sutton & Sons, for testing varieties by comparison, selection, and elimination. Those that succeed the best are retained, come from whence they may, and endeavours are constant for improving by selections from the best, and not without success. For instance, there are several stocks or strains of Earliest of All, but one stands out clear as the first and in every way the best, four tiers of the huge clusters of fruit being completely ripe, the next nearest having the fourth cluster changed, but not ripe. Bell's Defiance appears to be a good type of the variety named, but not quite so early as the best selection. Then we have what seems an absurdity in terms—an improvement on Perfection, the fruits being deeper than those of the type, and the handsomest for exhibition; it will simply supplant the old form, and not presumably be invested with a distinguishing name. "Perfection" means something absolutely complete, not open to the smallest improvement, and the term "degrees of perfection" too commonly used ought to be abolished. Returning to the varieties, for size and beauty of fruit with productiveness Magnum Bonum, perhaps, bears the palm, and it is undoubtedly a Tomato of high excellence, also early. A1, too, is a noble and beautiful fruit, and the crop was a valuable one. The three last named varieties, with Main Crop, form a quartette of Tomatoes which it would be hard to excel in size, symmetry, and brightness of colour.

But there are smaller red Tomatoes of note, of what may be termed the Prelude type, as bearing the fruit not so much in bunches as long racemes, but Prelude is too small. Abundance excels it in being larger, and growers who desire a great abundance of medium-sized fruits for market may have them in this variety. Conference partakes of this type in part, but the very bright and rather small fruits are borne more in clusters. Not so those of the comparatively new variety, Sutton's Dessert, for the scarlet Plumlike fruits hang in distinct racemes a foot long. The plants were objects of beauty, and Tomato connoisseurs who enjoy the fruit in an uncooked state will have a treat in this distinct variety.

Amongst the large fruited yellow Tomatoes the handsomest was

perhaps Golden Perfection, in size and shape the fruit being exactly like its scarlet precursor. It is more appropriate for growing under glass than outdoors, and for weight of crop in the open it did not by any means equal Golden Queen, of which handsome fruits were bountifully produced. One more yellow Tomato must have mention, the smallest of all, but charming in appearance and excellent in quality, Golden Nugget. No one could see the plants of this variety without being impressed by their beauty. The fruits are like Golden Gage Plums, but brighter, and it was not in the least difficult to find from twenty to thirty in a branching cluster. The plants were laden with them, those on the fourth cluster being quite ripe, a sufficient indication of earliness. A number of such plants in the London or any other parks or gardens would create something of a sensation. Berry-bearing plants are grown for decorative purposes under glass, and certainly those of this golden-berried Tomato were strikingly ornamental in the open air. This variety has received the maximum number of marks of merit at Chiswick, and like the scarlet dessert sort above noticed, is a distinct acquisition. The collection included a number of other meritorious Tomatoes that cannot be named. Such complete trials as the one in question, in which every variety receives the best possible attention, are decidedly instructive and worthy of recognition. -AN OLD GROWER.

SUMMER BEDDING DURING TROPICAL WEATHER.

THE summer of 1893 has been an ideal one for flower gardening in all instances where good facilities for watering were provided and made use of, but a disastrous one in those places where water could be only sparingly given. Where the plants have been grown under the most favourable conditions the majority of them have done remarkably well, and an unusually long season of beauty has been secured. Planting was accomplished early, and at the present time (September 9th) the beds look brighter than I previously

remember them to have done at the same date. This satisfactory state of affairs is doubtless due, in a great measure, to the absence of heavy rains, which frequently start the plants into strong growth never remarkable for floriferousness. This is particularly noticeable in the case of Pelargoniums. At no time throughout the summer have they made growth rapidly; indeed for some time after planting the weather was so tropical that with the best attention in the way of watering they were longer than usual in establishing themselves, but from the time they began to flower freely till now the best varieties of Pelargoniums have provided a continual display of attractive colours. Large trussed varieties like Henry Jacoby and John Gibbons have exhibited their true form; plenty of sunshine and an almost entire absence of rain favoured the full development of their enormous trusses, which are undoubtedly attractive. Although I like these bold trussed Pelargoniums, I am also fully alive to the great value of the older varieties which bear a profusion of flowers, though the trusses are small, for in dull or wet seasons these often make the best display. As a bright scarlet I think there is none to eclipse Vesuvius. Indian Yellow is another splendid bedder which for years to come will keep alive the memory of Donald Beaton, its gifted raiser. Large masses of this seen from a distance have a unique and beautiful appearance, and its attractiveness is by no means diminished on closer inspection. I know of no other bedding plant which produces flowers of so peculiar, yet pleasing, a shade of colour. This was recently described to me by an artist of repute, as a true Indian pink.

Among Ivy-leaved varieties Madame Crousse still holds the foremost place, making as it does good growth under conditions not favourable to many plants, and producing at all times abundance of flowers. The past season has suited it exactly, and four large beds in the flower garden are still one mass of salmonpink colour. I find Mrs. Clibran Tropæolum, or Golden Harry Hieover Pelargonium, form effective edgings for beds planted with this variety, the slight lilac tint in the flowers is then shown up to advantage. Two beds of Souvenir de Charles Turner, edged with a broad band of Mrs. Perry Pelargonium, were attractive early in the season. The bold trusses of deep rosecoloured flowers borne by the plants in the centre of the bed exhibited a marked contrast to the silver variegation of the edging. There is, however, I think, no comparison between Madame Crousse and Souvenir de Charles Turner Pelargonium; the former

flowers freely all through the season, the latter grows strongly but

blooms only sparsely after the middle of August. I have this year discarded Mrs. Pollock in favour of Black Douglas on account of the more distinct bronze zone in the leaf of the latter. If a golden variety were required I should give the preference to Crystal Palace Gem. Those who have some difficulty in raising a sufficient stock of Lobelias from cuttings will do well to obtain seed of Sutton's Dark Blue, which I have this season tried with results that exceeded my expectations, the plants being so uniform in both colour and habit as to leave little to be desired.

After the brilliant sunshine experienced throughout the summer we might reasonably expect to hear of many failures with Violas, but we are happy to record the fact that our own have continued to flower for a longer period than they did last year. They have, however, received enormous quantities of water, and unremitting attention in the removal of faded flowers. This, together with sweet rich soil and autumn or early spring planting, are the true secrets of success in Viola culture. Two long beds of Countess of Hopetoun (white) edged with a broad band of Lobelia, have throughout the summer been extremely effective. Another hexagon bed planted with Viola Yellow Boy, edged with Lobelia and dotted opposite the angles with single plants of Heliotrope Miss Nightingale, the centre being occupied with a Chamærops gracilis, supplied a novel and pleasing combination.

Among annuals the French Miniatum Marigolds have been unusually good. Orange and Queen of Dwarfs I can strongly recommend. The colours are very effective, and they flower splendidly until the approach of frost. A fine pink variety of Phlox Drummondi having a white eye is excellent for planting in large masses. Cornflowers, Stocks, Zinnias, Gaillardias and Dianthuses have all rendered material assistance in keeping both beds and borders gay, as well as in supplying cut flowers. Asters have unfortunately been to a great extent a failure, the plants being attacked by a minute fly in the early stages of growth, and where insecticides were not speedily applied the subsequent growth was unusually weak, and the flowers as a natural result small. Notwithstanding a few failures, I am inclined to the belief that the flower gardens of Britain will be long remembered for the brilliant spectacle they have presented during the last three months.—H. Dunkin.

PEARS VERSUS PEACHES.

"Pears are infinitely better and more profitable than Peaches, and we are therefore going to substitute the former for the latter on all the suitable wall space in the garden." Thus remarked a wellknown gardener to me a few weeks ago, and judging by the appearance of the trees to which he pointed with evident pride he would be perfectly justified in carrying out the proposed change. The young Pear trees planted three years ago against a wall with a south aspect were in vigorous health, bearing large stout foliage and a heavy crop of magnificent fruits. The latter were swelling rapidly, because they had been thinned and copious supplies of liquid manure with ample surface dressings administered during the hot weather. Pears of this kind are a credit to the grower, are appreciated at the table of his employer, and if disposed of in the market at a suitable period when there is no glut would doubtless realise handsome prices, and prove a remunerative investment. Such a testimony could hardly be given the outdoor Peaches. The trees were old and weakly, having been grown in their present position for perhaps thirty years, and during the greater portion of that time had, according to my informant, failed to ripen the wood or fruit properly. This season, of course, has been an exceedingly good one for Peaches on walls, and in the case mentioned the facility of the course of the co tioned the fruits although small were ripening early in August. But this is an exception to the rule, and in all probability will not occur again for some time, hence the gardener to whom I have alluded still remains firm as regards his decision to substitute Pears for Peaches.

Opinions vary, according to experience, as to whether Peaches can be profitably grown on walls without the aid of glass, and it is quite probable that among the numerous readers of this Journal there are many persons who are quite ready to take up the cudgels on behalf of this fruit. That good Peaches can be, and are, grown on open walls in various parts of the country will be readily admitted, and this, too, in spite of adverse seasons. To my knowledge there are gardens where it is a rare occurrence for the open air Peach crop to fail, no matter what the weather may be; but these, it need hardly be said, are situated in warm favoured localities. Much, no doubt, depends upon the treatment given to the trees and the soil in which they are growing, but instances could be mentioned where, under the best management, failures generally accrue, primarily through local surroundings and climatic influences. In such cases, therefore, one might wisely do away with the Peaches and plant Pear trees in their stead,

and the results, in nine cases out of ten, would be of a satisfactory nature.

To illustrate the various opinions regarding this subject, a few cases in point might advantageously be cited. In response to a question as to the advisability of growing Pears in preference to Peaches on walls in the open air, a gardener, who has charge of one of the finest gardens in Yorkshire, wrote me as follows:—"I cannot understand anyone in the north attempting to grow Peaches on open walls when glass can be put up so cheaply. The Peaches on open walls when glass can be put up so cheaply. the walls in these gardens did not pay for the labour of nailing. In 1887 the Peach wall (a long one) was covered with glass—in fact, a house 11 feet wide was erected, and since then it has been heated. I have kept an account of the produce sold, which has now more than paid for the whole outlay. Had the Peaches been on open walls the returns would have been nil. I think Pears would pay better on south walls, but then one must not grow many -something to please the eye is necessary. ence is that nothing would pay better than Pitmaston Duchess. This variety is a good cropper, fruit large, and of excellent flavour; one has no difficulty in making 6d. each of first-rate fruit. Clapp's Favourite is another good showy Pear I can strongly recommend for the purpose." From the foregoing it will be seen that in this instance Peaches are preferred so long as they can be grown under glass, and then they prove remunerative, so much so as to pay in less than five years for the outlay of erecting a house nearly 100 yards long. Against this it will be noticed that Pears are recommended as being the more profitable on south walls, and many gardeners who are struggling with Peaches in the open air in northern or unfavourable districts will do well to bear this in

To go further afield, a case in Northumberland might be mentioned. Some years ago perhaps one of the finest Peach walls in the country could have been seen in the gardens at Howick Hall, about forty miles north of Newcastle-on-Tyne, and situated on the coast line. The wall is, or has been, heated by flues in the old fashioned way, and many years ago, I am told, grand Peaches were grown there. For a short period the trees were partly under my charge, and in 1887, the last season I saw them, the fruit ripened fairly well, and the earlier varieties coloured beautifully. These, however, were by themselves in that respect, for although the flues were sometimes slightly heated when dull weather prevailed, the later varieties failed in ordinary seasons to ripen the fruit properly, and the wood seldom finished as it should have In consequence of this a change was proposed by Mr. Inglis, the gardener, and Pears were substituted in the place of some of the Peaches. This took place in 1887, and since then no doubt more Pear trees have been planted against the south walls with good results. In connection with this it may be mentioned that whilst there I, acting under instructions, cut down several old unfruitful Pear trees, and in the spring of 1887 Writing me in February grafted the stocks with other varieties. Writing me in February last year Mr. Inglis said, "You will remember grafting a Conseiller de la Cour (Maréchal de Cour) on the stocks against the south wall. Last autumn, 1891, I gathered from those same grafts fruits weighing 15 oz -. each. I also had Pitmaston Duchess weighing 18 ozs., which I consider good for the far north." Fruits of this weight are unquestionably good, and are, moreover, a credit to the grower. There is at Howick a remarkably fine collection of hardy fruit, and, notwithstanding the obstacles with which northerners have to combat, Mr. Inglis can always manage to make a splendid display with his Apples and Pears. Should this meet his eye, as it probably will, a few remarks from his pen as to "Pears versus would no doubt be appreciated by numerous readers of Peaches' the Journal, some of whom, perhaps, are not quite so successful in hardy fruit culture in a northern county.

Coming south one might also enumerate numerous instances where Peaches on walls in the open air are by no means a success, and Pears are being planted in their places. One case in this latitude will, however, be sufficient to prove that no apology is necessary for bringing forward the subject. At Cadland Park, situated on the shores of the Solent, and where the soil is light and warm, the Peaches for the most part on open walls this year, as they have been apparently in previous seasons, are a failure. The trees a few weeks ago when I saw them were comparatively leafless and the fruit was poor compared to that grown in unheated houses. I would hasten to add was not the fault of the grower but rather that of the climate; and as before mentioned in these pages, Mr. Garner, on taking charge in the spring of the present year, with the tact of a good gardener, wisely decided "to do away with the Peaches" that were growing on a wall facing south east and plant Pears. The trees were crippled owing to the fact that during March and April the leaves, being exposed rather to the east winds, usually become badly blistered, and thus the crop is annually affected. If this occurs in a season like the present when there were but few cold easterly winds, it will be easily understood what the condition of the trees must be under ordinary circumstances. Pears in such a position would not suffer to this extent, and others who have Peaches under their charge that do not flourish so well as is desirable owing to an unfavourable site might also consider the advisability of growing Pears in their stead. On a wall facing due south at Cadland Park, Peaches, it might be mentioned, will thrive, and on such it is proposed to grow them. The surroundings in this position are exceptionally favourable to their growth, and as in other southern gardens near the coast success in their culture generally accrues if the trees are judiciously

managed, and they are protected from cutting winds.

Apart from the value of the fruit produced from Pear trees and their adaptability for general cultivation, there are other points which might be taken into consideration. Peaches are here to-day, and to-morrow they are gone. In other words, the fruit cannot be kept, after becoming ripe, for much longer than a week except in an ice house, and then at the risk of losing its flavour. It matters little how large a collection of Peaches is grown on the walls, the season of ripe fruit cannot be prolonged beyond September. Pears it is quite different. A good wall devoted to Pears of early, midseason, and late varieties will give a succession of choice fruit from August till May inclusive—a period of ten months. What more could be desired? Looking at the matter from all points, it will thus be seen that Pears weigh heavily in the scales against Peaches in more ways than one, and those who are responsible for the production of fruit of the highest quality will do well to investigate the subject. Some readers may be inclined to think that I am advocating the non-culture of Peaches in the open air, but such is not the case. What I maintain is that in many gardens a large amount of wall space is devoted to Peaches that might more profitably and creditably be given up to choice Pears. The former in ordinary seasons are, as a rule, a failure, or nearly so; but the latter would, under judicious management, invariably result in producing an abundant crop of high-class fruit. Where Peaches can be successfully grown in the open air by all means continue their culture, and if plenty of wall space is forthcoming Pears as well may be cultivated; but when the space is limited and the Peach crop uncertain, I should unhesitatingly advise the growth of Pears on south walls. Much more might be said in support of my contention, but the experiences of others would be interesting before proceeding further.—C.

AUTUMN TINTS AT HAMPTON COURT.

HISTORICALLY, perhaps, Hampton Court Palace is as interesting as any public place in or near the metropolis, and for this reason it is a popular resort for Londoners. As is generally well known the Palace and its pleasant grounds are situated on the banks of the River Thames at a distance of about fifteen miles from London, and during the summer thousands of people go there by boat and rail, the latter starting from Waterloo, being the speediest method of travelling. If the visitor enters from Teddington he has to pass through a celebrated avenue of Chestnut trees in Bushey Park, and these when in bloom form a most pleasing sight. The same applies to the whole surroundings in the autumn, for at the present time the leaves of many trees are assuming tints of various hucs that cannot fail to attract the attention of everyone who is interested in Nature.

There are many things to be seen at Hampton Court, and of these the horticultural department is by no means the least important. Summer is doubtless the best time to pay a visit to the beautiful grounds, for then the bedding is at its best, and in this respect Mr. Graham, the superintendent, can hold his own. His skill has for so many years been conspicuous here that no one looks for other than good taste in the arrangement of flowers and plants at Hampton Court, and this fact is known throughout the country. This year there is no exception to the rule, and although my visit this season was inadvertently delayed until Monday last, there was then much to note in the way of good bedding. The summer flowers are for the most part over, but the numerous autumn tints are quite as interesting if not so showy, and if some of the beds at the end of September are past their best it can easily be seen that they were really beautiful carlier in the season.

The principal bedding is to be seen in the public pleasure gardens which are situated in front of the Palace. These are about seventy acres in extent, and between them and the building is a magnificent terrace or gravel promenade which is at least half a mile long and 36 feet wide. Parallel with this are two borders filled with miscellaneous plants, and on the opposite a continuation of beds of various shapes and sizes. The borders alone are worth a visit, for they contain many fine masses of plants, the arrangement of which is consistent with other good features about the place. One of the borders is devoted to hardy plants and the other to sub-tropical bedding. The former just now is very gay with clumps of Helianthuses, Phloxes, and Dahlias, the front part being occupied by a row of Crystal Palace Gem Pelargoniums with an edging of blue Violas and Dactylis glomerata variegata planted alter-

nately. The blue flowers of the Violas form a pleasing contrast to the variegated Grass. The wall at the back is covered with Clematises, Roses, the Canary Creeper (Tropæolum canariense) and other climbing plants. The sub-tropical plants in the other border are likewise well arranged, and form quite a feature in themselves.

Among the beds opposite the borders alluded to are some very choice arrangements. During the present year I have seen many beds in public and private gardens, but few to surpass those under notice. Notwithstanding the dry season the plants have flourished well and bloomed profusely, the Pelargoniums being especially fine. Tuberous Begonias have apparently been ladened with bloom, which is rather an exception to the rule this year, and they are yet yielding an abundance of flowers, bright and rich in appearance on a dull autumn day. A large oblong bed near the entrance from the Kingston Road, at the left end of the terrace, is particularly showy. This is filled with miscellaneous plants, which include three large Abutilons with rich yellow foliage, Zea japonica variegata in the centre, the remainder of the bed being occupied by Matigolds, Stocks, Zonal Pelargoniums, and Zinnias. The last named plants are remarkably good, the blooms being fine and brightly coloured. An edging of Alyssum maritimum variegatum and Echeverias complete the arrangement. Close by a bed of Abutilon Thompsoni, with Petunias, Ageratum, and an edging of Gnaphalium lanatum makes a good display; and the same may be said of early flowering Chrysanthemums, which occupy a square bed, as well as other places.

Some other beds of different shapes, and borders are not by any means unattractive at this period. One border filled with standard Roses, amongst which Cannas, Dahlias, and single Petunias are planted, is specially pleasing. Two beds of Roses with a groundwork of Lady Molesworth Heliotrope, a fine dark variety, are deserving of notice, not for their brilliant appearance, but the delightful fragrance they emit. A bed composed of scarlet Pelargoniums (Vesuvius), with a row of the variegated Manglesi next to an edging of Cannell's Dwarf Ageratum shows up conspicuously. The Ageratum is one of the brightest blues I have seen, and besides being dwarf is very floriferous. A small collection of succulents tastefully arranged commands attention, as also do the groups of foliaged plants which are placed in the turf.

Another bed that is exceptionally bright for the autumn is one filled with a variety of plants. The bed is oblong in shape, and in the centre are three Dracænas, around each of which is a ring of Coleus Verschaffelti. The centre ring is filled with double scarlet Pelargoniums laden with blocms, and the others with Mrs. Pollcck Pelargoniums. Between the rings are some Marguerites, Fuchsias and Begonias, all flowering grandly. An arrangement of white Tuberous Begonias and pale blue Violas with an edging of Echeverias is noticeable for its chasteness rather than brilliancy; and several beds filled with blue Violas and Flower of the Spring Pelargoniums, with Iresine Herbsti for an edging, also command attention. Begonia Worthiana (tuberous) is a favourite plant here, and it is seen to advantage in several beds. The centre of one large bed is filled with this Begonia covered with blooms, and these show well against a margin of Coleuses and yellow-leaved Pelargoniums. As an edging to some of the borders Begonia Worthiana is also used, and for this purpose it is admirably adapted. Among the numerous Zonal Pelargoniums used, Tom Bowling is most conspicuous, the large trusses of this variety being very showy.

A word must be said in regard to the carpet bedding. This is not practised very extensively, and perhaps wisely, but it is done well. The designs are excellent and clearly defined, the plants being kept well within bounds. Carpet bedding is usually seen to advantage in the autumn when many of the flowering plants are past their best, and such is the case at Hampton Court. A long spell of hot dry weather brought out the colours of the Alternantheras and Coleuses to perfection, besides being conducive to a sturdy growth. One huge bed is laid out in squares, each portion being occupied with a different kind of plant. Alternantheras, Echeverias, Mesembryanthemums, and other plants generally employed in carpet bedding are used, and the whole forms a novel feature. There are, I believe, about sixty squares in the bed. Another carpet bed with a Maltese cross of Echeveria Peacocki and Sempervivum montanum in the centre is particularly good, and the other portion of the design being worked out by Alternantheras in variety, Mesembryanthemum, and Echeverias.

In addition to the principal borders, to which allusion has already been made, there are others which deserve more than a passing notice. One filled with Dahlias, early flowering Chrysanthemums, and Aster bessarabicus is remarkably showy for the time of year, and it is worthy of imitation. The Dahlias at the back are full of flower, the same applying to the white and cream coloured Chrysanthemums, whilst the edging of A. bessarabicus is literally one mass of bright purplish blue blossom. It is almost impossible to form a more attractive border in the autumn, and such might well be seen in every garden.

Much more could be said in regard to these beautiful grounds, but space forbids further details. These notes would, however, be even more incomplete than they already are without a reference to the famous Black Hamburgh Vinc. This at the present time is showing signs of autumn, for more than half of the large number of burches which it has borne this year have been cut, and the leaves are beginning

to put on their autumnal tints. The bunches are medium in size and very even, whilst the berries are large and well coloured. The noted Orange trees, too, which stand on the terrace at one end of the palace have a history which is interesting to many visitors. The trees are in huge tubs, the majority of them of a healthy appearance, and some producing fragrant blossom. - OBSERVER.

ORCHARD PLANTING NEAR DENVER.

To your many readers who are connected directly or indirectly with horticulture, the following account of what is now going on around this city will doubtless be interesting as showing the large and effective scale on which fruit tree planting is conducted in Colorado. I have previously said that so recently as 1863, William Lec, a native of Croydon, Surrey, England, planted the first Apple trees in Colorado, a few miles from the then frontier village of Denver, having brought them by waggon 700 miles across the plains from Iowa City, Iowa, the then nearest railroad point. To-day Denver has over 150,000 inhabitants, and is the centre from which radiates a system of railroads aggregating 26,893 miles, while there are at least 12,900 acres already planted with fruit trees in Colorado, and the area is annually being increased. For instance, about eight miles south-east of Denver one company in the spring of 1892 planted 48,000 standard fruit trees, besides Blackberries and Raspberries, on 540 acres, and this year the same company planted 35,000 standard fruit trees, and 112,000 Blackberries and Raspberries, on an adjoining 450 acres. The land is laid out in 5 acre tracts, each containing approximately 421 trees, viz., 210 Apples, 135 Pears, 10 Cherries, 50 Plums, 16 Prunes, 10 Apricots, besides 10 Grape Vines, 625 Raspberries, and 625 Blackberries.

The trees comprise only varieties which years of experience have proved suitable and highly profitable in the vicinity of Denver, such as:—Summer Apples, Yellow Transparent, a Russian variety. Autumn Apples, Alexander, Haas or Fall Queen, a variety which originated near St. Louis, Missouri; Jeffries, a splendid variety of Pennsylvania origin; Red Beitingheimer, a German sort, very large and beautiful; and Wealthy, which originated near St. Paul, Minnesota. Winter Apples, Babbitt, a "coming Apple," originated in Illinois; Jonathan, McIntosh Red, Pewaukee, originated in Wisconsin (raised from the Duchess of Oldenburg), Shackelford, which a few years ago took the first prize at the Illinois State Horticultural Society as "the best new Apple," and is said to be the best market Apple produced in Colorado up to this time. Tolman's Sweet, Wagener, Walbridge, and Wolf River.

Pears.—Bartlett, Duchesse d'Angoulême, Louise Bonne de Jersey, Beurre d'Anjou, Flemish Beauty and Mount Vernon, a new American Pear, the very best of its season, a seedling of Winter Nelis. Cherries.— Early Richmond, Ostheimer, a late Cherry taken from Germany to Spain in 1814, and brought from there to Kansas; small trees of this variety near Denver have borne two quarts of Cherries each in less than fourteen months from planting; Montmorency Ordinaire, Suda Hardy, a very late variety originated in Louisiana. *Plums.* — Imperial, McLaughlin, Shippers' Pride, Early Red, and Lombard. *Apricot.*—North American. *Grappes*.—Moore's Early and Worden. To the south of Denver 370 acres of land were planted this spring with 26,000 standard fruit trees, 30,000 Raspberries, 32,000 Blackberries, and 1000 Moore's Early Grape Vines. A few miles east of Denver, 260 acres (reached by electric street car line, and having water mains, school, and electric lights) are being planted in a similar manner, and 580 acres adjoining will be planted by the same persons next spring. On the same avenue another 160 acres has been laid out in 5 acre tracts for suburban homes, and is being planted with standard fruit trace. Blackbarries and Basebarries as above, together, with 2000. trees, Blackberries and Raspberries as above, together with 2000 Grape Vines, comprising such varieties as Brighton, "the finest Red Grape vines, comprising such varieties as Brighton, "the finest Red Grape" for the West; Concord, "the popular market Grape;" Diamond, a very hardy Grape, a cross between Concord and Iona; Lindley, a Red Grape specially adapted for Colorado and Kansas; Martha (White Concord), Moore's Early, the best very early Grape; Salem, a coppery red Grape; and Worden, the best of the Concord seedlings, and probably the best black Grape in the United States.

One firm has undertaken for the various owners the planting of the above mentioned 1240 acres with 100,000 standard fruit trees, 165,000 Blackberries and Raspberries, and several thousand Grape Vines. The stock is all obtained from the old and reliable firm of Stark Bros., nurserymen, Louisiana, Missouri, about 1000 miles east of Denver, which

firm was established in 1835.

The special feature of the above fruit planting enterprises is that the 5 acre tracts are for sale on easy instalments extending over five years, the vendors caring for and cultivating the trees for five years without charge, and guaranteeing 90 per cent. of living trees at the end of that In this way the wear and tear and worry of the cultivation is all assumed and carried out by the vendors and paid for by them. Of course if a purchaser wishes to pay cash down he gets a discount. The land between the trees (which are planted 30 feet apart in rows 30 feet asunder) will grow large crops of Potatoes, Tomatoes, Hops, Cucumbers, Squash, Beans, Cabbage, Beets, Melons, Celery, Onions, and other vegetables, or can be used for poultry purposes.

At first sight it would appear that fruit growing near Denver is likely to be overdone but such is not the case inasmuch as the local

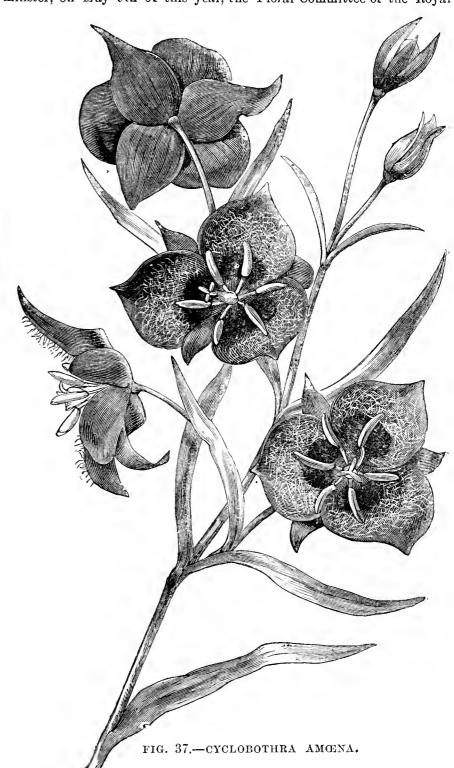
likely to be overdone, but such is not the case, inasmuch as the local market is unequalled, for the reason that less than 20 per cent. of the fruit consumed in Colorado is as yet grown in the State, the balance being shipped from California, Texas, Missouri, and other distant points, and sold at high prices. Denver, besides its own consumption of fresh

fruit and vegetables and the needs of the local canning factories, is the great distributing and supply point for a large area, including mining communities in the mountains at from 8000 to 11,000 feet altitude; and the fruit and vegetable grower and poultry farmer near Denver can load his produce into a waggon, drive into the city, sell for cash, and thus save the freight and middleman's profit, which he would have to pay were he further from the market.

Some of the prominent fruit and vegetable growers near Denver are Englishmen who have for years past practically demonstrated what can be done here, and at no distant date the vicinity of this city will become as famous for its orchards and fruit gardens as Kent, Devonshire, Hereford, or the Valc of Evesham.—Thomas Tonge, formerly of Manchester, England.

CYCLOBOTHRA AMŒNA.

THIS is an exceedingly pretty Cyclobothra, and when exhibited by H. J. Elwes, Esq., Colesbourne, Gloucestershire, at the Drill Hall, Westminster, on May 9th of this year, the Floral Committee of the Royal



Horticultural Society deemed it worthy of a first-class certificate. The flowers are of a pale rosy mauve shade, with three dark blotches in the centre of each. The sepals and petals are rather long and narrow, the latter being twisted, and they are hirsute. The anthers are white, which renders the flower more conspicuous. Fig. 37 represents Cyclobothra amœna.

THE WEM PEAS.

WEM, a quiet little town about twelve miles from Shrewsbury, is now fast becoming a familiar name with horticulturists, and has become celebrated as the scene of Mr. Eckford's present labours in the improvement of the Sweet Pea, and the culinary Pea also. Some 6 acres of land has been devoted to Peas at Wem, for the purpose of thoroughly testing his new varieties and securing a supply of seed to be grown in large

quantities in Essex, where several acres are also devoted to the culture of his Sweet Peas only, so great is the demand for seeds for home use and export to America and other parts of the world. The different varieties are sown thinly in rows in March, and when in full bloom they form a grand sight. Great care is taken that any plant not in its character should be allowed to remain mixed with the true variety. The rows are about 6 feet apart, so that an abundance of air is admitted, and there is plenty of space for a constant inspection of the plants, to detect any sport or "rogue."

Mr. Eckford is aiming at producing a yellow Sweet Pea, as well as a blue, and I think I may predict that this will be obtained some day, for in Primrose there is a shade of yellow, and this is being worked out further; and in Countess of Radnor and Emily Eckford we have a very near approach to a blue coloured Sweet Pea. The following new varieties not yet sent out will be welcome acquisitions to those fine sorts

already in cultivation:—

Duchess of York.—White, deeply striped and barred with pink; a

pleasing shade of colour, and a large flower of perfect form.

Duke of York.—The standard is bright rosy pink, with a primrose tint in it. The wings are primrose, tinted white, and it is a distinct, fine variety.

The Belle. -The standard is splashed with rosy pink, and the wings

with rose and blush. A charming variety, and will be a favourite.

Meteor.—Bright orange tinted pink, flushed with scarlet, and a violet tint which deepens to the centre. A bright, rich distinct variety

of great beauty.

Eliza Eckford.—The standard pink-tinted blush, with a rosy purple stripe, and splashed with pink towards the edges, varying in colour at times; the wings are creamy white. A very distinct and attractive variety.

Exectsion.—The standard is orange red, the wings a magenta red,

rich and bright in colour; flower large and stout.

Princess May.—White striped, and flaked with delicate pinkish

purple and fine.

Countess of Aberdeen.—White, delicately tinted towards the edge of the standard with soft pink, and with blush tinted wings; a charming

Mrs. Chamberlain.—White, striped, and flaked heavily with bright

rose; very striking and pretty.

Novelty.—Orange, tinted rose standard, and the wings of a delicate

mauve colour, lightly margined with rose, and very bright.

Blanche Burpec.—Wings and standard creamy white, large and stout in texture; a fine variety, named by Mr. Eckford in honour of an

American lady.

Of varieties already sent out, Mrs. Sankey is an unsurpassed white of the finest quality; Orange Prince is very distinct; Cardinal, brilliant scarlet crimson; Isa Eckford, The Queen, and Apple Blossom are all very pretty. Imperial Blue is a fine blue-tinted mauve, and Splendour is of the finest form and rich in colour. Lottie Eckford is as yet very little known, but is very distinct and handsome, resembling the old variety Butterfly, white, slightly margined with blue. Countess of Radnor, Her Majesty, and Dorothy Tennant are three superb varieties; and Mrs. Eckford, a delicate primrose tinted white, is a charming variety. Lemon Oueen is very distinct and Manarch Senator. variety. Lemon Queen is very distinct, and Monarch, Senator, Mrs. Gladstone, and Princess Victoria should be in every collection. Of the new varieties distributed this year, Firefly, Venus, Lady Penzance, and Blushing Beauty are all beautiful. Emily Eckford is extra fine, and very nearly a blue. Stanley is a very rich coloured, deep velvety maroon colour, and extra fine. Ovid is a flower of great beauty, truly a green and bright in selection. gem, and bright in colour. Royal Rose and Peach Blossom are two very pretty rosy pink-tinted flowers.

CULINARY PEAS.

The old Ne Plus Ultra has for a long time been Mr. Eckford's standard variety for breeding from for its excellent flavour and full blunt-ended pod, and trying to get very productive early varieties of much shorter habit with finer pods, but retaining all Ne Plus Ultra's good flavour. An inspection of the Wem seedlings through the growing season gives ample evidence of successful results, and many seedlings are discarded because not up to Mr. Eckford's high standard of excellence, and yet are very excellent Peas. These seedlings have to be grown for three or four years to get their true character firmly set by hard "rogueing" out of every plant not possessing the true characteristics of the variety, and then to be grown in sufficient quantity for sending out. A new variety named Aston Gem when sent out will be a great acquisition, and grows 3 feet high; a late blunt-ended pod; a wrinkled Marrow of Ne Plus Ultra breed, with long, large, handsome well-filled pods, and a heavy cropper from the root upwards. This is in every way a very fine Pea.

Critic. -This is a thin strawed Pea, the foliage not being so heavy as on many others, but it is a very fine market variety and for general use; blunt-ended pod; a midseason Pea, growing 5 feet high, coming into bearing quickly, and of first-class flavour.

[Colossus.—A profuse cropper; a second early wrinkled Marrow,

growing 5 feet high, and of first-class quality.

Wem.—A wonderfully fine variety with blunt ended pods, which are long and well filled, a Ne Plus Ultra seedling producing heavily from bottom to top and from 4 to 5 feet high.

Rex.—Bears a close resemblance to Wem, but has a deeper green pod, and is a first-class variety.

Epicure.—There were several long rows of this excellent Pea showing its free bearing qualities. It is a green wrinkled Marrow with large deep green pointed pods, with an average of ten peas in a pod, and of first-class quality. Height about 5 fect.

Juno.—A very dwarf-variety and most prolific. A fine late Marrow-

fat Pea.

Armorial.—This variety grows 4 to 5 feet high, has a very long blunt ended pod, with peas of a large size. A splendid exhibition Pea, as well as being first-class for general use.

Chieftain.—Long handsome slightly curved pods, with from ten to twelve peas in a pod, of dwarf habit and a profuse bearer, the plants having an abundance of pods from the bottom upwards, and the flavour

excellent.

Censor.--This variety was to have been sent out last spring, but the stock being limited it was withheld until next winter. It is a deep green wrinkled Marrow, growing 3 feet high, very fine pods, and a

valuable main-crop variety for productiveness and high quality.

Superabundant.—A dwarf Pea, an immense cropper of the first quality. A grand market variety, and bushy plants 2 feet and more

through of this kind showed up its productiveness.

Consummate. — Another high-class Pea, about 2½ feet high, with large pods, most productive, and of the best quality. Useful for market

gardens.

Other first-class varieties were to be seen, but enough has been said to show the kind of new Peas emanating from Wem. The seeds of culinary Peas are sown very thinly, and then the true character of each variety is seen, and heavy crops of well matured pods are secured. New Peas sent out by other raisers are grown at Wem for comparison in order to fairly test them. Mr. Eckford freely acknowledges merit in the productions of others, but I may safely say that by careful hybridising and judicious selection the Wem Peas will be only surpassed by others of very high class quality and superiority in other respects, and this will be no easy matter.—W. D.

EXPERIMENTS WITH SHANKING GRAPES.

FORTUNATELY I have not had much Grape shanking to contend with, but I have seen the evil and destruction it has caused in several instances, and my sympathy was very much with the growers who had charge of the Vines. Of all the ills to which Vines are subject I think shanking is the worst, with the exception of phylloxera. Each season up to a certain point the Vines may appear in the best of health, and all goes well until the unfortunate moment arrives and destruction of the crop sometimes follows in a very short space of time.

What produces shanking, and how can it be cured? I have heard some say the mischief proceeds from the roots being in a cold and unhappy state, others that sudden changes of temperature encourage it, and now the question arises, does thinning the bunches have anything

to do with it?

The first of these supposed causes I believe is the principal one, or this and the second combined; but I should certainly think the last has nothing whetever to do with the matter. I quite agree with the Editor's footnote on page 238, that Mr. Richardson may yet have Grapes free from shanking if he follows the treatment he has adopted with success so far if he thins the bunches. It would have been more interesting to readers, and I fancy a decided gain to the grower, had Mr. Richardson carried his experiments a little farther, and, coupled with the generous treatment to which the Vines previously were strangers, carefully thinned the bunches on every other Vine; he would have seen at a glance if the scissors had in any way assisted in the wholesale shanking, which I am inclined to doubt very much.

Mr. Richardson does not tell us which border he fcd, inside or out; and in wishing him every success with the work he has in hand, I cannot help thinking there may be another cause which may in a great measure account for less shanking this season than formerly—viz., the

tropical summer we have had.

I think it is pretty generally understood that anyone would experience considerable trouble in keeping a narrow inside border full of healthy feeding roots without constant attention to watering and feeding regularly and freely, which the Vines in question did not receive, especially so when the same Vines had unlimited root run outside. In fact, I should be a little surprised to find any roots in such a border under the conditions mentioned.

Now perhaps the excessive heat this summer has been such as to suit the roots in the outside border; at least, I should think they were in a happier state than in ordinary summers, or, in other words, has not these outside roots been too deep and too cold previously for the well doing of the Vines, hence the shanking? and has not the great heat coupled with generous treatment been the cause of bringing the roots nearer the surface with beneficial results?

In many localities where the subsoil is good and warm, Vine roots travel both a great depth and distance, and seem to revel in it; but I doubt if that would be the case at South Shields or the neighbourhood

by what I can remember of the locality.

I cannot believe that not thinning the bunches this season has assisted Mr. Richardson much in his improvement of the Grapes in his charge. If thinning assisted shanking in any way we should see a great deal more than we do, and thinning is sometimes done in a rough , and ready way.

A good bunch of Grapes can be easily spoilt with the scissors unless the operator knows what he is about, and no doubt much harm is often done by delaying the work too long, and if done clumsily or with blunt or rusty scissors each berry taken off leaves a wound, which does not

always stop at the footstalk. It would be interesting to hear how your correspondent succeeds next year, but my idea for the prevention of shanking is this—induce the roots near the surface or in an inside border, and keep them there by constant feeding winter and summer.—R. P., Impney.

ANYTHING that is written on the culture of Grapes is always interesting to old and young alike. Shanking of the fruit is a disease which causes much trouble, and in my opinion the problem is by no means solved. Shanking is not caused by one thing only, and Vines must be treated according to what is thought to be the cause of the disease, and it becomes the gardener in charge to put his head to work to find this out. Shanking of the footstalks first appears just as the berry is colouring, continuing to the time the Grapes are ripe. Some will shank even then, but these berries will be almost as sweet as the rest of the bunch.

Absence of calcareous matter in the border, and the roots in the cold subsoil, have been attributed as the causes of the evil; but overcropped starved rods which have not swelled according to their age with long spurs, obstructing the sap, over-richness of borders where they are new, bad ventilation while the Vines are in bloom, and hurrying them while

stoning, have something to do with it in several cases.

With regard to Mr. Richardson's case, he has done the right thing in lifting the roots, but I fail to see the advantage of not thinning the berries. If his rods have not swelled according to their age, he would obtain better fruit by running up young rods, not leaving too much length of rod the first year or two. He should feed the Vines well, fork the borders only once so as not to disturb the surface roots, and give a good coat of either stable or cow litter, letting it remain until the crop and laterals are ripe.—F. G.

I FAIL to see in what way the thinning of bunches of Grapes (when carefully done) should tend to the shanking of the retained berries as suggested by Mr. Thomas Richardson (page 238). Under the treatment so clearly described in the third and fourth paragraphs of Mr. Richardson's letter it is only reasonable to assume that had the number of bunches this year been reduced to seven or twelve on each Vine, according to its strength, and the berries thinned to about 1 inch apart, the result would be much more satisfactory than the magnificent (?) crop referred to by

your correspondent.

The improvement in the vigour and general condition of Mr. Richardson's Vines is not to be attributed to the fact of his having "dispensed altogether with the thinning scissors," but is traceable to the good resulting from the removal of the old worn out soil, and adding a more substantial and congenial admixture of "chopped turf, half-inch bones, and old lime rubble," and the subsequent top-dressings of cow manure, and applications of the "undiluted drainings of a cowshed." The fact is the Vines are now bearing evidence of the good they have derived from the change of fare. There is no reason why the Vines should not continue to yield good crops of creditable Grapes for several years to come. However, the Vines being very old I would suggest to Mr. Richardson the advisability of taking a young rod up, stopping the leading growths at 3 feet, and pinching out the laterals. In this way new rods may be secured in three or four years without interfering with the annual crop of Grapes, except by improving it, as the lower spurs may be cut clean away from the old Vines up as far as the shortened back young rods extend, these being allowed to bear a few bunches say two the first year four the second were six the third and bunches, say two the first year, four the second year, six the third, and eight or nine the fourth year, the old rods being then cut out at the fall of the leaf.

Means should also be taken to confine the roots of the Vines in a strip of border about 6 or 7 feet wide at the most, keeping them near the surface by top-dressing and liberal applications of liquid manure during the summer months to assist perfecting the crop. Where fermenting leaves to the thickness of about 2 feet can be put on the border when the house is closed for forcing without being considered objectionable, the gentle heat thereby imparted to the top-dressing will attract the roots to and keep them in the compost prepared for their special requirements and advantage. This is a simple and sure means of attaining an important end .- H. W. WARD, Longford Castle, Salisbury.

WITH the Editor's permission I should like to give my opinion on Mr. Richardson's experiments with shanking Grapes. The method he has found beneficial is quite the reverse of minc. Muscats I fancy would be better left unthinned under Mr. Richardson's treatment. I do not believe in cow manure in a raw state for Vines, the liquid no doubt will suit them to a certain extent. Has Mr. Richardson examined the drainage? That would be my first step. Lifting the roots near the surface by degrees has been successful with me. Take note of the soil, and water carefully, not twice a week, but once every two weeks would be quite enough in most cases. In an early vinery I have two Muscat Vines which my employer previous to my coming here a year ago was advised to chop down owing to shanking. I have given them part of the above treatment, and the result is a crop of excellent Grapes. I am in hopes of having better next year, after lifting the roots up to the front lights, as I only half lifted them last year, owing to it being late in the season when I took charge.

Did Mr. Richardson find any long tap roots when lifting? If not, I should advise him to look again, as I fancy there must be some straying into the clay under the lawn. Long thick fibreless roots straying

into a cold soil is, in my opinion, the principal cause of shanking. Get the roots near the surface, and top-dress with good turf, bones, charcoal, and lime rubble, then I think the Vines will require no cow manure, the liquid from it being quite sufficient.—WM. ROBERTS, The Gardens, Peniarth, Merioneth.

263

WITH the Editor, I agree that Mr. Richardson is on the way to have Grapes free from shanking on thinned bunches in the not far distant future. I do not believe that non-thinning of the berries will have much effect in preventing shanking, rather the reverse. It is obvious that the heavy feeding has exercised a most marked improvement on the Vines and their fruit, and if Mr. Richardson continues to feed with judgment I feel sure that no shanking will be the rule among his Grapes. At the same time I may perhaps advise caution in the use of cow manure applied several times in the season, in addition to undiluted drainings from the cowsheds every Tuesday and Friday. It may answer very well for a year or two, and then I think there is a danger of the Vine border becoming sour. To prevent sourness a soaking of lime water several times in the season would be advisable, and also prove beneficial to the Vines. Some of the various salts are also excellent if used with discretion, but soils vary so much in their constituents that only a practical knowledge of the elements therein can enable anyone to state what should and what should not be supplied. The question of manures and their action is somewhat perplexing, but I think a keen observer like Mr. Richardson will soon overcome all difficulties that may arise.— S. T. WRIGHT.

VEGETABLE CULTURE IN ADVERSE SEASONS.

(Continued from page 241.)

CAULIFLOWERS.

THE chief point to aim at in growing Cauliflowers for exhibition or home use is quick growth from beginning to end. If allowed to remain too long in the seed bed, or to be dry at the roots for a long period, clubbing will often follow, and this is vexatious. Very early heads may be obtained by sowing during August and wintering the plants in cold frames, or by sowing in heat in spring and transplanting to boxes or frames when in rough leaf, and when planted out put into shallow drills and protected by inverted flower pots or Fir branches. I prefer the last method of raising a stock for early use. There is not so much labour, anxiety, and risk of loss as in the case of autumn-raised plants.

Sow the early varieties in January or first week in February, and transplant the young seedlings in well prepared beds previously to putting them in their permanent quarters. Allow a good distance from plant to plant, according to the variety, and on the first appearance of clubbing earth up the stems, first treading the soil firmly round each plant. If the weather be dry and hot copious waterings will be necessary, and a good mulch should be applied. Sometimes in hot weather the fly is troublesome. The best remedy which I have found is anthracite coal ash dusted over the plants while they are damp with dew. Cut the heads when at their best. If allowed to remain long in very hot weather they soon become loose and discoloured and their chief attraction and quality lost. The varieties Early London, Walcheren, Magnum Bonum, and Eclipse, with Veitch's Autumn Giant for late use, I find sufficient for a large garden.

CARROTS.

Clean, even, and richly coloured Carrots are not to be obtained out of poor, stiff, and lumpy soil, especially if shallow. Deep cultivation should be the rule without exception for all root crops, and labour spent in this work will not be lost. Soil of a free and rather light nature is best suited for the production of clean, even Carrots. Where it is not so deal with it in early autumn; if wireworm be found apply a light sprinkling of soot and gas lime, and well incorporate with the soil as digging goes on. The ground ought to be broken up two spits deep, and if stable manure is used let it be decayed, without straw or litter of any kind, but not dried. Well break up the bottom spit of soil and leave it in position, turn over the top spit and leave the surface rough, then a good seed bed will be easily made in the spring. A rough surface admits air to the soil below, sweetening it. Some persons have great faith in chemical manures. Most of these, if good and properly used, are no doubt beneficial. They may be sprinkled on the surface of the bed early in the spring while the soil is dry and incorporated in it with a fork, at the same time breaking up all lumps of earth. After a time, when it is desirable to sow, make the remaining ground smooth, and draw drills a foot to 15 inches apart. Sow the seed thinly, scattering a little burnt earth and wood ashes in the drills before closing them with the rake. The preparation of the ground for Carrots will answer well for Parsnips and Beetroot.

Thinning is the next important operation, and should be done at an early stage of the plant's growth. It may seem a trifling affair, but it requires to be carefully carried out, and 4 to 6 inches or more should be allowed for the plants to develop properly. Draw the weakest first, then in a few days complete the thinning, always observing that the plants left be isolated, so that in taking away those not wanted its roots are but little disturbed. If it is one of a bunch the chances are that deformity in the root will result, though at the time of thinning it would not be observable.

The bulk of these remarks apply with equal force to the cultivation of the Turnip and the Onion, only these crops require firm ground. Rolling the ground does not compress it sufficiently, and I rather prefer treading. It is a little more tedious perhaps, but results justify the practice. Rake over the bed after sowing, but do not tread or roll it, as if that is done, and rain follows, the surface cracks in drying, and the seedlings do not grow freely. In very hot weather spread a herring net over the ground after sowing the Turnips, and leave it on till the rough leaf appears. The fly rarely troubles while the net is on, however hot the weather may be; afterwards use the anthracite coal ashes to prevent its ravages.

Mildew is very destructive among Onions. On its first appearance rub flowers of sulphur on the affected parts. It generally attacks the Onions during the month of August, and will work much damage among them if not quickly checked. At first it is not observable, ordinarily, but upon close inspection small patches of grey dust-like powder will be found on the stalks, and these if left untouched will soon cause the stem to turn yellow and decay. This premature loss of foliage is detrimental to the sound keeping of the bulbs during winter. If extra large Onions are desired the plants should be raised in January, and grown thinly in boxes before being finally planted out in April, and the crop treated generously throughout.

Good varieties of Carrots are Early Gem for early use, and New Red Intermediate for the main crop. Beetroot, Pragnell's Exhibition, Blood Red, and Carter's Perfection. Parsnips, Student and Hollow Crown. Turnips, Jersey Lily, Snowball, and Golden Rose. Onions, for autumn sowing, White Leviathan; for spring sowing, Rousham Park Hero, Improved Reading, James' Keeping, and Ailsa Craig.—G. GARNER.

(To be continued.)

NOTES BY THE WAY.

An oblique line to the left of the main road from East Grinstead, near which are Oakleigh, Brockhurst, and Brambletye, leads in the direction of Hammerwood, the residence of Oswald Smith, Esq. exact direction of the line is more than I was able to grasp, for an obliging guide led me by winding footpaths and zigzag approaches, beguiling the long and weary way by frequent references to a mysterious "short cut" which was to be found sooner or later. Hearing about short routes when it is only too evident that you are taking a long one is about as consoling as a landlady's assurance to a hungry traveller that she would have had a splendid dinner ready for him if disappointments with tradesmen had not left her with nothing but bread and cheese. Not being found on the outward journey, the guide decided that we must return by it. He had forgotten Mrs. Glasse's preliminary point in the recipe for jugged hare, which was to catch it first. The only "short cut" discovered was one which led through a farmyard, wherein a large, gaunt, and hungry looking dog was dragging round several feet of broken chain, and the settled conviction that we were at last on the straight road which had taken possession of the guide's mind deserted him with startling suddenness. But we found Hammerwood and got back from it, so I take it that a veil may be drawn over the doubts and difficulties engendered by seeking for a path that either does not exist or is too well guarded for use.

Mr. Oswald Smith is, I believe, either a brother or near relative of Mr. Martin Smith, but certainly he does not seem to share the fraternal enthusiasm for Carnations. I do not know that there is anything very striking in this fact, for as yet no gardening Ibsen has arisen to show us that heredity has its say in floral tastes, and we can do very well without him. But Mr. Martin Smith is such an enthusiast, and so convincing in his championship of the great summer flower, that there is room for a mild species of wonder that Hammerwood has not its quota of white grounds, yellow grounds, selfs, and the rest of the Carnation string.

"A person of the name of 'Arris," as Mrs. Gamp would have said, has charge of the gardens at Hammerwood. He is a broad, deep chested, hale and hearty looking gardener, and has earned quite a reputation in the locality as a vegetable grower. Perhaps the fact of his pleasant house opening direct on to the kitchen garden may have something to do with this, although it is not easy to trace any distinct connection between the two facts. It may be that as the vegetable quarters are also the pleasure grounds, so far as his residence is concerned, he takes a special pride in having them well filled, and this view I should be the last to traverse, apart altogether from fear of a cudgelling from our critical friend "A. D." to whom, as we all know, no Rose or Carnation has the beautiful points of an Onion or a Potato. Be the reason what it may, it is the exception to meet with a kitchen garden so well stocked and so admirably kept as that at Hammerwood. It is full of good produce, clean and orderly. Without being hypercritical, it may be advanced that many kitchen gardens would be improved if the "place-for-everything-and-everything-in-its-place" rule were observed in them as carefully as it is in this well-managed Sussex garden.

Hammerwood may be said to be the centre of a little kingdom of which Mr. Smith is the reigning monarch. It is far away from a town or even village, being snugged away amongst the fields and woods. But the beneficent potentate has built a number of excellent dwellings for his workpeople, a fine school and a handsome church. The little hamlet and the neighbouring mansion which fosters it lie calm, peaceful, and secluded, typical of many a pastoral picture in Merrie England. The hum of busy life, the ceaseless tramp of the "madding crowd," do not penetrate there. There is a restfulness and repose about the place which

are full of charm. The residence is embowered in lofty trees and huge masses of Rhododendrons. There are some immense banks of the old caucasicum quite close to the flower garden adjoining the house which must present noble effects when in full bloom, despite the modest beauty of the variety as compared with some of the gorgeous hybrids. I could not help thinking, indeed, that the semi-wild and natural aspect of the grounds was much in keeping with the surroundings, and perhaps felt inclined to accuse Mr. Harris of a leaning to vandalism when he talked about clearing some of them away; but superior varieties are, I understand, to take their place.

The sight of these wonderful bushes suggested the reflection that Sussex must possess a record hard to beat in her examples of this fine old Rhododendron. I remember dropping unexpectedly upon a huge tree—for it was nothing less—in a garden at Groombridge a few years ago, not very far from the foot of the famous hill. It was on a sunny afternoon late in spring, and the gigantic bush was laden with blossom. I am unable to recall my estimate of its size, but it was larger than many a cottage. Beyond Crawley, too, far past Cheal's, through the old town, up the hill and so on along the Brighton road, attention is attracted by some very fine bushes on the left, which when carrying their spring burden of flowers are a sight to linger in the recollection even when the manifold attractions of ancient Brighthelmstone are exercising their influences. This, however, is a digression.

A charitable and considerate pen must be wielded in touching on flower gardens this year. Gardeners waited anxiously for the fulfilment of Falb's weather predictions, and the filling up of their beds consequent on the rains which he generously provided, but alas! the professorial vaticinations proved to be a delusion and a snare. It is not the fault of Mr. Harris and his suffering brethren in other parts if the beds were only half furnished when they ought to have been amply filled. The designs were right enough, and so was the material to begin with, but the plants would not grow as they should have done, all their time being taken up in keeping alive under the fierce and protracted heat. Not that the bedding was bad, quite the reverse. There were some attractive arrangements, and quite a brave glow of colour in some cases, but there as elsewhere thin beds were the rule.

It will not be in the least surprising if there should be a check in the triumphant march of Tuberous Begonias, as a result of this season's experiences. Their most partial admirer must admit that the season has been somewhat too much for them in a great many places. They have not shone radiant as of yore, luxuriant in leafage and brilliant with flowers, but have been pinched, starved, and melancholy. It is easy to tell when plants are unhappy, and dejection has been written large on most of the bedding Begonias which I have seen in this season of sultry memory. But in venturing (spite of the colossal failure of the luckless professor) on this little prophecy it is not my wish to suggest that the Begonias merit the rebuff which fate perhaps has in store for them. That would be unjust. All I wish to do is to point out the probable result of their failure this year. It must be remembered that thousands of people act mainly on impulses, and the first thing that they will do in observing the poor condition of the plants will be to decide on doing without them another year, forgetful that we have had a season in a hundred, and that the Begonias have not had a ghost of a chance of doing themselves justice. 'Twas ever thus. Praise and admiration in the hour of success, disparagement and distaste in the moment of failure. But the flowers will win after all.

Speaking of Begonias reminds me that I ought to say how exceedingly well Mr. Harris grows them in pots, for he has a very fine display. Another useful decorative plant that he grows extremely well is the Cockscomb. He had a very fine specimen of Veitch's Dwarf, which, as grown at Hammerwood, is distinctly superior to the Glasgow Prize of my novitiate days, for, although very dwarf, the combs are even and finely developed. Orchids are well grown at Hammerwood, and so are many other plants under glass, such as Clerodendrons, Bougainvilleas, Bouvardias, Acalyphas, and others, but I have not space to enumerate them all.

Fruit comes in the same stream of praise, especially Peaches and Nectarines. The early house is a very wide and roomy structure, and contains some very large trees of Dr. Hogg, Princess of Wales, and Stanwick Elruge. Trees of the latter which were bought a few inches high in small pots of Mr. Rivers twelve years ago now have a spread of 20 feet and bear enormous crops. I was about to omit mention of Mr. Harris's Melon. What would he think of me if I did? I did not leave Hammerwood without tasting it, and I must not quit it now without saying a word about the fruit. Please do not understand me to suggest that there is anything astonishing in a gardener having a Melon of his own raising. Almost every gardener has one. It is a peculiarity of the craft to get a hybrid which puts every other Melon into the shade, and which is so precious that a slice has to be cut for you with great care lest you should carry away a seed in your mouth, sow it, and basely sell the stock thus procured for a fabulous sum. The Grinstead gardeners have this amiable little weakness strongly developed. Each runs a Melon of his own. The neighbourhood is positively overflowing with wonderful varieties. Each, of course, is a great deal better than the other; and the other, equally as a matter of course, is better than each. This may seem peculiar, but, as a proof of its accuracy, I may mention

that I had the information from the raiser in every case. Mr. Harris's is really a very good Melon, being an even, well-netted, handsome, orange fleshed fruit of very excellent flavour. I have not tasted a better one this year, and very few anything like so good. He calls it No. 1. In a season of poorly flavoured Melons it is a pleasure to come across a variety that possesses really high quality.—W. P. W.



EVENTS OF THE WEEK.—As notified in another paragraph, the Committees of the Royal Horticultural Society will meet at the Drill Hall, Westminster, on Tuesday, September 26th. On Wednesday, the 27th inst., a Show of hardy fruit will be opened at the Gardening and Forestry Exhibition, Earl's Court, and will continue the two following days. The County of Gloucester Show will also take place on the 27th and 28th.

— THE WEATHER IN LONDON.—During the past week fine weather has for the most part prevailed in the metropolis, although several local showers have occurred. Sunday opened fine, but gusty, and Monday proved cloudy with appearance of rain. On Tuesday last a few showers fell, and Wednesday morning was dull. At the time of going to press, however, it is fine, and rain is much wanted.

—— UNITED HORTICULTURAL BENEFIT AND PROVIDENT SOCIETY. —The seventh annual dinner of this Society will take place on Tuesday, October 10th, at 6 P.M., at the Cannon Street Hotel, E.C., on which occasion P. C. M. Veitch, Esq., of Exeter, has kindly consented to preside. Tickets, 5s. each, can be obtained from Mr. W. Collins, Secretary, 9, Martindale Road, Balham, S.W.

— ROYAL HORTICULTURAL SOCIETY.—The next meeting of the Royal Horticultural Society will take place at the Drill Hall, James Street, Victoria Street, Westminster, on Tuesday, September 26th, when prizes are offered for Gladioli. At three o'clock Mr. W. Iggulden of Marston Gardens, Frome, will deliver a lecture on the "Causes of Failure in Eucharis Culture."

- DEATH OF MR. HUGH LOW. - With great regret we record the death of Mr. Hugh Low, of the well known firm of nurserymen at Clapton, which took place suddenly on Sunday, September 17th, at his residence at Upper Clapton. The deceased gentleman was thirty-two years of age, and his untimely death will be regretted by a wide circle of friends; he leaves a widow and two little girls. For some time past Mr. Low had been in indifferent health and returned from a visit to Cromer last week, but was not taken seriously ill until Saturday, after which pneumonia developed rapidly with unfortunate fatal results. Mr. Low was in partnership under the style of Messrs. Hugh Low and Co., with his two younger brothers, by whom, we understand, the business will be carried on. He was a member of the Committee of the Royal Gardeners' Orphan Fund, and a most estimable man. The funeral took place at 12.30 P.M. yesterday (Wednesday) at Abney Park Cemetery, Stoke Newington, and the ceremony was attended by many sympathising friends.

- DESTROYING WEEDS.—On seeing a paragraph on this subject in the last number (page 245) from "Meehan's Monthly," I was reminded of a conversation I recently had with a gardener on the eradication of the small Bindweed, whose roots go down, as is well known, to an incredible depth. The pest appeared to have quite vanished from a formerly infested patch, and I asked how he managed it. "Oh! an old gardener told me the secret. He said you must hoe them every Wednesday. I did, and they are quite done for." It was good; and I should like to have known that old gardener, who evidently knew as much of human as of weed nature. It is pretty clear that if he had said "every week" they would have been hoed, once on a Monday perhaps, and then on the Saturday week, and so on, and the whole thing would have fallen through sooner or later; but by naming his day he gave a useful little touch of a superstitious charm for an ignorant man, and also made sure that it would be done every week. Let those of my friends who are troubled with Bindweed, Coltsfoot. and Dandelions, try the "every Wednesday" plan for them, and report if it does not answer.-W. R. RAILLEM.

— THERE are in the United States thirty-two botanical stations. Systematic botany and the physiology of plants are studied more or less at all these stations, and at every one of them particular attention is given to the maladies of plants and the disease causing fungi.

—— LILIUM JAPONICUM VAR. ALEXANDRÆ.—We observe in the catalogue of Messrs. Wallace & Co., Colchester, that our illustration of this new Lilium on page 57, July 20th, has been copied without permission and published without acknowledgement. This is not in accordance with the canons of literary propriety. Moreover, the flower that our artist sketched, and which is accurately represented in the Colchester catalogue, was not grown by Messrs. Wallace & Co., but by Messrs. Veitch & Sons, Chelsea.

—— Grapes for Wine.—In some parts of Médoc the vintage began as soon as the 20th of last month. Such an early date has not been known for generations, the usual period being the first half of September, sometimes even the last days of the month. The Girondins all agree in saying that the crop this year will be a splendid one in spite of drought. It is necessary to say "will be," for most of the growers have had to suspend the gathering of the Grapes for want of casks, which are so scarce that they fetch unusually high prices.

— Suburban Sparrows.—I should like to confirm all "Davies Duffryn" (page 214) alleges against these mischievous depredators, although he omits from his indictment one of their worst vices—viz., pecking, and thereby destroying all ripe or unripe fruit. But the difficulty is how to get rid of the pests. Cats seem quite useless, and hawks cannot be sufficiently tamed, I fear. Shooting is out of the question in a garden; consequently any inventor who devises a simple and inexpensive sparrow trap would very quickly make his fortune.—Country Amateur.

PERENNIALS IN TOWN GARDENS.—A very good word for perennials as becoming and profitable inhabitants of town gardens was spoken by Mr. Walter Child, F.R.H.S., in a paper delivered before the Birmingham Amateur Gardeners' Association the other day. Mr. Child is a very successful exhibitor of these plants, and has contributed substantially to rescue many worthy perennials by a sedulous selection of the best varieties, and by the most suitable cultivation. For a long period many of these old-fashioned garden flowers have enjoyed the loyal regard of those to whom gardening is a pleasure.

— Gardening Appointments.—Mr. William Carr has resigned the post of head gardener to Viscount Hill, Hawkstone, near Shrewsbury, in order to fill a similar position at Yeaton-Pevevey, the seat of Sir Offley Wakeman, Bart., Shrewsbury. Mr. Carr was foreman at Hawkstone under the late Mr. William Pratt, whose successor he became in the management of the gardens there when that good all-round horticulturist left ten and a half years ago to become head gardener to the Marquis of Bath, at Longleat. Mr. James Fawkes, for the past two and a half years gardener to the Hon. Mrs. Douglas Pennant, Lillingstone House, Buckingham, and previously foreman with Mr. Hope, Middleton Park Gardens, Bicester, has been appointed gardener to the Earl of Jersey, Osterley Park, Isleworth, Middlesex.

- THE NEW ZEALAND KARMAHI TREE.-A correspondent writes:--"So great has been the demand for Wattle bark that this valuable Australian tree is become scarce. But there is a native tree which I think might be found no mean rival of the Australian Wattle. I refer to the Karmahi, or Kamai, as it is generally called. This tree is known to botanists as Wienmannia, and is often called by bushmen "Bastard Birch." There are two varieties of the tree. One found in the North Island and northern portion of South Island, and the other peculiar to southern forests. In the great Tautuku Forest, extending from the Clutha to the Mataura, the Kamai is one of the most abundant trees. It grows to a height of 30 feet to 40 feet, and often attains a diameter of 20 inches to 30 inches. It is covered with a tolerably thick bark, which contains a considerable amount of tannic acid and dye material. The Maoris use the bark to dye flax, and produce a fast black or dark brown colour. They bruise the bark and boil it along with the flax to be dyed, which is afterwards steeped in swamp mud, where the iron held in solution comes in contact with the tanning of the bark, and so fixes a black dye. Experiment is all that is wanted, I feel sure, to bring the Kamai bark into general use, both at the tannery and at the dyeworks. From a series of chemical experiments made myself a few years ago on the barks of our forest trees, I proved the Kamai to be one of the richest in tanning material."

- MR. GEORGE GALLAHER, late gardener at Kilkewan House Ayrshire, informs us that he is about to commence business as florist and fruit grower at Burnhead, Liberton, Edinburgh.
- DESTROYING WASPS' NESTS.—It is reported that Mr. Whitbread, M.P., has caused the destruction of no less than 800 wasps' nests in his park at Southill. A few weeks ago Mr. Whitbread offered 6d. for each wasp's nest destroyed in his park, with the result that he has just paid on this account over £20.
- —— A POTATO PROBLEM.—On raising Potatoes in several gardens near Tenbury many of the tubers are found to be quite flabby, as if scalded or frosted, though some of them are only affected at one end. Have other readers of the *Journal of Horticulture* experienced anything of the kind? I shall be glad if the cause can be explained, and if the tubers will be good for seed. They go black on being cooked.—MIDDLEDALE.
- A WHITE FLOWERED COBŒA SCANDENS. When potting some seedling Cobœa scandens in the spring I noticed one much lighter than the others in the foliage and stems. It was marked and turns out to be a white flowered variety. Can you tell me if this is unusual, as I have never seen a white one before?—H. R. RICHARDS. [Light coloured forms are not uncommon, but so far as we know a pure white one has not been exhibited. Have you any flowers to send for examination?]
- —— QUEEN WASPS.—No delay should take place in destroying every nest known to exist, as the queens for another season's plague are very numerous in the nests now. I pointed out last autumn how necessary it was to hunt up all the nests, as they were producing an unusual number of young queens, and the season from the first has been highly favourable for their development. Some seasons I have had difficulty in finding a queen being developed for another year, which is to me unaccountable, and a few years ago this occurred to such an extent that to see a wasp the following summer was a rarity.—

 J. HIAM.
- CALIFORNIA MIDWINTER INTERNATIONAL EXPOSITION.— The Agricultural and Horticultural Hall of the Exhibition to be held in San Francisco during the winter of 1893-94 has an area of 300 by 125 feet. Agricultural products, horticultural products, floricultural products, forest products, specimens, botanical, fossil and mineral, samples of cereals and grasses, when not intended to be returned, may be carried from Chicago and Common Points west thereof to San Francisco at one-half the regular tariff rate for same. The general rules and regulations and information for intending exhibitors are now ready, and may be obtained by applying to the Department of Publicity and Promotion, California Midwinter International Exposition, Mills Building, San Francisco, Cal., U.S.A.
- A MELON NOVELTY.—The remarks of a correspondent on page 218 of the Journal induce me to relate a similar experience with Sutton's Triumph Melon, a variety with a thin skin and deep scarlet flesh. When the fruit was cut it was found that fully half the seeds had germinated, many of the plants having roots 2 inches long, and what surprised us still more the seed leaves were quite green. Acting upon instructions I placed a few of the seedlings in small pots on July 24th, and a fortnight later transferred them to 6-inch pots. From the first they made healthy growth, in fact there is no difference between them and others raised in the usual way. We planted four plants in the Cucumber house on the 21st of August; these are now flowering, but I fear the season is too far advanced for us to be able to ripen a crop of fruit upon them.—P. TARRY, The Gardens, Holly Hill, Hartfield.
- Tunbridge Wells:—"As an illustration of the shifts to which birds have been driven for food by 'the unexampled drought,' I may mention that within the last ten days the blackbirds have attacked and devoured dozens of some fine Black Hamburgh Grapes growing in my 'curate's vinery.' Have any of your numerous readers suffered in the same way? All the scarlet heps on the Cockspur Thorns were cleared off last month, and this morning (Sept. 16th) I saw five of my sable friends making a square meal off the heps on a White Thorn, intending, no doubt, to lay my Grapes under contribution for dessert. What these beautiful birds are to do for food in the coming winter, if it be a hard one, is not easy to say. Those who enjoy their presence and song in spring and summer must be careful to feed them well through the winter. Minced uncooked beef will be better for them than Black Hamburgh Grapes."

- WIDCOMBE HORTICULTURAL CLUB.—There was a large attendance at the meeting of the Widcombe Horticultural Club held on September 12th, when the Rev. E. Lascelles, Rector of Newton St. Loe, read a paper on "Begonias," flowers he has cultivated with so much success for several years. Mr. W. Pumphrey, the President, occupied the chair. Mr. Lascelles dealt with his subject in an interesting and able manner.
- THE SUNFLOWER.—Among neglected crops the Sunflower is one of the most interesting. Few people who grow it for ornament have any idea of its usefulness. A daily contemporary asserts that birds of nearly all kinds thrive on the seeds, and there is no more fattening food for poultry. Cattle like them, too, either in their natural state or crushed and made into cake; while the very stalks may be ground up and mixed advantageously with other fodder. In one or two places in Scotland a few acres have been devoted to Sunflower cultivation for the past few years with very satisfactory results.
- —— COVENT GARDEN FRUIT.—With a view to putting beyond doubt the little likelihood of spreading cholera through the medium of Covent Garden, as some questions in the House of Commons might lead the public to believe, a reporter pursued inquiries on the subject. The Market Inspector told him:—"There has been no dangerous fruit or anything approaching to it within the market area. It does not pay to send consignments of bad fruit. If it were otherwise buying would stop, and the wide reputation of the market would be ruined. We have the best name in the world for sound fruit and vegetables, and it is a poor market indeed for bad stuff."
- VARIEGATED ALOES.—It not infrequently happens that visiting some comparatively remote and almost unknown garden one meets with something of more than usual interest, and I found that to be so recently in Somersetshire, for when at Inwood House, Mr. Wilkins kindly drove me over to Milborne Port to see Mr. Bowers and the quaint old gardens attached to Venn Hall, the residence of Sir A. Medlycott, and there I found, standing on a terrace, a number of huge variegated Agaves, some of the finest and cleanest I have ever seen. They seemed specially to be fitting in this fine old garden. In one of the houses there is a gigantic Adiantum farleyense some 7 feet through. It is in a large pot, and growing in a shaded position. Many other good plants show that the cultivation in the highest perfection of this grand Fern is well understood here.—A. D.
- FERN HOUSES AND FERNERIES.—A block of formal houses, close to the mansion at Inwood, is now full of Ferns, in pots and standing on shelves and stages. Of course the result is, as is invariably the case in similar Fern houses, much uninteresting flatness and formality. Lady Theodora Guest, the munificent owner of this fine property, has resolved to convert these formal houses into one artistic fernery, and to that end the entire contents will be removed, the stages and shelves cleared away, the floors covered with substantial rockwork (which Mr. Wilkins will construct), good roomy alleys provided, and then the whole [planted artistically, so as to produce a very delightful effect, that can be at all seasons enjoyed. Then a Fern house becomes a real fernery. At present the houses are most unattractive to ladies; then they will be a favourite place of resort.—A. D.
- --- A GENERAL HORTICULTURAL SOCIETY.—We learn from the "Garden and Forest" that the birth of a General Horticultural Society took place on August 25th, immediately after the Horticultural Congress at Chicago, in Mr. Samuel's office. The scheme provides for three officers at large, a president, vice-president, and secretary-treasurer. Each country is entitled to a vice-president and secretary-treasurer. The three general officers, together with the secretary-treasurer of the country in which the president resides, constitute a committee on byelaws and on finance, while all the officers constitute an executive committee. The object of a general Horticultural Society is the promotion of correspondence, the exchange of plants, seeds, books, and other articles, and the general extension of fellowship among the horticulturists of the world. The membership of the society consists of horticultural societies and of individuals, who pay an initial fee of two dollars and a subsequent annual fee of one dollar. Only three general officers are yet determined. These are-T. J. Berckmans, Georgia, president; Henri L. de Vilmorin, Paris, first vice-president; and George Nicholson, curator of the Royal Gardens, Kew, England, secretarytreasurer. It is expected that one-third of all the money collected in each country is to be retained in that country for the expenses of its own branch of the work, the remainder going into the hands of the secretary-treasurer.

RAMSGATE PUBLIC PARK.—In the most beautiful weather a ceremony in connection with the Ramsgate Public Park took place recently. As far back as September 29th of last year a somewhat similar ceremony occurred, marking the transfer of the property from the trustees of the former owner to the representatives of the ratepayers. The present occasion, however, simply marked the close of the operations of beautifying and laying out the grounds, operations carried out most efficiently by Messrs. Cheal & Sons of Crawley, Sussex. Among the main features of the Park the finest piece of constructive work is the handsomely designed Doulton-ware terrace, 246 feet in length, 25 feet wide at the narrowest, and 75 feet at the widest part.

THE BOTANY OF TIBET.—A recent issue of the "Chemist and Druggist" remarked that Dr. Thorold, who, in 1890-91 accompanied Captain Bower's expedition through Tibet as a scientist, collected specimens of all the plants he saw during his journey across the country from west to east. The collection contains only 115 species, all told, showing the poverty of the Tibetan flora in the district traversed; a poverty which, however, is not astonishing considering that the greater part of the route lay over a country as high above sea-level as is the top of Mont Blane. The 115 species belonged to no fewer than twenty-eight natural orders, and only about half a dozen species were quite unknown at Kew. One flowering plant was collected at an altitude of 19,000 feet—probably the highest point on record in the history of botany.

LIQUORICE.—The inhabitants of Elizabethpol and Baku in the Caucasus derive considerable benefit from Liquorice (Glycyrrhiza glabra), which grows wild, needs no cultivation, and multiplies spontaneously. In 1878 two Greeks turned their attention to the large quantities of Liquorice in Caucasia; in 1886 they erected a large factory for drying and pressing the Liquorice, which they annually exported to America. The remunerative trade soon attracted others, and to-day there exist four prominent commercial houses which carry on a wholesale trade in Liquorice, and two of which have erected extract factories in this country. Annually there are produced about 108,339,000 pounds of raw Liquorice, which, after drying, yields 36,113,000 pounds of marketable merchandise. For raw Liquorice the factories pay on the average fivepence halfpenny per 100 pounds.

RECLAIMED LAND IN HOLLAND.—In the year 1886 a society was organised in Holland to make plans for the draining of the Zuyder Zee. It now officially reports that three-fourths of the soil covered by these 900,000 acres of water is as fertile as surrounding districts, and proposes a scheme of drainage which will leave 300,000 acres in the centre as a lake, while the rest will be redeemed at a rate that will annually render from 12,000 to 15,000 acres habitable. According to the "Garden and Forest" the cost of the entire work is estimated at £15,250,000. The largest enterprise of the same sort hitherto earried out has been the draining of the Haarlem Lake, which, after thirty-nine months of labour, added 46,000 acres to the solid soil of Holland. When the Zuyder Zee was formed by an inundation, in the thirteenth century, some 80,000 lives are believed to have been lost.

- THE WASP PLAGUE.-Mr. J. Lloyd Bozward, Worcester, writes to the last issue of "Nature" as follows: - "Of late much has been written about the seasonal prevalence of wasps, and the mischief, in several places, wrought by them. May not, however, their use in keeping down many forms of insect pests be set off as some sort of palliative? Wasps are exterminators of aphides, and although the season has been favourable to insect life, next to no damage has been done to the Hop bines or the corn or pulse crops of Worcestershire or Herefordshire by these latter pests-frequent destroyers of crops. Is it suggestible that the excessive wasp prevalence is attributable in some measure to the abundance of their insect prey, just as has recently happened in Seotland, in the instance of the multiplication of the short-eared or 'woodcock' owl, owing to the plague of field voles? The owl is a winter immigrant, usually leaving in spring. 'Nests in ordinary seasons are of rare occurrence in Great Britain, but owing to the vast increase of their favourite food-the field vole-these owls have not only arrived in increased numbers, but have remained and bred in Seotland all over the affected districts, laying from eight to thirteen eggs, and rearing large broods,' instead of the few eggs these owls have hitherto been accredited with laying. I am a fruit grower. Much damage has this year been done to the fruit; not, however, by the wasp tribe, but by hungry birds, the fruit having even been attacked in an unripe state. According to my experience wasps do not become household pests till the falling off of insect prey towards autumn."

—— SPIRITS FROM MULBERRIES.—The production of spirits from Mulberries, Pears, Cherries, and other fruits depends upon the yearly result of the vintage, as the producers seek to repair the eventual loss in wine and wine-spirits by substituting the above-named fruits. The production from fruits grown in the Caucasus during the last five years averaged about 65,000 vedros (211,185,000 gallons) of Mulberry spirits free from water. The other fruits are used for this purpose only in inconsiderable quantities.

— FRUIT CULTURE IN NEW ZEALAND.—The latest papers from Auckland, New Zealand, describe the cultivation of the Orange on the peninsula to the north of that town as taking a marked development, and superseding the cultivation of the Apple and stone fruits. It is not generally known in England that this northern portion of New Zealand, whilst being as green and well watered as Devonshire, can grow all the fruits of Sicily and Devonshire combined. The Lemon, the Seville Orange, the Loquat, together with Peaches, Nectarines, Apricots, and Apples, flourish exceedingly in every garden about Auckland; but the Sweet Orange requires the rather higher temperature some seventy miles to the north to bring it to perfection. Slowly the people are becoming aware of the unbounded possibilities of fruit growing awaiting them in the future, and it merely requires accessibility to a large market to convert this part of New Zealand into a paradise for small fruit farmers.

- BEGONIAS AT HENBURY HILL.-Mr. W. Strugnell writes:-For some years past the gardens at Henbury Hill have acquired a local fame in respect to Tuberous Begonias, which are well and extensively grown both indoors and in the open air. I made a call recently, and I was agreeably surprised to find such a wealth of bloom and variety after such a prolonged period of drought. Two large semi-circular beds are filled with Begonias and subtropical plants, having a background of tall evergreen shrubs. This shows up the Begonias in splendid contrast to the sombre tints of the evergreens, and being in direct view of the house must give an immense amount of satisfaction to their owner, A. E. George, Esq., during the summer. The site now occupied with the Begonias was once a portion of the line of shrubs extended forward by Mr. Smith to suit the object under notice, and being well trenched and manured each year, the plants grow with unusual vigour. The greenhouse and subtropical plants used include Ricinus Gibsoni, R. communis, Grevillea robusta, tall Acacias, Wigandias, Fuchsias, Brugmansias, and Cannas in variety. These grow well, and are interesting almost to the same extent as the Begonias. Mr. Smith devises a fresh plan for each year, but as this has been carried on several years the difficulty now is to find something original. Begonias embrace many colours and intermediary shades, and a course of crossing and intercrossing produces a strain of marked excellence both in habit of plant, size, and shape of blooms. Some of the flowers are massive and erect, others drooping and of medium size, but all are good. None but singles are grown, double flowers finding no favour at Henbury Hill. The plants are raised from home-saved seeds each year.

- SENDING FRUIT TO COVENT GARDEN 180 YEARS AGO .-A correspondent sends us the following extract from the "Spectator" of 1712. The writer appears to have been taking a holiday in August. He says:—"I lay one night last week at Richmond, and being restless, not out of dissatisfaction, but a certain busy inclination one sometimes has, I rose at four in the morning, and took boat for London, with a resolution to rove by boat and coach for the next four-and-twenty hours. When we first put off from shore we soon fell in with a fleet of gardeners bound for the several market ports of London; and it was the most pleasing scenc imaginable to see the cheerfulness with which those industrious people ply'd their way to a certain sale of their goods. The banks on each side are as well peopled, and beautified with as agreeable plantations as any spot on the earth; but the Thames itself, loaded with the product of each shore, added very much to the landskip. It was very easy to observe by their sailing, and the countenances of the ruddy virgins, who were supercargoes, the parts of the town to which they were bound. There was an air in the purveyors for Covent Garden, who frequently converse with morning rakes, very unlike the seemly sobriety of those bound for Stocks' market. Nothing remarkable happened in our voyage; but I landed with ten-sail of Apricoc boats at Strand Bridge, after having put in at Nine Elms, and taken in Melons, consigned by Mr. Cuffe of that place, to Sarah Sewell & Company, at their stall in Covent Garden. We arrived at Strand Bridge at six of the clock, and were unloading when the hackney coachmen of the foregoing night took their leave of each other at the Dark House to go to bed before the day was too

far spent. Chimney-sweepers passed by us as we made up to the market, and some rallery happened between one of the fruit-wenches and those black men about the devil and Eve, with allusion to their several professions. I could not believe any place more entertaining than Covent Garden, where I strolled from one fruit shop to another, with crowds of agreeable young women around me, who were purchasing fruit for their respective families. It was almost eight of the clock before I could leave that variety of objects." [We think it would be difficult to find Apricots grown on the banks of the Thames equal to filling "ten-sail of boats" in these modern days.]

A VINE PROBLEM.

HAVING an interesting if not an important problem in reference to variation in Grapes to solve, I should very much like to have the benefit of the experience and observations of readers of the *Journal of Horticulture*.

- 1, Is there such a thing as a Vine with foliage and wood that cannot in any point or degree be considered to differ from some other Vine, but that at the same time continues to bear Grapes that are quite distinct from that other Vine?
- 2, Are any instances known where a seedling Vine, the produce of a cross between two of the most distinct Vines, differs in no degree whatever from one of its parents in either wood or foliage, but that bears Grapes quite distinct from that borne by the parent with the leaves and wood of which the seedling is identical, and that at the same time has no likeness whatever either in colour or flavour of fruit, or in wood or foliage to the other parent, the parent being one of the most striking and distinct Vines known?
- 3, Do any readers know of any sport from a Vine that has borne and continued to bear Grapes distinct from the original stock, and that on being propagated in the usual way has perpetuated the distinction?

 —AN EXPERIMENTALIST.

[We shall be obliged by replies to the questions propounded by our correspondent.]

NEWNHAM PADDOX.

NEWNHAM PADDOX, the seat of the Earl of Denbigh, is very pleasantly situated on the south-eastern borders of Warwickshire, about three miles distant from Brinklow Station on the L. and N.W. Railway. After leaving the station the road passes through the small village of Stretton-under-Fosse, with its quaint-looking thatched cottages and wayside gardens, where many old fashioned hardy herbaceous plants may be seen growing luxuriantly, and evidently quite at home amid their rustic surroundings. Continuing our journey we shortly reach the small hamlet or Street Ashton, from whence may be seen the picturesque village of Monks Kirkby, with its grand old church tower looming up far above the housetops, presenting an excellent picture for the artist's pencil or the photographer's camera. At the extreme end of the village we find the entrance gate to Newnham Paddox. The mansion, which is approached by a carriage drive nearly a mile in length, winding through a finely timbered park, a splendid avenue of English Elms, which have withstood the storms and gales of time immemorial, being especially noticeable. As we approach the mansion our attention is directed to some massive wrought iron gates, separating the park from the pleasure grounds. These gates, which were brought from his Lordship's estate in Shropshire, are beautifully designed, carrying numerous monograms. They are 24 yards in width, and from 15 to 20 fect in height. these gates is a short drive, about 100 yards in length, leading to the front entrance door, upon each side of which, and planted sufficiently far enough back to allow them to develop into full beauty, are some splendid specimens of Araucaria imbricata, from 20 to 30 feet in height, and branched to their base. The gardens are situated about 200 or 300 yards from the mansion, and are admirably managed by Mr.

Commencing at the glass houses the first range entered consisted of three lean-to vineries, and a similar house in which fruit trees are grown The whole of the Vines were planted by Mr. Harman about five years ago, and the grand crop of fruit and strong healthy foliage showed that he thoroughly understands his business. The Black Hamburghs were carrying a magnificent crop of fruit. Each cane about 15 feet long bearing fifteen bunches, averaging $2\frac{1}{2}$ to 3 lbs. each. Several leaves which I measured were 15 inches across and $1\frac{1}{2}$ inch round at the base of the leafstalk. A large Fig tree on the oack wall was ripening a capital second crop, the variety being Brown Turkey. The second house contains Black Hamburgh and Foster's Seedling, the crop being similar in appearance to that described. A large Vine of Foster's Seedling, covering the whole of the back wall, was laden with grand bunches, the berries being large, and well finished. The third house is composed of Muscat of Alexandria, and presents a sight not easily to be forgotten. Several of the bunches are 20 inches in length, and exceedingly well shouldered, many of them would, I venture to a sert, turn the balance at 6 or 7 lbs. A shanked berry has never been seen in the whole house. The magnificent bunches which secured the

first prize at the Westminster Aquarium and at Birmingham last year were grown in this house. West's St. Peter's on the back wall was also doing well. Mr. Harman is a strong advocate for plenty of light in vineries. The laterals are allowed to extend till the trellis is covered, some of them being six or seven leaves beyond the bunch; in fact, they look more like young canes than laterals. The sub-laterals are pinched back to one leaf, for the purpose of throwing as much energy as possible into the main leader, as he avers there is more support in one primary leaf than there is in a dozen sub-laterals.

The trees in pots were exceptionally good, the varieties being—Plums, Coe's Golden Drop, Jefferson's, and Denniston Superb; Peaches, Alexander, Gros Mignonne, and Crimson Galande; Nectarines, Elruge and Lord Napier; Cherries, May Duke, Mammoth, and Bigarreau Napoleon. The Cherries were over at the time of my visit, and the trees placed out of doors to mature their growth for another season. Alexander Peach, which is looked upon by many gardeners as being subjected to bud-dropping, gives but little trouble in that respect here, both the trees in pots and on the back wall being well cropped. Tomatoes are largely in demand. Sutton's Earliest of All was carrying an extraordinary crop, in fact the plants had to be very carefully tied to prevent them breaking down. The fruit was excellent in shape and

flavour, and of a beautiful red colour.

In another house a number of Veitch's erect flowered Gloxinias were in full flower, making a grand show, a superb flower of pure white being especially noticeable. Sobralia macrantha and Oncidium flexuosum were in bloom. Cattleyas, Vandas, Aërides, Cypripediums, Cologynes and Calanthes are throwand Lælias were well represented. ing up strong pseudo-bulbs, bespeaking a good supply of bloom later on. Cut flowers and plants for decoration are in great demand, but to judge from the excellent young plants of Crotons, Dracænas, Pandanus, Dieffenbachias, and various others the supply is ample. Mr. Harman is no novice in this branch of his business. Ananassa sativa variegata beautifully coloured is a most useful plant for decorative purposes. Eucharises in the pits were in splendid condition, the plants being large and full of vigour, as were also Gardenias growing in 8-inch pots. The plant stove with its Ficus-clad walls contains many good specimens, including Dipladenia amabilis, Clerodendron Balfourianum, and Anthurium crystallinum, with its large and shapely leaves of a velvety green colour lined with crystal white veins. Gloriosa superba trained along the roof, and flowering profusely, presented a striking appearance. huge plant of Adiantum concinnum, by far the largest I have seen, is After passing through a beautiful grotto also deserving of notice. planted with various Ferns and Lycopodiums, we come to the conserva-tory, the centre bed planted with Camellias and Daturas. An immense plant of Habrothamnus elegans trained to one of the pillars is evidently quite at home, being laden with flowers. Luculia gratissima planted out and trained up the back wall was growing vigorously, and bids fair to supply a good display of flowers later on. Zonal Pelargoniums arranged along the front stage were magnificent; the plants were supplied by Messrs. Cannell & Son, and include some of the leading rieties of the day.

The large kitchen garden is enclosed by a high brick wall, planted on both sides with fruit trees. Across the centre of the garden and at right angles with each other run two wide gravel walks, flanked on each side by herbaceous borders. The walks around the garden are bordered with bush-trained fruit trees, which are probably as old as the garden Some of these are taken out every year and replaced by young The trees forming a line of espalier Apples planted last season were making capital progress. One quarter of the garden is devoted to bush fruit, and contains healthy young trees about three years old, and they were laden with fruit of splendid quality. Although so much has been done in the way of renovating the fruit plantations much more has yet to be accomplished. Crops of vegetables of every description were in excellent condition, but special mention ought to be made of a grand bed of spring sown Onions. The varieties principally grown are Sedfordshire Champion, Brown Globe, and James's Kerping. Border Carnations, of which a large number are grown, were showing well for bloom, and from 700 to 800 Gladioli will be most useful later on. As a successful exhibitor of Chrysanthemums, Mr. Harman needs very little introduction, and judging from the fine condition of the plants he bids fair to prove a very dangerous opponent at the forthcoming

tournaments.

Cedars are well represented in the extensive and well-kept pleasure grounds. Stretching away to the east are two large ornamental sheets of water, surrounded by shrubberies and woodland walks. The flower garden is situated on the south-east side of the house. The beds, which are geometrically arranged, were filled with all sorts of summer flowering plants. Zonal Pelargoniums, Tuberous Begonias, Stocks, and Asters are largely grown, and several beds edged with Sedum acre aureum were extremely effective. On the well kept lawn sturdy Yews feather the ground, stately Oaks of noble dimensions, splendid Acacias of great age, and many other trees and shrubs attract attention on our way to the rosery. This is circular in shape, and surrounded by high shrubberies. The beds were made and planted by Mr. Harman two or three years ago, and the display produced must indeed be gratifying to him, and a reward for his labour. Mrs. William Watson, Pierre Notting, Ulrich Brunner, Merveille de Lyon, Baroness Rothschild, Miss Jenne Dickson, Mr. A. Williams, and white La France were particularly effective.

I cannot close these remarks without thanking Mr. Harman for the hearty welcome accorded me, and for the ready manner in which he supplied me with any information I required about the estate—

G. PARRANT, Rugby.



CYPRIPEDIUM ŒNO-SUPEBIENS.

THE Cypripedium depicted in the engraving (fig. 38) is a very bright and handsome form. As mentioned last week it is the result of a cross between C. cenanthum and C. superbiens, and when exhibited by Sir Trevor Lawrence, Bart., at the Drill Hall on September 12th, the Orchid Committee of the Royal Horti-

on September 12th, the Orchid Committee of the Royal Horticultural Society adjudged an award of merit for it. The prevailing colour is a brownish red, this suffusing the petals and lip. The former are bold and spreading, the latter being somewhat pointed. As shown in the illustration the dorsal sepal is broad and imposing. It is heavily lined with chocolate dots and suffused with rose margined with white.

CATASETUM BUNGEROTHI.

THIS, one of the latest introductions amongst the Catasetums, is probably one of the most showy Orchids at present cultivated, by reason of its solid and massive spikes of almost waxy whiteness which last in good condition for some weeks. A fine healthy plant of the above species, carrying three grand spikes, has been in bloom at Cleveley, Allerton, and as it is one very seldom seen, a note as to the excellent system of culture pursued by Mr. Cromwell may be interesting to some readers. plants are grown in baskets suspended from the roof of the stove, the compost used being good peat with the finer particles taken out. When the plants are in active growth a plentiful supply of water is given, occasionally applying very weak liquid manure. When the pseudo-bulbs are matured only sufficient water to keep them from shrivelling is applied. During the winter the plants are kept in a temperature of 60°. If the pseudobulbs are strong they flower very freely.—R. P. R.

THE BLUE DISAS.

HAVING seen in the Journal of Horticulture for this week that "Specialist," on page 237, describes the blue Disa as being of a bluish purple hue, "by no means the

purple hue, "by no means the brilliant blue some might be led to expect from glowing descriptions given in past times of the blue Disas at the Cape," I would like to say that two years ago I was out in South Africa during the month of March, and was then given a bunch of Disas from Table Mountain, amongst them several blue Disas, the flowers of which were certainly not large, but there was no doubt as to their hue; they were unquestionably of a true bright blue. I have never seen the plant in flower in England, but I presume Disa lacera is the same as the blue Disa I saw at the Cape.—A PLANT PILGRIM.

INSECTS OF THE FLOWER GARDEN.

(Continued from page 190.)

THE snouted mites form a small and singular family, one member of which Curtis regards as useful to the farmer and gardener. In this little group we have both land and water species; some have no eyes, and others have them of variable number, from

two to six. Apparently the head is lacking; it takes the form of a snout attached to the thorax, but it is armed with long narrow mandibles, also there is a sucker which is enclosed in a sheath. Our garden species is called Scirus insectorum; it is brownish, has a bristly body and legs, being thereby no doubt able to cling firmly to those insects upon which it is parasitic. This snouted mite is sometimes found adhering to the legs of wandering spiders, but it is more frequently noticed upon the wireworm beetles, the Elaters, and it also infests the Tipulæ or craneflies, so troublesome to us in their larval stage. They occur in parties upon many of the insects to which they cling, and that by their proceedings they must weaken these is obvious; hence they help to diminish the number of our foes.

The ticks, which form the family Ixodidæ, are in our cool climate

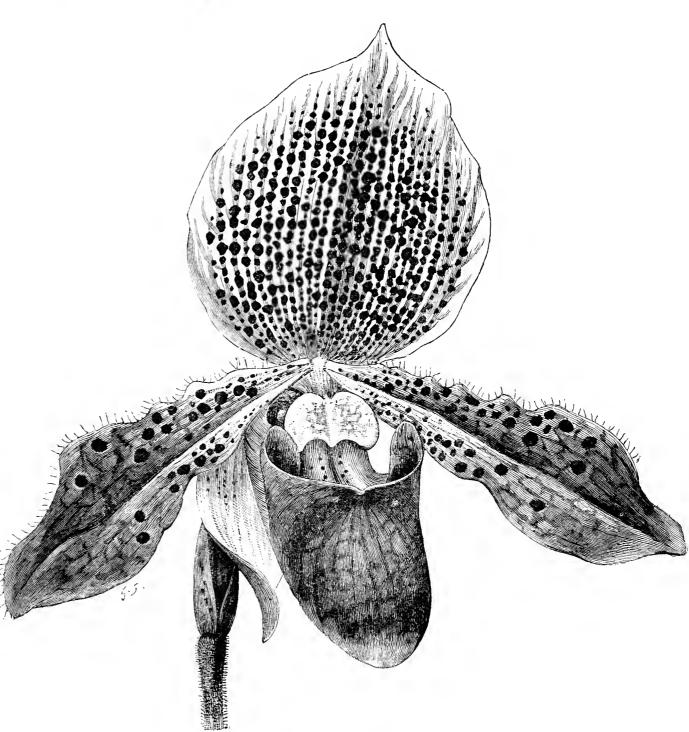


FIG. 38.—CYPRIPEDIUM ŒNO-SUPERBIENS.

of comparatively small consequence, but in warmer countries they are larger, their puncture is more virulent, and they multiply speedily; the rostrum or sucker is barbed, so that it cannot be retracted when it is once driven into the flesh. In habit most species resemble the harvest bugs or mites, that is, they commence life as feeders upon vegetable substances, and afterwards transfer themselves to warmblooded animals or to man. Our native species are eyeless, but this does not prevent them discovering us and gratifying their thirst for blood at our expense. Ixodes marginatus is not uncommon in South England about flower gardens, attaching itself to the grass of lawns and to low plants along borders. Like its brethren, being of a greenish or greenish brown colour it is not often noticed. Many persons have been annoyed by this or some kindred species during the summer of this year, probably owing to the dryness of the season, and have perhaps attributed the irritation to some other cause. The presence of ticks in the flower garden may seem singular; I imagine they are sometimes introduced there by dogs. These quadrupeds frequently swarm with ticks, and they are allowed by some persons to range

their gardens; in consequence the mature insects fall from the dogs and deposit their eggs, the young mites, as already noted, subsisting upon sap at first till they are strong enough to fasten on animals. It is curious that next to dogs the animals most infested by them are bats and snakes. On the Continent people much plagued by ticks have found advantage in applying to the skin strong tobacco water.

The beetle mites of the genus Oribates are little known in

Britain, having rather escaped observation so far, though they may be almost as numerous with us as they are in France. Individuals have occasionally been observed amongst Orchids, or shaken from the moss and sphagnum used in the cultivation of some kinds, and companies have been found under the bark of fruit trees, or hiding amongst lichens. Boisduval considers these mites are friends to horticulture, since he has had proof that they devour the eggs of thrips and other insects detrimental to choice plants. Their name was suggested by their beetle-like aspect under a glass, the body being rounded, black, and shining, with curious hairs or tubercles; the legs have double claws, yet their movements are slow. Also the beetle mites have no eyes, nor a sucker, but feed by means of mandibles. One naturalist says these mites should be "encouraged" if we knew how.

Rather a familiar object to us in country gardens these autumn days is the beetle Geotrupes stercorarius, possessor of several English names, such as the dor, the dumble-dor, and the watchman. We notice it dragging itself laboriously along the paths during daylight, and after dusk it careers clumsily about, having a habit of knocking against our persons, thereby bringing itself to grief. We see the point of one of its names when we take one of these useful beetles up and find that it is weighted with a load of mites, which hold on tightly to the body and thighs. The humble bees that we see visiting the later flowers of the season may be observed bearing about as they fly undesirable companions of the same kind, and though they seem indifferent such parasites cannot tend to the benefit of the insects thus infested. A young lady of my acquaintance sometimes occupies herself in freeing this "shard-borne beetle" from its encumbrances if she comes upon a specimen. It is observable that the mites seldom live long when removed, appearing to be unable to re-attach themselves to another victim. These mites are Gamasids, some of them having the skin horny all over; in others it is soft and pliant. In colour they are yellowish or brown. They have mandibles with nippers, and a sort of sucker peculiar to themselves; also they are eyeless. On the supposition that in their early stage of life they feed upon manure or amongst damp earth, we may understand how, when they change their food, they can soon transfer themselves to beetles and humble bees. Gamasus marginatus is the commonest of the group, being about as large as the head of a good-sized pin. A smaller Gamasid occurs upon some garden beetles, crowded together on the under side of the insect. The mites look like a number of tiny shining scales or cocci. Occasionally they are piled upon each other, and if an attempt is made to remove them it is discovered that every mite is secured by a small tough thread. Some species of this family occur upon the shores of the ocean, and a too well-known very prolific species is the so-called tick that annoys canaries and other small birds, also domestic poultry. This is Dermanyssus avium, and it seems to be a bloodsucker throughout its history. It has been found in colonies of all ages upon birds, and under some circumstances may doubtless infest human beings.

The Hypopidæ are also parasitic upon other insects, specially on many flies that are common in gardens; but some attack beetles and bees. They possess a sucker, though jaws seem to be wanting. The front pair of legs are elongated, and the body is smooth and velvety. They are supposed to undergo some very singular transformations; but these are imperfectly known, owing to the minute size of the mites. De Geir was the first naturalist who noticed them. They were detected by him in 1735 occurring upon house flies and allied species in such numbers that the thorax and abdomen of the insects appeared to have a sort of coating. When removed the mites could run rapidly. Those that live upon beetles sometimes conceal themselves in a cluster under the wing cases; and we must conclude that with these, and still more with flies, the attacks of such mites tend to check their increase, and as parasites they have their utility. Some of the French scientists think that the Hypopidæ may be frequently feeders upon vegetable matters when young, since in 1873 and 1874 the Mushroom crops about Paris sustained damage from a mite which was presumed to be one of these species in an early stage.—Entomologist.

PLAIN WORDS ON PRUNING FRUIT TREES.

OF all the various branches in the art of gardening there is not one which requires more skill and experience than the care of fruit trees. To the world in general this may appear to be one of the easiest of a gardener's duties, to the true gardener it is a pleasant mental and

manipulative occupation. Few amateurs understand the subject of pruning, and being afraid of making mistakes put off the work from day to day, until it is too late to act effectively. Yet amateurs should learn something of the art in question. Every house should have a garden attached capable of producing enough fruit for home consumption, and what more interesting change for a man who has been engaged in a close office or workshop all day than to spend an hour or so in his fruit garden in the evening? The trees must be trained, and useless shoots removed that would obstruct the light and prevent the formatting of facility had a superstant who wishes to learn the restaurant of facility had a superstant who wishes to learn the restaurant of the superstant who wishes to learn the restaurant of the superstant who wishes to learn the restaurant of the superstant who wishes to learn the restaurant of the superstant who wishes to learn the superstant of the supers mation of fruit buds. The amateur who wishes to learn how to prune should try and make acquaintance with a practical gardener who will give him a few lessons. Then the gardening papers distribute useful information. Every person interested in gardening should take in at least one of them weekly, and he will find in a few years that he has made a good investment.

As there are different kinds of trees so there are different kinds of pruning—for instance, summer pruning, winter pruning, and root-pruning, and I should like to write a few plain words about them.

SUMMER PRUNING.

This chiefly consists in pinching back side shoots to induce them to form fruit spurs and prevent overcrowding. It is very important to keep the head of the tree open to admit sun for ripening and colouring the fruit and maturing the wood. A young bush tree may have half a dozen branches, and it fruit spurs are formed on these there will be very little to cut away; but the natural inclination of young trees is to make wood.

The pruner must exercise judgment in determining the shoots to cut away and those he must leave. He must keep well in his mind's eye the future formation of his tree, and not stop the growth of the leading shoots required for extension. If a tree were allowed to grow in its natural manner it would be many years before it would bear fruit. A tree first devotes its energies to making wood, and not until the branches are well developed and vigour subdued does it produce heavy crops of fruit; but as good land is often scarce and dear, and life short, Art must step in and assist Nature to induce early fructification.

Peach Trees in Summer. - These call for more than ordinary attention. All useless wood must be cut away, and the shoots for the next year's crop neatly laid in, as the Peach bears its fruit on the young wood. Shoots that start from the old wood should be encouraged to keep the tree well clothed with foliage; there are no bare branches on a Peach tree that has been well looked after. The shoots for bearing next season must be selected as near the base of the fruiting branch as possible. Do not bruise or in any way damage the tree, for gumming would certainly occur in the bruised part, and eventually the branch

would die, spoiling the shape of the tree.

Fig Trees.—The summer pruning of the Fig consists in thinning out the young shoots similar to that recommended for the Peach. In the Fig tree the embryo fruit is formed near the apex of the shoot late in the summer, therefore it must not be shortened in winter. The best plan to adopt is to lay in two shoots, one for bearing and the other to be cut back, as will be explained in winter pruning. The fruit formed in summer that obtains any size larger than a pea would, if left, drop off in the following spring. If the fruit can be seen in August it will not become perfect in the following season. The best plan to adopt is to rub off all small Figs that can be seen in the month named. Old trees do not make much wood, and in favourable situations produce good

crops.

Cherry Trees.—These require attention during the summer in pinching young side growths to four good leaves, for inducing the formation of fruit buds to form. The upper part of the tree should be pruned a week before the remainder to strengthen the lower branches and check the upper ones, so as to have equality in growth all over the tree. These remarks apply to Sweet Cherries. Morellos require different treatment. They make more slender growths, and generally form fruit buds the whole length of the shoots, oftentimes with only a terminal wood bud. The treatment should be similar to that given to the Peach—namely, young growths laid in to take the place of the fruiting shoots, which are to be cut out in the winter. Standard trees do not require much summer pruning after the tree is formed. Plum trees should be treated similarly to carly or dessert Cherries.

Raspberries.—Suckers should be removed in the summer with the exception of three or four, from which the next year's crop is expected, and these trained to a stake. Those tied to it should also be thinned and evenly disposed for producing stout canes for ripening.

Bush Fruits.—These, whether Gooseberries or Currents, should not be allowed to grow into a thicket in the summer, as that practice prevents fruit, whereas our object is to produce it. This is accomplished by so thinning and shortening the breastwood in summer that the sun can shine into the bushes. Fruit generally follows the sun, barrenness the shade caused by crowding.

Strawberries.—The pruning (if it can be so called) of these consist in cutting away all runners except those required for layering to form new plantations, and after the fruit is gathered all old and useless leaves, to admit light and air to proper ripen the crowns.

Apples and Pears.—The summer pruning of these consists in pinch-

ing the side shoots to four or five good leaves, and subsequent growths to one leaf. This leads to the formation of fruit buds, but care must be taken to leave the leading shoots unpinched; also the formation of young trees must be considered. If the tree was started with four branches, and these shortened in winter, the next year it should have cight; in the summer following care must be taken not to cut away shoots that will be wanted for the formation of the tree. I will next refer to winter pruning .-- A WORKING GARDENER.

(To be continued.)



EARLY FLOWERING CHRYSANTHEMUMS.

THE communication from your able correspondent "P." (page 249) has a tone of sadness about it quite out of keeping with the weather. It appears he would fain see better things than Chrysanthemums, but does not make it at all clear as to how that end is to be accomplished. I journeyed to Westminster on the occasion mentioned by "P. the impression we should see a very fine display of early flowering Chrysanthemums, for there has been no rain to spoil even the outdoor flowers. On arriving at the Aquarium I was disappointed to see the whole exhibits of the National Chrysanthemum Society staged on one table, or perhaps a series of tables at the end of the building. reflected on the numerical strength of the Society, I felt surely there must be something wrong. Where were the collections of groups of plants so much admired in former years? I was eventually told there was no class in the schedule for groups this season at the early Show.

The competition in the cut flower classes was very meagre. Why? I was informed because the prizes offered were not enough to pay the carriage of exhibits any distance. Surely these are not the lines upon which to conduct a National Society. I was glad to see such a beautiful collection of Dahlias, otherwise I should have had my journey for nothing. At the same time, I heartily agree with your correspondent for nothing. At the same time, I heartily agree with your correspondent, when Chrysanthemums are staged in such company they are not very brilliant. Again, where were the numerous new varieties we have imported during the last few years? Some, I know, are acquisitions, having tried them, but why they failed to put in an appearance on such an auspicious occasion is a mystery to me. J. B. R.

SOFT VERSUS HARD COLD WATER FOR PLANTS.

THE above heading does not accurately indicate the point which arose in conversation between Mr. Dunn and myself, and which I thought readers of the Journal might like to discuss. The question was not the relative values of soft and hard water, but whether hard cold water was positively injurious to plants or not. The comparison referred to broadens the discussion somewhat, and others may like to give their opinion upon it, but I will content myself with meeting Mr. Dunn's wishes, and endeavouring to prove that hard cold water is neither an "obnoxious drug" nor "slow poison to vegetation in general."

First, I should like to correct any mistaken impression which may have arisen through your correspondent referring to my having "thought right to divulge" his "secret ideas." These words would imply that I have been guilty of a breach of confidence in having made public what was looked upon as private; but so far from this being the case it was an agreement between us, clearly understood on both sides, that readers of the Journal should have the question placed before them for their experience and opinion to decide the point at issue. I feel sure that the Oakleigh gardener would be the last to wish so unjust an impression to be formed of his words on page 214 as that I had

betrayed his confidence.

There is such a mass of material and such a flood of instances at the command of anyone who looks about him to prove that hard cold water is the very reverse of harmful to plants when judiciously used that only a fraction of them can be quoted. The first I will refer to is one bringing in the twin points of health and freedom from insects. One of the largest establishments for market plants and flowers (not fruit and vegetables) is in the South of London, and one of the features of it is a very large house filled with one of the finest Stephanotises in the country. The growths cover hundreds of feet, and they are a picture of health, the foliage shining with the rich deep hue of perfect condition. No trace of mealy bug can ever be found in this house, which yields thousands of sprays, but no special preparation is employed for cleansing it. The only insecticide used is water, syringed on constantly and forcibly, water from tanks fed by pipes connected with the water company's mains. It is impossible for the insects to gain a footing under the drenchings that are applied. They do not stop to ascertain whether the water is hard or soft, they have no time for arguing that point, although according to Mr. Dunn's theory they would simply indulge in a disdainful sniff at tap water, and then treat it with silent contempt. Do they do this? No, they ignominiously depart. Evidently they are craven-hearted creatures not possessing half the determination of those in the East Grinstead district. "J. B. R." (page 239) has spared me the trouble of more market references.

Then there are the parks. I was admiring Battersea Park a few days ago. The bedding is beautiful, the Chrysanthemums sturdy and healthy. But they do not get soft water. They have been "poisoned"

with hard all through this rainless season. They ought to be dead, but they are alive-very much alive. A more vigorous collection of plantcorpses I never saw. I might even say that, magnificent as are the flowers and Chrysanthemums at Oakleigh, those at Battersea Park are equally creditable to the grower. If this does not draw an admission of error from Mr. Dunn I do not know what will. I feel that it is the most subtle shaft which I can hurl, but still I will make a short reference to the nurseries in order to "pile conviction on conviction's head." the trade establishments this year I have seen hundreds of thousands of plants in perfect health and cleanliness. How does your correspondent imagine that in a season like this, when millions of gallons have been wanted daily, nurserymen have been able to avoid using tap water? Their plants have not succumbed to the "obnoxious drug." Perhaps they are tougher than his.

Lastly, so far as the present communication is concerned, there are the thousands of amateurs before referred to. In towns they use tap, in the country well water. Where it is practicable I agree that they would be wise to expose their water to the sun and air, but my present task is to show that without that they achieve success. The best cultivators among them have clean and healthy plants all the year round, and when they fail it is not because the water is hard, but generally because too The fact of others succeeding with the same much or too little is given.

kind of water is proof of this.

I have said all I have time for, and perhaps sufficient to mcct the case. If not I will try again. There are degrees of hardness in water just as there are in temperature. Water drawn from town cistorns is neither so hard nor cold as that pumped up from the bowels of the earth, but both are beneficial if properly used. In my view hard cold water is a "slow poison" of about the same virulence as tobacco to the old smoker who had puffed at his pipe for sixty years. "Slow," said he. "Yes-very!"-W. P. W.

AFTER reading "J. B. R.'s" article upon this subject on page 239 in your last issue, I feel almost tempted to covet a few gallons of the "hard cold water" that has produced such marvellous results. I am not in the least surprised to learn that "J. B. R." has waited "anxiously" for the opportunity of thoroughly demolishing my "out of date" ideas by such "stubborn facts." What interpretation are we to put upon this word stubborn? The true meaning of stubborn I take is unreasonably obstinate; therefore it strikes me as rather singular in glancing at the commencement and conclusion of his article to find that by "unreasonably obstinate facts he has proved that I am whimsical."

Allow me for a moment to look into these "stubborn facts" The very first one shakes faith and leaves doubts—namely, "J. B. R.'s" assurance that in entering a market garden "where nothing else but cold water was used he found the crops far superior to anything seen in private gardens." His opportunities for seeing the work of some of the best practical men has evidently been limited, and he undoubtedly weakens his case by his statement, which is really a reflection on many of the best cultivators in the world; but it seems evident that he was not trained under them, hence, perhaps, his sweeping dogmatism.

It is acknowledged by practical and scientific authorities that water has a considerable effect in cooling soil, and also that cold wet soil is far from being so fertile as soil that is properly drained. Why? Because the drainage of wet soil results in a greater warmth, and consequently an earlier and more vigorous growth of vegetation. Does not this alone prove how essential it is to keep the soil of growing plants reasonably warm according to the seasons? Will "J. B. R." kindly explain why crops and plants in general grow so much more freely after a warm shower than they do after a cold shower? We shall then be a trifle nearer the actual point. My experience is quite the reverse of "J. B. R.'s" "as to the fertilising properties of hard water." Here is a fact which can be substantiated by one who occupies a high position in the gardening ranks. A Rose house was erected about twelve miles from London, and water laid on direct from the main. The Roses were planted in good substantial soil, and kept constantly watered and syringed with the "hard cold water;" result, a miserable failure. The plants refused to grow, and mildew was constantly appearing. After repeated trials to improve them, a tank was fixed inside the house exposed to light and sunshine. The plants when watered and syringed with this "warm soft water" changed in a few weeks, and in twelve months the Roses were growing vigorously and producing splendid blooms—the Maréchal N cls quickly paying for the tank, and leaving a weighty purse over. Other equally convincing facts can be supplied if space permits.

I have no wish to dispute the point of colour and appearance raised respecting Palms grown for market, but "hard cold water" is not the only stimulant used to produce luxuriant growth, or why do so many turn a pale, sickly colour in a few weeks after being bought? Do they miss the" hard cold water" or the stimulants used to bring them to perfection quickly? I pass over the Grape question, having no wish to bring down the overladen houses upon my head, although I must confess to a lurking disposition to inspect the poorly built structure and cast a critical eye over the "finish" of those heavily cropped Vines which my "slow poison" has stimulated to such an alarming extent. Just a word of advice to "J. B. R." Carefully preserve all articles upon shanking that may appear for presentation to the proprietor of that

large Grape-growing establishment.

Lastly, we turn to Chrysanthemums watered with "hard cold water" by hose, and picture for a moment the effects of this stimulant so lavishly used in contrast to those carefully watered with "warm soft

water." Watch those stern judges as they wander along the boxes of blooms produced by such opposite treatment, and I venture to say without fear of contradiction, that those nurtured with "warm soft water" will be the first to command attention.

I am glad that "J. B. R." finds one "novel" point in my "out of date" ideas. This is curious, and I fail to reconcile the two statements, "Novel" and "out of date." "Novel" I take to mean of recent origin, "out of date" a bygone, exhausted error. Can "J. B. R." explain these somewhat contradictory terms?

I still maintain that "warm soft water," although "novel" to your correspondent, is one of the safest and cheapest insecticides for ridding Peach and other trees of red spider. Allow me to point "J. B. R." to the concluding words of your able and practical correspondent Mr. G. Garner (page 241)—viz., "Avoid the use of cold water." Is not this another convincing proof that my ideas are not based upon imagination or odd fancies, but are purely plain unvarnished truths which no "stubborn facts" as related can prove "whimsical?"—F. DUNN.



JEAN BAPTISTE GUILLOT.

This distinguished rosarian who has just now passed away is the third of those French raisers whom we have recently lost, and was certainly the foremost of the three in the services which they rendered to horticulture. Margottin and Charles Verdier have left behind them but one or two Roses that are likely to perpetuate their names; not so, however, Guillot, the raiser of Horace Vernet and La France amongst Hybrid Perpetuals, and Catherine Mermet, Edith Giffard, Comtesse de Nadaillac, Ernest Metz, Etoile de Lyon and Madame Hoste varieties, which will long, I believe, perpetuate his memory, and which have won him the lasting gratitude of all lovers of the Rose.

It is many years since I made his acquaintance. His father was then alive, and we used to call him young Guillot, though he must at that time have been forty years of age. He was an amiable and much respected honest man, and the high position of most of the Roses he sent into commerce is in itself an ample testimony to the correctness of bis judgment. He was not actuated merely by the considerations of pecuniary gain that his Roses might bring to him, as the following incident will illustrate. When I visited his garden, after showing me his other treasures, he said, "I have here a Rose which I think will be the parent of a new race," and he brought me over to see the seedling plant of La France. I was so taken by it that I ventured on behalf of a London nurseryman to offer him a sum of money which would have been considered by many Frenchmen as quite a fortune. "No," was his reply, "I will not part with it. I believe it will perpetuate my memory, and so I would rather it should go out as mine." I cannot but think he was right. In one thing, however, so far, he was somewhat too sanguine, for La France has up to this time never given a pod of seed, although I hear that Messrs. Dickson & Son of Newtownards have a seedling from it.

Lyons was so far south, and the journey is a long and tedious one, that English resarians did not come in contact with him so often as they did with his Parisian confrères. Thus while I frequently visited Margottin and Verdier, I paid only one visit to Guillot. But all who did so can bear testimony to the fact that he was an intelligent and pleasant companion and an enthusiast in his love of the flower for which he had done so much.—D., Deal.

OSIERS.

It has been represented to the Board of Agriculture that it would be useful that they should obtain and publish some information respecting the cultivation of Osiers, with a view to direct the attention of agriculturists and others to a special industry for which there would appear to be some room for development in certain parts of this country. The Board have, therefore, collected certain particulars, and have obtained a report by one of their Inspectors—Mr. W. C. Little of Stags Holt, March, who was assisted in his inquiries by Mr. J. Brown of Wisbech as to the conditions under which Osier growing is now pursued in the Fen districts, from which the following notes have been compiled.

There are no official records of the quantity of Osiers imported into this country, but it has been estimated that some thousands of tons are received from abroad annually. There is also said to be a large and increasing importation of baskets. The number of baskets required for the fruit industry alone is considerable, and it must increase with the extension of fruit cultivation. Formerly the fruit was generally packed in baskets made of red or unpeeled Osiers, but white Osier baskets are almost invariably used now.

Osier Willows are grown in nearly every country in Europe. cultivation has received special attention in France, Belgium, Holland, parts of Germany, and South Russia.

In France Osiers occupy large areas in the valleys of the Aisne, Oise, Loire, Gironde, and on the banks of the Dordogne and Rhone. The basket Osier (Salix viminalis) is largely grown in the departments of Aisne and Ardennes.

The area under Osiers in Belgium, according to the latest official returns, amounts to 11,036 acres, the larger portion of this surface is in the provinces of Antwerp and East Flanders, which have 3780 and 2811 acres respectively.

In Bavaria great efforts have been made to improve the cultivation of Osicrs, and the area devoted to Osier holts in that country is steadily

increasing.

OSIER GROWING IN THE FEN COUNTRY.

The term Osier is popularly used as comprehending all the trees or shrubs of the Salix genus, which are cultivated as a crop to be converted by the basket maker and similar craftsmen into various articles which are known as wickerwork. The genus Salix includes Willows, Sallows, and Osiers. Most of the kinds grown for a crop in the Fen district are, it is stated, really Willows, and not Osiers. At any rate, while growers use the term in a collective sense they limit the term when distinguishing sorts of rods to a coarse growing, softwooded species, which peels indifferently, and is only grown in limited quantities for a particular purpose.

Osiers are grown in enclosed plantations, which are locally known as holts. The produce of the Osier holt is known commercially as

"rods.

Green rods are fresh cut and unpeeled.

Brown rods are those which have been left to dry in their skins. White rods are those which have had the bark removed or peeled. Buff rods are produced by boiling brown rods and then peeling them;

but the colour thus produced is imitated by dyeing.

In the Fen district the growth of Osiers is chiefly carried on in unembanked river valleys which are subject to flooding. A variety of circumstances contribute perhaps to this situation being almost universally selected. It is not merely that this is the natural habitat of the genus, and that the soil is suitable, but the convenience of having close at hand water carriage for a bulky and heavy crop, which must be for the most part removed in a green state, has no doubt tended to restrict the growth of Osiers almost entirely to the borders of rivers. An additional reason for the selection of such sites is, that the periodical winter floods bring down from the uplands a considerable quantity of soil, which acts as a fertiliser and is obtained at a comparatively cheap rate. Floods, however, are occasionally the cause of considerable injury to the holts. An ice flood cuts the rods and seriously damages them. Sheet ice settling down on the holt will entirely destroy a crop, and a spring flood, which entirely covers the young shoots, will kill them; but freshets, which disappear quickly and which do not rise above the tops of the rods, do no harm.

The area of Osier holts in the district in question has been approxi-

mately estimated as follows:-

In the Ouse Valley, between St. Ives (Hunts) and Denver (Norfolk) In the Cam Valley, near Cambridge and Ely 190 acres. 108 In the Nene Valley, in the neighbourhood of Peterboro' In the Welland Valley, around Spalding and ... 130 Crowland

But these estimates exclude considerable areas above St. Ives, Peterboro', and Cambridge.

Ely and Earith are centres of a considerable growth of Osiers, of rod

peeling, and of basket making.

There can be no doubt that the extent of Osier holts in the Fen district is now much less than it was; but at the present moment there is some evidence of increased interest in the subject and greater attention to the business. The industry is apparently becoming more of a speciality, and basket makers are planting holts in some instances to supply their own requirements.

THE CULTIVATION OF THE OSIER.

The most suitable soil for the growth of Osiers is a deep, rich, moist, alluvial soil. Any good clay may be planted if sufficiently moist. Peat moor and hot gravels are absolutely unsuitable. Though water is requisite, a holt will not thrive in stagnant water.

The site of a holt having been selected, the land must be thoroughly cleaned during the summer before planting, and it may be worth while to give it a complete summer fallow. Before the winter sets in it must be thoroughly stirred either by digging or ploughing to a depth of 14 or 16 inches.

If the soil is not naturally rich it should be manured, and soot is

said to be a good preparation for the crop.

Planting should be done in February or March. The sets are cut from wood of two years' growth—they should be 16 or 18 inches long, and about 10 inches of the set should be in the ground. During the spring and early summer the spaces between the rows must be kept clean by hoeing and forking. The cleaning must be completed before the middle of June, or the Osiers will be injured. The cost of cleaning is variously estimated at from £1 to £2 per acre per annum for the first two years. After that time the expense of cleaning is much less, as the dense and rapid growth of the Osiers stifles and smothers all other vegetation. It may be mentioned in passing that the young shoots from

an established stock will make a growth of 18 inches in the course of a

Under the most favourable circumstances the newly planted holt will be at maturity in three years, but as a general rule four or five years

must elapse before its full development.

A holt properly planted, kept clean, regularly filled up, and well managed will last from ten to fifteen years, the duration depending upon the sorts planted and various circumstances which affect the several kinds of Osiers in different ways.

The Willows and Osiers usually grown in the Fen district are known locally by names indicative either of some characteristic of the tree or of the country from which it has come. The favourite sorts are :-

Glibskins.--In some situations this kind is particularly liable to "scab," a disease to which reference is made later on.

Black Mauls. - Small, but hard and tough, and consequently

valuable.

Green Sucklings .- A heavy cropper, but not liked by the basket maker.

Welsh Osier.—This has a very bitter rind, which is disagreeable to all animals, and it is planted on the outsides of holts.

Black Hollanders, Mottled Spaniards, Cane Osiers, and Dutch Red.

A certain proportion of the coarse-growing Osiers may be grown, as the basket makers require some strong stout rods for uprights; where they are not grown their place is supplied by leaving a portion of the holt to grow for two or three years.

The cost of preparing and planting an Osier holt is variously estimated at from £14 to £23 an acre—the amount depending upon whether the land is trenched or ploughed and upon the preparatory cleaning which may be necessary.

Taking an outside estimate, the items of expenditure would be as

follows :-

Fallowing ... \dots £4 0 0 an acre. 8 Trenching -0 - 0,,, Sets, 20,000 at 10s. per 1000 10 - 0Planting 1 0 0 £23 0 0

This is without any allowance for manure.

On the other hand, if fallowing is not required and ploughing is

resorted to, the cost would not exceed £14 an acre.

The Osiers attain to their full growth by the middle of September, by which time the rods on established plants will have made a growth of 6 to 7 feet. Osiers and Sallows will make an average growth of 8 or 9 feet, and occasionally as much as 13 feet, in a single season.

Cutting the rods commences with the new year if the holts are accessible. Sometimes, however, floods or other circumstances prevent the early cutting, and the process has to be postponed. It is, however, considered very desirable to cut before the sap rises, as the stocks bleed, and the new growth is less vigorous if the sap has risen before cutting. The rods are cut with a sharp hook, somewhat like a strong reaping hook; a clean cut without splitting the rod is essentially necessary. As the rods are cut they are tied up by willow bands into bundles or "bunches." Each bunch has a girth of 45 inches (an English ell) at a distance of 1 foot from the butt end of the bunch. The "ell band" is secured in its place by attachment to another band, called the "breech band," round the butt end. A third band is placed higher up. The cutting is paid for by the score bunches, the ordinary rate being 2s. 6d. An average crop will be about 150 bunches, and a heavy crop will reach to 250. A green bunch will weigh 6 stones. The weight of rods per acre will range from 5 to 10 tons.

It has already been observed that it is a great advantage if this

bulky and heavy crop can be removed by water carriage.

If the rods are to be peeled they are conveyed to the peeling yard and placed with their butt ends in water, where they remain until the rise of sap makes the peel separate easily from the stick. Sometimes after the rods are cut they will dry from exposure to the air, and in that case they are put in a heap, watered, covered and sweated, or "couched" as it is called. If the rods in the pits get too advanced in growth before peeling the difficulty of peeling is increased, and the rods are damaged. The work of peeling begins as soon as any of the rods are fit. It is chiefly done by women, who draw the rods through a "break" or "cleave," which divides the bark into strips, which are removed by the hand. The children of the peelers assist in this latter operation.

As the rods are peeled they are sorted into three grades—"large," "Middlesboro," and "small" rods, according to their size and length. They are then exposed to the air for a short time on racks, or reared against hedges or walls. When dry they are tied up in bunches of the

same dimensions as before, and stored away in sheds.

Rods which are adapted for the purpose, and which are, in consequence, most valuable, are subjected to another process known as "skeining." This is the longitudinal division of the rod by splitting it into equal parts. The thick end of the rod is nicked with a knife, dividing the circle into three sectors. A triple wedge is then inserted, and the rod is drawn rapidly through the hand. The split canes are then drawn twice under a knife fixed to a gauge to remove the outer ring and inner angle, and the cane is reduced to a flat thin strip of equal thickness. These "skeins" arc used for weaving sieve and riddle bottoms, and for making basket handles and similar articles. Green rods are "skeined" by the same process for making ecl grigs and hives.

(To be continue.)

CODONOPSIS (GLOSSOCOMIA) OVATA.

THE plant represented in the engraving (fig. 39) was introduced under the name of Glossocomia, but which has been superseded by that of Codonopsis in the "Genera Plantarum." It is easily cultivated after the seedling stage has been passed, a good plan being to sow the seed in pots in a heated frame, pricking out the young plants as soon as they are large enough in boxes or pans, planting them out the following spring, but guard against breaking the very brittle roots.

The choice of position will be the next consideration; the sunniest and most exposed that can be selected will be the best, planting them 6 inches apart, and the roots must not be disturbed by digging. The flowers are large, as may be seen, but are best viewed at a distance, the



FIG. 39.—CODONOPSIS (GLOSSOCOMIA) OVATA.

odour being anything but agreeable, and resembling somewhat that of the Aristolochia; the colours inside the flowers are very pretty and curiously blended. This is one of the few flowers, we believe, that are self-fertilising, that process being accomplished before the flower opens by a curious movement of the anthers. It ripens seeds freely, and is readily increased by that means. It is a native of Northern India, and flowers during the summer.

HORTICULTURAL SHOWS.

EDINBURGH.—SEPTEMBER 13TH AND 14TH.

THE autumn Show held annually in connection with the Royal Caledonian Horticultural Society took place on the above dates. The exhibits were numerous though not so much so as in previous years, this being more especially noticeable in the classes for Grapes. Apples were as a whole the best feature of the exhibition, though vegetables were well shown. Amongst these latter Onions were exceedingly good. The arrangements of the Show were not praiseworthy in any way, the utmost confusion prevailing. The judges had much difficulty in finding the classes, and the work of reporting was rendered arduous; in fact it was found impossible owing to the manner in which the exhibits were arranged to give a full account of the prize winners, and those who were successful in the principal classes only are named in the appended list. During the two days about 20,000 people visited the exhibition.

FRUIT.

As already stated, Apples were the chief feature of the Show. Grapes, on the other hand, have not for many years been so poorly represented at any of the autumn meetings of this Society. Some of the exhibits were of exceptional merit; but generally, the quality, like the numbers shown, was below the average. Collections of fruit, again, were only few in number. Pears were staged in large numbers, but in quality they were generally inferior to Apples, among which were many dishes of exceptional merit. Few Peaches were shown, and fewer Nectarines and Figs, though Plums, notwithstanding the early nature of the season and the unremitting attention of wasps, were fairly well

represented.

Taking the collection of fruit first, that of twelve dishes, excluding Pine Apples, was the chief item, and for the handsome prizes offered only three competitors staged. The first prize was awarded to Mr. Hunter, Lambton Castle, Durham, who had some very fine fruit. The Grapes comprised two very large clusters of Gros Guillaume, each in beautiful condition, a pair of large-berried examples of Gros Colman, and a couple of bunches of Raisin de Calabria. Peaches were Exquisite and Noblesse, both very fine, a dish of splendid Beurré Diel Pears, fine King of Pippin Apples, Challenger Lemons, Hero of Lockinge Melon, the other dishes being rather poor examples of Nectarines, Plums, and Figs. Mr. A. Kirk, gardener to — Paton, Esq., Alloa, was a close second. He showed black Grapes only, these being extra fine Alnwick Seedling, fine Gros Maroc and Black Hamburgh. Among the other dishes were good examples of Pitmaston Duchess Pear, good Barrington and Walburton Admirable Peaches, Spense's Nectarines, and Worcester Pearmain Apples. Mr. McKelvie, gardener to the Duchess of Roxburgh, Broxmouth Park, Dunbar, was the other exhibitor, and to his collection the third prize was awarded. Extra fine Muscat of Alexandria and Souvenir du Congrès Pears were the outstanding dishes.

For a collection of dishes of fruit, including Pine Apples, there were again three entries, Mr. Hunter repeating his victory. The Grapes comprised good Gros Colmans and somewhat loose Raisin de Calabrias, fine Noblesse Peaches, extra Beurré Del Pears, fine Magnum Bonum Plums, Hero of Lockinge Melon, extra fine Cox's Pomona Apples, and small Victoria Nectarines. Mr. McKelvie was second with good Muscat of Alexandria and Madresfield Court Grapes as the chief dishes. Mr. Morrison, Archerfield, Drew, third. Only two collections of hardy fruit, grown in the open air, were staged. Of these the best were shown by Mr. Goodfellow, Kinfauns Castle, Perth, Peaches Dr. Hogg and Prince of Wales, and Souvenir du Congrès Pears being very fine, the same collection containing also dishes of good Magnum Bonum Plums and Morello Cherries. Mr. McIntyre, Darlington, staged the other collection, to which the second prize was awarded. For a collection of twelve dishes of orchard house fruit, again there were only two exhibitors, Mr. Hunter securing first prize with a superb fruit, comprising Pears Souvenir du Congrès and Pitmaston Duchess, Apples Ribston Pippin and Peasgood's Nonesuch, Nectarine Peach, Plums, Figs, and Passiflora edulis, Mr. Bowman, Pittendreich, the other exhibitor, securing the

second prize.

In the Grape classes the most important was that for six bunches. Five exhibitors staged in this class, the first prize falling to Mr. Kirk for large and fine clusters of Gros Maroc, Cooper's Black, Madresfield Court (two bunches), an excellent bunch of Duke of Buccleuch, and a less noteworthy cluster of Black Hamburgh. Mr. Leslie, Pitcullen, Perth, was a very close second, staging two extra fine examples of Muscat of Alexandria, good Gros Maroc, and Alicante. Mr. Hunter third, with splendid Gros Colman, Black Alicante, and Gros Guillaume, the latter having berries very small in size. Five staged in the fourbunch class, Mr. Leslie worthily securing first prize here with extra Gros Maroc, a cluster of well-finished Muscat of Alexandria, good Alicante, and Madresfield Court. The second prize was awarded to Mr. J. Caldwell, gardener to J. Scott, Esq., Langholm, for good Muscat of Alexandria, Gros Colman, and Madresfield Court. Third Mr. McKelvie with bunches somewhat loose.

There was a keen competition in the class for two bunches Muscat of Alexandria, the first prize being awarded to Mr. McKelvie for good and well-finished clusters. Mr. Leslie was second with bunches little behind the first prize exhibit. For one bunch Mr. Waldie, gardener to W. H. Dobie, Dollar, was first with a well-finished bunch. Hamburghs throughout were deficient in quality, though numerously ntaged. Mr. Dickson, Alyth, was first for these; and Mr. Murray, Polmont, second. For one bunch Mr. Ch. Blair, gardener to Col. Malcolm, Langholm, was first. Alicantes were very good, the bunches large and well finished, Mr. Leslie having the best, and Mr. Caldwell a good second. Mr. Green was first for Alnwick Seedling with a small, well-ripened example. Mr. Jeffrey, gardener to Earl of Harewood, Harewood Hall, in a well-contested class, was first with a superb bunch of Gros Colman, the berries very large and of high finish. Mr. Murray second with good examples. Lady Downe's, on the other hand, were presented in poor condition, Mr. Murray being first in this class. For a bunch of any other sort Mr. Kirk was first with an exceedingly fine bunch of Madresfield Court. Mr. Lunt second with Mrs. Pince. In the corresponding class for white Grapes Mr. Caldwell, with a very highly finished Duke of Buccleuch, secured the first prize, and Mr. Smith, Arundel House, second. Mrs. Pince was the finest flavoured black

Grape, the best flavoured white being Muscat of Alexandria, Mr. Leslie staging the former, and Mr. Winter, Walk House, Hull, the latter. Mr. McIntyre, The Glen, secured first prize for the bunch of Grapes with finest bloom, showing Black Alicante. Mr. Crichton,

Southfield, second with Trentham Black.

Mr. Lunt, Kier House, Dunblane, staged twelve beautifully coloured fruits of Late Admirable Peaches, securing therewith first prize, Mr. Melville, with equally good, though pale coloured Princess of Wales, being second. Plums were fairly good. Mr. Cairns, The Hirsel, Coldstream, secured the first prize for seven dishes of rather small fruits of dessert sorts, and Mr. Goodfellow, with a like number of varieties, the first prize for a collection of culinary Plums. The latter comprised Goliath, Magnum Bonum, Pond's Seedling, Coe's Golden Drop, Victoria, and Blue Impératrice. Pears were also good, much better than usual, and a very large number of dishes were staged in the gross for the several prizes. For a collection of six sorts Mr. Day, Galloway House, Kirkcudbright, was first with extra fine Pitmaston Duchess, Souvenir du Congrès, Williams' Bon Chrêtien, Beurré Diel, and Marie Louise. Mr. Campbell, gardener to Lord Swansea, Singleton, South Wales, was second with fine Pitmaston Duchess, Louise Bonne of Jersev, and others. Mr. Day was again first for six dessert Pears with good Williams' Bon Chrêtien and Beurre d'Amanlis. The same exhibitor a so secur d first for dishes of Marie Louise, Beurré d'Amanlis, and Pitmaton Dochess. Mr. Paterson, gardener to A. Fletcher, Esq., Salton Hall, was first in the class for six Williams' Bon Chrêtien with excellent Souvenir du Congrès (was this overlooked by the judges?) and also for a dish of Glou Morçeau. Mr. Campbell had the best Louise Bonne, and Mr. Chaplin, Springwood Park, Kelso, the best stewing Pears with fine Gros Calabasse.

In the Apple classes the collection of twelve sorts was the most important, and brought together a disp'ay of fruit rarely seen in Scotland. Mr. Campbell, Singleton, was first for these with good well coloured examples of Alfriston, Mère de Ménage, Emperer Alexander, Blenheim Orange, King of Pippins, Peasgood's Nonesuch, Worcester Pearmain, Cellini, and others. Mr. Culton, Castle Douglas, was second with better fruit less highly coloured, Ringer, Bismarck, Warner's King and New Hawthornden being specially good. Mr. Cairns, The Hirsel, was third. Mr. Fowler, Merton House, St. Boswells, secured first prize both for six dessert and six culinary Apples with Peasgood's Nonesuch, splendid examples no doubt, but hardly in the same matured condition for dessert as many other sorts on the tables. Mr. Brown, Abercairney, was second for six dessert Apples with fine fruits of Worcester Pearmain and James Greive of culinary Apples. The sorts mot numerously, and at the same time best represented by handsome samples were such popular sorts as Ecklinville, Stirling Castle, Warner's King, Tower of Glamis, Lord Suffield, and Hawthornden, and of dessert Apples, King of Piopins. Cox's Orange, James Greive, and Ribston Pippin. Messrs. Campbell, Singleton; Culton, Castle Douglas; Day, Galloway House; Brown, Abercairney, and Fender, Autoguhey, secured the chief prizes for the several varieties.

PLANTS.

In the class for four Adiantums Mr. Farquhar, gardener to R. Croall, Esq., Blackhall, was deservedly awarded the first prize, staging A. pentadac ylon, A. gracillimum, A. cuneatum, and A. Flemingi in good con-The second and third prizes were awarded to Mr. Napier, gardener to P. Neill Fraser, E.q., Murrayfield, and Mr. A. Crichton, gardener to Mrs. Croall, Southfield, Liberton, in the order of their names. For six Hollies Messrs. J. Dicksons & Son, nurserymen, Edinburgh, were accorded the first prize for handsome specimens. Messrs. R. B. Laird and Son, nurserymen, Edinburgh, were the only exhibitors in the class for twenty-four evergreen shrubs, and were given the first prize. were two competitors in the class for a table of plants, and Mr. McIntyre, Darlington, was placed first with a light graceful arrange-The table was principally covered with Crotons, Dracænas, Ferns, Palms, Lilium lancifolium (speciosum), Bouvardias, and a few Orchids. The second prize was won by Mr. Wood, gardener to J. Buchanan, Esq., Oswald Road, Edinburgh, whose table was composed of very fine plants, better in many cases than those of Mr. McIntyre, but lacking the taste in arrangement which was so prominent in the first prize stand. The premier prize in the class for three Fuchsias went to Mr. Thomson, gardener to G. Gray, Esq., Dalkeith, who staged highly creditable specimens. Mr. Aitken, Rosebery Cottage, Balerno, was a good second, and Mr. Fraser, gardener to the Misses Horn. Canaan Park, third. Mr. Anderson, gardener to Colonel Davidson, Edinburgh, was placed first for one Fuchsia, his plant being very finely grown and profusely flowered. A very close second was found in Mr. Sutherland, gardener to - Mather, Esq., Edinburgh, Mr. J. Dickson being third.

In the class for six dwarf British Ferns Mr. Anderson with very beautiful plants was first, staging Asplenium septentrionale, Scolopendrium Kelwayi, Polypodium cornubiense, P. cambricum, Allosorus crispus, and Trichomanes radicans. Mr. J. Cumming and Mr. McPherson were second and third respectively. Mr. Cropper, gardener to W. B. Boyd, Esq., Faldonshire, was first for twelve dwarf British Ferns; prominent amongst which were Polypodium cambricum, Asplenium Trichomanes incisum, and Scolopendrium Robinsonianum, the second prize going to Mr. Johnstone, gardener to Miss Fulton, Morningside, who had some very charming plants. Mr. R. Muirhead, gardener to W. Ivory, Esq., Edinburgh, was placed in the premier position for three Begonias, showing very beautiful examples, all clean and finely grown. Mr. Thomson was placed second, and Mr. Taylor, Musselburgh, third. For six Begonias the first prize went to Mr. D.

Adams, who showed highly creditable examples. Mr. Henderson' gardener to W. Macfie, Esq., Cleominster, was second, and Mr. Pearsongardener to Lady Lucy Dundas, third. In the class for three bronze Pelargoniums Mr. Gibb, gardener to Mrs. Edmondston, Edinburgh, was a good first, Mr. Anderson being second, and Mr. Cowan, gardener to

Mrs. McDowall, Edinburgh, third.

Mr. Bald, gardener to J. Menzies, Esq., Grangetown, was first for four Pelargoniums in flower, Mr. Muirhead taking the second place. For three Zonal Pelargoniums Mr. McKenna was first with good plants, Mr. Gibb being second, and Mr. Fraser third. In the class for six foliage plants, exclusive of Palms, Mr. Lunt, gardener to A. Stirling, Esq., of Keir was first, his Dracæna Youngi being particularly good. The second prize was awarded to Mr. Crichton, and the third to Mr. W Bennett. Mr. McIntyre, Darlington, was first for six greenhouse flowering plants, Clerodendron Balfourianum and Eucharis amazonica being conspicuous. Mr. Bennett was second, and Mr. Criehton third. Mr. Wilson was accorded the premier position in the class for six foliage plants in pots not exceeding 9 inches, Crotons being noticeable amongst others. Mr. McIntyre, gardener to Sir C. Tennant, Bart., was second, and Mr. McIntyre, Darlington, third.

CUT FLOWERS.

In the competitive classes cut flowers were not very largely shown, especially stove and greenhouse blooms. This was not, however, the case with regard to the Dahlias and the Roses, these being exhibited in great numbers and in grand condition. In the class for thirty-six Roses Messrs. J. Coeker & Sons, nurserymen, Aberdeen, were a good first, staging exceptionally good examples of Victor Verdier, Alfred Dumesnil, Horace Vernet, Comtesse de Nadaillac, Souvenir d'Elise Vardon, Madame Lambard, and Alfred Colomb; Mr. Croll, nurseryman, Dundee, being second. Messrs. Coeker & Son were again first for eighteen Roses, and Messrs. Thos. Smith & Son, nurserymen, Stranraer, second. In the class for twelve Roses the order was reversed, Messrs. Smith & Son being first, and Messrs. Coeker & Son second. For twelve Fancy Dablias Mr. M. Campbell was first with perfect blooms of Silver Prince, Rev. J. B. M. Campbell, Comte de la Saux, Comedian, Madame Soubeyere, and Frank Pearce, the second prize going to Messrs. J. Coeker & Son. Mr. M. Campbell was also first for twenty-four Show Dahlias. staging Mrs. Morgan, Reginald, Wm. Powell, Dandy, Majestic, Maud Fellowes, T. W. Girdlestone, Mrs. Humphries, Colonist, Duke of Fife, R. T. Rawlings, Jas. Coeker, Muriel, W. H. Wil'iams, Mrs. Wm. Slack, John Hickling, Mrs. Gladstone, Nellie Cramond, Agnes, Ethel Britten, Queen of the Belgians, Mrs. Langtry, John Walker, and a seedling. Messrs. Coeker & Son were a highly creditable second.

VEGETABLES.

The classes for vegetables were as a rule very keenly contested, though the number of entries in many of the leading classes did not reach those which have been staged at previous shows. For a collection of vegetables there were eight competitors, Mr. Harper, gardener to J. R. S. Richardson, Esq., Perth, being first. This stand was composed of Sulham Prize Celery, Winningstadt Cabbage, Dobbie's Champion Leek, Autumn Mammoth Cauliflower, Cranston's Excelsior Onion, Long White Marrow, Scarlet Intermediate Carrots, Matchless Marrowfat Peas, Lockie's Perfection Cucumber, Canadian Wonder Beans, Satisfaction Potatoes, and Glenhurst Favourite Tomatoes, all of which were in fine condition. Mr. Johnstone, gardener to T. Laidlaw, Esq., Hawick, was second, and Mr. Rae, gardener to Captain Scott Kerr, Sunlaws, a good third. Mr. J. Waldie, gardener to W. H. Dobie, Esq., of Dollarbeg, was first for six Cauliflowers, showing grand heads, Mr. Abbott, gardener to C. M. Burns, Esq., Prestonfield House, Edinburgh, being a good second. There were seventeen competitors staged exhibits in this class. For a dish of twelve Tomatoes Mr. Murray, gardener to T. L. Learmouth, Esq., Polmont, was first with grand fruits, Mr. Jeffrey, gardener to the Earl of Harewood, Harewood Place, Leeds, being second, and Mr. Hunter, gardener to the Earl of Durham, Lambton Castle, a good third. Mr. Waldie was first with six Cabbages, and Mr. Thomson second. The competition was very keen, there being eighteen exhibits staged. For a brace of Cucumbers Mr. Waldie was again first, the second prize going to Mr. P. Mains, Polmont. Mr. J. A. Murie, Craigmillar Gardens, Edinburgh, was a good first for six Savoys, Mr. Goodfellow, gardener to E. A. Gray, Esq., being a close second.

Mr. Ramage, gardener to J. C. Hope Vere, Esq., Blackwood House, Lanarkshire, was first for twelve Onions, Mr. McKelvie, gardener to the Duchess of Roxburgh, Broxmouth Park, Dunbar, being a very close second. There were twelve dishes staged in this class, magnificent produce being displayed in each case. Mr. Gourlay, gardener to G. Caldwell, Esq., Loanhead, was first for four Beets, and Mr. G. McKenna second. For a collection of six dishes of Potatoes Mr. J. Gentleman, Armadale, was first with Reading Russet, Jeanie Deans, Up To Date, Colossal, Fairlie Castle, and Abundance; Mr. J. Riddell, Chapelton, being a good second. Mr. J. Gemmell, Flakefield, Chapelton, was first for twelve dishes of Potatoes, staging Fair Maid, Post Master, Triumph, The Foreman, The Herd Laddie, Miller's Bountiful, Sutton's Matchless, Windsor Castle, Reading Russet, Pink Perfection, and Abundance. Mr. Wilson, gardener to R. B. Archibald, Esq., Tillicoultry, was second, and Mrs. Ormiston, gardener to G. Pott, Esq., third. For six Turnips Mr. Anthony was first, and Mr. Ormiston second. Mr. R. Moffat, McIrose, was first in the class for six Parsnips, Mr. Logan, Coldstream, being a very good second. Mr. Logan staged six heads of Celery, and was deservedly accorded the first prize, Mr. Waldie being a very close

second. The Brussels Sprouts staged by Mr. Murie, for which he was awarded the first prize, were highly creditable, as also were those of Mr. Brown, who took the second place. Mr. Abbott was first for six Lettuces, and Mr. Lunt second.

MISCELLANEOUS EXHIBITS.

Many of the leading Scotch nurserymen staged exhibits which altogether formed a great attraction to the Show. Messrs. Thos. Methven and Son, 15, Princess Street, Edinburgh, arranged a magnificent table of plants, consisting of Lilium speciosum, Crotons, Caladiums, and Dracænas, all of which were in excellent condition. A table of Begonias, also staged by Messrs. Methven, was one of the brightest ornaments in the Exbibition. Another very fine stand was that of Mr. M. Cuthbertson, nurseryman, Rothesay. Some grand Onions were shown, and the Cuthbertson's New Hybrid Leek were by far the best in the Show. The floral part of this exhibit was composed of very fine Marigolds, Gaillardias, Coreopsis grandiflora, perennial Phloxes, Heliantbus multi-florus maximus, and Pyrethrums. Messrs. Dobbie & Son, Rothesay, had an exhibit, of which the Dahlias-Show, Fancy, Pompon, Cactus, and Single—were by far the best features. Messrs. Jas. Cocker & Son, Aberdeen, staged some very fine Mrs. John Laing Roscs, and Lilium auratum rubro-vittatum amongst other things. Mr. John Downie, Murrayfield, had a highly creditable and tastefully arranged table of plants, amongst which the most prominent were Liliums, Dracænas, Palms, Crotons, and Begonias. Messrs. Cunningham & Fraser, Edinburgh, had two tables of plants, one comprised of hardy plants, and the other of stove and greenhouse plants in variety. Some handsome Hollies were also staged by the same firm.

Ferns were staged by Messrs. Birkenhead, Sale, Manchester, in fine condition. Conspicuous amongst them were Athyrium f.-f. concavum, Adiantum tinctum, A. peruvianum, A. speciosum, Gymnogramma Pearcei robusta, and Asplenium australasicum. Messrs. J. Dickson and Co., Edinburgh, arranged a striking collection of flowers and fruit, in which Violas, Chrysanthemums, Asters, Liliums, Apples, and Pears were the best. Messrs. Alex. Kerr & Son, Roxburgh, showed some grand Cockseombs, and Mr. John Forbes, Hawick, some Carnations, Pentstemons, Stocks, and Phloxes, which were very beautiful. Mr. M. Campbell, High Blantyre, staged Carnations, Dahlias, Michaelmas Daisies, and Pansies, amongst which the Show Dahlias were perhaps the best. Mr. Alexander Lister, Rothesay, showed Pansies in grand condition, good French Marigolds, Dahlias, and Anemone japonica alba. Messrs. R. B. Laird & Son's stand of Dahlias, tastefully arranged with Asparagus plumosus, was one of the most charming in the Show. Messrs. Alex. Cross & Son, 19, Hope Street, Glasgow, arranged a stand of their fertiliser, one, it may be added, of much merit. They also showed a new sprayer they are now offering, which appears to be one of the most simple and at the same time most effective machines for this purpose which has ever been before the public.

BANBURY ONION AND VEGETABLE SHOW.

BANBURY has long been celebrated for its magnificent Onion competitions, but the display of Thursday, Sept. 14th, eclipsed all previous shows of Onions held at that place, or probably elsewhere. This is not to be wondered at when such redoubtable champions as Messrs. Wilkins, Pope, Waite, Kneller, Lye, Doherty, and Posse marshalled their fullest strength in the struggle for supremacy and the extremely liberal prizes offered.

The present series of shows was instituted by the late Mr. Henry Deverill with a view to encourage the better cultivation of this most wholesome esculent. But, alas! the originator was not spared to see this most interesting Exhibition and the immense results of bis enterprising handiwork, and many were the sympathetic regrets expressed by those present on the occasion. Fortunately, the institution is not likely to suffer, for the enthusiasm is still continued by the widow, Mrs. Deverill, and her enterprising manager, Mr. Crews. The competition was large and very severe, but Mr. Wilkins, gardener to Lady Theodore Guest, Inwood House, proved invincible in the principal Onion classes, although he had to lower his flag to Mr. Pope, gardener to Earl Carnarvon, Highelere, in the class for eight distinct kinds of vegetables.

In class 1, a gold medal or timepiece was offered for the largest and handsomest specimen of any one kind of Deverill's Pedigree Onions, and here Mr. Wilkins staged six bulbs of Lord Keeper, perfect in shape and quality, which turned the scale at 15 lbs. Mr. Lye, gardener to W. A. Kingsmill, Esq., Sydmonton Court, closely followed with six splendid bulbs of Ailsa Craig weighing $13\frac{3}{4}$ lbs.

Class 2 was for twelve specimens of pedigree Onions, and here again Mr. Wılkins was successful with Ailsa Craig, scaling 26½ lbs. Mr. Pope was second with the same variety weighing 22 lbs.; third, Mr. Kneller. Sixteen competitors, all showing well.

Class 3, for twelve specimens, enumerated kinds, Mr. Wilkins leading with Anglo-Spanish weighing $20\frac{1}{2}$ lbs., perfect in every respect. Second, Mr. Waite, gardener to Colonel Talbot, Glenhurst, same kind, weighing $18\frac{1}{4}$ lbs. Third, Mr. Pope, with Royal Jubilee weighing $18\frac{3}{4}$ lbs. Thirteen competitors, and the competition very close.

Class 4 was for twelve specimens of that splendid keeping Onion, Improved Wroxtor, Mr. Kneller having the best, weighing 14\frac{3}{4} lbs., followed by Mr. Wilkins, whose bulbs were slightly heavier (15 lbs.), but less perfect in finish. Third, Mr. Pease.

Class 5, was for twenty specimens of any kind, open only to cottagers,

mechanics, and allotment holders. Weight of bulbs 30½ lbs., 30½ lbs.,

-Eight distinct kinds of vegetables. First, Mr. Pope, with a faultless collection, containing grand samples of Exhibition Carrots, Lyon Lecks, Glenhurst Favourite Tomatoes, Middleton Park Beet, Aylesbury Prize Celery, Autumn Giant Cauliflower, Ailsa Craig Onions, and Satisfaction Potatoes. The second prize went to Mr. Wilkins, who

had similar kinds, but a few points short. Mr. Waite was a close third. There were five competitors, all good.—W. CRUMP.

MANCHESTER.—SEPTEMBER 15TH AND 16TH.

In the Gardens at Old Trafford the Royal Botanical and Horticultural Society of Manchester held a very fine Exhibition of fruit and other produce on the above dates. The beautiful gardens, containing so many well grown plants, all showing the touch of a master hand, add greatly to the interest of the meeting, which, combined with fine weather, excellent music, and easy access to the public, caused a crowded

attendance.

For twelve dishes of fruit the Earl of Harrington, Elvaston Castle, Derby (gardener, Mr. Goodacre), was first with fine Muscat of Alexandria, Black Alicante, and Gros Guillaume Grapes, a beautiful Countess Melon, very fine Sea Eagle and Golden Eagle Peaches, two good Pines, well coloured Nectarines, Louise Bonne de Jersey Pears, Cox's Orange Apples, and fine Figs and Plums. Sir J. M. Pease, Hutton Hall (gardener, Mr. McIndoe), was second with a fine collection. Unfortunately, some of his Grapes were rubbed in transit. The Duke of Newcastle (gardener, Mr. Slade), was third. For twelve bunches of Grapes, in not less than three varieties, two gold and one silver medal were offered, causing keen competition. E. M. Mundy, Esq., Shipley Hall, Derby, was first with a fine heavy Gros Guillaume, Muscat of Alexandria, and Gros Colman, all showing skilful treatment and good finish. The Earl of Harrington was second with a little smaller examples of high merit, having Gros Maroc, Aln wick Seedling, and Madresfield Court, in addition to the varieties staged in the first prize collection. The Duke of Newcastle was third with good heavy bunches. For six bunches of white Grapes E. M. Mundy, Esq., was an easy first with large, well coloured bunches of Muscat of Alexandria. Second, the Earl of Harrington with excellent Bowood Muscats, Muscat of Alexandria, and Mrs. Pearson. The prizes in this class were given by Mr. W. Innes of Derby. For four bunches of black Grapes Mr. W. Innes, Derby, was first with enormous clusters of Gros Guillaume, which had suffered somewhat in travelling. C. Lee Campbell, Esq., Glewston Court (gardener, Mr. S. T. Wright), was second with Black Alicante, firm in bunch and in perfect condition. The Earl of Harrington was third.

With eight dishes of Apples the Earl of Harrington was first, showing large, highly coloured fruit of Loddington, Flower of Kent, Gloria Mundi, Peasgood's Nonesuch, Ribston Pippin, Adams' Pearmain, Fearn's Pippin, and Cox's Orange Pippin. Sir J. M. Pease was second with fruit grown under glass. Mrs. Barlow was third. A special prize was awarded to C. Lee Campbell, Esq., whose dessert Apples were very fine indeed. For eight dishes of Pears the Earl of Harrington was first with large family of Pitmesten Duchers, Catillag, Dergand du Comise. with large fruits of Pitmaston Duchess, Catillac, Doyenné du Comice, Duchesse d'Angoulême, Beacon, Beurré Diel, Williams' Bon Chrêtien, and Louise Bonne de Jersey. Sir J. M. Pease was second, and Mrs. Barlow third. With twelve Tomatoes Mr. James Mason, Victoria Street, Manchester, took leading honours, followed by J. Grant Morris, Esq., Allerton Priory, and Mrs. Lord, Oakleigh, Ashton-on-Mersey. In the Apple and Pear classes open to residents within twenty miles of Manchester, the competition was good, and the fruit fine for the district; the most successful exhibitors being J. Watts, Esq., R. R. Gills, Esq., J. J. Travis, Esq., A. Hornby Lewis, Esq., and the Earl of

Messrs. J. Peed & Sons, Norwood, staged about 120 dishes of Apples and Pears, also a collection of Grapes, altogether a fine collection, which deserved the gold medal awarded. Special prizes were awarded as follows:—To the Duke of Newcastle for six grand Pines; to Mrs. Barlow for 100 dishes of Apples, Pears, and Crabs; to Messrs. Keynes and Williams, Salisbury, for a most imposing and beautiful display of Dahlias, arranged in a charming manner; and to Messrs. Harkness and Sons for a magnificent collection of hardy cut flowers in over eighty Mr. H. Merryweather, Southwell, Notts, also had a special varieties. prize awarded for thirty-seven dishes of Bramley's Seedling Apple, very fine. Other non-competing exhibits were staged by Messrs. Dickson and Robinson, Old Mill Gate, Manchester, who put up fine Roses and Gladiolus; Messrs. Dickson, Brown, & Tait staged good Dahlias and Gladiolus; Messrs. Caldwell & Son, Knutsford, had Apples and Dahlias; and Miss Hopkins, Mere Cottage, Knutsford, hardy flowers and Pansies.

TRADE CATALOGUES RECEIVED.

Fred Horsman & Co., Colchester.—Orchid Specialities.

G. Mount, Canterbury.—Roses.

McRonald, Chichester.—Dutch Bulbs and Flower Roots.

Van Zinten & Nieuwerf, Boskoop, Holland, and Tottenham, N.—Plants for Potting and Forcing.

T. S. Ware, Hale Farm Nurseries, Tottenham .- Carnations and Picotees and Autumn Bulb Guides.

Dicksons, Limited, The Nurseries, Chester .- Select Roses.



FRUIT FORCING.

Figs.—Early-forced Trees in Pots.—As it is not advisable to increase the pot room, a few inches of soil may be removed from the base of each ball, cutting back the roots, also reduce the ball a little at the side so as to provide room for fresh compost, and remove the loose surface soil, cutting off any strong straggling roots. The drainage must be thorough, using a compost of fibrous loam three parts, decayed manure one part, and old mortar rubbish pounded one part, thoroughly incorporated and had under cover a few weeks previous to potting (if necessary) to become moderately dry. Make the whole very firm. Afford a good watering, and place the trees where they can have plenty of air with shelter from heavy rains and snow. This is only available for trees that are not in large pots or have the roots mainly restricted to the pots, as those that are in 18-inch pots and have been stood on brick pedestals to prevent their sinking with the fermenting material, require different treatment. In their case every particle of the old Oak or Beech leaves should be removed from the bed, and the surface dressings also be picked from amongst the roots with a handfork, shortening the strongest roots. The drainage being attended to the trees are to be placed in position on the loose brick pedestals, and the soil surface-dressed with the compost named firmly rammed into the pot. Supply water to settle the soil, and after this keep the house cool, dry, and well ventilated until the time of starting in November or early December. This method is preferable to repotting annually, as the trees are less likely to cast their first cropof fruit, which is the most important, and it is not advisable to disturb trees in 18 or 20-inch pots at the roots more than can be helped. Trees that are not in as large pots as desired, or when it is thought desirable to increase the root space, a liberal shift may be given, the sides of the ball being loosened with a handfork, and any straggling roots cut back, also the matted roots in the drainage. Provide good drainage, using the same kind of compost for potting as previously advised, and ram it as hard as the ball, this having been moistened previously, but the soil used in potting must be rather dry.

Succession Houses.-The trees now ripening the second crop Figs must be gradually kept drier as the days shorten, a little fire heat being necessary in dull weather to admit a free circulation of air and prevent damp, for moisture settling on the fruit causes it to fall an easy prey to fungi, which compass its decay. Particular attention must be given to the exposure of the wood to the full influence of sun and air, removing all useless growth, thinning where the shoots are too close, and allow the points to stand well up or out to the glass. As already mentioned, the supplies of water must be diminished, but not so as to cause the foliage to become limp, and it may be withheld from borders that have been well watered and mulched up to the middle of this month. The main point is to get the wood well ripened, especially at the points of

the shoots.

Lifting Over-luxuriant Fig Trees.-When in rich borders and the rootage deep and extensive, Fig trees are apt to become too strong for fruit bearing, and in that case preparation should be made for lifting them as soon as the leaves turn yellow. If the trees are fruitless a trench should be taken out about one-third the distance from the stem the branches extend, cutting off all the roots. This will check the tendency to late growth and concentrate the forces on the ripening of the wood. In other cases the trees should be attended to as soon as the crop is gathered, lifting them with care, cutting back all long roots, reserving the fibres only. Good drainage with a drain to carry off superfluous water is necessary. A 3-inch drain with proper fall and outlet will do the last, and a foot thickness of brickbats with a 3-inch layer of old mortar rubbish over will provide the first. A border of 4 to 6 feet width is much better than a wide one, and 18 inches to 2 feet depth of soil ample. What is wanted is firm, sweet, calcareous soil that will admit of the percolation of water and air through and retain the manurial elements essential to the production of fine fruit. Good turfy loam four parts, and one part each old mortar rubbish and road scrapings forms a suitable and durable border, incorporating well. Place the compost together firmly so as to insure a sturdy short-jointed growth. Spread out the tree roots evenly, work in the soil amongst them, and make it firm, placing them in layers as they rise, and keeping them well up. not covering the topmost more than 2 or 3 inches. The soil must be moist when used, but it ought not to be wet. Give a moderate watering, and keep cool and dry.

Peaches and Nectarines .- Trees Ripening the Fruit in July .-The trees will now be approaching the resting period, indicated by some of the leaves falling. They should be kept somewhat drier at the roots, but if the lights have been removed the trees will not take any harm, but be benefited by the thorough moistening of the soil, as they will have a correspondingly cool atmosphere and not be excited by fits and starts as in houses that are made receptacles for plants. If the trees, however, are very strong, it is not wise to remove the roof lights, and if the wood does not ripen well a trench may be made at a distance of about one-third the height of the tree from the stem, and detach all roots down to the drainage, leaving the trench open for a fortnight, when it may be filled again and made firm. This will cause the wood to harden, and the sap will be concentrated on the buds and help to plump them. Young trees only will require this; but older trees that have the wood very strong should be root-pruned, and have the roots wholly or partially lifted before the leaves have all fallen. In the case of weakly trees remove the old soil from over and amongst the roots, supplying fresh, rather strong calcareous loam, making it firm, following with a good soaking of liquid manure.

Trees Ripening the Fruit in August and Early September .- Cut out the wood that has borne fruit, leaving no more successional shoots than are necessary for next year's crop and that can be fully exposed to light. Cleanse the foliage of dust and red spider by water directed with force from a garden engine or syringe, and repeat occasionally. If there is scale promptly apply an insecticide, petroleum emulsion being one of the most effective, also against red spider, a soapy solution destroying it, and for brown aphis use tobacco powder or juice. There must not be any lack of moisture at the roots, therefore apply water to the inside borders as necessary to keep them from becoming too dry. Afford abundant ventilation, and if the wood is not ripening well keep the house rather warm by day, and throw the ventilators open at night, but a warm, close, moist atmosphere must be avoided, as that would be injurious than otherwise.

Late Trees.—As the fruit is cleared from the trees the shoots that have borne fruit should be cut to a successional one at the base, and where the growths are too crowded they must be thinned. This with free ventilation and gentle fire heat in cold localities during dull weather, and with the growth strong will assist in ripening the wood. This is of primary importance as regards next year's crop. The trees must not lack moisture, and yet a drier condition is advisable whilst the fruit is ripening. Some soft netting suspended beneath the trees will be useful to save any fallen fruit, but it must be looped up in small pockets to prevent the fruit bruising each other. With an examination of the fruit in the morning and late afternoon there is no necessity for the netting. The fruit is better gathered before becoming dead ripe, yet not before it parts readily from the branch, and kept in a cool, light, airy fruit room until required.

Melons.—While the fruits are swelling water must be supplied, keeping the soil healthfully moist, and feeding with tepid liquid manure. A moderate moisture also must be maintained by damping in the morning and in the afternoon, and at closing time a light syringing of the foliage may be practised if the weather be bright. Remove all superfluous growths as they appear, and admit air early or at 75°, keeping the bottom heat steady at about 80°. Maintain a night temperature of 65° to 70°, 70° to 75° by day, and 80° to 90° with sun heat, closing sufficiently early to increase to 95° or more.

A little fire heat so as to insure a circulation of air constantly and prevent the deposition of moisture on the fruit, and no more water at the roots than is necessary to prevent flagging, will accelerate the ripening and do much to improve the flavour. In manure-heated pits and frames no water will be required where the soil has been kept properly moist during the swelling of the fruit, but keep the sides well lined, and leave a little air on at the back at night. The fruit should be raised well above the surface of the bed. Any fruit wished to be kept for a time should be cut with a portion of stem when it gives indications of ripening, placing in a dry airy room; if wanted ripe place in a warm house in the full sun, where it will ripen better than in cool frames.

THE KITCHEN GARDEN.

Open-air Mushroom Beds.—This has been a rather trying season for early formed Mushroom beds, and unless there is sufficient moisture in the manure to insure its steady decay there is no heat to promote the rapid spread of the spawn or to hasten the growth of Mushrooms. Any beds spawned early in August ought now to be examined. If there are no signs of Mushrooms, the manure also being found very dry below the surface, then the attempt should be made to moisten it by either exposing to a soaking rain or else form holes all over the bed, and then give two or three waterings with a rose on the pot, using tepid water. This must not be overdone, though judging from the present state of the beds there is little likelihood of saturation taking place. After the beds have been moistened cover heavily with strawy litter. Those found to be in a fairly moist state when first examined need not be watered. Mushrooms ought to be forthcoming in from five weeks to six weeks

Successional Beds.—Some of the most profitable beds are those that are formed and spawned during the month of September. Open air beds must be ridge-shaped, but may be of any length, or, say, from 6 feet upwards. The site should be well drained, somewhat sheltered, and if it can be managed the beds ought to be formed where neither moles nor large field mice are likely to get at them. Horse droppings without a portion of straw, to the extent, say, of one-third of the bulk, are unsuitable for ridge-shaped beds. The heap must be well prepared or it will heat very violently, or so much so as to quite spoil the bed after it is put together. About a fortnight should be taken up in preparing the manure, the heap being turned inside out every second or at the most third day, and watered whenever found dry. Dry manure is worthless for making into Mushroom beds, and the watering will in many cases be necessary according as the materials are finally put together. Properly prepared manure must be free from rank put together. Properly prepared manure must be free from rank smells and violent heat, but still be capable of going on heating and decaying.

Forming and Spawning.—Mark or stake out the site, allowing a width not exceeding 3 feet, and work just inside of this. Shake out the manure so as to separate what flakes there may be and distribute it in layers, either trampling or heavily beating down each layer with the back of the fork. Gradually narrow the ridge till when from 30 inches to 3 feet high, it is only 6 inches wide. Finish off neatly, and slightly round the top. The manure must be put together so firmly as to make it no easy matter to thrust the necessary trial stakes well into the bed. Examine these sticks frequently. At first the heat will most likely increase considerably, but directly it is on the decline, or as soon as the heated part of the trial sticks can be comfortably borne in the

palm of the hand, the time has arrived for spawning.

Use fresh spawn and break the bricks up into about eight pieces. Insert these lumps in holes formed with the hand, and not a dibble, just below the surface, and about 8 inches apart each way, angling the holes being advisable. The start should be made 6 inches or so from the ground, and there will be no necessity to spawn quite up to the top of the ridge. Make all level and firm, looseness being prejudicial to the spread of Mushroom spawn. Continue to frequently examine the trial sticks, and if they are found to be very hot to the hand Continue to frequently examine the some of the enclosed vapour must be let out by means of a pointed iron rod thrust down through the centre or ridge of the bed at short intervals. This will quickly lower the temperature and save the manure from becoming dry and musty. A little judgment must be exercised as to when to soil over the beds. If the manure has been well prepared, the proper time to case over is on the fourth day after spawning, but it is better to defer this a few days longer rather than cause over-heating. Fresh fine yellow loam suits Mushrooms well, nothing answering better than that obtained from immediately under turf in a meadow. Failing virgin loam use garden soil dug from between the top spit and subsoil. Firmly cover the beds with a layer 2 inches thick of soil, but do not wet and plaster it on, or cracking to a most injurious extent will inevitably result. Protect open air beds with strawy litter, lightly at first, and heavily, in the form of a thatch, when either heavy rains or frosts have to be warded off.

Mushroom Beds under Cover.—Now is a good time to form beds either in Mushroom houses proper or in cellars, sheds, or snug outhouses of any kind. These beds should be nearly or quite flat, a gentle slope to the front being usually given, of any convenient width, and from 12 inches to 15 inches in depth. They can be enclosed either by walls or stout boards kept in position by means of strong uprights, and preferably be formed on the floor, shelves answering better later on. these cases rather less short stained straw ought to be left with the manure, though in all other respects the preparation should be the same. This season much green food has been given to horses, but it should be remembered that it is from horses in hard work, and fed on hay and corn, that the droppings most suitable for making into Mushroom beds are obtained. If there is no choice take every care with the best that can be had. No fire heat ought to be turned on for some time to come, the best crops very frequently being had from the beds in snug unheated sheds and cellars. Prepare more manure for successional beds, supplementing it with Oak leaves if the bulk is insufficient. Old Cucumber and Melon beds in houses might also be spawned with every prospect of a good crop of Mushrooms following in due course if only the top heat is not too strong.



APIARIAN NOTES.

HOME FROM THE MOORS.

AFTER two months of suspense and toil, with alternate disappointments and successes, we have returned from the moors. We had a brief period of fine weather, but this was followed by torrents of rain and a low temperature, and there were few mornings without hoarfrost. With all these drawbacks, however, I am home with a fair yield of Heather honey, but by no means so great as I have frequently had from the same place in as few days. My best hive, a second cross Carniolan, weighs gross 160 lbs., having increased in weight 70 lbs. My next best, a second cross Syrian, weighs about the same. Both these, along with the others, lost in weight the first month from 12 to 20 lbs., and near the end another 10 to 12 lbs., as is always the case, so that the actual gathering of our best hives would be 100 lbs. The average weight gathering of our best hives would be 100 lbs. The average made from the setting down till the lifting is about 40 lbs.

A dozen hives increased before going to the Heather to thirty-four. Although constantly attending my bees at the Heather, six swarms left unseen and were lost, it being impossible to detect them. Twenty seven of the thirty-three swarms I had were all returned. Among the rest was a Punic nucleus, the pure and cross giving alike satisfaction, having made on the whole as much, or perhaps more, than any other variety. They are no worse than other bees, nor so bad as the pure Italians for stinging or robbing, but are not entirely innocent in that respect. They are very prolific, and it is this good quality that our modernists do not know how to put to

the best use for large yields of honey. The toil from excessive swarming this season is due entirely to practising contrary to what I teach, and, like many more, have suffered accordingly. Influenced by persuasion and past bad seasons I wrought my hives with two divisions instead of three, as I have advised sensible bee-keepers to do.

I am perhaps prejudiced against the mild tempered pure Carniolan free from the yellow bands, but I cannot help admiring the beautiful whiteness of their honeycombs. I thought till early in the summer that I possessed the original pure strain first sent me by the late Mr. Alfred Neighbour nearly twenty years ago, but somehow, through so much swarming and so many queens about, every one was lost, so I have begun anew with one that I have safely introduced lately. Having taken some trouble to obtain the pure strain free from Italian and Syrian blood, I shall if spared till another year take care to increase and to keep them pure, having a good opportunity of doing so.

Elvanfoot has about fifty inhabitants, and it is becoming well known as a healthy locality. Among the inhabitants is one who dislikes bees and bee-keepers. He says, "Bee-keepers bring wet weather, and the bees take the strength out of the grass and the Heather." The person alluded to has for years tried to prevent bees being set upon neighbouring farms, and this year appealed to the factor of an adjoining estate to compel the bees to be removed. This was, however, only partially complied with, the owners of the bees removing them several hundred yards.

As everything by way of reading and correspondence are in arrears, I will in the next issue answer several queries, and commence a series of practical articles for beginners and the inexperienced. I have omitted to say that my best hive mentioned above is an old stock that swarmed in June, the prime swarm from it being nearly as heavy, and gave a surplus of honey early in the season. Your readers can now judge of the reliability, or unreliability, of the saying, "When hives swarm there is an end to honey gathering." In my future articles I will give full instructions how to be as successful as—A LANARKSHIRE BEE-KEEPER.

GARDENERS' CHARITABLE AND PROVIDENT INSTITUTIONS.

THE GARDENERS' ROYAL BENEVOLENT INSTITUTION.—Secretary, Mr. G. J. Ingram, 50, Parliament Street, London, W.C.

UNITED HORTICULTURAL BENEFIT AND PROVIDENT SOCIETY.— Secretary, Mr. W. Collins, 9, Martindale Road, Balham, London, S.W.

ROYAL GARDENERS' ORPHAN FUND.—Secretary, Mr. A. F. Barron, Royal Horticultural Society's Gardens, Chiswick, London, W.



*All correspondence should be directed either to "THE EDITOR" or to "THE PUBLISHER." Letters addressed to Dr. Hogg or members of the staff often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Bee subjects, and should never send more than two or three questions at once. All articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post, and we do not undertake to return rejected communications.

Cow and Pig Manure Water for Chrysanthemums (MacLeod).—There is no safer liquid stimulant than that made from cow manure provided it is scalded with boiling water so as to destroy destructive larvæ before adding the water—say twenty gallons to one peck of the manure, stirring well and leaving a day or two. If you mean the drainings from the cow house it is an excellent manure, and should be diluted with about a fourth of water when neat; if from the manure as well it should be diluted to the colour of mild beer. Piggery drainings are much more powerful than either stable or cow house drainings, and could only be safe when diluted with ten times the bulk of water. Nitrate of soda may be used occasionally, but not too often, at the rate of a \(\frac{1}{4} \) oz. per gallon of water.

Phygelius capensis (L., Dundee).—You ask whether this is a shrubby or herbaceous plant. According to the "Botanical Magazine" it is both. The description in connection with a beautiful coloured illustration, tab. 4881, vol. xi., third series, states the plant is "shrubby below and herbaceous above." That is its general character. In the south the lower part assumes a shrubby habit and retains it through the winter, the Pentstemon-like stems of scarlet flowers dying and cut back to the sound parts. In some colder localities we are told the plants die down the same as Fuchsias do in the open ground and produce young growths from the rootstock annually. Only in such instances could the plant be popularly described as herbaceous.

Storing Fruit (F. J.).—There is nothing better than clean white paper for the fruit to rest on, though it is not necessary unless the wood is likely to taint the fruit. Cocoa-nut fibre would certainly form a better "bed" for the fruit; but choice fruit should have as much of its surface exposed as possible, so that it might ripen equally in every part. As this process begins at the eye, that part is generally placed downwards, in some cases embedded in sand or other material to secure equal ripeness all over. To insure the fruit keeping sound as long as possible it is often packed in material calculated to exclude air, and maintain a uniform temperature without tainting the fruit. Peat moss litter has been used for storing Apples in with complete success, and the fruit was not in the least tainted. The same variety kept longer in it than by any other method, and fetched more money. The moss litter was of course sweet. The very soft wood wool referred to on page 220, September 7th, is excellent as a packing for fruit.

Bones and Kainit for Fruit Trees (T. W. F.).—If it is desired to get as much value out of the bones as possible the first year, they should be dissolved—that is, made into superphosphate. Steamed bone meal is a little more durable, but by no means to be considered a permanent improvement. Crushed bones have value extending over several years, and ought not to be used where the trees are in immediate want of support, it being better to employ bone superphosphate, so as to secure the best results in the summer following its application. The superphosphate and kainit should be in a mixture of equal proportions, and spread over the ground under the branches of the bushes or trees and for a foot beyond in the autumn, at the rate of 2 ozs. per square yard, or $3\frac{3}{4}$ lbs. per rod ($30\frac{1}{4}$ square yards). The ground may then be lightly pointed over, but not injuring the roots, and left until the spring. If a full crop of fruit needs support give a supplementary dressing of powdered nitrate of soda—say $1\frac{1}{2}$ lb. per rod, a little more if the soil is of a dry nature, or a little less if the ground be damp.

Pear Tree Blister Moth (G. T. D.).—The moth is minute and active, body satiny white, the wings having an orange ground spotted with black and other colours. It appears in May, and after pairing the female deposits her eggs at the end of that month or beginning of June, or later, in the tissue of the leaves on the upper surface, and from these issue the grubs or caterpillars, which feed beneath the epidermis, and produce dark brown blisters, corresponding to the spread of the caterpillar. Sometimes the blisters run together. When the caterpillar is full fed, which usually takes place in August or September, it eats its way out, and entering a crevice in the bark or a wall, where it will be snug and dry, it spins a white silken cocoon, very beautiful, and becomes a chrysalis inside, being quite small in itself, but easily recognisable by the silvery coating. From this it appears as the moth at the time before named. Those at the back of the old plaster are the cocoons—some empty, others contain chrysalids. The description to which you allude is not accurate as regards this country, but it is strictly so in respect of warmer and drier climes.

Housing Chrysanthemums (A. Pitman).—Mr. Molyneux's references on page 73 of his work, which you have found so useful, apply to late varieties generally as the first to be placed under glass with the object of advancing the blooms so that they may be ready for cutting at the same time as the earlier varieties, the plants of which are housed later. There are only about two in your list that can be called late or slow in opening, Hero of Stoke Newington and Barbara. Endeavours to have all the varieties in condition at the same time are only as a rule resorted to by exhibitors, and growers of Chrysanthemums for house decoration find a prolonged display the most satisfactory, therefore they prefer to allow the different varieties to open at their natural time. Judging from the names in your list you do not intend the blooms for exhibition, and therefore you will not err by housing all the plants at the end of the present month, sooner if the nights are clear and frost appears immiuent, though if you wish to advance any particular varieties place the plants under glass at once. Some of the names in your list are not to be found in the National Chrysanthemum Society's catalogue, and others are misspelt. Chrysanthemums are often injured by a keen frost at the end of September or early in October, mild weather supervening, and growers should be on the alert accordingly.

Odontoglossums Planted Out—Orchids from Seed (J. Wilson).
—Odontoglossums are planted in thousands by Mr. F. Sander, in his establishment at St. Albans. A layer of open material, consisting of sphagnum, fibrous turf and charcoal, is spread over ample drainage on side stages, and the plants established in it. Under the skilful treatment to which they are subjected they grow as well as plants can grow, and lift well for establishing in pots. The thickness of the compost varies according to the size of the plants, but the same depth as that

usually found in pots for different sized plants is a safe rule of guidance. Planting out is a labour-saving process in watering—a point of greater importance in extensive trade collections than in private establishments. The atmospheric conditions of the houses are specially appropriate for the well-being of the plants. The best way of raising Orchids from seed is to sow all that is found in the pods as resulting from careful fertilisation. To attempt to separate the weak from the strong grains, as revealed by a powerful magnifying glass, would be somewhat too tedious. The seed is cast on the sphagnum round established plants, and if good, and the essential conditions of moisture and temperature maintained, germination follows in due course. The most careful skilled attention is needed, transplanting and establishing the seedlings being an extremely delicate process. The plants flower in from ten to fifteen years after sowing the seed, the majority being no better than the parents, perhaps worse. Raising Orchids from seed reminds us of digging for diamonds—an enormous amount of rubbish has to be removed, but now and then a gem of the first water is found, the lucky owner rejoicing accordingly in the reward for his enterprize and perseverance; but many diamond searchers are not lucky, and it is the same with Orchid raisers, and experts have the best chances of success

Sirex gigas (A Young Entomologist).—The Sirex gigas is found in the north of Europe; it has been taken in England, but very rarely; it is a British species, and is sometimes taken in Scotland. It is likely to be met with in Pine forests, as the female seems to prefer that wood to deposit her eggs in. The male is considerably smaller than the female, and has no sting. The sting of the female consists of three parts—a sheath which divides into two parts or valves, and a fine instrument somewhat resembling a needle; it is with this instrument it wounds its enemies, and the sting is said to cause excruciating pain. The microscope discovers this part to be beset with a number of very minute teeth, like the edge of a saw; with this sting the creature can pierce the wood of sound trees; for we suspect it does not always deposit its eggs in such as are decayed, but rather in such as will supply the larva with nourishment when it is hatched. The eggs are laid in clusters of 200 or 300 together; they are of a pale yellow colour, about the thirtieth part of an inch in length, and shaped like a weaver's shuttle. The larva lives in the body of the tree, enlarging its habitation as it increases in size, for it never leaves the tree till it becomes a winged creature. The larva when full grown is about 14 inch in length, and as thick as a goose quill. It is a heavy sluggish creature, almost cylindrical, the head very small, and the whole of an uniform pellucid yellowish colour. It has a small spine at the end of the body like those by which the larva of some spinges are distinguished; this spine is also a striking character in the perfect Sirex. In the pupa the form of the winged creature is more visible than in the larva state; it is of a browner colour than the larva, and the rudiment of the sting and legs are very visible.

Naming Fruits—A Roundabout Procedure.—A correspondent informs us that he usually sends his Pear problems to a friend, and if neither he nor his man can name the fruit, it is at once sent by the friend to this office. Our correspondent further states that he does not wish to trouble his friend at present, so sends fruit direct to us, with a request that we send the names by post. This is an improvement on the roundabout way, but we only name fruit through these columns for the convenience of regular subscribers, who are the growers of such fruit, and not collectors of specimens from non-subscribers. This latter procedure is wholly irregular, and we trust that none of our readers will allow themselves to be made the mediums in infringing our rules.

Names of Fruits.—Notice.—Special attention is directed to the following decision, the object of which is to discourage the growth of inferior and promote the culture of superior varieties. In consequence of the large number of worthless Apples and Pears sent to this office to be named, it has been decided to name only specimens and varieties of approved merit, and to reject the inferior, which are not worth sending or growing. The names and addresses of senders of fruit to be named must in all cases be enclosed with the specimens, whether letters referring to the fruit are sent by post or not. The names are not necessarily required for publication, initials sufficing for that. Only six specimens can be named at once, and any beyond that number cannot be preserved. They should be sent on the first indication of change towards ripening. Dessert Pears cannot be named in a hard green state. (E. M.).—The clustered fruits are varieties of the Siberian Crab, the smaller form with narrow leaves being Pyrus Malus prunifolia, and the other P. M. baccata. You are probably right in the names of the Apples. (J. C. M.).—We cannot name the Apples. The larger ones are essentially faulty, and the others not worthy of names or cultivation. (J. E.).—1, Probably Golden Reinctte, but not sufficiently matured for positive identification; 2, Dr. Harvey. The Pears were unripe and in a condition which rendered naming them an impossibility. (D. M.).—1, Souvenir du Congrès; 2. Williams' Bon Chrêtien; 3, Immature; 4, Probably Beurré de Capiaumont, and certainly not Van Mons Léon Leclerc. The Apple is Five-crowned Pippin. (H. T. H.).—1 and 5, Gathered before ready, consequently unrecognisable; 2, Mère de Ménage; 3, Wyken Pippin; 4, Small fruit of Lane's Prince Albert. (B. W.).—12, Cobbam, a good Apple; 14, Dumelow's Crab. The others cannot be named; they are probably local kinds, and we do not wish to see any more of them. The Crab was quite rotten. If your object is to grow fruit for sale increase the varieties which thrive best in your s

but the stalk end containing the most characteristic feature of the variety was quite rotten; 2, Beurré d'Amanlis. (G. J.).—1, Cox's Pomona; 2, Kirke's Fame; 3, Northern Greening; 4, Nonesuch; 5, Sturmer Pippin; 6, probably a small fruit of Court Pendû Plat. (H. C.).—1, Bergamotte Dussart, a Belgian Pear; 2, Duchesse d'Angoulême; 3, Summer Thorn. (F. B.).—1, 2, and 5, not known, no stalks to assist in the identification of the fruits; 3, Mère de Ménage; 4, Cellini; 6, probably Loddington Seedling, but no stalk. (J. E. S.).—1, Cellini. The others cannot be named, not being well grown specimens, and all of them have been dragged from the trees too soon. (G. G. P.).—Winter Hawthornden. (H. H.)—Apple Ribston Pippin, Pear Autumn Bergamot. (J. D.).—1, Beauty of Kent; 2, probably local, resembles Tower of Glamis; 3, Beauty of Hants. (Knebba).—1, Hollandbury; 2, the two specimens are very unlike, but bear a general resemblance to Dutch Mignonne; 3 and 4, not known, probably local. The Pears were hard, and not ready for naming. Hard Pears.—We have several boxes of Pears that it is quite impossible for anyone to name with any approach to accuracy. They have been sent weeks, and some of them months, too soon for the purpose in question.

Names of Plants.—We only undertake to name species of plants, not varieties that have originated from seed and termed florists' flowers. Flowering specimens are necessary of flowering plants, and Fern fronds should bear spores. Specimens should arrive in a fresh state in firm boxes. Slightly damp moss, soft green grass or leaves form the best packing, dry wool the worst. Not more than six specimens can be named at once, and the numbers should be visible without untying the ligatures, it being often difficult to separate them when the paper is damp. (James Boyd).—We regret that the plant which you have taken such creditable pains to describe cannot be identified from the leaves, though special endeavours have been made to determine its name. (H. C. L.).—Funkia grandiflora. (L. M. B.).—Odontoglossum crispum. (H. J.)—Brassia Lawrenceana. (D. H.).—1, Clematis coccinea; 2, We kept the spray of this in water to enable the buds to open which they failed to do, without blooms it cannot be identified; 3, Colutea arborescens; 4, Ceanothus azureus; 5, An Azalea, but must have flowers; 6, Tropæolum speciosum. (C. E. B. B.).—Specimen insufficient, probably Tropæolum Ball of Fire. (R. A. C.).—1, Flowers shaken off; most likely Pelargonium Scarlet Unique; 2, P. quercifolium; 3, Helenium pumilum.

COVENT GARDEN MARKET .- SEPTEMBER 20TH.

Market quiet; prices remaining the same with exception of Cobs, which are finding their level at a slight reduction.

FRUIT.

Apples, per bushel Cobs Grapes per lb Lemons, case	••	$\begin{array}{c} 1 \\ 25 \\ 0 \end{array}$	0 t 0 6	27 1	0 6	Peaches, per doz 1 6 to 8 0 Plums, per half sieve 1 6 2 6 St. Michael Pines, each 2 0 5 0
1	••				FEI	ABLES.
Beans, Kidney, per lb. Beet, Red, dozen	s	0 1 0 2 1 2 1 1 0	0 4 0 0 0 0	ю 0	d. 4 0 6 0 3 0 0 6 0 0 0 0 0	Mustard and Cress, punnet

AVERAGE WHOLESALE PRICES .-- OUT FLOWERS.

Orchid Blooms in variety.

	g.	d.	g.	d			d.		d.
Arum Lilies, 12 blooms	2	0 to	4	0	Marguerites, 12 bunches	2	0	to 4	0
Asters (English) doz. bches.		0	6	0	Mignonette, 12 bunches	2	0	4	0
Bouvardias, bunch		6	1	Õ	Myosotis, dozen bunches		6	3	0
Carnations, 12 blooms		6	2	ŏ	Orchids, per dozen blcoms		0	12	6
Carnations, dozen bunches		ŏ	8	ŏ	Pelargoniums, 12 bunches		0	9	Õ
	**	U	o	.,	Pelargoniums, scarlet, doz.	٠	•	•	•
Chrysanthemums, dozen		0	c	0	bunches	3	0	6	0
bunches		0	6	0		J	U	0	U
Chrysanthemums, doz. bls.	1	0	2	0	Primula (double), dozen			_	^
Cornflower, dozen buuches.	1	0	2	0	sprays	0	6	_	0
Eucharis, dozen	1	6	4	0	Pyrethrum, dozen bunches	2	0	-	0
Gardenias, per dozen	2	0	4	0	Roses (indoor), dozen	0	6	1	6
Lilium laucifolium, dozen	_		_		" Red, doz. bunches	4	0	6	0
blooms	1	0	3	0	" Tea, white, dozen	1	0	2	U
				ŏ	,, Yellow, dozen		ō	4	0
Lilium longiflorum,perdoz.	S	U	U	U	,, Tellow, dozen	-		_	
Maidenhair Fern, dozen					Tuberoses, 12 blooms	0	4	U	6
bunches	4	0	6	0					

PLANTS IN POTS.

	g.	d.	s.	d.	1	g.	d.	8.	d.
Arbor Vitæ (golden) dozen					Ferns (small) per hundred	4			0
Aspidistra, per dozen				0	Ficus elastica, each	1	0	7	6
Aspidistra, specimen plant			10	6	Foliage plants, var., each	2	0	10	0
Asters, dozen pots			6	Ō	Fuchsia, per dozen	4	0	6	0
Balsams, per dozen			6	0			0	6	0
Campanula, per dozen		õ	18	ō	Lilium lancifolium per doz. I	12 -	0	18	0
Chrysanthemums, per doz.	-	_		Ó	Lilium Harrissi, per dozen I	12	0	24	0
, large plants, cach				ō	Lycopodiums, per dozen	3	0	4	0
Dracæna terminalis, per		•	-	_	Marguerite Daisy, dozen		0	12	0
dozen		0	42	0			0	6	0
Dracæna viridis, dozen		Õ	$\overline{24}$		Myrtles, dozen	6	0	9	0
Euonymus. var., dozen		ŏ		0	Palms, in var., each	1	0	15	0
Evergreens. in var., dozen			24	0	" (specimens) 2	21	0	63	0
Ferns, in variety, dozen	4	ō	18	0	Pelargoniums, scarlet, doz.			4	0



POOR MILK.

HITHERTO it has been laid down by authorities that quality in milk fluctuates 3 or 4 per cent.; it is also admitted that the milk of a "stale" cow is less rich by 5 per cent. than that of a "fresh" cow-a "stale" cow meaning one that has been so long in milk after calving that there is a falling off in both milk yield and richness; a "fresh" cow, one that has recently calved. This has formed a basis for analyses made in the interest of the consumer. It has been regarded as a safe guide, a higher per-centage of poverty in quality being invariably taken to indicate just so much added water. Having regard to the simplicity of milk adulteration, and to the temptation which a farmer struggling with adversity has to indulge in it, it is only right that some check in the guise of a fair test should be kept upon it. It is equally right that the producer should have fair play, and therefore it is all important that the scrutiny should be just and thorough.

A case recently tried in the Marylebone Police Court so clearly points to the possibility of erroneous analyses, that it is worthy of special notice. The report says that two summonses came before the Court, issued at the instance of the Hampstead Vestry, against a dairy farmer named Robert G. Norman of Hillfield Farm Dairy, Bushey, Herts, for sending milk to London which on analysis was alleged to have been adulterated by the admixture of 6 and 7 per cent. of water respectively. The sanitary inspector took samples of the milk on its arrival at the Kilburn Railway Station on August 11th and 12th. Professor Stokes analysed the samples, and certified them to contain 6 and 7 per cent. of added water. The West London Dairy Company, to whom the milk was consigned, also had it tested by Mr. Lloyd, the analyst, who certified it to contain as much as 9 per cent. of added water. Both certificates were met by Mr. Norman with the plain answer that the milk was in the same condition as taken from the cow, and luckily for him it was arranged that Mr. Lloyd should see the cows milked, and make an analysis of that milk. He saw the seventeen cows milked in the middle of a field. All the milk was put into a large churn, and he took a sample. The result of his analysis showed 8 per cent. of added water.

Mr. Lloyd said he believed the only explanation to be given was the exceptionally hot and dry season this year, and its effect upon the cows. The dry season had so affected the food as to alter the composition of the milk. The poorness of the food would affect the quality of the milk and diminish the solids. It was not the dryness of the food eaten that changed the quality of the milk, but the nutriment obtained out of it by the cow. The quantity of water drank by the cow was not important. In dismissing the summonses, Mr. Plowden, the magistrate, said the substantial question underlying all such summonses was whether or not there had been fraud-that must be proved by cogent evidence, for it was a serious matter for an honourable and respectable man to be convicted of such an offence. Mr. Lloyd's analysis must be taken as a perfectly honest one, and it showed that due allowance had not been made for the very hot weather and dry season.

We have quoted this important case in sufficient detail to make it quite clear, because it demanded something more than a mere passing notice. We have long held that if some such scheme of Government supervision of dairy farms in force in Denmark were possible with us, it would be for the mutual

benefit of producer and consumer. "Honourable and respectable" men would then not only have the protection of a skilful Government inspector, but they would also receive invaluable advice and guidance in the provision of food, and the best method of using it for the cows. To have a full flow of rich milk we must feed aright, under a sound method of food production as well as of its use. Had dairy farmers generally such a method entering into the economy of farm management, they would have come through the great drought with comparative ease. There would have been little if any shortness of food supply or deterioration of milk quality. It may seem hard—almost cruel -to say this to men struggling with adversity; but surely it must be granted that he is their true friend who, knowing how many of them might do so much better, strives to assist them in doing it.

WORK ON THE HOME FARM.

Couch fires are burning everywhere wherever we go; they are a sign and token of the doing of much good work, the autumn to get the land clean. Twenty-four of them did we see in one field in Yorkshire a few evenings ago. The following day we came upon a long line of them on a south country farm, and it was delightful to see the men doing their utmost to keep the fires going and to set fire to other heaps. If ever we are to have clean land it is surely now after six months of summer followed by another month of fine weather. Autumn tillage, too, is being done far more generally than usual; we were much pleased recently to see furnace ash being carted upon a Midland farm to be ploughed into the heavy land. Such signs of sound energetic action make us hopeful for the future of farming.

The Wheat sowing is in hand, also Rye and Winter Oats. Wheat should be sown only on deep sound loam; it, with the other crops mentioned, should be got in now without loss of time. Where new layers of mixed seeds or Rye Grass are wanted, it is a good plan to sow now soon after the Wheat is in, because a full plant seldom fails from an autumn sowing; but sowing with spring corn is always much more speculative, as many a farmer has found to his cost this year. Vetches should also be sown soon; a second sowing early in October is also worth while as a connecting link between the first sowing and spring crops. Frosts in Derbyshire dales have touched some vegetation; they are a reminder to push on, using green Maize, holding in hand crops less susceptible to frost. Cows will eat Maize after frost has turned the tops of the plants brown, but it is not so nutritious then. Mention is made of this because we have already seen sheepfolds on roots. The only roots that should be in folds yet are early sown White Turnips; all other root crops should be held over for winter. Dale farmers have no occasion for early folds, plenty of herbage have they on the pastures, many of them have mown a fair second crop of grass for hay.

THE ROYAL COMMISSION ON AGRICULTURE.--The second meeting of this body took place on Tuesday last at 23, Great George Street, Westminster, Mr. Shaw Lefevre, M.P., presiding. The other Commissioners present were Viscount Cobham, Sir Nigel Kingscote, Mr. R. Giffen, Mr. Everett, M.P., Captain Owen Thomas, Mr. Lambert, M.P., Mr. W. Long, M.P., Mr. J. Gilmour, Mr. C. Whitehead, Mr. C. N. Dalton, and W. C. Little, with the Secretary (Mr. H. Lyon), and the Assistant Secretaries (Mr. C. Crawford and Mr. F. Freeman Thomas). Five Assistant Commissioners were chosen to travel, four of them in England, one in Scotland, and gather information for the central body.

METEOROLOGICAL OBSERVATIONS. OAMDEN SQUARE, LONDON. Lat. 51° 32' 40" N.; Long. 0° 8'0" W.; Altitude, 111 feet.

DATE.			9 A.M							
1893.	Barometer at 32°, and Sea Level.	Hygro	meter.	Direc- tion of	Temp. of soil at	Shade pera	Tem- ture.	Radi: Tempe	Rain.	
September.	Barc at 32 Sea	Dry.	Wet.	Wind.	1 foot.	Max.	Min.	In Sun.	On Grass.	
Sunday 10 Monday 11 Tuesday 12 Wednesday 13 Thursday 14 Friday 15 Saturday 16	Inchs. 30·010 30·226 30·329 30·230 30·246 30·226 29·922 30·170	deg. 54.9 59.6 60.2 54.2 65.9 59.6 60.4	deg. 49·2 52·7 52·9 49·9 60·9 55·0 56·3	N.E. N.E. E. S.W. N. S.W.	deg. 59.0 58.1 57.9 57.6 58.2 58.7 59.1	deg. 65°8 68°0 69°9 71°0 77°4 75°9 67°6	deg. 45·2 45·4 46·8 42·1 54·2 50·2 49·2	deg. 103·9 112·1 119·1 1(8·0 111·9 112·3 84·4	deg. 41·2 39·8 40·3 37·2 49·7 44·8 43·1	Inchs. — — — — — — — — — — — — — — — — — — —

REMARKS.

- REMARKS.

 10th.—Nearly cloudless morning, overcast at times in afternoon, and fine evening.

 11th.—Dull early, and generally overcast till 1.30 P.M.; bright afternoon and evening.

 12th.—Clear and fresh, with warm sunshine.

 13th.—Sunny, but rather hazy.

 14th.—Almost cloudless early and in afternoon, but a good deal of cloud in morning.

 15th.—Warm, with brilliant sunshine almost throughout.

 16th.—Bright early, overcast after 9 A.M.; spots of rain in afternoon; wet evening and night.

A fine week with much sunshine, and rain on only one day. Temperature above the average.-G. J. SYMONS.



To many of the younger generation the meeting of the veterans, so pleasantly recorded in the pages of the Journal three weeks ago (page 236), must have been highly interesting, and if a young man's record of a young man's work may be allowed to follow the sketch of the veteran's longer experience I should like to give it. I felt tempted to ask at first for a special gathering of younger men round the council fire to whom to address my story, but after all it may be gratifying to the old chiefs of the gardening tribe to hear of those of the younger generation growing up around them who are animated by the same ideals, and endowed with the same sterling qualities. The time will come when the old workers must lay aside the spade and the pen, and it can hardly be other than gratifying to them to think that when that time comes their teaching will live on, and be developed to the common good as others have been before them.

High cultivation has but a vague meaning to many minds. Mention of it is usually received in a tolerative spirit as a something which, although devoid of practical shape, still merits respect as an admirable abstract principle. It is not looked upon as actually implying the production of good crops of fruit on trees which formerly yielded bad ones, or heavy crops of vegetables where the land originally gave light and unsatisfactory returns. But it is my present purpose to show that it has a tangible force and value, and that far from being an abstract theory it is a principle pregnant with practical results. It has been my good fortune to enter many well managed gardens this season, and the latest affords a splendid instance of what high culture can do. It is a Sussex garden, entered through handsome lodge gates about two miles past Crawley on the main Brighton road. The proprietor, Philip Saillard, Esq., is a wealthy merchant, who has made himself the owner of a vast estate, and has devoted time, money, and intelligence to improving it. The gardens are admirably laid out, the houses handsome and substantial, exhibiting excellence of material, workmanship, and design. Indeed, the whole place is such as the proprietor may well look upon with pride and satisfaction.

I turn now to the gardener's part, and so get at last to my story. The fruit at Buchan Hill, for that is the name of Mr. Saillard's splendid place, is a great object lesson to those who are unable to form any definite conception of the meaning of the term "high culture." The large, walled-in kitchen garden contains a collection of trees, which for skilful management, healthy condition, and productiveness, are not to be excelled in any garden which I have yet seen, and are equalled by very few. They are a remarkable example of the results which follow an intelligent prosecution of a few leading principles. As models of pruning and training, of health and cleanliness, and of fruitfulness, they are equally striking, and in whatever aspect they are considered they constitute an eloquent testimony to the advantages of culture.

The gardener, a young man named Martin, went to the place as foreman, and took full charge between four and five years ago. In that time outside witnesses, well capable of judging, tell me that he has effected an extraordinary transformation. For my own part I can only speak of the present, not of the past. Peaches and Nectarines on a wall facing due east are now in magnificent order, whatever they may have been a few years ago. They are huge trees splendidly trained, with healthy, well-developed, clean foliage, and

have carried good crops of fruit. Walburton Admirable, Royal George, Noblesse, and Dymond are four of the leading sorts. The trees were lifted last year, and are now well furnished with bearing wood. Lifting is the young gardener's prescription for barrenness. He practises it with all kinds. The labour must be great, but the results are unmistakeable.

A long stretch of cordons on the same wall as the Peaches have been recently planted. The quality of the material, as well as the nearness to Cheal's, suggests their birthplace. The espaliers, which run nearly all round the garden, are in first-rate order. They are well established trees, and have filled their allotted space. Enormous quantities of fruit are yielded by them. There is grand fruit of the two stewers, Uvedale's St. Germains and Catillac. Capiaumont is heavily laden, in fact the tree is brown with fruit, and almost the same might be said of Brown Beurré and Easter Beurré, while Beurré Sterckmans, Beurré Diel, Beurré Superfin, Pitmaston Duchess, and Beurré Hardy are bearing exceptional crops. So heavy is the burden of fruit that it is natural to express a doubt if the trees are not overcropped. But the growth, it is observed, is of the right sort, and by no means points to a debilitated condition. The secret is in the condition of the roots and the soil. Lifting and re-lifting, with the concomitant shortening of coarse "prongs," has resulted in the production of a network of feeding fibres, and the medium in which they ramify has been consistently enriched.

Even more noteworthy than the espaliers and wall trees are the pyramids. It would be difficult to produce a more perfectly healthy and fruitful type. Though termed pyramids, they are not so formal as the average tree of that class, and might almost be described as intermediate between the pure pyramid and the open bush favoured by many cultivators. The course of training pursued has evidently been conducted with a view to securing neatness and shapeliness without excessive formality. The bushes are open through the thin disposal of the main branches, which are 15 to 18 inches apart, and they bear magnificent fruit, which is of great size, and as smooth and clean as indoor Nectarines. The moderate extension that is permitted affords a natural outlet for the inherent energies of the trees, and their open character favours complete solidification and maturation. Root management is again advanced as one of the great factors in successful management. "Use the knife less and the spade more" is this young gardener's creed. Numbers of trees which never bore a good crop, the roots being in an unsatisfactory state, the soil exhausted, and the branches in a tangled mass, crossing and re-crossing each other, so that, as my companion put it, "you couldn't see half through them," are now bearing splendid crops. You can see all the way through them now, and a fine display of fruit is included in the survey.

This affords one side of the practical aspect which I have claimed for the term "high cultivation." In this garden, where the trees once gave but a poor return, they now yi ld produce that would shine prominently at any exhibition. I might pass for a moment from the type to a variety. Some of the finest pyramids are Pitmaston Duchess, and with these notes I hand the Editor two Pears from one of the trees. One is a large, clean, shapely example, weighing It was not selected, as there were many larger, but taken off at random. The other is a wrinkled, distorted, worthless fruit weighing 5 ozs. Four years ago the latter represented the crop, for the trees bore no other, now there is only one here and there, an ugly duckling amongst a full crop of large, handsome specimens, such as might have come off one of Mr. Thomas's famous Sittingbourne trees. The ugly ducklings would be laughed out of the market, the normal fruits would probably bring half a crown a dozen. There have been no mysterious processes brought to bear on the trees. They are the same specimens, and occupy the same places as when they were worthless; cultivation alone has brought about the change. They have been thinned, judiciously trained, rootpruned, and liberally fed, nothing more. The plain truth is that practical work and common sense have transformed them from cumberers of the ground and robbers of the soil into valuable and fruitful occupants of the garden.

There is a fruit arch at Buchan Hill about which a few words ought to be said. It is 17 feet high, 15 feet wide, and upwards of 300 feet long. The well known arch at the Lowfield nursery is a babe beside this giant. It is planted with cordons on both sides, and must present a magnificent sight when the trees are in full blossom. It is not less remarkable now, for many of the trees have met in the centre of the arch overhead, and are a rope—I had almost said a rainbow-of fruit. The trees on one side were lifted last year, and next season probably the other side will be similarly treated. Amongst the Pears Nouveau Poiteau, Marie Louise, Duchesse d'Angoulême, Pitmaston Duchess, Brockworth Park, Doyenné Boussoch, Beurré Diel, Beurré Hardy, Souvenir du Congrès, and Louise Bonne of Jersey are doing well; amongst the Plums Green Gage, Magnum Bonum, Peach, Jefferson, Diamond, and Victoria; amongst the Apples Alexander, Blenheim Orange, Lady Henniker, Cellini, Lord Suffield, King of the Pippins, Cox's Orange Pippin, Worcester Pearmain, Peasgood's Nonesuch, Loddington, and Lord Derby.

This wonderful arch has been established ten years, and it is a revelation to see what magnificent results are yielded by the cordon system when the trees have scope for free main extension, are well fed, and have their roots kept in good order. Every fruit grower in the kingdom would delight in seeing it, and indeed the whole garden. The kitchen garden is full of splendid pyramids, and the walls are packed on both sides with fruitful trees. All over the place, amongst the vegetable quarters, the fruit trees, and in the plant houses, the rule is heavy cropping and perfect cleanliness. The soil is systematically stored with nutriment, weeds are kept down and insects prevented, and the result is such full crops of splendid produce as are rarely seen. I am told that Mr. Martin is a tremendous worker, in the garden early and late. My own eyes have told me that he is a fine cultivator. This young practitioner is a credit to his craft, and one whom time will distinguish, unless I am much mistaken, as one of the leading gardeners of his time. His future, at all events, lies in his own hands. His work is a worthy tribute from one of the younger generation to the sound teaching of the old, and a proof that some at least of the rising school are prompted by high principles and energetic perseverance. —W. P. W.

HARDY FLOWER NOTES.

Though days grow short and cool, and falling leaves from trees and hedgerows bespeak the coming of the wintry days, when the wind shall whistle eerily through the leafless boughs, and the flowers which bedeck the garden be few and far between, as yet there is no want of brightness. The Sunflowers still glow; the stately Gladiolus still uprears its beautiful spike among the border flowers; the Pyrethrum has endeavoured, though faintly, to assume the beauty its flowers display in June; the Michaelmas Daisies have been most beautiful, with that soft beauty which renders these flowers so much in harmony with the sadder skies of these autumn days; some of the Campanulas still display on border or in the rock garden their spikes or sheets of cup or bell-like form; the autumn-flowe-ing Chrysanthemums, which here are treated practically as hardy herbaceous plants, adorn the borders with their brilliant blooms of various sizes; late-flowering Poppies, such as the charming scarlet and black Papaver umbrosum, are bright and attractive still, and many others lend gaiety to the garden.

The Meadow Saffrons have well nigh passed away, leaving joyful memories of the cups of the single or the ribbon-like petals of the double forms. No prettier flower of its kind exists than the double white variety of C. autumnale. Scarce it still is, but is worthy of a place in the garden of the choicest of hardy flowers. Their rivals, too, in the affection of the lover of bulbous plants—the Crocuses—have come or are coming rapidly into flower. They are doubly welcome prophets, so to speak, as they are of the spring when the Crocus is fully aglow with beauty, and in themselves choice as little gems which sparkle in the fainter sunlight of cloudier autumn. No one can see a clump of C. speciosus expanded in the sun with its blue-purple flowers so deeply feathered

without feeling delighted at the sight. Very fine, too, has been a clump of C. pulchellus which has come to me from the Bithynian Olympus. When they bloomed before it was on Asiatic soil, and now in this mild corner of Scotland they are blooming again, and one would hope may do so many years. Variable are these collected bulbs, some flowers being darker in colour inside, some with sharper petals, and others with deeper coloured feathering; but all are beautiful with their exquisite tint of blue, and when open showing the white anthers, which are a distinct feature of this Crocus, so worthy of the specific term "pulchellus"—beautiful. A charming companion to this native of the neighbourhood of the Bosphorus and the adjoining countries is the white C. hadriaticus, in flower here at the same time. This beautiful little Crocus from the Ionian Islands and Albania is quite hardy here, and its little white flowers are most delightful either when open, displaying its lemon-coloured anthers and scarlet stigmas, or when closed in in cone-like form. Other Crocuses are also in flower, but must be referred to again.

Very attractive for a long period, either on the rockeries or forming part of rockwork edgings to other borders, has been Linaria anticaria, a little alpine Toadflax which I have had in my garden for a number of years. Unfortunately, like many other Linarias, it cannot be said to be perfectly hardy, although for some years, when I first grew it, it survived our winters. Further experience leads me to the conclusion that it is not to be depended upon; but it seeds so freely here, and sows itself so readily, that my first sowing years ago has given me a constant stock of plants. One of the charms of this little Toadflax is its variable character We do not admire inconstancy in people, but what is a failing in them becomes with some flowers an additional attraction, and this Linaria, like the allied Snapdragon, varies much in colour. The plant forms a neat tuft of grey foliage, with little spikes of flowers well raised above the plant. These are very beautiful, varying much in colour and in shade, some having a white ground with a yellow lip, and spurs faintly lined with grey, and others of various shades of cream and of purple. L. anticaria is more easily retained in my garden than L. alpina, which I have had much greater difficulty in establishing.

One of the prettiest in its way of the dwarf Campanulas still

one of the prettiest in its way of the dwarf Campanulas still in flower has been C. soldanellæflora fl.-pl., an attractive little flower, now I understand ranked among the forms of C. rotundifolia. The flowers are blue and semi-double, the latter feature not being apparent unless on rockwork above the level of the eye or until the pendant flower is lifted to examine the interior of the bell. This pretty Bellflower should grow to about 1 foot in height; but as I prefer to keep it dwarf it is grown in a sunny position in very dry soil, where it does not grow more than 9 inches in height. Seed of C. soldanellæflora may be obtained, but only a proportion can be depended upon to come true, some seedlings showing flowers almost identical with those of C. rotundifolia, and others

having a number of narrow petals loose to the base.

A valuable plant all through the summer has been Polygonum sphærestachyum, the Round-spiked Knotweed, which has been much admired by all visitors to my garden who can appreciate hardy flowers (alas! that such a saving clause is necessary), with its spikes of blood-red flowers on stems growing here to about 18 inches in height. The spikes are about 1½ inch in length, and the brilliance of the flowers renders this perhaps the most attractive of the dwarf Knotweeds. It is growing in my garden in a low spot at the base of a rockery in free peaty soil, and having, what is necessary for this plant, a copious supply of water. Without this it suffers much; its allied species P. affine or brunonis being less particular in this respect, although the best plants I have ever seen had a plentiful supply. P. sphærostachyum is a native of the Himalayas, and although I have previously called attention to it this further note is hardly uncalled for, as so pleasing a plant cannot fail to give satisfaction to the grower. It is quite hardy in this neighbourhood.

Although I have not flowered it, nor have I even a plant at present, I may be pardoned for speaking briefly of a flower which on its introduction we heard a great deal of, but regarding which there is now an almost ominous silence in horticultural literature. This is Ostrowskia magnifica, introduced from Central Asia in 1887, and named in honour of Ostrowski, the Russian botanist. Those who have not seen an engraving of this plant will find one in the Journal of Horticulture, vol. xvii., 1888, p 53. There were great expectations regarding this Bellwort, but very few have been successful in its cultivation, and it is as much in the hope of receiving as of giving information that this note is penned. I have made several inquiries of hardy plant growers who have had this plant, and nearly all have, like the writer, lost their plants through causes variously reported as "severe winters," "slugs," or more frequently what may be called "sheer inanition," or "a premature and unwelcome death." A valuable horticultural work gives

instructions that the Ostrowskia requires the same cultivation as the tall perennial Campanulas. Would that this would suffice. My own experience is brief but typical. I had a plant which survived two winters in a border of good soil which would grow any other hardy Campanula quite well. The first summer it made a growth of about 9 inches, the second spring it grew about 4 inches and dwindled away. Those who are experimenting or hoping to experiment with O. magnifica would do well to be careful to protect the plant in early spring. Like many other Central Asian plants it makes growth early, and its fleshy structure seems to be easily injured by the severe frosts we often experience. I am aware that this plant has been flowered in England, but what we would like to know is, under what conditions? and was it treated as a hardy plant?

The hope which is said to spring "eternal in the human breast" has induced me to hope for several years that Zauschneria californica would flower in my garden, and with a desire to give it every opportunity of displaying what beauties it may possess, I removed my plant to the warmest position I could command—the top of a rockery facing due south, and close to a stone wall which shielded it from the north winds. Here, with a favourable season, this Zauschneria has deigned to yield a few open flowers; but as I write it is showing symptoms of retiring to its annual rest without opening many of the buds which have appeared. The few which have opened fail to exhibit the plant in its true character, and with great reluctance I have come to the conclusion that it must be discarded as unsuitable for our cool climate on the Solway. A similar tale of its behaviour has reached me from many growers, and if it has not been satisfactory in a year like this it is only occupying the ground, which would be better devoted to a more accommodating plant.

Possibly the same might almost be said of Plumbago Larpentæ, which I have had for several years, but which has only flowered this season. There is this very considerable difference, however, that P. Larpentæ has flowered very profusely, and that its deep blue flowers are particularly pleasing, and where it is grown here, on the top of a rockery, having a beautiful effect. I do not know that there is anything particularly required for its successful cultivation beyond a warm soil and situation. It is much admired, although its blooms are not of the same beautiful sky blue as the delightful greenhouse plant P. capensis, but are smaller and of a deep purple blue.—S. Arnott, Dumfries.



HABENARIA CARNEA.

THE exhibits of Habenaria militaris at the Drill Hall during the last year or two have drawn more prominent attention to this brilliant Orchid than it had previously received. Partly, perhaps, on that account, but largely owing to its intrinsic beauty, the new species carnea, placed before the Orchid Committee of the R.H.S. on the occasion of the great Show at the Agricultural Hall, received a considerable share of notice and criticism, which, on the whole, was of a favourable character, and a first-class certificate was subsequently awarded to it. In general character and expression the flower greatly resembles H. militaris, but it is larger and of a tender rose-tinted flesh or blush colour. Considerable interest attaches to this charming novelty, and the engraving (fig. 40) will therefore be welcomed. This Orchid was exhibited by Messrs. F. Sander & Co., St. Albans.

SPATHOGLOTTIS FORTUNEI.

SEVERAL pans of this terrestrial Orchid have been a noteworthy feature in the cool Orchid house at Kew for some time past. Though the individual flowers may not be so fine as in some of the other species, well flowered plants of S. Fortunei are very showy, and supply a welcome colour at a season when the Orchid houses are otherwise rather bare. S. Fortunei is a native of Hong Kong, where it was discovered by Fortune, who sent home pseudobulbs, which first flowered in this country in the gardens of the Royal Horticultural Society in 1845. The species is deciduous, and the flat, fleshy, underground pseudo-bulbs remain dormant for some months after the foliage has disappeared. During this period the plants require to be kept quite dry. S. Fortunei has a considerable resemblance to a Bletia (to which genus Spathoglottis is closely allied), and succeeds well under practically the

same conditions of culture. The narrowly lanceolate plicate leaves are pale green, and about a foot in length. The flowers are borne six to eight on a scape 12 to 18 inches high. They are about $1\frac{1}{2}$ inch across, of a fine clear yellow. The lip is threelobed, and the two side lobes, which curve inwards, are blotched with chocolate.—A. B.

AUTUMN TREATMENT OF DENDROBIUMS.

THE growths of many of these will now be completed or approaching completion, and every opportunity should be taken of exposing them to sun and air. Many of our Dendrobiums have for some time been standing out of doors in the full sun, but as the nights are getting colder they will be removed to the front stage of a vinery, where air is constantly admitted day and night. Here they will remain until they are wanted for flowering, as a long rest

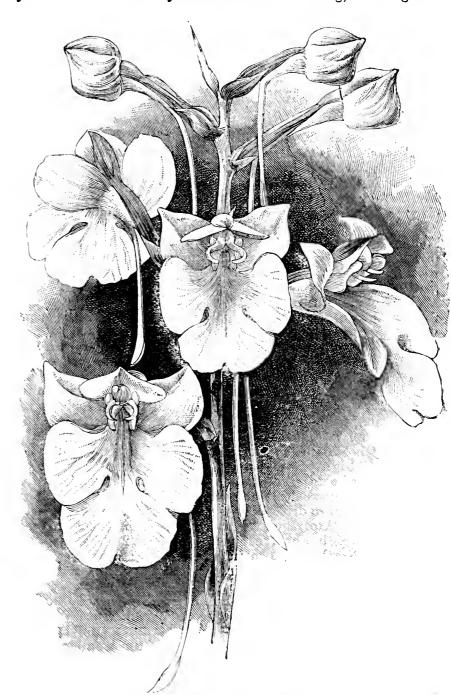


FIG. 40.—HABENARIA CARNEA.

in a cool dry atmosphere is the only means of getting a full complement of bloom in the spring.

There is a difference in the time taken by the various species to produce and mature their pseudo-bulbs. Some, like D. Dalhousianum, although started early in the season, will occasionally be still growing at the end of October or in November; others, such as D. thyrsiflorum, will often make two distinct sets of growths in a season, the time taken being usually about six weeks. D. Wardianum requires a long season of growth, and should be carefully watched and kept rather drier "at the roots and in the atmosphere" when nearing completion, as it is very apt to grow at the bottom before the new growths are matured, and may frequently be seen with young shoots 6 or 8 inches long in the middle of the winter. This is extremely weakening to the plants, and should be avoided in all cases where possible. D. Cambridgeanum and other autumn-blooming species should not be dried off too rapidly after flowering, but the water supply ought to be reduced gradually until the foliage withers and falls off, when it may be entirely withheld until the plants show signs of activity in the spring. D. formosum eburneum, and all spring-flowering Dendrobiums, must be

kept fully exposed to the sun, as it loses its power, a thorough hardening and ripening of the bulbs being most desirable.

A sharp look out must be kept for woodlice and small snails, which do much mischief at this season by eating out the flower buds of such plants as D. nobilis just as they are becoming visible at the nodes. A few pieces of Potato placed on the pots and examined every morning make good traps for the woodlice, while hand-picking by the aid of a light in the evening will be found the best remedy for the snails.—H. R. RICHARDS.

OUT OF TOWN.

Country people enjoy a visit to London during the season, and there is certainly plenty to see and hear in it, while Londoners enjoy a run in the country. My escape from the City was during the time of the great heat, and unfortunately there appeared to be more flies than breezes in the country. It was a sweltering run one evening from King's Cross to Peterborough. A carriage companion was going to the far north—Mr. Ross of the Scone Fruit Preserves. He had travelled from Perthshire to Kent the night before, and after noting that the crop of small fruit there would by no means equal the demands of the jam makers, he was rushing back to buy all he could, and thus literally steal a march on the southerners, whom he knew would have to go north for supplies. That is the way business is done in these days, and men have to be on the alert to make a living.

have to be on the alert to make a living.

The first stop was at Peterborough, convenient for a call on Mr. Harding of Orton Hall. A great change has taken place there since then in the death of the Dowager Marchioness of Huntly. The deceased lady was an ardent gardener and accomplished botanist. Not many persons had perhaps a better knowledge of British plants, and she was ever an assiduous collector of them. Her rockery afforded her much solace during a lingering illness, and gardening was one of the pleasures of her life. The Orton Wellingtonias with trees and Conifers are splendid. Mr. Harding's faith in the future of Thuia gigantea as a timber tree increases with experience. There are trees 60 to 70 feet high, and he with experience. expects they will grow as high again. Seedlings raised by him fifteen years ago are 30 feet high—beautiful specimens, and he does not know of any other Conifer, except perhaps the Larch, that would make equal progress. The timber of this Thuia is said to be of a very durable kind. Passing from the high to the low Mr. Harding was rejoicing over the New York Lettuce obtained from Messrs. Veitch & Sons, as affording the best of salads in the driest and hottest of summers. It seemed to partake of both the Cos and Cabbage type, and was as crisp and sweet as Lettuce could be. He says he does not know what he should have done without it, which is a good deal for a man like him to say, for it would take a good deal to drive him into either ecstacies or despair. He is a believer in Asparagus, too, as a paying crop, and of growing the plants in a single line on 2 feet wide ridges with 2 feet alleys between. The single lines have grown into broad ones; the ridges appear to be full of crowns, and judging by the growth of the plants in summer they may be expected to afford fine produce in spring. A profit of £50 an acre is Mr. Harding's estimate of first-class Asparagus culture, and he speaks from experience in growing, selling, and drawing the money—as good a test as could be desired. Fruit crops were abundant, but a crop of cones on Picea amabilis appeared to be as much valued as any other kind of fruit. Chaçun à son goût. I have no more to say about Orton, except to express appreciation of everything experienced there except the flies, and to state that Mr. Harding remains there as gardener to the Marquis of Huntly.

The next day the train took me northward, and not till passing Grantham, and swerving to the left, was a tinge of green to be seen in the pastures, but the freshness deepened as we sped along, and at Southwell all was verdant and refreshing. The entrance to the town is through an open park-like space, partly surrounded by lofty Elms, and beyond is the fine old Minster. It is a treey place is Southwell, and the land around is fertile. Just outside the town stands the pleasant home of Mr. Merryweather, and at a time when gardens were dried out in the south the nursery seemed as full of flowers as if drought was unknown. But we have only time for a glance, and have to see "Bramleys, and Roses" on our return from the Dukeries.

With his proverbial kindness Mr. Henry Machin, J.P., met us at ancient Worksop, and drove us to his charming home at Gateford Hill. A land of plenty it seemed, as the heavy crops of corn in the fields around swayed in the breeze, and the green crops were pleasant to see, thriving as they were, without a blank in the rows. Good land, good culture, cleanliness, and care were stamped on the face of the compact estate. One of the features to leave an impress on the visitor was the transformation of a drying ground,

on the stable side of the mansion, into a delightful rosery. A very

common sense arrangement it may be termed—a series of long beds about 4 feet wide, with glades of smooth lawn between them. All the blooms could be seen and reached, but the most charming effect was produced by the floriferous Polyantha Roses. Surely all the varieties must be there—not in isolated plants, but sheets or masses, the floriferous trusses rising from a bed of glossy green foliage, producing a delightful effect. That is the way to grow and show the Fairies, not dotting a plant here and there, to be "lost" among its larger congeners. Mr. Machin's exhibition Roses are grown under, so to say, field culture. He is a true Rose amateur—i.e., lover, for this is the English equivalent of the Latin amator, a lover. They are grown in a slice off a field, where they have plenty of air, and not in a garden confined. The young squire of Gateford has done very well as a beginner in showing, and will do better in the future. If he will take a hint from an older man, who commenced budding fifty years ago, he will give his plants liquid manure in the winter, and not be afraid to give it plentifully, and of twice or thrice the strength of a summer application. The best kind of all would be stable drainage, for soil of the texture displayed is seldom rich in potash; and at any rate more could not possibly do harm, and might be of marked benefit to the Roses. Let him try the experiment, and if it does not answer let him not treat his visitor so well if he should call again another year. He will risk incurring the penalty. After a walk through the enjoyable old world kitchen garden there is yet

nearly two hours to luncheon—just time for a drive to Hodsock suggests our friend, forthwith ordering another conveyance.

Hodsock Priory, the home of the Mellish family, is a familiar name to the readers of the Journal of Horticulture, as mentioned in connection with carefully compiled meteorological notes by Mr. J. Mallender, the gardener. The mansion is old, some parts of it very ancient, and the garden is in keeping with it, while Mr. Mallender is no novice, as he has been engaged at Hodsock for more than thirty years. Miss Mellish may be fairly described as a real garden lover, as indeed all the family are, and with her love for plants is combined knowledge. Garish show and formal effect are not sought for in this old-fashioned place. Plants are cherished for their individualities, and more pride would be taken in preserving some rarity and growing a plant needing special care, than in creating a sensation in colour with thousands of familiar bedding plants. Water plants, bog plants, hardy border plants, and old-fashioned Roses prevail at Hodsock; the border plants grouped in colours, such as white, pink, red, yellow, blue, and so on, according to Miss Jekyll's idea of arrangement, instead of the orthodox mixtures. The old time garden Roses are seen at every turn, but en masse in five or six V-shaped beds their points converging at the terrace platform. These beds are apparently about 50 yards long, and must afford cartloads of fragrant trusses. Then the lovely miniature or Polyantha Roses are cherished, and a round bed of them with a local novelty in the form of a hardy Pea covered with brick-red flowers, was much admired. The pleasant reception accorded by the family and Mr. Mallender was highly appreciated, but half an hour was all too short for inspecting the treasures of the garden at Hodsock.

After luncheon at Gateford and a quiet stroll among the Roses through the pleasure grounds our untiring host thought there was time for a drive to Clumber to see Mr. Slade, and have a look round the gardens in the cool of the evening, a happy thought well carried out, ending in all being satisfied with the visit. Clumber is a great place, and Mr. Slade is a "great" gardener, surely one of the greatest (if scaled) and his work is as good as he is weighty. Owing to the vicissitudes of life, to which high and low are exposed, Clumber was for years, so to say, deserted, and "Time's effacing fingers" left their mark behind. But an improving spirit is abroad now, and the present Duke and Duchess of Newcastle, whose goodness are on all tongues, evidently intend to make their splendid heritage worthy of its ancient fame. The garden structures are old, heavy, and out of date; but Mr. Slade, like a sensible man, makes the best of them, and does more than could be expected with them. His Pines, Peaches, and Grapes won honours where it is hard to win them—at Shrewsbury, and when this can be done under present conditions what may we expect after the restoration that will in due time be accomplished? first thought of the Duke appears to be the comfort of workers. A splendid new house has been built for Mr. Slade, one of the best gardeners' homes in the kingdom, and new bothies are in progress, which will combine every requisite for the comfort of the Fruits, plants, flowers, and vegetables are in great demand, and the supply is ample and meritorious.

The most commanding features of Clumber are the mansion, lake and pleasure grounds. The noble building overlooks an extensive terrace flower garden, the fountain in the centre having been cut from a block of marble weighing 50 tons. The lake of nearly 90 acres stretches away right and left till lost in the distance

beyond the trees. Beyond is forest scenery. On the mansion side of the lake are acres of lawn, stretching far away, studded with noble trees of various kinds, a few crowded, no doubt, but all cared for and everything in excellent keeping. Contiguous to the mansion is the new church, a splendid architectural ornament and beautiful within. A magnificent Turkey Oak affords an effective foil to the building, but is spoiling another tree, or this spoiling the Oak which would be a pity. When trees have been allowed to grow so long together so as to mar each other it is often difficult to know what to do for the best, but the Duke has a gardener whose experience and judgment will not lead astray in any matters connected with his charge. Clumber is a princely place, and Mr. Slade appears the right man for the position which he fills so well.

The shades of evening fall, and Mr. Machin drives us to the "Royal," at Worksop where we rest till the morrow, when we have to face the flies in Sherwood Forest en route from Welbeck to

Thoresby.—A CITY MAN.

WINTER-FLOWERING PLANTS.

THE time has now arrived when a general re-arrangement of the inmates of glass structures becomes necessary, so that those plants which have been refreshing themselves in the open air may again be placed under glass, where they will be safe from frost. In carrying out this work there is a general tendency to overcrowding, and a most unwise policy it is in the majority of instances, the exceptions being those plants which are only required to give cuttings in the spring, or others which are passing through a period of partial or total rest, and consequently make little or no top growth during the next few months. These may, for convenience sake, be placed closely together whenever a scarcity of room is experienced, but on no account should the plants intended for winter flowering be overcrowded, otherwise good results will not follow. Although with most of us there seems to be an inborn aversion to consigning plants to the rubbish heap, it is nevertheless sound policy to occasionally "weed" out with no unsparing hand weakly or unsightly plants in order to secure room for the full development of others, and thus prevent their drifting into the same unsatisfactory state. This practice may with advantage be carried out at the present time, so that the large numbers of plants intended for winter flowering which have during the summer months been grown in the open air or cold pits, may be arranged thinly in positions favourable to their well-being. True, it is not always possible to place each class of plants under the exact conditions which experience teaches us to be the best, but much may be done by giving the most important ones the best

Begonias.—Although these are not so much grown for winter flowering as formerly, several species and varieties are extremely useful for the purpose. Insignis, manicata, and nitida are three of the best that I am acquainted with. They are also very accommodating plants, and succeed well in old houses where many other plants cut but a sorry figure. Each of the trio produces flowers either pink or rose in colour, which are very useful in a cut state, and the two first-named make handsome decorative specimens for use in pots. Plants which have been growing during the summer in cold pits ought now to be removed to warmer quarters, where a night temperature of from 50° to 60° is maintained, under which conditions they will flower well during

the next three months.

Few plants are more useful than Bouvardias for supplying choice cut flowers especially adapted for arranging in sprays and buttonholes, provided they are well grown. Cold pits are excellent positions for them during the summer months, but they should receive daily syringings during bright weather to prevent attacks of red spider. After the plants have become established occasional applications of soot water and Clay's fertiliser are beneficial, promoting health, vigour, and cleanliness; indeed, if these matters are not attended to green fly, scale, and red spider will invariably establish themselves on the foliage. Should any of these insects be found upon the plants, the latter ought to be thoroughly syringed with a solution of Calvert's carbolic soap, mixed at the rate of 2 ozs. to a gallon of water. This I find is a safe and rate of 2 ozs. to a gallon of water. efficient insecticide. To flower Bouvardias well during the winter a light house or pit is necessary, and a night temperature of 55° to 60° should be maintained, with a rise of 5° during the day. If grown under cooler conditions a smaller number of flowers is produced. When much fire heat has to be employed to maintain those temperatures, special attention must be given to damping the floor in the house as well as to watering the plants, otherwise the insects above enumerated will give great trouble and severely check the formation of flower buds on the side shoots. If the top lights are left open a little way continually, except during very

severe frosts, the pipes kept slightly warm when the weather is not bright, liberal ventilation being given when it is, the plants will make

sturdy and floriferous growth.

The following varieties of Bouvardias give a good variation of colour, the majority of them being very free flowering:—Alfred Neuner, double white; Candidissima, white; Vreelandi, white; Elegans, scarlet; Etna, double red; Hogarth, scarlet; Maiden's Blush, rosy blush; Mrs. Robert Green, salmon pink; President Garfield, double pink; Purity, pure white; and Vulcan, scarlet. Humboldti corymbiflora, with its snow white and deliciously scented flowers, is always much sought after. It seems a pity it is not a continuous bloomer, like so many of the smaller flowered type. I find its flowering period seldom extends over a month or six weeks. This variety succeeds well if planted outdoors during the summer, provided it is given a warm sunny position and the plants are set far enough apart for the air to circulate freely between them. They ought to be potted early in September, and placed on the north side of a wall to establish themselves before being taken under glass. When in the latter position less heat and atmospheric moisture than the majority of Bouvardias require will suffice for Under such conditions the flowers produced the one specified. have much greater substance than when given the treatment recommended for other varieties.

Where flowers of Calla ethiopica are especially prized during November and December a number of plants should be kept in pots throughout the year. If these can be stood at the back of a north wall, away from overlanging trees, they continue to increase in strength throughout the summer months, and by the present time many of them will be showing flower spikes. I like to place these plants in their winter quarters by the end of the present month. Before arranging them in the houses the application of a rich top-dressing is of immense benefit to the plants. Loam and fresh horse droppings in equal parts with a 5-inch potful of Clay's fertiliser to a peck of the other ingredients is an excellent compost to use for the purpose. Light span-roofed or lean-to houses are the best for Callas, but not absolutely necessary, as I have frequently produced large numbers of flower spikes during the autumn months from plants in houses which were both lofty and heavy in build, but when grown under such conditions the plants always become more or less drawn, even when kept near the glass. The advantages of growing the earlier plants entirely in pots may be easily perceived, as much less artificial heat is required to bring the flowers out by a given date. Indeed good clumps which have been planted out are frequently weakened by applying strong fire heat to hasten the flower spikes as soon as they are seen. These which were planted in the open air and have not yet been lifted should be potted at once, and placed in Peach houses, vineries, or pits, till they can be removed to more favourable positions. These will supply bloom during the early spring. They are generally at their best about Easter.—LABOR OMNIA VINCIT.

PLAIN WORDS ON PRUNING FRUIT TREES.

(Concluded from page 271.)
WINTER PRUNING.

Apple Trees.—The operator should look over all his trees in the autumn immediately the leaves have fallen. If summer pruning has been properly attended to the winter work will be light; but many gardeners have not the time during the summer to attend to this matter, and consequently the pruning is left until the winter. This is not always advisable, inasmuch as the trees can be kept in better order by judicious summer pruning, and, moreover, made to produce better crops. In pruning a young tree the operator should consider the shape and form he wishes it to assume. Leading shoots for the formation of bush pyramids or espaliers should be well looked after. In pruning cut back to a bud that is on the outside of the shoot, which will help to keep the head open. Insert the knife directly opposite the bud, and then make a slanting cut upwards so as to come out a little over the bud. If the cut is made too low down the growth from the bud will be weak, and in some cases the shoot will get broken up by the wind. All dead branches and spurs should be cut away, as they give the trees an unsightly appearance. The heads of the trees must be kept open; cross branches should always be cut away, also any useless wood. The aim of the pruner should be to regulate the tree so as to give every leaf and bud sufficient room to develop; then if the roots have been properly attended to a good crop of fruit should be the result. If previous instructions have been carried out Apple trees will require but little attention besides shortening side shoots and to thinning the head to induce fruit spurs to form. As regards trees that have not attained their full size and the leading shoots have been left for extension, these should be shortened back to about 18 inches, pruning to an outer bud. This chiefly applies to bushes, which are the best for gardens. A standard tree after the head is formed will need little pruning besides the outling out of cross head is formed will need little pruning besides the cutting out of cross branches and not allowing the shoots to become crowded.

Pear Trees.—Pears on the bush system should be pruned similarly to the Apple, but trees that are growing against walls require different

treatment, so as to cover the allotted space. In pruning the young tree leave the branches about 12 inches asunder. The leader must be cut back to the proper distance, then three shoots will be required, one for leader and two for side branches. The latter will not require much shortening, as it is desirable to cover the wall as soon as possible. With some varieties it is possible to take two or more courses in one year. If a bud refuses to break, it is, in my opinion, a good plan to make an incision in the bark over the bud, which will check the flow of sap and

cause the bud to start into growth.

Peach Trees.—Assuming that a Peach tree has been properly attended to during the summer, and only sufficient wood laid in to replace that which has borne fruit, the latter should be cut away with a sharp knife close to the base of the young shoot which is destined to take its place for the next year's crop. Shorten the young shoot to where there is a wood bud. On some shoots it will be found that there is no wood bud except the terminal bud, in which case the shoot must be left at full length, as the fruit cannot come to perfection unless leaves are produced beyond it. To distinguish fruit buds from wood buds is a very simple matter. The former are full and plump, whereas the wood buds are thin To distinguish fruit buds from wood buds is a very simple and pointed, and are generally found between two fruit buds. When this is so the shoot can safely be cut back to the length required. Young gardeners and amateurs will avert much disappointment by carefully observing this one particular point.

Cherry and Plum Trees. These will not require much winter pruning beyond cutting away dead wood or thinning spurs, and in the case of full grown trees spurring back leading shoots not pruned during the summer. The Morello Cherry should be treated similarly to the Peach, cutting away all the old wood that has borne fruit to make room for the young shoots. Standards are better if left to themselves. Plums require but little winter pruning if properly attended to during the summer. Figs should be treated like the Peach, as they fruit on the new wood, which must not be shortened except to induce young shoots

for the coming year.

Bush Fruits.—Red and White Currants should be pruned hard back after the bush is formed, as the fruit buds form in clusters at the base of the young shoots. A young plant should be cut back to produce vigorous growth. Select four shoots to form the base of the bush, then at the next pruning cut them back, and from the young growths choose eight shoots, which will be found sufficient to form a bush. Keep the centre open. A good height will be from 4 to 5 feet. All shoots should be spurred in to the main stem. Black Currants require different treatment, as they fruit on the previous year's wood. A good practice is to cut out weakly shoots and encourage vigorous young growths, cutting away the old wood. Raspberries should be kept to four cancs in a clump; if more have been allowed to grow they should be cut away, and the remaining four shortened back to 4 or 5 feet.

Root-pruning.—All trees before they are planted should be examined, and all tap roots cut away with sharp knife. After these are removed cut away the bruised parts of the other roots to encourage the emission of fibrous roots. The greatest attention should be paid to this part of pruning. It is a good plan to train the roots to grow straight from the stem of the tree. All the roots that cross should be shortened. In young plants the roots should be shortened to about 18 inches from the stem. The root-pruning of old trees is rather a difficult operation, and should not be attempted by amateurs. In the case of an old tree that has never been pruned before, it is better to operate only on one side for the first year. Dig a trench not less than 3 feet wide and 2 feet deep, the distance from the stem and also the depth must be in proportion to the size of the tree. The trench being dug, examine the roots, and cut the ends off those which are bruised with a sharp knife. Thrust a spade beneath the ball of soil around the stem of the tree to sever any tap roots. The trench must then be filled in with fresh soil, and a good watering given. The following year the other side of the tree may be treated in a similar manner.—A WORKING GARDENER.

SOFT VERSUS HARD COLD WATER FOR PLANTS.

It would appear Mr. Dunn (page 271) has very little to advance in the shape of argument to further his ideas on this matter, or he would have published them, instead of indulging in a mere play upon words, and suggesting that my training and observation have been so limited as to render me incapable of realising what can be grown in large gardens. Such is Mr. Dunn's summing-up of myself. It seems he has already had sufficient of the real question, and would fain turn the matter into other channels. But that will not do. Your correspondent has on page 214, September 7th, described cold hard water as an "obnoxious drug," and little better than "slow poison" for plants. He suggests that I do not understand the meaning of the word "stubborn." He will find if he looks in his dictionary that it means "firm," the facts I adduced on page 239 are as firm this week as when they were recorded. Now, let him find, if he can, if pure hard cold water is by any authority described as an "obnoxious drug," and he may also, with advantage to himself, endeavour to trace the meaning of "poison." Both those epithets, as applied by him, are, in my view, grossly incorrect. He has committed himself to dicta, the truth of which he must prove before what he may say in other respects can have weight with intelligent readers.

His references to drained and undrained soil are beside the question, for plants fail in waterlogged soil whether the water is soft or hard, and there is more soft water than hard in quagmires. The relative values of warm and cold showers are not in question. He made a positive statement that hard cold water is an obnoxious drug poisonous to plants. He must either prove, withdraw, or modify that statement, or stand self-convicted on its inaccuracy. That is the point, and all arguments around it will be mere word spinning.

I have given instances of the water so unequivocally condemned by Mr. Dunn, proving of enormous value in the profitable cultivation of Grapes, Cucumbers, and plants. Hundreds of persons have seen the examples, and Mr. Dunn may see similar results in scores of establishments, where the best Covent Garden produce is grown. The question, I repeat, is not of one kind of water being better than another, but of hard cold water being "an obnoxious drug poisonous to plants." That is Mr. Dunn's astounding allegation. I have rebutted it with a narration of facts much too stubborn to be dissipated by any person who is so loose in his phraseology as Mr. Dunn has, to my mind, shown bimself to be.—J. B. R.

MUCH experience with "hard cold water" is my excuse for entering shortly in the discussion on the subject. If hard cold water were "slow poison" our prospects here for the future would be miserable indeed. During the whole of this year the rainfall has been so light that " soft water" has been quite out of the question for plants of any kind. So dry has been the weather that, instead of having all our tanks full of warmed water, they have been quite dry when pumping day came round, and by the time the water entered them plants of various kinds were quite ready to receive a supply. The only source of water here, irrespective of the small amount of rainfall, is one well dug in the chalk 250 feet deep. One would imagine the water drawn from such a depth is as cold as water can be in summer, and I think there is no doubt it is as hard as it is possible to obtain any. Within five minutes of the water being pumped from this well it has many times this summer been given to plants of various kinds, including Chrysanthemums and Calanthes. Grapes, Peaches, and Melons have also been refreshed with supplies of this hard cold water. He would be a bold person who would say any of these are being poisoned ever so slowly. While perhaps wishing that I could not only soften but warm this water before applying it to the roots and over the foliage, I find it is impossible to do either, so many are the calls upon our one well. We are thankful to take it as it comes, and will wait and see whether it proves to be "slow poison" or not. So far, I am bound to say, it appears to have had a distinctly nourishing effect.—E. MOLYNEUX, Swanmore, Hants.

EARLY PEARS.

In the Journal of Horticulture Dr. Jules Guyot has been recommended as a good Pear. I have fruited this variety as a cordon on a south wall for the past five or six years, and I do not think it is ever likely to be so valuable as Williams' Bon Chrêtien. It is, indeed, a prettier fruit, is sweet and good; but I have never had it so delicious as the old "Williams" when in perfection. Souvenir du Congrès has become very popular, no doubt on account of its large size combined with a prolific habit. Some wonderfully fine examples of this desirable Pear have been exhibited this year, and it is sure to be grown more largely than ever. My opinion is that a few cordon trees will yield a sufficient supply for most establishments. The old Beurré d'Amanlis is, I think, a more useful variety. Clapp's Favourite as a cordon has yielded some delicious early fruits of good size. It possesses the desirable property absent in most early Pears, of ripening a few at a time, so that from one tree a supply can be gathered to bridge over several weeks. It seems to make way very slowly, but is bound to become a standard garden fruit. I have a cordon tree of a Bergamot named Dr. Hogg. It is delicious, and follows Beurré d'Amanlis, ripening about the same time as Louise Bonne of Jersey. Another delicious autumn Pear of the same shape, but larger, is Fondante d'Automne. This, with mc, is later than Louise Bonne of Jersey.

I have planted several trees of Marie Louise, the most useful of early winter kinds. It is seldom we have too many tof this, as it ripens slowly and its season is easily extended by a little care in gathering and by keeping the later fruit cool. Moreover, no Pear sells better, as it holds a high character in the market. I have a young tree of Beurré Bachelier, a Pear which ripens earlier than the above, and is a most prolific variety. The flavour is, however, rather poor, and it is useful alone on account of its never failing to bear, and therefore of value in seasons when good Pears are scarce. Pitmaston Duchess produces enormous fruits, but it has the fault of the last-named without the redeeming quality of producing fruit freely. Where space is limited I should personally be inclined to leave it out. Hacon's Incomparable is

very good in some seasons, and bears freely every year.

The time will soon arrive when any new trees that may be wanted must be purchased. On this point I may be allowed to say that it is necessary to keep a supply of young fruitful trees. In some soils no doubt old Pear trees bear fruit with wonderful regularity; but in very many gardens the soil is so unsuitable that root-pruning and the best attention to the branches combined fail to produce trees worth the trouble they incur. I have some magnificent trees under my charge, but if I had not from time to time introduced young trees the Pear crop of 1893 in our case would have been a small one. With young vigorous trees, however, I shall have no difficulty in meeting current demands. I prefer maiden trees to those that are older. They can be purchased cheapiy, and the trees may be grown in any form it may be found necessary to train them. As a last word, let me advise intending planters to order trees at once, so that they can be planted before thewinter.—B.



THE LATE M. GUILLOT.

In common with thousands of Rose cultivators, I mourn the death of M. Guillot of Lyons. He has, as your correspondent, "D., Deal" (page 272), indicates, immortalised himself by his world-famous productions, such as La France, Catherine Mermet, and Ernest Metz, which have so many admirable attributes, such as those of form, of fragrance, and floriferousness, that they are not likely to be superseded or surpassed. He was unquestionably the greatest of modern French rosarians. As Mr. Wm. l'aul of Waltham has been for a long period the intimate friend of these, I venture to express the hope that he will, ere long, contribute to this *Journal* his personal reminiscences of M. Guillot. -David R. Williamson.

A LARGE MARECHAL NIEL ROSE.

In paying a recent visit to Knowsley Cottage, the residence of Thos. Pilkington, Esq., I found planted on the end and trained along a back wall of a vinery a fine Maréchal Niel Rose tree. The Rose under notice was planted some ten years ago, and is on its own roots. Twelve wires 9 inches asunder cover the back wall, and to each of these a shoot of the Rose has been trained, and the growths have reached a total length of $24\frac{1}{2}$ yards. The tree is in perfect condition as regards foliage, but canker has shown itself upon the older of the two stems from which the shoots are taken, the other being quite young and vigorous. A difficulty to its blooming freely was the free access of the roots into the Vine border. This has been overcome by a brick chamber built so as to confine the roots. After growth is completed the plants can now be given a period of rest. Good loam and liquid manure when in growth are what the plant feeds upon, and no mildew is to be seen. The shoots trained across the end of the house yield blooms a fortnight earlier than those on the back wall —R. P. R.

PEARS VERSUS PEACHES.

I FOR one cannot agree that "Pears are infinitely better and more profitable than Peaches" grown out of doors, because here I have abundant proof that the latter are more profitable than the former, given equal conditions as to site and culture. I am well aware that Peaches on open walls in several gardens are a failure, but why is it in many cases? Given a favourable locality I consider the Peach crop is the most certain of all hardy fruits when the trees are reasonably managed. I am ready to admit that in some districts where the situation is low there may be more difficulty in obtaining a full crop of fruit annually, but I am also well aware that in some of these gardens the trees are not managed in the proper way to secure the best results. When the soil is made rich enough by heavy manuring to grow full crops of vegetables over the roots of the trees, and when the foliage is permitted to be infested in the spring with black fly, to be followed with red spider in the summer, we may expect that outside Peach culture will be condemned. But is it fair?

Other mistakes besides those are continually being made, such as deferring the pruning of the trees until the spring, thus depriving them of a reasonable chance of maturing their wood. A lack of water at the roots is also another cause of failure with Peaches. Without sufficient moisture after the crop is gathered trees cannot prepare the fruit buds for the next year's crop of fruit. So long as such cultural points are neglected it matters little what locality Peach trees are found, the crop will be light, and the argument of "Pears being infinitely better" holds good. This, however, is not the right way to view the matter, and given equal conditions of situation I say that open air Peaches are by far the more remunerative crop.

I will cite an example on the remunerative side of the argument for the two sorts of fruit. A tree of Peach Grosse Mignonne, covering 30 feet of an 8 feet wall, this year ripened 300 good fruit early in the month of August. Every fruit could have been sold at the rate of 3s. per dozen, taking this as the minimum price. Growing against the same south wall are cordon Pear trees in really good condition. Fruit from the varieties Louise Bonne de Jersey and Duchesse d'Angoulême of the first quality would not fetch more than 2d. per lb. Now, who would say the same amount of wall space occupied with Pears would give the same return as the Peaches?

I do not stop at Peaches growing against south walls. I have this year gathered fruit of Late Admirable, weighed 10 ozs. each, from a tree facing east, and Royal George tree gave similar excellent fruit. Both these trees occupy a very much exposed site. Although these same trees seldom miss a crop of "blister," their healthy character otherwise seems to pull them through. We grow Peaches against west walls also, and with good results. Pears, I find, are much more difficult to sell than Peaches owing to the immense quantity that come from Jersey and France. When eighteen magnificent fruit of Williams' Bon Chrêtien can be bought in the market for 1s. 9d., what chance is there for English grown fruit? My experience is that fruiterers care but little for Pitmaston Duchess Pears when they can obtain fine fruit of Duchesse

d'Angoulême. So much as gardeners think of Jargonelle and Marie Louise Pears, there is a great difficulty to induce fruiterers to buy them. I am well aware that this has been an exceptional season for outside Peaches. We gathered our first fruit from an open wall June 24th, and have not been without Peaches since, and have still a few fruit. such sorts as Alexander to commence with, followed by Early Louise, Waterloo, Hale's Early, Bellegarde, Grosse Mignonne, Dymond, Royal George, Walburton Admirable, and Late Admirable, there need be no great difficulty in having an uninterrupted succession of fruit from the open walls. From the remarks of "C." (page 259), he would have us believe that when Peach trees are blistered during March and April it is useless to expect them to recover that year. This is not my experience, and I have to contend with east winds. If the trees are otherwise healthy "blister" should not prevent their perfecting a full crop of fruit.

As much as I like Pears it would never do to follow the suggestion of your correspondent and substitute Pears in all cases for Peaches. The great charm of a garden is the variety which it is made to produce, and this applies equally to hardy fruit. We must have proof positive that a fair trial has been given to the Peach trees before we dispense with them, especially when Pears will grow equally, or nearly as well, against other walls. Except in extreme cases I am hard to convince that Peaches are so difficult to cultivate on south walls. I know they have been condemned in many cases, but the judgment was misplaced. — E. MOLYNEUX, Swanmore Park, Hants.

SALWEY PEACHES RIPE IN SEPTEMBER.

WE are now (September 23rd) gathering large, ripe, and beautifully coloured fruits of the Salwey Peach from a tree on a south wall, the crops borne by three trees of that excellent late Peach Sea Eagle, occupying space on the same wall having been finished a fortnight ago. The supply, in the meantime, had been maintained by Lord Palmerston on a west wall, and Violette Hâtive on a wall having an east aspect. The trees of the last mentioned variety produced equally fine fruits as were gathered some weeks earlier from trees of the same kind growing

against a south wall.

It is certainly an advantage to growers who have to maintain a regular supply of ripe Peaches from as early as possible and as late into autumn as they can be obtained, to have trees of early and midsummer varieties on walls having respectively south, east and west aspects. By planting, say, two trees of Alexander, one on a south and the other on a west wall, Amsden and Hale's Early on a south wall, and another tree of the latter fine Peach on a west wall, a better succession of ripe Peaches is thereby secured than could otherwise be obtained. The succession to the supply yielded by trees of the above mentioned Peaches planted as indicated may be continued by such varieties as Dr. Hogg, Early Grosse Mignonne, Dymond, Royal George, Bellegarde, Violette Hâtive, Princess of Wales, Barrington, and Sea Eagle, planted all against south walls, or in the manner described above, a tree of Salwey being planted against a south wall to come in last, generally towards the middle or end of October. This is the first year in my experience for middle or end of October. This is the first year in me the fruit of the Salwey Peach to be ripe in September.

This being the time for transplanting home-grown trees and obtaining fresh ones the above remarks may prove as useful as they are opportune to intending planters generally, but more especially to amateurs, who may modify the plan recommended above to suit their own individual circumstances.—H. W. WARD.

LIVERPOOL NOTES.

THE AUTUMN SHOW.

As would be noticed by many of your readers from the advertisement in the Journal of Horticulture last week our autumn Show is to take place on Tuesday and Wednesday, November 7th and 8th, and not on the 15th and 16th, as previously arranged. According to the season this is a step in the right direction, for Chrysanthemums are rather early, and if bright frosty weather should come the former date will probably be more suitable for many good varieties. It has been a most trying summer, but there are certain to be some fine blooms. We are all looking forward to a wonderful display of fruit, which is of splendid quality in Lancashire, and the earlier date is without a doubt more suitable, for Pears and Apples are quite a fortnight or three weeks earlier than on former seasons. I may mention that liberal prizes are again offered,

SUCCESSFUL EUCHARIS CULTURE.

Owing to a breakdown of the heating apparatus in connection with the glass houses at Parkside, Huyton, the residence of J. A. Willox, Esq., M.P., the magnificent Eucharis in 12 and 16-inch pots were completely frozen through last winter and the foliage killed. To many persons the bulbs appeared useless, and, indeed, advice to that effect was freely given, but Mr. Wattie, the gardener, made an effort to save his plants. Some good loam (two parts) with the finer particles taken out, charcoal refuse, dried horse droppings passed through a sieve, and coarse silver sand were selected and mixed well together. Three or four hard bricks were heated and transferred to the centre of the compost. These heated bricks were used as a precaution against any danger from germs in the soil. Eight and 10-inch pots were scrubbed, drained, and half filled with the compost, on which some silver sand was placed, leaving all thus ready for the reception of the bulbs. The latter were not washed, nor does Mr. Wattie believe in washing with any solution unless the greatest care is exercised. The bulbs being dry the old soil was removed with a well worn hat brush, six being placed in an 8-inch and eight in a 10-inch pot. A little of the compost was then put in between the bulbs, and the pots stood on a boarded stage, the temperature of the house ranging from 65° to 70°, rising with sun heat. A watering was given at a temperature of 90°, and an occasional damping about the pots was all the moisture applied until growth had commenced, after which copious supplies were given. The freezing occurred at the end of February. Now the plants have massive leaves 6 and 7 inches across, pots full of thick white roots, and have produced an abundance of flowers during the past six weeks.

TOMATOES IN SHALLOW BOXES.

Is a deep soil necessary for the growth of the Tomato? was a question which occurred to me after leaving the Eucharis referred to above. In the early Peach house I noticed some grand well fruited plants, growing in ordinary cutting boxes 1½ and 2 inches deep and 18 inches long, placed on the narrow stage at the front of the house. The plants were trained to upright stakes, and there were two in each box. Good loam had been used in planting, with a top-dressing of horse manure given, and Sutton's A1, Hackwood Park, Carter's Traveller (a beautiful free setting, large and solid red fruits), and Golden Sunrise (the now well known yellow) were carrying heavy crops. They were some surplus plants which had been planted in the shallow boxes with the object of getting a few fruits from them. The lesson learnt is that good Tomatoes can be well grown in very little soil, provided the plants are properly watered.—R. P. R.



EVENTS OF THE WEEK.—But few events of horticultural interes will take place during the ensuing week. The special Show of fruit and vegetables which opened at the Gardening and Forestry Exhibition, Earl's Court, on Wednesday will remain open to-day (Thursday) and to-morrow. Several sales of garden produce, particulars of which have been advertised, will be held in the various auction rooms in the metropolis.

- THE WEATHER IN LONDON.—Since publishing our last issue the weather in the Metropolis has been of a variable character. Until Friday it was warm and summer-like, but on the day mentioned it became cold, as also was Saturday, when showers occurred. Sunday opened bright and comparatively warm, Monday proving colder, with occasional showers. Tuesday was mild, and early on Wednesday morning it rained heavily. At the time of going to press, however, it is fine. Slight frosts have occurred at night, but at the time of writing no damage has been done to tender plants.
- DEATH OF MRS, LATHAM.—We deeply regret to announce the death of Mrs. Latham of the Edgbaston Botanical Gardens, Birmingham, which took' place on the morning of the 24th inst. somewhat suddenly, 'after a' long and dangerous illness, from which it was hoped she was recovering. A very large circle of friends sincerely sympathize with Mr. Latham in his bereavement.
- TESTIMONIAL TO MR. THOMAS MANNING.—We have pleasure in announcing that the Committee of Gardeners formed for the purpose of offering to Mr. Manning some mark of respect on his retirement from active duty, have had gratifying support in the form of contributions towards carrying out the object in view. A large number of gardeners and others at once sent subscriptions, which are limited to 10s. 6d., to Mr. George Wythes, Syon House Gardens, Brentford, Treasurer of the Fund; or Mr. James Hudson, Gunnersbury House Gardens, Acton, London, W., Honorary Secretary. The subscription list closes on October 7th.
- GARDENING APPOINTMENTS. We learn that Mr. James Gibson, recently of The Oaks, Carshalton, a first-class vegetable grower and exhibitor, as well as an all-round horticulturist, is about to enter the service of A. H. Watts, Esq., Devonhurst, Chiswick, as head gardener, where it is hoped he may find ample scope for his abilities. Mr. A. Aitkins, for the past two years foreman under Mr. Lewin at Drumpellier, N.B., has been appointed gardener to Colonel King-Harman, Newcastle, Ballymahon, Ireland. Mr. W. Adams has been appointed head gardener to Mrs. Walker, Rydinghurst, Cranleigh, Surrey. Mr. G. Phillips, late gardener to W. Banon, Esq., Taplow House, Maidenhead, is appointed head gardener to the Rev. G. W. Corbit, Sundorne Castle, Shrewsbury.

- —— It is with unfeigned regret that we announce the death of MISS SARAH LLOYD, daughter of the late well-known florist, Mr. Lloyd of Sheet, near Petersfield. Mr. Lloyd's specialty was the Tulip, of which he possessed a very choice collection, and which his daughter has carefully tended since his death in December last. Miss Lloyd was also an ardent florist. She died, after a short illness, at her residence at Sheet on the evening of the 25th inst., deeply regretted.
- THE GRAPE CROP IN AMERICA.—Grapes in the Lake Erie region, according to an American exchange, are looking fine. From Dunkirk, in Chautauqua County, to Cleveland, Ohio, the crop has more than a usually promising appearance. The vineyardists of that section have long recognised the importance of exterminating weeds and of cultivating the Vines as carefully as other crops are cultivated. Some of their vineyards, containing from 25 to 50 acres, and laid out with extreme regularity, are indeed a beautiful sight.
- THE CURRANT CROP IN GREECE.—While most countries have suffered from poor crops this year, Greece has been exceptionally favoured. The Currant crop amounts to 160,000 tons, while last year it was only 112,000 tons. Again, the crop of Olives is reported to be three times as large as it was in 1892, and the Wheat crop is also said to be good. The agricultural population, therefore, of Greece, ought, one would think, to be prosperous. There is, of course a grievance, on account of the low price of Currants. The new crop is selling at 8s. a cwt. to London or Liverpool, which is a sad falling off from last year, when there were buyers on the same terms at 19s. a cwt.
- —— SINGLE CACTUS DAHLIAS.—Messrs. Dobbie & Co., Rothesay, N.B., send us blooms of a new type of single Cactus Dahlias that has been distributed by them this season. The flowers are of medium size, with reflexed florets of various colours. For decorative purposes these Dahlias are undoubtedly useful, but they will not find favour with everyone, no more than the single Chrysanthemums do. The flowers sent, however, are fresh, and among the named varieties Highland Mary, rich scarlet; Meg Merrilies, lemon yellow; Guy Mannering, blush; and Robert Burns, purplish magenta, are specially good. Blooms of some unnamed seedlings of merit are also noticeable in the same collection.
- —— Shrivelled Potatoes.—The case to which "Middledale" (page 266) refers of Potatoes being found in a flabby or soft condition is not at all novel. I have often met with tubers in a similar condition, and have always attributed it to scald from occasional very hot sunshine. It is usually found where the tubers are very thinly covered with soil, or has sometimes occurred where through some accident the plant stem has been injured, and soil partially removed from the tubers, thus exposing them to undue heat. Of course it is a case that seldom occurs, and for that reason it is of little importance. Still, whenever oddities in any garden product are found it is but natural that anyone should wish to know the why and the wherefore.—A. D.
- THE SIREX GIGAS.—I was surprised to read on page 279 that this beautiful insect "has been taken in England but very rarely." I have at odd times taken a few insects, and retained them as objects of interest, and now have some fine specimens. They do not appear rare in our neighbourhood near Bath. I take it that this insect has not an actual sting in the ordinary sense of the word. I have handled them when alive, but have never been stung; this, of course, does not go for much. The very wonderful tail that the female has, often more than half an inch long, is not a sting, though it is quite possible it might inflict injury on the skin; but its use is to pierce the wood in order to lay its eggs therein, and the Pine forests in some countries are often much injured by this gigantic sawfly. Wood calls this instrument a gimlet.—Y. B. A. Z.
- THE ROYAL GARDENERS' ORPHAN FUND.—We learn that a large committee of gardeners of Kingston, Surbiton, and district, including the leading members of the fraternity in that locality, with Mr. T. Cushon, Norbiton Hall Gardens, as Chairman, Mr. E. Bennett, Hampton Court, Vice-Chairman, Mr. W. Furze, Roselands, Teddington, and Mr. A. Dean, Kingston, Secretary, has been formed for the purpose of promoting a grand concert in aid of the above Fund, at the Surbiton Assembly Rooms, on the evening of October 25th. A strong effort is being made with considerable success to secure an influential list of patrons. The concert is being furnished by Mr. W. Furze, who is himself an excellent amateur vocalist, and who promises a first-class programme. The effort is a somewhat ambitious one, but it is hoped that with some active canvassers in the district tickets will be largely sold and a great success achieved.

- FROST IN SURREY.—A Godalming correspondent informs us that 5° of frost occurred last Saturday night in that district which destroyed all the Runner Beans, Vegetable Marrows, and plants of a similar nature.
- CASSIA CORYMBOSA.—Mr. H. R. Richards, Roche Court, Salisbury, writes:—This fine old plant has been flowering here continually since June, and seems likely to go on for another month at least. There are but few better plants for standing out of doors in vases, and a great point in its favour is the comparative immunity which it enjoys from insect pests.
- A SPARROW TRAP.—I want to make a fortune (vide page 265). Sparrows are easily tamed by feeding them regularly for a few days near the doorway of an outhouse, gradually introducing the food to the interior. The sparrows will soon enter freely and confidently. When many are inside close the door by drawing a string or other contrivance previously arranged. "Country Amateur" will then have them, and can send the fortune, care of the Editor, to—W. T. B.
- WAKEFIELD PAXTON SOCIETY.—There was a brilliant display of Tuberous Begonias at the rooms of this Society on the occasion of a recent meeting, when Mr. Vere, gardener to Mr. W. H. Stewart, J.P., of Milnthorpe House, read a practical paper upon their culture. In the paper he pointed out that under suitable conditions Begonias would prove formidable rivals to the Pelargoniums. It was, he said a novel and pleasing change, beautiful alike in foliage and flower, and produced a display with which no other class of plants could vie. Mr. J. G. Brown presided, and Mr. Thomas was Vice-Chairman. There was a good attendance.
- MICROBES ON ROOTS.—A correspondent sends us the following cutting:—"'Symbiosis' is a word used by scientists to describe the peculiar relations which have been found to exist between various microbes and the roots of plants to obtain necessary food. The Leguminosæ—such as Peas and Clover—are well known to be assisted very considerably by a microbe which forms tubercules on the roots, and multiplying exceedingly there little colonies of microbes 'manufacture' nitrogen in large quantities. The fungus or microbe feeds upon organic matter, but does not make it, whilst plants with green leaves make organic matter, but do not use it, so that both green-leaved plants and fungus work or 'manufacture' for each other, but not for themselves."
- This young Society means business, for it wound up its summer session by holding a largely attended and most enjoyable soirée at the Albany Hall, Kingston, on Wednesday evening last, and opens its autumn session on Tuesday evening next, October 3rd, in their new rooms in Eden Street, when Mr. Jas. Martin, the able foreman to Messrs. Sutton and Sons, Reading, will have an "Evening with the Begonia," a theme upon which he is specially entitled to speak. J. P. Trew, Esq., the President, will take the chair on that occasion. The session will close on December 12th with a "Chat about Chrysanthemums" by Mr. H. J. Jones of Lewisham, when it is hoped that the President of the Chrysanthemum Society, Mr. Alderman Sherrard, will preside.
- SUNDERLAND GARDENERS' IMPROVEMENT SOCIETY. On Wednesday, September 20th, the members of this society (upwards of forty) held their excursion to Hutton Hall Gardens, the seat of Sir J. W. Pease, M.P. They were kindly met at the station by Mr. McIndoe, head gardener, and Mr. Funnel, estate agent. Mr. McIndoe conducted the party, and explained the various fruits, including the cultivation of Vines, Figs, Tomatoes, and Citrons, the houses of which extend nearly three miles (?) The pleasure grounds were next visited, and the Coniferæ were much admired, the marked difference in the atmosphere between Sunderland and that district being clearly apparent. The company then adjourned to the boathouse (a remarkable structure of rusticity), situated at the end of the lake, and on the invitation of Mr. McIndoe partook of a substantial luncheon. Mr. Funnel then conducted the party over the hills and estate, including the stables. The party next proceeded to Guisborough and viewed the priory, abbey, and gardens, then dined at the Buck Hotel, Mr. Bolam, F.R.H.S., the Chairman of the Society, presiding. Mr. McIndoe proposed, "Success to the Sunderland Gardeners' Society," and regretted that distance prevented him becoming a member, but he promised to read a paper on fruit growing. The health of Sir J. W. Pease, Mr. McIndoe, and Mr. Funnel were enthusiastically drunk, and also the host and hostess. The party arrived home at 9.30 P.M., after enjoying a pleasant and harmonious day.-JAMES WATSON, Hon. Sec.

- A NEW HYBRID CLEMATIS.—Monsieur André describes in a recent issue of the "Revue Horticole" a new hybrid Clematis, produced by a French horticulturist at Lyons by fertilizing Clematis Pitcheri with the pollen of C. coccinea. This new Clematis is said to have preserved the vigour and the numerous stems of the strong-growing C. Pitcheri, and the brilliant colour of the flowers of C. coccinea.
- Destroying Weeds.—On page 265 "W. R. Raillem" contributes an interesting note on eradicating fleshy rooted weeds. Like him I have been very successful in destroying Bindweed, Tassilago, and other fleshy rooted kinds, and like his informant I had my information from a grand old gardener—viz., the *Journal of Horticulture*, which also exposed the folly of allowing weeds to seed before attempting to root them up.—N. B.
- GARDEN GUNS.—Mr. E. P. Timmins, Balsall Heath, Birmingham, claims by the invention of catapult guns to have overcome the difficulty of clearing cats, rabbits, and similar destructive animals from gardens. These guns are made in various sizes, are perfectly silent, and no licence is required to use them. Mr. Timmins has also produced a useful contrivance called the "Beak-weeder," by which Plantains and other weeds can be easily removed from lawns and walks.
- DISTRIBUTION OF SURPLUS PLANTS AT THE LONDON PARKS.—As winter is approaching it is announced that the surplus bedding plants will be distributed to the public on application to the superintendent at the various parks on the undermentioned dates:—Battersea Park, 24th October; Myatt's Fields, 21st October; Ravenscourt Park, 21st October; Royal Victoria Gardens, North Woolwich, 14th October; Southwark Park, 27th October; Victoria Embankment Gardens, 13th October; Waterlow Park, 18th October. Many amateurs in and around the metropolis will doubtless avail themselves of these opportunities to obtain plants.
- FORMOSAN CAMPHOR.—One of the chief staples of Formosa is camphor, but the industry is carried on under somewhat unusual conditions. Mr. Hosie in his late report on Formosa says that the Camphor Laurel grows in the savage territory only, and the hillmen or Hakkas, who border on that territory, have to make arrangements with the savage chiefs to protect or refrain from destroying the stoves or stills which the former set up in their country. As soon as the hillmen have settled all preliminaries with the savage chiefs and a suitable spot has been fixed among the Camphor trees for the erection of a still, the former proceed to run up a shed or rough building, the size of which depends on the number of stoves it is intended to contain. If ten are to be erected the building would be about 20 feet long by 12 feet or 13 feet broad. In the centre of the floor an oblong structure, some 4 feet high, 10 feet long, and 6 feet broad is built of sun-dried mud bricks, having five fireplaces or holes at each side raised a foot or so above the floor of the room. The two ends of the structure are solid and without fireplaces. The latter are so built that an earthenware pot can easily be inserted above the fire in each hole. An earthenware cylinder connects the mouth of each pot with the surface of the structure or still; between the pot and the lower end of the cylinder there is a round thin piece of wood fitting both the mouth of the pot and the lower end of the cylinder, and perforated so as to allow the steam from the water in the pot to pass into the cylinder during distillation. The top of each cylinder is usually about a foot in diameter and is level with the surface of the still. Such a still would present to the eye a mud structure, with ten round holes on the top and five fireplaces at each of the two longest ends. To complete it, however, ten large earthenware jars are required. These during the process of distillation are placed inverted on the top of the still immediately over the upper ends of the cylinders so as to form condensers. To prevent the escape of steam from the condensers bands of jute are fitted firmly between their mouths and the top of the still. The pots are filled with water and the cylinders with camphor wood chips; the jars are in position on the top of the still, and the firewood is lighted under the pots. When the water boils the steam passes up through the perforated wood into the cylinders, heats and moistens the chips, and ascends to the condensers, carrying with it the camphor fumes which the chips have given forth. The steam then condenses on the inside of the jars, and when the latter are removed a layer of white camphor crystals is found adhering to them. This is brushed off by hand and placed in baskets. The chips are then withdrawn from the cylinders, fresh chips take their place, water is added to the pots, the condensers are again placed in position, additional firewood is thrown into the fireplaces, and the work of distillation recommences.

— SUGAR CANE DISEASE IN BARBADOES. — The steamship "Atrato," which arrived at Plymouth a few days ago, brings information of a destructive cane disease that has developed itself at Barbadoes during this season, and is causing considerable alarm among the sugar planters. Nearly every estate in the island is losing its sugar crop. The plants are attacked at their roots, which rot and the plants perish.

COPPERAS IN PLANT MANURES.—"Suburban" sends us the following extract for publication. "Since the successful application of copperas or ferrous sulphate in the treatment of plant disease has become known, manure manufacturers have been in the habit of mixing this salt with the other ingredients of a manure, more especially in the case of phosphates. The advisability of this practice has recently been investigated by authorities. From a number of experiments they have drawn the conclusion that the addition of copperas has a deleterious effect upon superphosphates, that is to say, on mono-calcium and bi-calcium phosphates; but when tri-calcium phosphate is treated with copperas, a considerable portion of the phosphoric acid is rendered soluble in ammonium citrate, hence the action is beneficial."

— Bedding Begonias were at Yeovil, where Mr. B. R. Davis has collected a remarkably beautiful selection of plants, doubles chiefly, for the doubles seem in respect of massing effects to be productive of more pleasing effects than do the large-flowered singles. The plants put out in large numbers range from 7 inches to 13 inches in height, the tallest, Clemence Demeart, of a deep rose colour, giving a most charming effect, and the dwarfest, Dandy, a rich deep red, about 7 inches. Cactus is a beautiful reddish cerise, 8 inches high; Postboy, salmon carmine, 10 inches, are but a few of many that constitute a splendid strain. Whilst some are of continental origin, not a few are of Mr. Davis's own raising, the general collection of double and single large-flowered varieties is of the best grown, the new bedding forms may well rank as unique of their kind.—D.

Wonders of the Cotton Plant.—The Cotton plant, which has for so many centuries furnished a large part of the population of the globe with clothing, seems to be almost without limit in its usefulness. From the seed a valuable oil is expressed, while the husks form an article of food for cattle in the shape of cakes. From the lint which clings to the seed after it has passed through the "gin" felt is made, while the oil extracted from the seed is applied to quite a large number of purposes. But, according to the British Consul, Mr. Portal of Zanzibar, Cotton seed is also capable of yielding sugar. A process, 'Public Opinion" remarked recently, has been discovered for extracting sugar from Cotton seed meal, and though the details of this process have not been disclosed, it is said that the product obtained is of very superior grade, being fifteen times sweeter than cane sugar and twenty times more so than sugar made from Beet. This indicates that sweetness is not due to cane sugar, but to some chemical.

- SNOWSTORMS.—On Saturday morning a severe snowstorm was experienced over a great portion of the north of England. Snow fell so thickly that in a few minutes everything was covered to a depth of 3 or 4 inches. The weather in the district up to the present week had been unusually fine, but bitterly cold during the last day or two. The fall of snow lasted several hours. There has been a snowstorm in north Westmoreland, and the Pennine Hills are covered with snow. Snow fell in Annan early on Sunday morning. The flakes were unusually large, and the ground was covered with snow 1 inch deep. On Saturday soft snow fell heavily in Newcastle, and at night the weather was very cold. There has been no rain in the neighbourhood for many weeks, and the danger of a water famine has compelled the water company to cut off the supply to households for about fourteen hours a day, and pump water from the river for the use of manufactories. Dense hailstorms swept over parts of North Wales on Saturday, and the first snow of the season was to be seen on Snowdon. The districts of Hitchin, Luton, and St. Albans experienced a decided change in the weather on Saturday morning, when a strong north-easterly gale swept across the country. Several hailstorms prevailed at intervals, while between Hitchin and Luton there were occasional slight falls of snow.

VINE PROBLEMS.

OF the three questions propounded by "Experimentalist" on page 268 last week, No. 2 is the most interesting to me personally from having had considerable experience in raising Vines from seed, and I will, therefore, deal with it first and principally. It is, unfortunately,

not stated whether the seedling in question (taking it for granted the case is fact, and not merely theoretical) resembles in wood and foliage the male or female parent, as in the latter case I should be inclined to draw the conclusion that no actual cross had been made, and that the difference in fruit was merely the result of seminal variation. The crossing of Grapes is a delicate operation requiring very great care and a certain amount of manual dexterity, or the flower is self-fertilised before the foreign pollen is applied, and in the majority of cases which I have investigated where crosses were supposed to have been effected the rough and ready methods employed made it absolutely impossible to say whether any real cross-fertilisation had been accomplished or not.

Seedlings from self-fertilised flowers generally follow the parent pretty closely in habit, though the fruit may differ considerably in flavour and colour; but seedlings from a genuine cross will differ immensely, especially when the parents are not nearly related, in support of which it may be mentioned that a number of seedlings raised by my father from the American Strawberry Grape crossed with the Black Hamburgh had foliage varying from less than the size of one's hand to one which overlapped a sheet of the "Times."

I have at the present time an interesting study in heredity in the shape of seedlings from Gros Colman and Black Hamburgh crossed with the Strawberry Grape, the offspring in both cases resembling the male parent closely in foliage, peculiar perfume, intense flavour, and diminutive bunch and berry, the last two points of course rendering them commercially valueless. I ascribe the prepotency of the Strawberry Grape, even when used as a pollen parent, to the fact of its having been but recently reclaimed from the wild state, while our older Eastern varieties have been constitutionally weakened by long generations of cutting propagation.

Questions 1 and 3 are matters of history, and therefore better dealt with by older writers; but it seems probable that if an instance of a genuine sport could be produced it would be found to agree with the description in Question 1, just as in the case of plants grown for their flowers (notably Chrysanthemums); the sport, while differing widely from the parent in colour of bloom cannot be distinguished from it in habit and foliage.—Chas. E. Pearson, Chilwell Nurseries, Notts.



NATIONAL CHRYSANTHEMUM SOCIETY.

THE next meeting of the General Committee will take place at Anderton's Hotel, Fleet Street, E.C., on Monday evening, October 9th, at seven o'clock. On the termination of the ordinary business of the Committee Mr. Charles E. Pearson, of the Chilwell Nurseries, Notts, will read a paper on "How to Improve our Chrysanthemum Shows," and discussion will be invited.

KINGSTON CHRYSANTHEMUM SOCIETY.

More than usual interest attaches to the annual Exhibition of this Society on November 7th, as there will be two champion vases competed for, the first being restricted to three previous winners only, the second one of course being open to all comers. Chrysanthemums seem to be grown in the locality more largely than ever, and in spite of the season they never looked better. A severe competition in all classes is expected.

BIG BLOOM CULTURE IN FRANCE.

THIS is a subject that seems to have agitated the minds of French growers not a little. While many appear to affect a sort of contempt for the method we adopt to secure exhibition blooms there are others who are undoubtedly desirous of giving it a practical test. Most of the pamphlets and articles published on Chrysanthemums in France have contained allusions to the big bloom method, and one or two cultivators like Mr. Phatzer and Mr. Calvat have successfully put it into practice. A Mr. Thibault of Nantes has, however, recently published a small treatise on the subject, borrowed principally from Mr. Edwin Molyneux's well-known book on "Chrysanthemums and their Culture," It is illustrated with several reproductions from Mr. Molyneux's excellent little volume, which appears to have formed the basis of more than one continental work on the popular autumn flower.

CHRYSANTHEMUM BUD MITE.

ALTHOUGH the Chrysanthemum sprays dispatched by your correspondent, "G. B. A.," from Scotland on September 8th did not reach me until the evening of the 11th, they were quite fresh, clean, and undamaged by the post office punches. This condition is absolutely

essential for a satisfactory examination of specimens. The three sprays were packed in damp clean moss in a stout cardboard box; growth sturdy, leaves deep green, glossy, thick, leathery, and without speck or blemish. The buds crowning the three sprays, one to each, appeared small (for the time of year), but normal, and had apparently nothing the matter with them. "These buds were taken early, and have remained in nearly the same state for about six weeks," stated "G. B. A.," also that they were taken from a plant of Wm. Holmes.

Denuding a spray of its leaves it had the appearance shown at A (fig. 41), natural size. The side buds (a) had been taken off six weeks ago, leaving the crown bud (b) only. This bud was slightly tinged at the apex (a) with brown. Removing the bud scales, the inner portion

to upset its equanimity. It will be noticed that there are no "buds" (or eggs, as they are sometimes called), nor were any discovered in the other parts of the dissected Chrysanthemum bud; in fact, gemmation had ceased, evidently some time ago, and only a few "bud" sacs were found. But in the older and unbrowsed erineum and suspended in it I found what I take to be the transformation stage of the four-legged (larva) mite into the six-legged. This is shown at G, and the empty case from which the six-legged mite emerges is represented at H. The six-legged mite itself was not found, but to assist others to recognise it it is shown at I. It is the female form—a most active and interesting creature.

The mite is not by any means uncommon, though hitherto unnamed

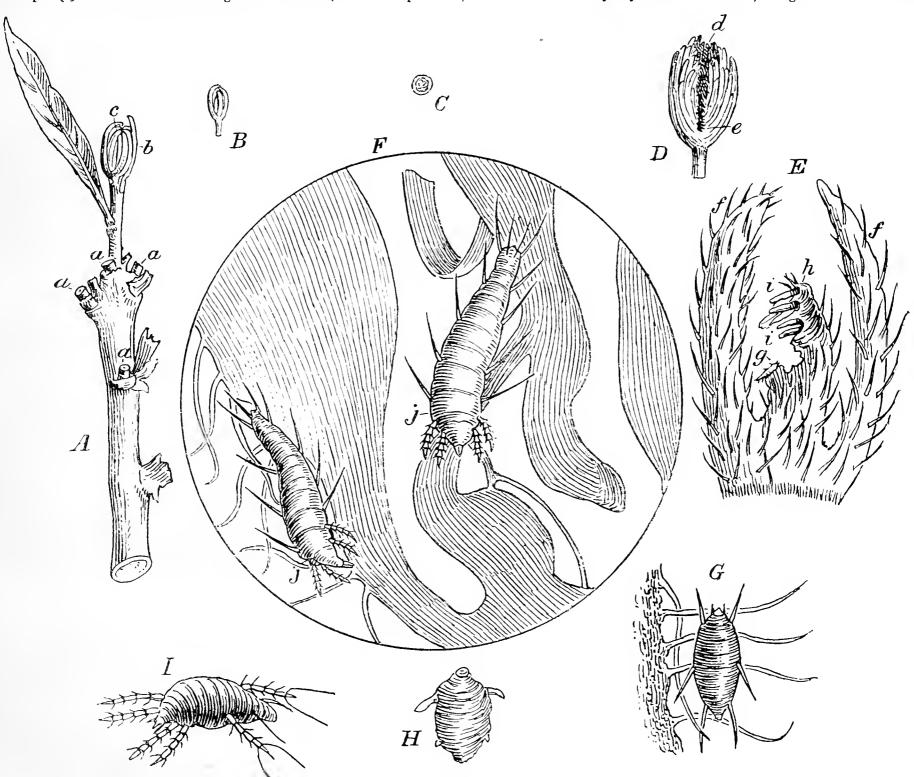


FIG. 41.—CHRYSANTHEMUM BUD MITE (PHYTOPTUS CHRYSANTHEM!—Abbey).

or embryonic flower was the size shown in vertical section at B, and in transverse section in C. Nothing was manifestly wrong with the bud as observable by the naked eye. Subjecting the section B to an ordinary pocket magnifier it had the appearance represented in D. Still no trace of any parasite was to be found, but the brownness at the apex pourtrayed in black (d) was seen to extend down the flower bud and to the base of the embryonic petals (e). Taking this portion only of the section and subjecting it to a lens of moderate magnifying power it appeared as shown in E; f, petals with hairs or erineum; g, mite; h, "bud eye;" i, cases from which the parthenogenetic mites emerge. Cutting a microscopic section—that is, a thin slice with the aid of a lens, and placing it on a glass slide and examining it with a powerful lens, two mites were seen as shown in F at j. They are full grown—the last of the parthenogenetic series, nearly 1-200th of an inch in length and about 1-900th of an inch in breadth at the widest part. The full scope of the microscope on the section is given to show that there is no erineum on the right hand side, where the mite is full fed, torpid, and beginning to thicken, but that on the left hand side was active amongst the erineum, moving about as if nothing had occurred

and undescribed. I propose, therefore, to name it Phytoptus chrysanthemi, the Chrysanthemum bud mite. It is unquestionably a native species, found in the buds of Chrysanthemum Leucanthemum or Leucanthemum maximum, the whole of the flower buds of this plant often being what is termed "deaf." In some gardens the plants flower profusely, in others only few flowers are produced, though the plants are perfectly healthy and strong growing. Some of the flowers are deformed, perhaps the florets only develop on one side, because the mites destroy the buds.

It also proves disastrous sometimes to Centaurea montana buds, they also being occasionally flowerless; but it is chiefly confined to the Chrysanthemum family—in fact, it is doubtful if the species are identical. But there is no question about the Chrysanthemum mite of our gardens and fields attacking the buds of Chrysanthemums. It generally fastens on the crown buds, the female pushing her ovipositor into the bud from the apex and right down to what would be the eye of the flower, and there deposits her eggs. They are imbedded in the living substance, and erineum is produced on what would be the petals of the flower. These eggs hatch out in a few days; but the mites are enclosed, and in

growing they form somewhat large tuhes, not unlike erineum, but stouter, shorter, and blunt-ended, and from these the mites emerge. The tubes are easily seen, and heing hairy on the outside are readily distinguished from the erineum, which is not hairy on the surfaces. The mites at once commence depositing "buds," which are almost as much in diameter as the four-legged mites which shed them. These "huds" produce more four-legged mites, and all, or such as survive—for they have many enemies when they become full fed—pass from this into the six and eight-legged stages, and it is the four-legged mites that do all the mischief; or rather they do the work mapped out for them by the perfect mite, which deposits its eggs where the succeeding generation will find the needful food ready for its sustenance.

What hecomes of the mites after they leave the Chrysanthemum buds I do not know, but this I do know, they will return at the appointed time of breeding and deposit eggs in the flower buds then formed. This is seldom deferred beyond July, and as regards Chrysanthemums is usually restricted to the king or crown buds, though the side buds are occasionally infected. There is one peculiarity about this mite which deserves notice, it does not, like other hud mites, cause the buds attacked to become abnormally large, and their presence cannot be detected by any external sign until the mischief is done—that is by the buds not swelling as they ought.

The only thing likely to be of any use is to syringe the plants with bisulphide of calcium (see page 223), 1 pint to 12 gallons of water, immediately before or directly the Chrysanthemum buds appear, and repeat occasionally to August. Dusting with tobacco powder would also act as a preventive. The only remedy is to cut off the early crown buds and rely on side huds, which is very plainly set forth in "Chrysanthemums and their Culture," by Mr. E. Molyneux; but this has no regard to mites, only the practice cuts short their career, as the four-legged mites must perish in the decapitated buds, and they certainly cannot leave them and enter others. The best thing is to make sure and hurn every crown bud removed, also cut off every "deaf" bud without delay and serve it the same.

Some people like the large white Daisies, Chrysanthemum Leucanthemum maximum. When the plants have the buds "deaf"—that is, cease to swell and develop flowers, cut off all such and burn them. Pursue this with all the huds appearing in a similar condition, and it will he found that the plants will produce flowers as well as leaves.—G. ABBEY.

EARLY FLOWERING CHRYSANTHEMUMS.

In my former note I am afraid I did not make my meaning clear, for I do not want to see better things than Chrysanthemums at a show where they are supposed to form a leading feature. It was solely for the purpose of secing the display of early Chrysanthemums that I went to the Aquarium, but they were unquestionably far less attractive than in previous years. The fault, if there be one, scarcely lies with the N.C.S., but rather with those who have sung the praises of the early section. So much of late years has been said and written about this new race and the value of them for outdoor decoration, and I know not what else beside, that any true lover of the Chrysanthemum must have shared my feelings of disappointment at the very few varieties of modern introduction that were staged on the occasion of a show where one naturally expects to see a first-class assortment of the best new flowers.

From what I know of the Chrysanthemum circle I should say there is a very small percentage of the members of the National Society who are ardent admirers of early varieties, and I question whether they are wanted. The November Chrysanthemum makes itself beloved on its own merits, the early kinds appear to require being subsidized. If that be so they are not wanted, and the sooner they cease to exist the better. This appears to me to be the more strongly manifest when such dull, colourless blooms are placed in striking contrast with Dahlias and Gladioli. No flower can hope to retain its hold on the public if it has to be propped up with pecuniary assistance; it must assert its own inherent value, it must be loved for itself alone, for its form, its colour, its beauty, and usefulness. Herein lies the difference between the early and the November Chrysanthemums, the latter having all the qualities that appeal to the affections of the flower loving community, chief of all perhaps being its seasonableness. At the time of year when it comes to us in all its fulness it is indeed a thing of beauty, if not a joy for ever, and has many thousands of admirers.—P.

EASTERN LILIES.

THE Duchess of Sutherland, who is an earnest amateur horticulturist, writes me to say that the Japanese, Indian, and Levantine Lilies which she planted at my suggestion at Trentham last winter have proved a gratifying success, and that Her Grace intends to give them a trial at Dunrobin Castle, Sutherland, where she is at present residing. Among those which have succeeded admirably at Trentham, where I saw them recently, are Liliums auratum, longiflorum, speciosum, Kraetzeri, Wallacei, Kramerianum or "Krameri," and giganteum cordifolium, of which the last mentioned, the emperor of Liliums, is grown under glass, though this is not requisite to ensure its success. Lilies have been at least three weeks earlier than usual this year, but, though in many instances they flowered splendidly, they did not grow to their average dimensions for want of rain.

In my own garden L. davuricum, also called umbellatum, flowered

in May; the beautiful Madonna Lily, Lilium candidum, in June; longiflorum and giganteum early in July, closely followed by the majestic auratums, the later flowering varieties of which have now the harmonious companionship of the exquisitely formed and delicately fragrant Lilium speciosum. The cultivator of Eastern Lillies is, manifestly, to be envied; for if even moderately successful he may have from the period of the Narcissus to that of the latest autumnal Chrysanthemum one long, continuous, and infinitely varied bloom. Their reign is, therefore, as impressive in its duration as that of the Rose. The infamous sparrow has, in my garden, occasionally attacked the Gelden-rayed Japanese Lily, and destroyed its noble buds when preparing to expand, but that I may add was before the adjoining cornfields were ready for his always unwelcome incursions, since which period he has left my Liliums alone.—DAVID R. WILLIAMSON.

LILIUMS FROM COLCHESTER.

WE send Lily blooms mostly from plants growing out of doors, viz., L. speciosum Kraetzeri, L. s. Melpomene, L. s. macrantha, and L. tigrinum Fortunei. Owing to the drought Lilies have had a bad time, the flower spikes are short and the substance of the blooms thin where grown out of doors; but as regards pot culture where moisture has been freely given it is quite different, and the blooms and spikes this year are very good. We also have included bloom of Lilium neilgherrense and L. Henryi. The former Lily has flowered with us very freely this year, but requires the aid of glass both to start it and finish its growth. Imported bulbs arriving in a shrivelled, poor condition late in the spring, plumped up rapidly, and to our surprise grew to the flowering stage much better than could have been expected, showing that it is really a very vigorous Lily under proper treatment; its scent is peculiarly like honey. L. Henryi has been grown by us both in pots out of doors and in the open ground. It is a grand grower. We received our bulbs from China in the middle of March last; they soon hegan to stir, the growths appeared some six weeks later than those established at Kew, and are now in full flower, those at Kew being over some six weeks since. It has evidently a hardy constitution, and roots very freely, has dark green foliage and numerous flowers. It is from these points and from its novel colour a grand Lily for the hybridiser. Two points about this new form seem not to have been brought forward—its broad beautiful dark green central axis, translucent like deep sea water; second, the number of large processes of an orange yellow colour which fringe these green axes. It is a beautiful flower for ladies to wear, specially for those of a dark complexion, or a couple of blooms well backed by the foliage of the scented-leaved Pelargoniums are very decorative in a room. We feel convinced that this Lily will become a great favourite with the fair sex.

We are hound to express our surprise on reading the paragraph on page 265 reflecting on ourselves in copying your illustration without permission. So far from that being correct, we purchased the block from your office, and as no stipulation was made as to the use to which it might be put we thought, and still think, we had a perfect right to use the block in our catalogue.—WALLACE & Co.

[The flowers referred to were beautiful. Many of the buds expanded on being placed in water, and others are still opening, showing the great value of Liliums as cut flowers for decorative purposes. In reference to the illustration Messrs. Wallace & Co. had the undoubted right, under the circumstances, to use the block in their catalogue. Had we known they had purchased it the paragraph would not have been written, and it may now be considered as withdrawn. The block was sold in the publishing department without the fact being made known to the Editor—a purely accidental omission that occurred during a moment of pressure in business. Our rule is only to supply blocks to the owners or exhibitors of the flowers illustrated, and it is not departed from except by special arrangement equitable to all parties concerned in their reproduction.]

GRAPES SHANKING.

MR. RICHARDSON'S article on this subject (page 238, September 14th) is in some respects a remarkable one.

- 1, He says about a dozen bunches left unthinned in 1892 had not a shanked berry in them. Nothing is said about the variety left unthinned, nor anything stated as to the condition of the thinned bunches in that year; but it is assumed that his subsequent statement—namely, "In previous years there was not a bunch but was more or less affected by the disease" applies to the thinned bunches in 1892. This being so, it is clear that the thinning was considered in 1892 to be the cause of the shanking, hence the decision to leave the whole crop unthinned in 1893.
- 2, In anticipation of the prospective heavy crop in 1893 measures were taken in advance for its support. A heavy dressing of fresh cow manure was given to the borders in the early part of November. Inside it could only benefit to the extent of the washings from it by artificial watering. Outside there would be washings by rains, and the consequent enrichment of the soil. The removal of the November dressing of cow manure in February, and the supply of another dressing then, left till the first week in May, is a method of enriching the soil with one of the most soapy, close, and retentive of manures in the winter season. It is an old and bad practice.

3, The feeding twice a week with the undiluted drainings of the

cowshed from the first week in May until the Grapes began colouring, could not have other than a good effect, especially as the season of 1893 has been the hottest and driest on record. Your correspondent was singularly fortunate in having such an abundant supply of cowshed drainings at a time when most cows were at grass and the tanks empty. The applications appear to have suited the Vines admirably under the conditions prevailing in 1893—a broiling sun, a parched soil, and an arid atmosphere; for the result was "A magnificent crop of good bunches with medium sized berries (no puny stoneless ones), excellent in flavour,

but as might be expected, deficient in colour."

"Poverty," says Mr. Richardson, "is the cause of shanking in Grapes." Mr. Barron in "Vines and Vine Culture," gives overcropping as the "cause of shanking to a very serious extent," and Mr. Richardson's Grapes were so plentiful that they were deficient in colour. With the Grapes unthinned there is more danger of poverty than when they are thinned. Of course Mr. Richardson means poverty of soil, but Mr. Barron includes "rich materials" as one of the causes of shanking. Though a believer in "muck," I am sorry to say that where it is most used shanking is most rampant, and Mr. Richarson's experiment only proves the importance of feeding the Vines when the greatest strain is put upon them by the crops.

As to the cause of shanking I must say that it has so far baffled both cultivators and scientists. The alleged causes are as opposed to each other as the poles of the earth, that is, shanking occurs in Grapcs under conditions diametrically opposite to the assumed cause. Let us notice a

few of them.

Overcropping the Vines.—Mr. Richardson has shown that Vines with the Grapes unthinned, and a crop so heavy as not to colour well, there was less snanking than when the berries were thinned, and the seeds much less in number. In a vinery where the Vines are seen carrying a crop of Black Hamburgh Grapes an black as jet, and a weight of fruit equal to 1 lb. per foot run of rod, scarcely a shanked berry is to be found, but in one adjoining, and with the Vines carrying a bunch of Grapes here and there, not only small branchlets, but whole shoulders, and in some cases whole bunches have to be cut away because the

Grapes are shanked. Weakness.—This must be distinguished from poorness of soil, for Vines against houses, and with the bunches unthinned, like Mr. Richardson's, often produce enormous crops of Currant-like unshanked Grapes, and this is allowed to go on until the Vines become so exhausted as to yield nothing but leaves and tendrils. Such Vines with the shoots properly thinned and pruned, also fed at the roots with house slops, would bear excellent fruit if the bunches and berries were duly thinned. But this is not the weakness alluded to as conducive of shanking, for what is meant is a puny condition of the Vines resulting from early forcing or heavy cropping in consecutive years, even where the borders are rich, yet we have growths tendril like and small bunches with a large percentage of shanked berries. Border renovation, a year's rest and freer growth will generally insure better crops. But the opposite of weakness—that is, grossness, or Vines with soft long-jointed shoots, leaves like Rhubarb, and lank loose bunches, is also given as one of the causes of shanked berries, and the remedy propounded is border renova-

Restriction .- Too close stopping or poverty of foliage and consequently indifferent root action is presumed to favour the dwindling of the bunches and cause the berries to shank. The remedy for this is alleged to consist in allowing the Vines to make more growth and to prune less Vines, however, on the extension system often go wrong—that is, they produce Grapes that shank in some cases to the extent of onethird of the crop. The preventive for shanking in this case is assumed to be found in pinching. This shows the falsity of extremes. to be found in pinching.

Checks to Growth.—One of these, prejudged to promote shanking, is to remove a large quantity of foliage at a time and at distant intervals. This, of course, is a bad practice; but the fact remains that at the opposite pole is seen Vines that have never had removed from them more growths than can be carried away at one time from a large vinery in the attendant's apron, with a number of red sour berries in the otherwise well finished bunches when the Grapes are ripe. It is difficult to understand why outdoor Vines with the shoots cut back considerably just before the Grapes commence ripening have few shanked berries, while Vines so treated under glass have a large number of shanked Grapes.

Chills.—Allowing the temperature to rise considerably in a vinery and then admit air so as to reduce it several degrees is said to produce rust on tender Grapes and shanking when they ought to ripen. The other side of the question is, that however careful the cultivator may be about ventilation, the Grapes often shank badly.

Rich Borders.—When the carcases of animals were buried in Vine borders the Grapes were said to have been wonderfully fine in some cases and in others that the Vines absolutely refused to grow. About shanking under such conditions the records are mute, and I have no experience. Nevertheless rich borders are alleged to induce shanking in Grapes, but there is a difference as regards richness in Vine borders. Some are composed of material which settles into a close soapy mass, and the Grapes produced by the Vines planted therein sometimes shank in the stems of the bunches. Others are formed of rich material, with enough gritty and calcareous substances to render them porous and swect, yet the Grapes borne by healthy Vines growing in them are shanked more or less. Mr. Richardson tells us that the cause of shanking is poverty of soil. Grapes certainly shank when the Vines are grown in poor soil, perhaps one berry in a thousand as compared with those growing in rich soil.

Excessive Dryness at the Roots.—Mr. Barron gives this as paralysing to the young roots and a cause of shanking, for deluging with water afterwards destroys the roots. I presume every gardener has a copy of Vines and Vine Culture, if not, he ought to procure one, for the illustrations of the Grapes—almost every variety—certainly all worth growing, with the descriptions, are worth double the money (5s.). But the fact remains that Vines receiving 72 inches of water or equal to that of rainfall, have the berries shanked ten times worse than those of Vines growing in a gravelly soil receiving only 24 inches of rain direct from the clouds.

Sodden and Sour Svil.-Whether the Vines are in pots or planted in borders this condition at the roots results in shanking in the Grapes. There is no question about that, nor is there any of Grapes also shanking when the roots of the Vines are in the most favourable circumstances as regards soil sanitation. It is a matter of degree, for it is not difficult to find shanked berries in the best examples of certain varieties, to wit Frontignans, Black Muscat, Muscat of Alexandria, and even in Black

Hamburgh.

Cold Borders.—Forty years ago there were ten outside Vine borders to one even partly within the houses. There was no more shanking in those days than at the present time. Mr. Barron mentions cold subsoils, of course, with the roots in them, as a source of shanking, and it is quite true, nevertheless he recommends outside borders (and I agree with him) for summer Grapes; but I have seen Grapes ripe in March on Vines over Pines with the roots entirely in an outside border, and covered with a coating of the soapiest manure. It would have delighted Mr. Richardson to have seen it, for there were only "a few shanked berries here and there." That is one side of the picture, the other is That is one side of the picture, the other is Muscat of Alexandria Grapes shanking badly when the roots of the Vines are confined to inside borders. Mr. Richardson has only a few shanked berries and no puny stoneless ones with the roots of the Vines partly in and partly outside the house. The case is a hopeless one— Grapes will shank.

Bad Management.—This includes errors in ventilation, syringing, watering, temperature, disbudding, stopping, thinning, cropping, feeding,

unfortunately Grapes shank under the best treatment.

Fungal and Insect Attacks.—Mildew infesting the growths and berries, and the destruction of the foliage by red spider, also scale and to induce shanking in Grapes. They may; the mealy bug, are said to induce shanking in Grapes. They may; the facts are as positive in the opposite direction, for I have seen outdoor Grapes white with mildew in June with Grapes as black as jet and covered with a blue bloom in September, except where rusted by the sulphur in destroying the mildew. A similar thing occurred in a house, the Grapes ripening but much rusted. There was nothing remarkable in either case as regards shanking. Grapes may ripen off red, and even shrivel when red spider has exhausted the foliage; even scorched Vines shank less, if anything, than Vines do in some cases with flimsy foliage, and scale and mealy bug in no way contribute to shanking. I have seen whole houses of Grapes, every bunch of which had to be syringed before sending the Grapes to table; but the scissors had not to be employed to cut out red, sour, shanked berries.

Outdoor Grapes.—These are found to shank less than the same

varieties indoors; yet shanked berries are found both on thinned and unthinned bunches, on heavily cropped Vines and on those carrying only a few bunches. It is hardly necessary to say that shanked Grapes are common on Vines under glass.

Time.—Shanking is generally confined to the period when the Grapes begin changing colour. Sometimes it is only a berry or two, in extreme cases it is a whole bunch; generally one or more of the branchlets or shoulders, or parts of them that shank. One Vine has few, its neighbour of the same variety has many shanked berries; some are red and sour, others are black and not ill-flavoured. It is similar with white Grapes. Some of the shanked berries shrivel, remain green, and are ill-favoured, while some retain their plumpness, attain a high colour, and are exquisitely flavoured, as found on some bunches of Muscat of Alexandria It is not a question as to when the shanking occurs, for it does so both before and after the Grapes are ripe, also after they have been cut, bottled, and placed in the Grape room.

Thirteen causes of shanking have been given, and still the real cause of the evil is as great a mystery as ever. All I know about shanking is that, like every other disease, it is induced by certain favouring climatic, conitary and cultural conditions. This being a like the following that the conditions of the cond sanitary, and cultural conditions. This being so, it follows that it is to a great extent preventible by careful cultivation. Some varieties being more subject to it than others may be rejected, as is recommended in the case of Apples and Pears to avoid canker; but this is an admission of being dead beat, and is analogous to killing a whole herd of cattle because one or two are afflicted with anthrax. Who can dispense with because one or two are afflicted with anthrax. Black Hamburgh and Muscat of Alexandria? Both are at the head of their classes in quality and in liability to shanking, but they have been to a great extent superseded by the thick-skinned varieties, less subject to the evil. Still the varieties first named are grown in proper structures, well provided with means for ventilation and heating, well constructed borders of sound material, and good cultivation all round, without many shanked berries.

Notwithstanding all that has been advanced in support of shanking being a constitutional and heredital disease, the fact remains that it is of an organic nature, and as such has its rise in the morbidity of the subject. That, however, cannot give rise to any living organism; it is caused by and owes its origin to a micro-organism, which, like all life, is dependent for its existence on a parental germ. -G. ABBEY.

THE ASHFORD VINERIES, FORDINGBRIDGE.

JUST as the seeing of a place that has a reputation, and yet is indifferently cared for, brings the visitor disappointment, so does a visit to a place where little is looked for and much that is good found afford exceeding satisfaction. I have been into many market-growing establishments about London, and have usually found that everything about them was made very secondary to tidiness and general excellence; consequently when recently I called at the Fordingbridge Vineries I looked for nothing better, but was exceedingly pleased to find a large number of houses in perfect condition, the whole place neat and clean, and the culture of Vines, Tomatoes, and Chrysanthemums, for these are just now the chief objects of culture, of the very best. Perhaps some of this is due to the fact that Mr. Stephen Castle, who is the Manager, and has had full control for several years, is at once a modest man, who boasts nothing, has some garden taste as well as much skill, and is certainly a capital cultivator. It may seem odd that what is a small town of such excellent houses should be dropped down in so remote a part of the country. The vineries are the property of a well known Jersey firm, Messrs. A. & J. Quartier, who also have an extensive corn business at Fording bridge. On the other hand, it would seem as if soil and situation were in these days of far more consequence than place and distance, for the railways render locality of small moment, and it seems as easy, as is found in practice, to send products to London, Manchester, or Edinburgh, as to Bournemouth, Plymouth, or Exeter. The vineries are close to the railway station, and in that respect, whether in getting in coal, for Mr. Castle believes only in anthracite, or for sending away produce, is most convenient.

Looked at from the clevated railway a little towards Wimborne the entire body of glass is presented in the form of a large triangle, the acute angular point being closest to the spectator, whilst in the remote background are Mr. Castle's and some of his assistants' residences. Just by these there is yet space to erect another long, broad span house, and then in a meadow below there is reserved space for the addition of some ten or twelve more large houses, and these no doubt will be erected in a few years. For the purpose of examining the contents of these structures we start from the manager's house, and enter a huge lean-to that fronts to the north-east of the other houses. This is 200 feet by 18 feet, and is in three equal divisions. The first two are planted with Gros Colman, the end one of which is the latest. Here at the time of my visit the berries were just showing a little colour, whilst in the next division the colouring was much more advanced. These represent the latest of the five market Grapes grown. The Vines are planted close to the front, and at only 2 feet apart. There are twenty-three Vines in the first division and thirty in the second, a portion of the first being otherwise occupied. Every Vinc is carrying a tremendously heavy crop of good sized bunches, and the berries when ripe will be fully up to the usual dimensions. Each rod is expected to give 40 lbs. of Grapes; whilst those in the first division will be cut in January, those in the other will be cleared by Christmas. The third division is planted with Black Alicante, and there are twenty-nine rods. Here, too, there is a great crop, although not the same weight as in the other divisions. Grapes are, however, nearly finished, and will be excellent in every respect, the average weight per rod being rather over 30 lbs.

It is worth noting that for these Vines, as indeed all over the place, no very special preparation has been made. The borders consist of the ordinary soil deeply trenched, and it is naturally drained. It is very firm, and seems to have very enduring nature—indeed, it must have good natural properties to carry such crops of Grapes year after year. There is very little of top-dressing with animal manure, as it does not seem to be too accessible; about 3 feet wide, close to the Vines, alone is thinly dressed. The chief reliance seems to be on the patent silicate manure, which Mr. Castle largely uses for top-dressing, and which he regards as most valuable for Vines. I may mention here that for all his Muscat Vines he adds a moderate proportion of sand to the borders, and also gives occasional dressings of it, as well as of the manure.

The next house, running at a slight angle from the one described, is a fine span 210 feet long and 30 feet wide. This, too, is in three divisions and was planted with Vines so recently as 1891. In the first division on the north side twenty-two Alicantes are planted 3 feet apart, each one carrying from ten to twelve well-coloured bunches. On the south side are the same number of Gros Colman, each one heavily fruited. Then on either side of the centre walk, and at 6 teet apart, there are planted on the south side Alicantes, and on the other Gros Colman, so that some of each sort are on each side of the house. These are trained as vertical cordons, each carrying on an average twelve to fourteen bunches, and not less than 20 lbs. weight. Tomatoes in pots are run up between the Vines. The second division is planted exclusively with Muscats, but the crop had been cut. Into the border four loads of sand had been worked. Mr. Castle speaks very highly of the Canon Hall Muscat of which there are several Vines, specially liking its full berries, stout dark leafage and wood and general productiveness.

The third and lower division is planted entirely with Gros Colman, twenty-four on cach side, and twenty-four down the centre for erect training, making seventy-two in all. The berries on the north side have much the best colour because the sun caught them obliquely through the glass above the Vines on the opposite side. This fact shows in getting colour into this Grape the importance of ample sunlight. This division was planted towards the end of May, 1891, each Vine now catrying a heavy crop up some 6 feet of rod.

*Close to the end of this fine vinery commences the smaller houses of

the large triangle of glass. Here is a block of three, each 12 feet wide respectively, of 30, 40, and 50 feet long. The Vines in the first house are Black Hamburghs, planted 3 feet apart, and are two years established. They run to the apex on each side, and have given a good crop. The borders are 5 feet wide, and only 9 inches deep, as being They run to the apex on each side, and have given a good built for Cucumbers, pipes run along beneath. The second house is planted partly with Hamburghs, partly Gros Maroc, in the same way, but the crop has been cut. The third house is planted with Muscat of Alexandria; the return pipe in the chamber beneath the border being found most helpful in finishing the berries. The Vines here are three years planted, and carry a fine crop. Then follow three span houses, each 18 feet wide, and respectively 70, 80, and 90 feet long. The centre gutters of these rest on brick piers, so that the houses are all, so far, open one to the other. The plan, however, is productive of cold draughts, and is not desirable. One range of pipes is made partly to heat two houses. The first house is full of Gros Colman, chiefly planted form made about 0 foot large and 2 foot spect containing a heart four years, rods about 9 feet long and 3 feet apart, carrying a heavy crop. A few Muscats planted by mistake are to be worked with Gros Marga for a few Vines of that variety do records her well because in Maroc, for a few Vines of that variety do remarkably well here, and in all cases the soil seems to impart excellent flavour to the fruit, perhaps due to some extent to absence of gross feeding. In the second house the Vines are chiefly Alicantes, the rods laden with fine bunches, and richly coloured. In the third house Muscat of Alexandria and Gros Colman are planted alternately. The greater part of the crop here, also a very fine one, has been cut.

Next comes a block of houses 20 feet wide, ranging in length from 120 to 160 feet. The first house is planted on the west side with Muscat of Alexandria and Gros Colman alternately, all the other side being the latter sort only. The Vines are four years old, and the crop is indeed a splendid one, presenting a grand sight. The Grapes are cut during November and December. The next house is planted entirely with Gros Colman, two years old, fruiting about 7 feet lengths, each rod having from nine to eleven bunches. There are in this house 100 Vines at 3 feet apart. In the third house of this group Black Hamburgh Vines have been planted recently for early forcing. Tomatoes otherwise fill the house, these being planted crosswise in rows 3 feet apart and are vertically trained. The crop has been a heavy one, and fruit will be furnished if desired till the end of October. The chief varieties are Hackwood Park, Sutton's Perfection, Challenger, and Webb's Regina, one of the larger Apple-shaped sorts, of which Mr. Castle speaks in the highest terms. The fourth house is also recently planted with Black Hamburghs, and in it immenses numbers of Tomate plants have been as

and in it immense numbers of Tomato plants have been grown.

Lastly is a huge house, 34 feet wide by 160 feet, the first division of which was planted last spring with Peach and Nectarine trees. The second and third divisions were planted with Gros Maroc last April, and will soon be in a productive condition. This house, too, has been planted with Tomatoes, and amongst them are Conference, Ham Green Favourite, and Vick's Criterion. This completes the record of the glass houses at the Ashford Vineries, and presents a total length of 1530 fcet a goodly area of glass to be met with so far from London. Mr. Castle has long been known by his writings, and very often by the fine examples he has shown, as an authority on Grape culture, and this unbiassed record of what I have seen of his work will, I am surc, carry conviction that he is fully entitled to all the honour of such a position. -A. D.

LONDON TREES.

THE following correspondence regarding London trees appeared recently in The Times:

BEFORE parting with the memorable summertide of 1893, it may not be profitless to observe its effect upon trees, so essential to the beauty and health of the metropolis. They afford the one redeeming feature to an otherwise ugly town. Some years ago I brought upon myself a good deal of adverse criticism by quoting Leigh Hunt's saying that it was hard to find a single street in London from some part of which a tree was not visible. I only know of two—viz., Savile Row and a street parallel with Berners Street.

London trees have two adverse influences to resist—coal smoke and heat reflected from miles of brick and stonework. The effect of the latter is so clearly marked upon several species at the present moment that the lesson ought not to be neglected by the Office of Works and by those in charge of squares and gardens, for, although the heat has been greatly excessive this year, trees in a town are always exposed to greater summer heat than those in the country.

The trees which have suffered most are one native species—the Wych Elm, and two exotic species—the Horse Chestnut and the Lime. The condition in which these are now and have been for some weeks past ought to convince us of their unsuitability for urban planting. Many of them are entirely leafless; others retain but a sere remnant of summer clothing.

The Plane, for which we shall soon have to borrow the title of a humbler green thing and call it "London Pride," has stood the trial fairly well, for, although it has shed half its leaves, the other half remain and are still fresh and verdant. By a popular mistake this tree is called the Western or Occidental Plane. It is not so, but an Eastern European and Asiatic species (Platanus acerifolius), and may be distinguished from the American P. occidentalis by bearing two or more seed vessels on the fruitstalk instead of one.

Aspens and Poplars have suffered not at all, and should be more

largely planted in London. By a peculiar formation of the leafstalk, which is flattened midway, they are specially provided with a mechanical means of protection against heat. The leaves hang vertically, and possess glands on both surfaces, whereas Oak, Beech, Chestnut, &c., have glands only on the under surface.

Ailantus glandulosa, the Tree of the Gods, is in splendid foliage, and, if more care were taken to keep it in shape in its early years, would soon

prove one of the surest ornaments of our streets.

But the tree to which I wish to call special attention as invaluable for towns is what is commonly called the Acacia. It is not an Acacia at all, being of the Pea flower tribe; its scientific name is Robinia pseudo-Acacia. Let anyone compare the fine specimen standing at the corner of Lord Sefton's house in Belgrave Square, or a group of young ones in the Green Park, near the Wellington Arch, with trees of other kinds around, and he cannot fail to recognise in this species one which, for beauty of form or freshness of verdure, cannot be excelled for planting in towns. Ulmus campestris, called the English Elm because it is not English, has kept its foliage fairly well, but it is dull and discoloured.—HERBERT MAXWELL.

SIR HERBERT MAXWELL does well in calling attention to the Ailantus glandulosa in his remarks on London trees. It is one of the very best trees for the soil and climate of London, and will in time grow to the height of 40 feet or 50 feet. So vigorous is the growth in a young state that it will often make a shoot of 6 feet in a single year. The leaves are large and handsome, 3 feet or more in length, with a thick midrib, on each side of which are ranged in pairs some twenty or thirty lance-shaped leaflets. I have a specimen of this tree in my garden nearly 50 feet high, which is the admiration of everyone who sees it. When the late Major M'Kenzie was about to plant the trees on the Thames Embankment I remember discussing with him the merits of this tree for that position. It was, however, decided, properly I think, that the beautiful but massive foliage would be torn and disfigured by the strong currents of wind often prevalent there. In fairly sheltered positions no tree is handsomer or more appropriate for cities and large towns, as it is very hardy and will grow anywhere. Many trees which flourished in London some thirty or more years ago no longer thrive there, owing to the increased volumes of smoke and various noxious gases; but there are still many trees and shrubs, which, owing I believe principally to the structure of their leaves, seem to set these influences at defiance, and the Ailantus is one of the most valuable of them. Planes, Poplars, and Robinias (the latter usually called Acacias) are proved London trees, and there are many varieties of each far preferable to the old-fashioned and beautiful but unsuitable English and foreign trees still injudiciously planted.—WILLIAM PAUL, Waltham Cross, Herts.

MAY I add a word of caution to Sir Herbert Maxwell's praise of the Ailantus as a London tree? The foliage has all the beauty and endurance he claims; but, to use the words of an American authority, Mr. F. B. Hough, "the male flowers have a nauseating odour that renders this tree undesirable for cultivation near dwellings."

I think I am right in adding that not many years since most of the Ailantus trees in New York were grubbed up on account of this offensive character. It is a tree also to be handled with care on account of the acrid juice of its bark, which has been known to caused poisoned hands among woodmen and gardeners —J. L. P., Marlborough.

TRIDAX BICOLOR ROSEA.

A NORTHERN correspondent sends us a few blooms of this pretty late flowering plant, and remarks that the yellow-flowered Compositæ are so numerous in late summer and autumn that it is quite a relief to obtain any additions to the family in which the flower heads are of some other tint. We think so too, and the plant to which attention is called is by no means familiar in gardens. When in bloom it is very attractive, and is worthy of a place with other border plants. As will be seen by referring to the illustration (fig. 42), the flower heads are of moderate size and neat shape, white with a strong suffusion of deep clear rose—a peculiarly bright and pleasing tint. They are freely produced. The plant is compact, of moderate height, and of easy culture.

APPLES AND PEARS AT WOODHALL, WEST NORFOLK.

"WOODHALL," a very ancient mansion, is said by Kelly in his Directory of Norfolk to have been "formerly one of the seats of the Abbots of Ramsey, to whom the estate belonged before the dissolution of the Monastery in 1537." It is now the property of Major Stocks, D.L. and J.P., by whom it has been much enlarged and in every way greatly improved. I do not purpose, however, now to take up space in the Journal by a description of this fine old place other than as it relates to the above-named fruits.

Mr. Lewendon, the gardener, is an experienced and successful fruit cultivator, both outdoors and under glass. Heavy crops of Grapes of the finest quality and finish, Peach and Nectarine trees in splendid condition, perfectly clean with fine foliage, well ripened wood on triple buds boldly developed at nearly every leaf, show his skill in growing fruits under glass; but this skill is perhaps still more strikingly shown

outside by trained trees on walls, bush and pyramid trees in gardens, and free standards in the orchard. All alike arc, or have been, carrying fine crops of fruit of the largest size and finest quality.

Here may be seen carried out most effectually the rational methods of pruning advocated by many horticultural writers and lecturers—viz., no lopping off of large limbs (mutilating, not pruning), but judicious



FIG. 42.—TRIDAX BICOLOR ROSEA.

thinning out of the smaller branches annually through all the free orchard trees, so as to admit a full amount of light and air freely through all their parts. This practice, combined with due attention to cleaning the trees annually by lime dressings in the winter and feeding their roots as required, results in the good supply of fruit of the finest quality. Some horizontal trained Pear trees, covering one side of a long range of stables and carriage houses, are pictures of health, fruitfulness, and good management. The common error one meets with in trees of this class is overcrowding both of the horizontal branches and of the spur growths thereon, but here no overcrowding is permitted either in trained trees,

free standards, or pruned bushes. In pruning pyramids and bushes, Mr. Lewendon says he prefers "to give them their head"—that is, he leaves the leading growths a foot or more in length, but keeps each branch

quite a foot distant from its neighbour.

A considerable portion of the fruit had been gathered on the occasion of my visit, and a peep into his fruit room was a treat not soon to be A number of Warner's King Apples covering a long rack, forgotten. were the finest I have yet seen of that variety. The fruits taken throughout, as gathered, I was told, averaged 18 ozs. each, and one specimen when placed on the scales bumped them down at $1\frac{1}{2}$ lb. Other varieties so large and fine as to be almost out of character were Gloria Mundi (averaging 1 lb. each), Blenheim Orange, Lord Suffield, Ribston Pippin, King of the Pippins, Cox's Orange Pippin, Kentish Fillbasket, Lady Henniker (a favourite with Mr. Lewendon), New Hawthornden, Sturmer Pippin and Worcester Pearmain. Bismarck, Cellini, Small's Admirable, Lane's Prince Albert and Bramley's Seedling were also very good indeed.

Amongst Pears his finest and best are Maréchal la Cour (a variety which succeeds remarkably well in the eastern counties), Dorothy Royal, Zepherin Grégoire, Pitmaston Duchess, Durondeau, Forelle (very handsome), Beurré Diel, Beurré Clairgeau, Beurré Rancc, Beurré d'Aremberg, Marie Louise and Winter Nelis; very good also were Autumn Bergamot, Williams' Bon Chrêtien, Glou Morçeau, Passe

Colmar, Thompson's and Josephine de Malines.

Passing from Woodhall, I find in many parts of Norfolk grand old trees alike trees of the fine Apple Ecklinville Seciling. Young and old trees alike are laden with fruit of large size, clear skins, and of such colour as one only expects to see upon fruit grown under the sunny skies of Kent. a well tried variety for the market grower this is hard to excel in the

county.

In many orchards I also find large trees of Wyken Pippin heavily laden The trees as a rule bear every second year, the trees needing with fruit. a season to recuperate after perfecting such heavy crops as they are now I am surprised to find no young trees planted of this delicious Christmastide Apple. The tree is a vigorous grower everywhere, perfectly free from canker, and makes a large spreading head. Of few varietics only can it be said they are free from canker in this generally flat, low-lying, badly drained county, which seems to produce forest trees and pheasants far better than high class fruits.—W. K. W., Leeturer in Horticulture to the Norfolk County Council.

ROYAL HORTICULTURAL SOCIETY.

SEPTEMBER 26TH.

THIS meeting brought a very effective display of autumn flowers-Dahlias being very prominent, Orchids, fruit, and vegetables.

FRUIT COMMITTEE.—Present: Philip Crowley, Esq. (in the chair); with Rev. W. Wilks, Dr. Hogg, and Messrs. John Lee, G. Bunyard, J. Cheal, A. H. Pearson, G. Goldsmith, G. Taber, T. J. Saltmarsh, W. Warren, J. Smith, H. Balderson, J. Hudson, G. Wythes, W. Iggulden,

G. Reynolds, G. Sage, A. J. Laing, A. Dean, and J. Wright. Mr. E. Molyneux, The Gardens, Swanmore Park, Bishop's Waltham,

sent a magnificent dish of the American Apple Wealthy. large, round, inclining to ovate; greenish yellow, almost entirely covered with broken crimson stripes. Very handsome, symmetrical, and as tender as a Pear. Considerable discussion arose relative to the growth and bearing habit of the trees, some of the members expressing their strong disapproval of the variety in those respects, while others had found the trees quite satisfactory. Eventually an award of merit was granted by a majority of three votes.

Sir John H. H. Amory, Bart. (Mr. Grigor, gardener), sent a new Melon named Maximus, cut from a plant in a pot. Fruit oval, very large indeed, but like many other large late fruits wanting in quality, and no award was made. Mr. J. Lye sent from Clyffe Hall, Market Lavington, a fruit of his new Melon Lye's Exquisite, a medium-sized green flesh,

but over-ripe. Probably a good Melon when in condition early in the season, and the Committee desired to see it next summer.

Sir E. Loder (gardener, Mr. G. Goldsmith), Leonardslee, Horsham, sent a dish of Pomegranates, very large, 3 inches in diameter, grown against a wall in the open air. They were not ripe (vote of thanks). Plenty of fine ripe imported Pomegranates can be bought from barrows in the London streets at 1d. each. Mr. J. Duncan sent ripe Grapes grown in the open air at 45, Amherst Park, Stamford Hill, London (vote of thanks). A similar mark of recognition was accorded to Mr. Wm. Palmer, who sent from Andover a dish of Duke of Albany Peas grown from seed ripened from an early crop in the summer and sown on

July 15th.

The Earl of Cork and Orrery, Marston House, Frome (Mr. W. Iggulden, gardener), sent thirty dishes of splendid Pears, mostly grown by old trees on Pear stocks in clay soil. A silver Knightian medal was unanimously recommended for the collection, also a bronze medal for an unusually fine dish of Doyenné de Comice. Besides the variety named grand dishes of Van Mons Leon le Clerc, General Todtleben, Glou Morçeau, Easter Beurré, Beurré Sterckmans, Pitmaston Duchess and others were staged by Mr. Iggulden, who would like more hot summers at Marston.

Mr. Owen Thomas sent from the Royal Gardens eighteen magnificent Pines and a dish of fruit of Cydonia japonica. The Pines consisted of twelve Queens and six Smooth Cayennes from plants sixteen months old from the sucker. Fruits of the Queens would probably average about 6 lbs. each, while some of the Smooth Cayennes were doubtless

9 lbs. in weight. A silver-gilt Knightian medal was unanimously recommended, and some persons thought that a still higher honour was merited. A vote of thanks was accorded for the Cydonia fruits.

A collection of twenty dishes of Apples and the same of Pears were sent from the gardens of the Dowager Lady Freake, Fulwell Park, Twickenham; very good fruits of popular varieties, and a small silver medal was recommended. A highly creditable exhibit of seven varieties of Onions, six of Apples, six of Plums, and a fine dish of Marie Louise Pears was staged by Mr. John Chinnery, Downton Castle Gardens. produce represented excellent culture, and a silver Banksian medal was A similar honour was voted to Mr. G. Reynolds, Gunnersbury Park Gardens, for twenty splendid Melons, several very large indeed, and all indicating superior culture. J. Nix, Esq., Tilgate Manor, Crawley (gardener, Mr. Dibben), sent twenty-seven dishes of Pears, several of them very good in leed—an excellent representative collection (small silver medal). Messrs. H. Cannell & Sons had a very extensive exhibit of vegetables and fruit, the whole comprising a hundred dishes, only some of the vegetable "dishes" would about fill a bushel basket. Earliest of All Cabbage was represented by neat compact heads, and London Coleworts were very fine. Leeks were blanched to the extent of 9 or 10 inches, and robust plants of Brussels Sprouts were crowded with firm knobs. Potatoes, Carrots, Onions, and most other vegetables in season were included in this representative collection, and a silvergilt medal unanimously recommended.

FLORAL COMMITTEE.—Present: W. Marshall, Esq. (in the chair);
Messrs. H. Herbst, R. Dean, G. Stevens, C. F. Bause, C. J. Salter, J. D.
Pawle, C. Jeffries, E. Mawley, H. Cannell, A. H. Williams, Charles
Noble, Peter Barr, and Rev. H. H. D'Ombrain.

Messrs. Cheal & Sons set up a very attractive stand of Dahlias,
three bold shields of bloom being flanked by boxes and bunches of

flowers. The central and largest shield was composed of Cactus varieties, prominent amongst which were Delicata, Ernest Cannell, Robert Cannell, and Countess of Radnor. Duchess of York was also noteworthy for its distinct colour, and a new variety called Crawley Gcm, with bright crimson flowers, was much admired (silver Flora medal). Messrs. Keynes, Williams & Co. had a fine display of Dahlias, comprising three large shields of Cactus varieties, in which Kaiserin, pale yellow; Dawn, golden bronze; and Keynerith, the grand scarlet, were prominent; and stands of Show, Cactus, Pompon and single varieties; Delicata, Lady H. Grosvenor, Bertha Mawley, Chancellor, Lady Penzance, and Gloriosa, all Cactus varietics of great merit, were much admired (silver Flora medal).

Mr. R. Dean exhibited Venidium calendulaceum var. multiflorum (Vilmorin), but as only a small pot plant bearing four flowers was shown its value as a pot plant was not strikingly evident. Mr. H. J. Jones sent Fuchsia triphylla carminata alba, the plants being 6 to 8 inches high, in 5-inch pots, bushy and freely flowered. Mr. R. Owen sent a Canna named Comtesse O. de Lestoile and Chrysanthemum Vigilant. G. P. Pierre Harris, Esq., Scads Hill House, Orpington, had a stand of double Dahlias, containing neat bright blooms. Messrs. Pitcher and Manda aroused attention with the fine Datura cornucopia, the flowers of which are white with a faint lilac shading; the reverse of the segments and the tube rich bluish mauve, and with a powerful Auricula fragrance (see below). Messrs. Cannell & Sons contributed a pleasing display of Begonias, the most conspicuous variety being the golden amber single Begonias, the most conspicuous variety being the golden amber single Fashion. The doubles possessed great quality (silver Banksian medal). Mr. A. Waterer showed seedlings of Abies pungens glauca, Andromeda japonica, and Cedrus atlantica glauca (the "Silver Atlas Cedar"). These had been lifted and the roots wrapped in packing material surrounded by mats (silver Flora medal). Mr. C. Turner had some splendid double and Pompon Dahlias, Mrs. Morgan and Norma being very conspicuous among the former (both receiving awards), Captain Boyton, Irene, and Eric amongst the latter. They also had a very promising seedling Cactus named Edith Turner large rich crimson with cerise suffusion Cactus named Edith Turner, large, rich crimson, with cerise suffusion. Mr. T. S. Ware sent a choice collection of new Dahlias, several of which received awards, and are referred to below.

Mr. Arthur Rawlings contributed a large collection of Show and Fancy Dahlias, many leading varieties being in admirable condition (silver Banksian medal). Messrs. J. Laing & Sons were represented by one of their characteristic displays of stove and greenhouse plants, the foliage plants being noteworthy for cleanliness and good colour, and the group was tastefully displayed (silver Flora medal). Mr. B. Ladhams contributed a large and varied display of hardy plants, and he also had some beautiful bunches of his fine Pink Ernest Ladhams. bipinnata was noteworthy amongst the hardy flowers, and so was Heliopsis scabra major, which received an award of merit, and is referred to below (silver Flora medal). Messrs. Veitch & Sons staged several new plants, and three—viz, Nepenthes mixta, Veronica hybrida Purple Queen, and Aglaonema rotundum-were honoured by the Committee

(see below).

The Gladiolus prizes did not bring satisfactory competition. J. C. Tandy, Warkworth, Northumberland, was the only exhibitor in both classes, one being for twelve distinct varieties and the other for twelve British-raised Gandavensis varieties. He was placed first for both stands, and showed all Kelway-raised varieties. Atlas, Corinne, Formosa, Grand Rouge, Enchanteresse, and Pyramide were six of the

ORCHID COMMITTEE —Present: H. J. Veitch, Esq. (in the chair); Messrs. J. O'Brien, T. W. Bond, C. Pilcher, E. Hill, J. Douglas, E. Handley, S. Courtauld, T. B. Haywood, and Dr. Masters.

Mr. P. McArthur sent a small collection tastefully arranged with

Ferns and Palms. Amongst these the beautiful Vanda Sanderiana, V. Sanderiana pallida, Oncidium Jonesianum, and Cypripedium Ashburtoniæ were conspicuous. W. Thompson, Esq., Walton Grange, Stone, had some spikes of Cattleya Alexandræ, for which a vote of thanks was accorded. A spray of Cattleya Brymeriana came from W. E. Brymer, Esq., Dorchester, and Messrs. W. L. Lewis & Co., Southgate, sent a few plants, including Cattleya Ashtoniana (C. Harrisonæ X C. gigas Sanderiana) Cattleya X Johnsoniana, and C. Loddigesi Pugetiana. Mr. J. O'Brien, Harrow-on-the-Hill, send blooms of Satyrium eriscarpum, S. membranaceum, and Brownlea cærulea (botanical certificate). Messrs. F. Sander & Co., St. Albans, had a small group of choice species. The most attractive of these were Cattleya aurea, Miltonia Moreliana, Cœlogyne oculata, Calanthe curculigoides, Cypripedium Schlimi, and the pretty Habenaria carnea, which is figured on page 283. E. Ashworth, Esq., Harefield Hall, Wilmslow, Cheshire, was accorded a cultural commendation for a fine plant of Dendrobium Phalænopsis Schröderianum Beatrice Ashworth var. The same exhibitor had a plant of D. P. Schröderianum Ashworth's var., a paler flower than the last named variety. A plant of Cypripedium Beatrice Ashworth (C. Leeanum X venustum) was also shown by Mr. Ashworth, likewise were blooms of other Orchids. W. Cobb, Esq., Dulcote, Tunbridge Wells (gardener, Mr. F. Howes) exhibited a plant of Catasetum Gnomus, for which a botanical certificate was awarded.

Messrs. B. S. Williams & Son showed a few choice Orchids, for one of which—Cattleya blesensis—they received an award of merit (see below). Messrs. Hugh Low & Co. had a varied and bright collection of Orchids backed by Lilium nepalense. The group included Cattleya maxima, Tricosentrum albo-sanguineum, Vanda cærulea, V. Kimballiana, and many good Cypripediums. Thos. Statter, Esq., Stand Hall, Manchester, sent Cattleya Alexandræ, C. Parthenia hybrid, and C. bicolor cærulea. Messrs. Charlesworth, Shuttleworth & Co. had a little group. cœrulea. Messrs. Charlesworth, Shuttleworth & Co., had a little group of much interest, the most noteworthy feature of which was a new Cypripedium named Charlesworthi, referred to under certificates below. They had Vanda cærulea very richly coloured, V. Sanderiana, Cattleya labiata autumnalis, and a number of Cypripediums. C. Ingram, Esq., Elstead House, Godalming (gardener, Mr. Bond), sent Lælia elegans

Turneri, Ingram's variety (see below).

CERTIFICATES AND AWARDS OF MERIT.

Aglaonema rotundum (J. Veitch & Sons).—A charming little foliage plant, with broadly lanceolate pointed leaves, deep rich green, blotched with light silvery green. It will make a good companion to A. costatum, exhibited some time ago (first-class certificate).

Alocasia Chantrieri (J. Laing & Son).—A variety with shield-shaped,

deep burnished green leaves, prominently ribbed (award of merit).

Begonia Duchess of York (J. Laing & Son).—A fine double flowered variety, blooms of medium size and rich cerise colour (award of merit). Cattleya blesensis (B. S. Williams & Son).—This is a cross between Cattleya Loddigesi and Lælia pumila. The flowers are of a uniform mauve shade, but the lip is richly coloured with purplish magenta

(award of merit).

Cypripedium Charlesworthi (Charlesworth, Shuttleworth & Co.). A very remarkable introduction from the East Indies. It is a distinct and beautiful species, very dwarf, with long, narrow leaves. The flower stem is only 3 to 4 inches long. The lip is short, green, heavily suffused with bronzy brown; and the dorsal sepal is very noteworthy. It is broad and rounded, and the colcuring is a beautiful soft rose, delicately veined. The staminode is pure white. A feature of the leafage are the rows of dots on the reverse side. The species is a great acquisition (first-class certificate).

Dahlia Octavia (C. Turner).—A fine yellow show faintly tipped

with red (award of merit).

Dahlia Mrs. Morgan (C. Turner),-A large and handsome show variety, blush deepening to pink (award of merit).

Dahlia Captain Boyton (C. Turner).—A very neat and pleasing Pompon, colour blacking purple, an acquisition (award of merit).

Dahlia Miranda (C. Turner).—A very distinct Pompon, yellow, heavily tipped with chocolate (award of merit).

Dahlia Beauty of Watford (Mr. Darby).—A pretty single variety of an cld gold colour, suffused with carmine, with a distinct brownish red ring in the centre (award of merit).

Dahlia Edith Turner (C. Turner).—A fine Cactus Dahlia with

flowers of a purplish scarlet colour (award of merit).

Dahlia Florence Woodland (T. S. Ware).—A beautiful Pompon, very

smooth and neat, yellow tipped with crimson (award of merit).

Dahlia Mrs. Peart (T. S. Ware).—A very promising white Cactus

which will meet a long-felt want (award of merit).

Dahlia Cherub (G. P. Pierre Harris, Esq.).—A variety of the Show type, with shapely flowers of a rich golden amber (award of merit).

Dahlia Grand Duke Alexis (Keynes, Williams & Co.).—A very large

white decorative variety, with folded florets (award of merit).

Dahlia Norma (C. Turner). — A grand new Show variety, large,

shapely, and of a beautiful golden amber colour (award of merit).

Dahlia Duchess of York (Keynes, Williams & Co.).—A fine show variety with neat blooms, terra cotta, heavily suffused and margined

magenta (award of merit). Dahlia Ceres (Keynes, Williams & Co.).—A pretty Pompon, flowers

neat and lemon colour (award of merit).

Dahlia Sovereign (Keynes, Williams & Co.).—A bright yellow

Pompon variety with neat blooms (award of mcrit).

Datura cornucopia (Pitcher & Manda).—A very handsome species; flowers white, with faint lilac suffusion, the reverse of the segments and tube having rich bluish mauve specklings and flakings. It is strongly scented (first-class certificate).

Heliopsis scabra major (B. Ladhams) .- A fine autumn Composite,

with flowers of a very rich deep yellow (award of merit).

**Lælia elegans Turneri, Ingram's variety (C. Ingram, Esq.).—A very large and richly coloured form, the lip being of great size, and coloured

with glowing purplish magenta (award of merit).

Nepenthes mixta (J. Veitch & Sons). — An interesting and highly coloured hybrid, raised by crossing N. Northiana (pollen parent) and N. Curtisi. The pitchers are long, somewhat narrow, greenish red, heavily blotched with deep brownish red (first-class certificate).

Veronica hybrida Purple Queen (J. Veitch & Sons).—A very free-

flowering, brightly coloured, and beautiful variety (award of merit).

THE LECTURE.

At the afternoon meeting, Mr. W. Iggulden, The Gardens, Marston House, Frome, gave a lecture on the "Causes of Failure in Eucharis Culture." There was a fair attendance and Mr. Iggulden dealt with his subject in a thoroughly practical manner, detailing the various causes of failure in the cultivation of this plant. A brief discussion followed, and a vote of thanks was accorded the lecturer.

EARL'S COURT SHOW.

SEPTEMBER 27TH, 28TH, AND 29TH.

A SPLENDID show of fruit and vegetables was opened at the Garden and Forestry Exhibition yesterday (Wednesday). The Apples were remarkably fine and well coloured, and the Pears were also good. The vegetables were not very numerous, but of excellent quality, the chief

feature being the fruit.

The principal class was for twenty-four dishes of dessert Apples, and seven exhibitors competed. The leading prize was awarded to Messrs. G. Bunyard & Co., Maidstone, who staged medium sized, even, and richly coloured fruits. Wealthy, Cobham, Gascoyne's Scedling, Cox's Pomona, King of the Pippins, and Worcester Pearmain were particularly good. Mr. H. Berwick, The Nurseries, Sidmouth, Devon, was second with fine fruit; the third prize going to Mr. John Scott, Marriott, Somerset. For a collection of culinary Apples comprising forty-eight dishes there were four competitors, and the first prize went to Messrs. G. Bunyard & Co., who had splendid fruits. The best of this collection were Cox's Pomona, Lane's Prince Albert, The Queen, Tyler's Kernel, Emperor Alexander, and Peasgood's Nonesuch. Mr. Woodward was second, and Mr. J. Scott followed closely. An extra prize was awarded the English Fruit and Rose Company for a good collection. Mr. Nicholson, gardener to J. W. Melles, Esq., Sewardstone Lodge, Chingford, was first for three dishes of culinary Apples; Mr. Cotteral, Oxon Hoath, Tonbridge, second; and The English Fruit and Rose Company, Hereford, third. Messrs. G. Bunyard & Co. were again first for twelve dishes of dessert Apples, the best being Worcester Pearmain, Wealthy, Washington, Swedish Reinette, Blenheim Orange, King of the Pippins, and Cox's Orange. Mr. G. Woodward, Barham Court Gardens, followed with a fine collection.

Mr. Woodward was awarded the first prize for twenty-four dishes of Apples in the amateurs' section. The fruit was fine and well coloured, especially Cox's Pomona, Mère de Ménage, and Worcester Pearmain. Mr. G. Goldsmith, gardener to Sir E. G. Loder, Bart., Leonardslee, Horsham, was second with a good collection, the third award going to Mr. G. Chambers, Beech Farm, Mereworth, Maidstone. Mr. S. H. Goodwin, Smartswell, Mereworth, secured first prize for twelve dishes of Apples, amongst which Cox's Pomona, Worcester Pearmain, King of the Pippins, and Peasgood's Nonesuch were particularly fine. Mr. J. Austin T. Killick, Weavering, Maidstone, was second, and Mr. Goldsmith third. Five competed in this class. Mr. W. Minifile, Bedlands, Sidmouth, was first for six dishes of Apples; Mr. Chambers being second; and Mr. James Hall, Croscombe, Wells, Somerset, third. Thirteen competed in the class for six dishes of dessert Apples, and the produce was good throughout. Mr. Chambers was the winner with fine fruits. The second prize went to Mr. R. Potter, gardener to Sir M. Collet, Bart., St. Clere, Kemsing, Sevenoaks; and the third to Mr. J. Hall. The English Fruit and Rose Company were third. For twelve dishes of Apples Mr. G. Woodward was first, Messrs. G. Bunyard & Co. second, and Mr. H. Penwick third. Berwick third. Messrs. G. Bunyard & Co. and T. Rivers & Son divided the prizes for twelve dishes of Apples and Pears grown in an orchard house.

Pears were also shown in splendid condition. In the class for twelve dishes there were nine competitors, and the leading award went to Mr. G. Goldsmith for a magnificent collection of fruit. Pitmaston Duchess, Marie Louise, Doyenné du Comice, and Beurré Clairgeau were very fine. Mr. W. Allan, gardener to Lord Suffield, Gunton Park, Norwich, was second, and Mr. G. Woodward third. Mr. W. Wills, Unsted Park, Godalming, was first for six dishes of Pears in one section, Mr. J. Dean, being second, and Mr. W. Slogrove, third. There were six competitors in the class for twenty-four dishes of Pears, and the prizes were keenly contested. Mr. G. Woodward was awarded the first prize, the second going to Mr. G. Goldsmith, and the third to Mr. W. Iggulden, Marston House Gardens, Somerset. M. A. Offer was first for twelve dishes of Pears, Mr. R. Smith, Presdale Gardens, Ware, being second, and Mr. H. Berwick third.

Vegetables, as already mentioned, were shown in good condition. For a collection of twelve kinds Mr. T. Wilkins, gardener to Lady Theodora Guest, Inwood House, Blandford, was first, showing splendid produce. Mr. G. J. Waite, Glenhurst, Esher, was a good second, the third prize going to Mr. J. Friend, Rooksnest Gardens, Godstone. There were seven competitors. Mr. E. Ryder, Orpington, was first with a collection of Tomatoes, the Frome Flower and Fruit Company second, and Mr. J. Welborn third. Messrs. J. Strong, E. Ryder, and J. Hall secured other prizes for Tomatoes. Messrs. T. Rivers and Son, G. Goldsmith, J. Friend, and J. Dean for Plums, and Messrs. G. Woodward, T. Rivers & Son, A. Offer, D. Fairweather, and H. Beanes for Peaches.

Miscellaneous exhibits were numerous. Mr. G. Reynolds had a collection of Melons (silver medal), and Mr. C. Terry, The Gardens, Tatton Park, Brentford, some Pine Apples (silver-gilt medal). Mr. C. Turner, Slough, exhibited a dish of very fine Mère de Ménage Apples, the heaviest veighing 221 erg. (highly commended). Mr. W. Manager, the heaviest weighing $22\frac{1}{2}$ ozs. (highly commended). Mr. W. Mancey, Upper Gatton, Redhill, had Pitmaston Duchess Pears, the heaviest of which weighed 2 lbs. (bronze medal). Mr. Goldsmith gained a bronze medal for Pomegranates. Messrs. T. Rivers & Son, Sawbridgeworth, gained a silver medal for a collection of Grapes, Apples and Pears, and was awarded the first prize for a splendid table of fruit, including trees of the Bijou Apples. Mr. J. Dibben, Tilgate House, Crawley, had a collection of Pears (bronze medal); Mr. T. M. Le Pelley, Rusper, Sussex, Grapes (bronze medal), and Mr. W. Minifie, Sidmouth, Peasgood's Nonesuch Apples (highly commended).

In the Exhibition buildings many miscellaneous exhibits were also staged. Mr. J. Strong had Tomatoes (bronze medal), and Mr. W. Salmon, West Norwood, a large collection of vegetables (silver medal). Mr. Henry Merryweather, The Nurseries, Southwell, Notts, had a fine collection of Bramley's Seedling Apples. Mr. A. Rawling secured a bronze medal for Dahlias, and Mr. Deverill, Banbury, a silvergilt medal for a magnificent collection of Onions. Messrs. H. Cannell and Sons had Begonia blooms, as also did Mr. A. W. Young, South Norwood. A bronze medal went to Mr. T. A. Hester, The Links, Plumstead Common, for a collection of Grapes Apples Pears and Nuts.

Plumstead Common, for a collection of Grapes, Apples, Pears, and Nuts.

Messrs. J. Veitch & Sons, Chelsea, gained a gold medal for a group of
Nononthes. Nepenthes. First-class certificates were awarded for N. Northiana, N. mixta, and N. Burkei excellens. The same firm sent a collection of cut hardy shrubs, and certificates were given for Cratægus pinnatifida major and Cornus stolonifera Spathi. Messrs. Veitch & Sons also gained certificates for Aglaonema rotundum, A. costatum, Cypripedium Niobe, C. Aphrodite, C. T. B. Haywood, C. Drysa, Catasetum Darwinianum, Pandanus pacificus, Rhododendrons Princess Beatrice, Aphrodite, and Ajax. Mr. A. Waterer, Knaphill Nursery, had Conifers (silver medal), and Messrs. J. Cheal & Sons a grand collection of Dahlias and Apples, but no award had been made when our reporter left. Messrs. W. Paul & Son, Waltham Cross, gained a silver medal for a collection of cut Roses and Apples. A first-class certificate was awarded for Duke of York Rose, a new China variety.

Mr. J. Watkins, Withington, Hereford, had a very fine collection of

Apples (silver medal), as also did Mr. H. Berwick, Messrs. J. Veitch and Sons, G. Bunyard & Co. (silver-gilt medal), but pressure on our space prevents further reference. Messrs. W. Innes & Co., Littleover, Derby, staged some well-grown Grapes (silver-gilt medal), and Messrs. G. Spooner & Sons, Hounslow, had Apples (silver medal). Messrs. J. Laing and Sons secured a bronze medal for Apples and Pears, as also did Mr. A. H. Rickwood, Fulwell Park, Twickenham. Messrs. H. Cannell and Sons secured a silver medal for a collection of vector blog and fruit and Sons secured a silver medal for a collection of vegetables and fruit, and Messrs. Keynes, Williams & Co., Salisbury, a similar honour for Dahlias. Certificates were awarded for Dahlias Apollo, Lady Penzance, Gloriosa, Sovereign, and Phœbe, shown by the Salisbury firm.



HARDY FRUIT GARDEN.

Wall Trees.—Branch Thinning.—At no period of the year can the evil of overcrowding branches be better noticed than at the present time while the foliage is still on the trees. Horizontally trained trees often have double the number of branches they should have. results are easily seen by the elongated spurs which are denuded of foliage at the base. This goes on continually when the sun cannot shine between the branches or spurs. Clusters of strong wood buds and weak fruit spurs struggle with each other. The lower branches usually suffer the most in this respect. The top tiers of branches and their extremities are often able to develop some fruitful spurs even when crowded, but it is seldom such can be found lower down the trees, which shows the great importance of light and air. Trees should be so managed that equal conditions can be secured to every part, then general fruitfulness will ensue. The main branches ought, as a rule, to be a foot asunder, except in the case of some varieties of Pears which, making slender wood and small foliage, will do with the branches 9 or 10 inches apart. Another point to be noticed is that branches with spurs standing out a considerable distance from the wall require more room between them than those on which the spurs are short.

Spur Pruning.—Along with removing some of the branches spurthinning is usually required, crowded elongated spurs being also conducive to unfruitfulness. Thinning spurs is usually done in the winter, but greater advantages follow if the operation is done while the

foliage remains. In the first place it can be effected more thoroughly while the leaves are present on the trees to guide the judgment in the selection of the best to retain; while the further advantage results with autumn as against winter pruning, that the buds left receive at once the active energies of the trees, helping them to become transformed more quickly into prominent fruitful buds.

Pruning Bush Apple Trees.—The present is also a suitable opportunity to thin out the wood of bush Apple trees. They will be fruitful at an earlier period if overcrowding is never allowed, and to effect this a little judicious thinning is necessary every season. Remove the badly placed shoots and those which intersect others, spoiling the appearance and contour of the trees. Severe shortening of the main shoots must not be adopted except where it is desired to originate more. Before young trees come into bearing long shoots are frequently made in one season. Such as these are backward in forming fruit buds if Therefore shorten the longest to half some slight check is not given. their length, others merely having their points removed, cutting to firm wood, and to a bud pointing in the right direction for extension. Next season, instead of the sap rushing straight to the leading point it will be diverted into the lower buds, causing fruit buds to form or side shoots to be produced, which in the summer shorten to four leaves, thus aiding the formation of fruit buds and preventing the interior being overcrowded with long spray.

Stopping Growths on Neglected Trees.—Scores of Apples and Pears grown on walls and in other restricted forms never receive any summer pruning, consequently the growth of foreright and side shoots on main branches is a continuation of the first growth, increasing in strength and length. Usually such shoots are shortened back at the present time, sometimes left for the winter pruning, with the idea that this is the correct method; but in neither case can the formation of fruit buds be relied on to take place, owing to the excessive appropriation of sap by these rampant growths. It is, however, better to shorten them now to four or five leaves than to permit them to remain. Their removal will, at least, admit light and air to any weak fruit buds which may be clustering near the base, improving and strengthening them whereby they can take advantage of more rational treatment to be followed another season. The strongest growers will be benefited by root-pruning.

FRUIT FORCING.

Pines.—Suckers.—These, started early in September, or recently, should be raised near the glass as soon as they have made good roots, for it is essential that those intended to be wintered in small pots be brought forward very gradually, so as to secure a sturdy base. This must not be sought by withdrawing the plants from bottom heat, as that would render the growth stunted. When the suckers have well filled their pots with roots the strongest plants may be transferred to the pots in which they are to fruit.

Growing Stock.—Young plants will need free ventilation on all favourable occasions to maintain them in a healthy sturdy condition, keeping the bottom heat about the roots at 80°, and maintaining a temperature from fire heat of 60° to 65° at night, with 5° to 10° rise by Water the plants when they require it, employing weak and tepid liquid manure, and avoid the use of the syringe too frequently; merely sprinkling the paths and pit sides morning and evening will suffice in all but very bright weather.

Fruiting Plants.—Afford these a night temperature of 70°, 80° to 90° during the day, closing at 85°. The watering should only be moderate at the roots, as an excess is liable to cause the fruit to become black at the centre. Moderate moisture also must only be accorded, for when kept very close and moist the crowns are apt to become unduly large, and the glass should be kept clean, with the plants as near to it as

practicable without the crowns touching.

Cherries.—With plenty of air and not too much heat up to the stoning period Cherries may be had in April or May. They can be grown either planted out or in pots. Inexpensive houses with boarded sides and a glass roof answer as well as more elaborate structures. It is nccessary that the house be well ventilated both at top and bottom, and efficiently heated. Wooden ventilators should be provided at the front or sides just above the floor line, and at the top to open the whole length of the house. In addition to this drain tiles may be laid in the soil in channels about 6 feet asunder crosswise of the house, with the ends taken outside and above the surface by elbows, and the drains should have sockets at 3 feet within the house, and then 6 feet apart, with pipes coming above the surface. With caps for the outside openings and similar ones for the inside air cap be admitted by these drains in the similar ones for the inside air can be admitted by these drains in the severest weather. The trees may be planted out in front of a lean-to and be trained to a trellis fixed 12 inches from the glass, the treeshaving stems reaching to within a few inches of the trellis. The roof lights for planted out trees should be moveable, and it is better to allow the trees to occupy the whole of the roof than have them partly so, and others against the back wall.

A lean-to structure is best for early forcing, and two rows of 4-inch pipes in front will suffice for a house of 10 to 12 feet width. Span-roofed nouses will accommodate trees on both sides of them, and for widths of 18 to 24 feet will require two rows of 3 and 4-inch hot-water pipes respectively on each side. The border should be wholly inside and not made all at once. A 4 to 6 feet width of border according to the size of the trees is sufficient to commence with. It should be drained 9 inches to a foot deep, having a drain to carry off superfluous water, placing the roughest at the bottom and least coarse on top, covering with a 3-inch thickness of old mortar rubbish. From 21 to 24 inches depth of soil is ample. Good turfy loam four parts, lime rubbish from an old

building one part, and road scrapings one part, chopping the turfy loam moderately small, and mixing well together forms a suitable compost. If the top 3 or 4 inches of a pasture can be had where the soil is a rather strong loam interspersed with calcareous gravel and flints, it could not possibly be better for this or any stone fruit, and needs no admixture. Trees, that have been trained two or three years to walls are best, as they come into bearing at once, and will move safely provided they have been recently lifted. The borders being firm plant at once, or as soon as the leaves have mainly fallen, and give a good watering. Mulch with a couple of inches thickness of short stable litter, and take off the roof lights, not replacing them until the new year, when the trees may be started. Early Rivers Black Tartarian, and Governor Wood are the be started. Early Rivers, Black Tartarian, and Governor Wood are the best for trellises.

best for trellises.

I. Cherries in Pots.—These are very accommodating, and may be grown in any light, airy, well heated houses. The trees may be procured at once. They ought to be in pots, if not they will require a year to become thoroughly established. Repot at once if necessary, disentangling the roots at the sides of the ball, removing the drainage, and shortening any thick or straggling roots. Provide good drainage and make the soil firm, adding a fourth of well decayed manure to the compost for potting. Trees that are in as large pots as desired need only have the drainage rectified and be surface dressed, or the old drainage may be cleared away, a few inches from the base of the ball removed, the roots shortened back, removing all the loose surface soil and supplythe roots shortened back, removing all the loose surface soil and supplying fresh material, made firm under, around, and over the ball. The trees should be placed on a hard bottom impervious to worms, and surrounded with ashes to the rim, covering the pots with litter upon the approach of frost. Afford a good watering after potting or having the roots interfered with. Guigne Annonay, Early Rivers, Empress Eugénie, Early Red Guigne, Early Jaboulay, Early Red Bigarreau, May Duke, Black Tartarian, Governor Wood, and Elton are excellent varieties, and afford fruitin succession. The trees may be in pyramidal form, but low standards, so that the heads will be well up to the glass, are most desirable.

Cucumbers.—The plants for winter fruiting should be planted as soon as they are ready if not already done. A good bottom heat is essential to success, whether it be obtained by the aid of fermenting materials or hot-water pipes, but the latter is the most desirable means, and if the former are used there should be hot-water pipes in the bed to maintain the heat when that of the fermenting material declines. The soil may consist of light turfy loam with a third of fibrous peat, a sixth of old mortar rubbish, and a tenth of charcoal, the whole well incorporated. Reliance should be placed on liquid manure and surface dressings for imparting vigour later in preference to employ-

ing manure in the compost.

Autumn Fruiters.—A healthy and vigorous growth must be maintained, and do not overcrop the plants. Afford weak tepid liquid manure once or twice a week as may be necessary. Add a little fresh warmed soil about once a fortnight to the hillocks or ridges. Maintain a night temperature of 65°, 70° to 75° by day artificially, and 80° to 90° from sun heat. Avoid a close atmosphere by careful and moderate ventilation, but cold drying currents must be prevented, for they are very injurious. Be sparing in the use of water, especially on the foliage, keeping a genial condition of the atmosphere by damping the surface in the morning and afternoon, but gradually reduce the atmospheric moisture as the days shorten and the natural heat declines. If aphides attack the plants fumigate on two or three consecutive

evenings; for mildew dust with flowers of sulphur.

Strawberries in Pots. — A selection should now be made of the plants for early forcing, taking those which are in the forwardest condition as regards completing their growth and plumping the crowns. La Grosse Sucrée and Vicomtesse Hericart de Thury are, all points considered, the best. They may remain outdoors until the approach of frost, and should then be placed well up to the glass in frames, only affording protection from heavy rains and frost, otherwise exposing fully or ventilating freely. The plants must not lack water, yet needless applications cause the soil to become sodden and sour. Any plants that appear in the latter condition should have the drainage examined. Expel worms from the pots with lime water, and rectify the drainage where defective. Where the crowns are numerous, the small ones should be removed with a wedge-like piece of hard wood without injuring the leaves or central crown. This will concentrate all the vigour of the plants on the chief crown, and though there will be fewer trusses of bloom there is no need to fear a deficiency of crop, but it must not be carried too far, and in the case of split crowns, that is, the central one divided into two or three, these must be left, removing the small side ones only. The plants must have plenty of space for the full exposure of the foliage, which is essential to a sturdy growth and plump well-developed crowns. Remove all runners and weeds as they appear.

TRADE CATALOGUES RECEIVED.

W. & J. Birkenhead, Fern Nursery.—Ferns and Selaginellas.

J. Cheal & Sons, Lowfield Nurseries, Crawley, Sussex.—Fruit Trees and Shrubs, &c.

W. Clibran & Son, Oldfield Nurseries, Altrincham.—Shrubs, Fruit Trees, Spring Flowering and other Plants.

Laing & Mather, Kelso-on-Tweed.—Carnations.

Ketten, Frères, Luxembourg.—Catalogue of Roses.
W. Paul & Son, Waltham Cross, Herts.—Catalogue of Roses.
W. Rumsey, Joyning's Nurseries, Waltham Cross.—Roses.
L. Spatb, Baumschall, Rixdorf, Berlin.—Fruit Trees, Roses, Shrubs.
Wallace & Co, Colchester.—List of Lilies, Irises and other Plants.



APIARIAN NOTES.

PRACTICAL HINTS FOR BEGINNERS.

THE reader must bear in mind as he peruses these notes, that the writer has had a wide experience in bees and bee-keeping, sufficient to enable him to answer almost any query concerning bees, and to affirm positively that the Lanarkshire divisional hive is the only one adapted for moving bees with safety from place to place, as from the home apiary to the orchard, thence to the Clover, and eventually to the Heather. It is the only hive in which we can say in the autumn, when all is arranged, the bees are safe till May or longer. It will therefore be the only hive

alluded to in these notes.

But bee-keepers are their own masters, and beginners are at liberty to make experiments, and trials of different things and on different lines from what I teach; at the same time it must be understood that the many mishaps in wintering and moving bees in summer, together with unnecessary expenses connected with large and double cased hives, warrant me giving the foregoing warning. Read the book of Nature, then the singular and often mysterious movements occurring in the hive will become plain and easily understood. Learn the "hows and the whys," and beekeeping will become an easy, profitable, and interesting pursuit.

TENANTS OF THE HIVE.

These are the queen, workers, and drones during the summer, and not unfrequently fertile workers, drone-producing queens, and hermaphrodites. As every text book gives illustrations of the former, it is needless to enlarge on them here further than is necessary to make plain to the novice their mission in the hive.

"It is difficult to catch the queen," or "I have never seen one" are expressions not unseldom used by beginners. Experienced beekeepers have not unfrequently from the smallness of some queens great difficulty in spotting or catching them, but it is often undesirable to waste time hunting for them, as there are ways of disposing of them, as will be hereafter explained. Meanwhile the best illustration of a queen beginners can get is, when queens are heard piping in the hive to open it and secure a ripe cell. It is known by its dark brown appearance over the seal and its edge, as the seal sometimes falls back after the queen has left and is again sealed by the bees. Make sure the cell contains a queen. Vibrations by its movements are distinctly felt, and it can be seen in the cell when held between the eye and the light. Now place the cell with a few workers on a piece of comb under a glass, where you can watch the exit and other movements, and have a full view of a live queen bee and all her movements better than pen or pencil can describe.—A LANARKSHIRE BEE-KEEPER.

(To be continued.)

LANARKSHIRE DIVISIONAL HIVE.

I OBTAINED two hives and like them, only I am somewhat in difficulties about the management. You kindly told me how to pack them for winter, but I want to know about sufficiency of room. I drove and put a stock in three weeks since, placing with it other two stocks; they were not very strong. I put them on worked out combs, so there is no building for them, and I have fed them slowly with syrup; but I fancy the one box will hardly be large enough. Perhaps you might kindly tell me in the Journal of Horticulture. The "B. B. J." says we should replace old queens with young ones, but I cannot find the queens. I suppose it is a difficulty for novices, so I must leave them alone and trust they will be all right.—S. M. H.

[In reply to "S. M. H.," it depends greatly upon whether the hive is intended as a swarmer or non-swarmer, and on the locality producing flowers that yield the principal supply of honey whether the bees should occupy two or three divisions. One at any time is too small. If the bees swarm several weeks before the honeyyielding flowers are in bloom, then two divisions are suitable; but if the flora of the district comes before the bees are ready for swarming, prepare the hive now in three divisions full combed, having a youthful queen. If the hive is well supplied with stores it will attain a good strength, and the bees will be able to gather much honey in the early part of the year before attempting to

It is not very long since the "B. B. J." taught that queens were at their best when three years old, and perhaps took the hint about youthful queens from the pages of the Journal of Horticulture. As you have joined two old stocks to the original

probably one of their queens is saved: usually old or swarmed

stocks have young queens.

There have been many mishaps in feeding bees with syrup made after a recipe in the "B. B. J.;" it is by far too thick. The proportions of the best cane sugar and water should be equal in weight. For various reasons I neither spend time nor money on the paper mentioned, so cannot help inquirers outside of the columns of the Journal of Horticulture.—A. L. B. K.]

CARNIOLAN BEES.

An error has occurred on page 278. The matter should read, I am perhaps prejudiced in favour (not against) of the pure Carniolans free from the yellow bands, but cannot help admiring their good qualities in honey gathering, purity of comb, and mild temper, or, in other words, after disproving by actual trial and experiment nearly all that has been written elsewhere against Punics, I prefer Carniolans.—A. L. B. K.

THE INGENUITY OF BEES.

CAN bees learn to tell the time of day as well as a clock? A correspondent of "Science Siftings" lately noticed that a large number of bees were frequenting the flowers on his lawn, and every day when he came home to lunch he put a lump of sugar on a brick in the garden for them. They soon learned the time when they might expect the sugar, and now, when he goes out at noon, he finds about 100 bees sitting around waiting for their lunch.



*All correspondence should be directed either to "THE EDITOR" or to "THE PUBLISHER." Letters addressed to Dr. Hogg or members of the staff often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Bee subjects, and should never send more than two or three questions at once. All articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post, and we do not undertake to return rejected communications.

Calla æthiopica Seedlings (T. W. W.).—Calla æthiopica is popularly known as the Arum Lily, but seedlings vary somewhat in foliage as well as in form of spathes, and you can only ascertain the character of your plants by flowering them.

Cobæa scandens alba (H. R. Richards).— We have not seen flowers so nearly approaching pure white as those you have sent, nor does Mr. G. Nicholson, of Kew, remember seeing any quite so white as these specimens of yours which he has examined.

Insecticides (T. A.).—We have not a doubt that what you say is correct, but your letter is written in a form that brings it distinctly within the category of advertisements, and could only appear by an arrangement with the publisher on the usual business lines.

Culture of Erythrinas (Young Gardener) .- The following hints, written by a most successful cultivator of these plants, exactly answer your question:—"Erythrinas are very handsome easily grown plants, and we strongly recommend them to those whose accommodation for growing plants is limited, because they may be kept all the winter in any kind of place where frost does not penetrate; after they are started in spring may be wholly grown outside, and only removed to the greenhouse as they come into flower. They are remarkably profuse flowering plants, and their wants are few. A mixture of loam and leaf soil, with a good dash of sand and a few pieces of charcoal, suits them admirably. An annual potting just as they start will be sufficient for ordinarily large plants, and an annual pruning—which consists in cutting off all the summer's growth down to the rim of the pot—coupled with such treatment as we have hinted at, will insure success. We advise a little heat for starting them in, though, because they start more regularly than if left outside. If put in a warm temperature we advise careful hardening-off and placing outside early in June; their removal inside when the first flowers show themselves. After they are cut down they should be kept rather dry and away from frost. E. crista-galli is the best known, and a fine plant it is. It is hardy in the warmer districts of England and Ireland, but must rank as an easily grown greenhouse plant in the less favoured districts of these islands.

Thin Runner Beans (T. W.).—The variety sent is of a different type to the ordinary Scarlet Runner, the pods being, as a rule, less fleshy, but more delicate in flavour. Those you send are too old for cooking, and the older they are the more "skinny" they become. The season has been very unfavourable for Runner Beans, and the produce has, in consequence, not been so good as usual, though dearer in the markets, and we suspect that ripe seed will be much above the average price in bulk. We think you should send samples of the Bean to the introducers of the variety and the vendors of seed, and hear what they have to say on the subject.

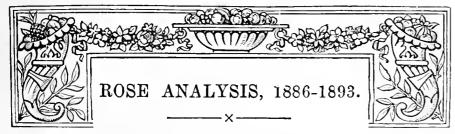
Destroying Ants (D.).—As you have fruit about and the ants visit it, it would not be safe to use poison. There is no better plan than to procure some partially picked meat bones and place them near their haunts. In a short time the ants will cover the bones, which can be placed in a bucket of boiling water. Another set of bones should then be laid, and more ants will visit them, often covering them in their eagerness to appropriate the flesh. In the meantime the bones first used should be placed in a sieve to dry, and then may be used again as baits. This simple plan will soon clear off thousands of ants provided it is persistently practised.

Euphorbia splendens (B. P. S.). — The plant of which you sent a specimen is Euphorbia splendens. It is of easy culture, requiring a stove temperature and a soil of fibrous loam and sand, with a small proportion of lime rubbish. The pots should be well drained, as any stagnant moisture is especially injurious to the plants, as their stems are very succulent. When the plants are growing freely water may be liberally supplied, liquid manure being also beneficial occasionally. Although succeeding well in pots this Euphorbia is more useful if planted out in a border against a wall in the stove, where flowers will be freely produced, during a considerable portion of the year.

Sambucus nigra aurea (Elder).—You are right, this is more golden than the old Gold-variegated Elder (Sambucus nigra variegata), being quite yellow in the matured growths, and which it retains to the close of the season. It is of very free growth, and though Elder may be common it is fit to take rank with the choicest of variegated shrubs, not the least of the merits of Elders being that of their thriving in the vitiated atmosphere of manufacturing localities, and they do well near the sea; in fact, screens of Elder are the best as screens or shelter from sea breezes for choicer plants—choicer simply because less free-growing and less common. The Silver-variegated Elder (Sambucus nigra argentea) is not nearly so effective as this; still it is a desirable shrub or small tree, and especially as it will grow anywhere.

The Lady Apple (W. M.).—The Apple to which you refer is the Api of pomologists, and the following description and history from the "Fruit Manual" may be of interest to you:—"A beautiful little dessert Apple; in use from October to April. It should be eaten with the skin on, as it is there that the perfume is contained. The skin is very sensitive of shade, and any device may be formed upon it by causing pieces of paper, in the form of the design required, to adhere on the side exposed to the sun before it has attained its deep red colour. The tree is of a pyramidal habit of growth, healthy, and an abundant bearer. It succeeds well in almost any situation provided the soil is rich, loamy, and not too light or dry, and may be grown with equal success either on the Doucin or Crab stock. When worked on the French Paradise it is well adapted for pot culture. The fruit is firmly attached to the spurs, and forcibly resists the effects of high winds. According to Merlet the Api was first discovered as a wilding in the Forest of Api, in Brittany. It has been asserted that this Apple was brought from Peloponessus to Rome by Appius Claudius. Whether this be true or not there can be no doubt it is of great antiquity, as all the oldest authors regard it as the production of an age prior to their own. Although mentioned by most of the early continental writers, the Api does not appear to have been known in this country till towards the end of the seventeenth century. It is first mentioned by Worlidge, who calls it 'Pomme Appease, a curious Apple, lately propagated; the fruit is small and pleasant, which the Madams of France carry in their pockets, by reason they yield no unpleasant scent.' Lister, in his 'Journey to Paris, 1698,' speaking of this as being one of the Apples served up in the dessert, says, 'Also the Pome d'Apis, which is served here more for show than for use; being a small flat Apple, very beautiful, and very red on one side and pale or white on the other, and may serve the ladies at their toilets as a pattern to paint by.' De Quintinye calls it 'Une Pomme des damoiselles et de bonne compagnie.' Under the name of Lady Apple large quantities of the Api are annually imported to this country from the United States, where it is grown to a great extent, and produces a considerable return to the growers, as it always commands the highest price of any other fancy Apple in the market. In the winter months they may be seen encircled with various coloured tissue papers adorning the windows of the fruiterers in Covent Garden Market.

Names of Fruits.—Notice.—We have pleasure in naming good typical fruits (when the names are discoverable) for the convenience of regular subscribers, who are the growers of such fruit, and not collectors of specimens from non-subscribers. This latter procedure is wholly irregular, and we trust that none of our readers will allow themselves to be made the mediums in infringing our rules. Special attention is directed to the following decision, the object of which is to discourage the growth of inferior and promote the culture of superior varieties. In consequence of the large number of worthless Apples and Pears sent to this office to be named, it has been decided to name only



Palace on the 1st of July last, as regards both the number and quality of the flowers staged fell far short of what we expect to see at "the National." In fact, we have to go back nine years in order to find so small a display of Rose blooms. This year's display has been likened to that of 1879, when instead of the season being a singularly dry, hot, and early one it was nearly as abnormally cold, wet, and backward. On that occasion, however, instead of 4660 Hybrid Perpetual and Tea and Noisette Roses being staged, as was the case in 1893, there were then only 1880, or less than half the number. It was also in other respects much inferior, so that exhibitors as well as visitors will see what they have to expect should our fickle climate treat us to a Rose season as unprecedentedly late as that of 1893 was forward.

It is the proud boast of the National Rose Society that on whatever date their metropolitan exhibition be held, or whatever the character of the season, they never fail to attract to their leading show the cream of all the Roses throughout the country which happen at that particular period to be in flower. This year our English rosarians have had to contend against conditions of weather, at all events as regards heat, dryness, and continued sunshine, without precedent during the seventeen years that the Society has been established; and taking all three adverse conditions together, as far as I can gather unequalled during the present century. So that regarded from another and I think a more reasonable standpoint their Crystal Palace Show of 1893 must be looked upon as having been a highly creditable one considering the very exceptional character of the spring and summer. The only wonder to me is that anyone could expect to see anything like an average exhibition after such a long and trying spell of drought and heat and in such a remarkably forward year. In fact, the calendar had become so utterly deranged that throughout the Rose season instead of May we had to read June; instead of June, July; and instead of July, August.

Notwithstanding all these drawbacks there were to be seen scattered here and there throughout the Show a fair sprinkling of choice blooms — blooms sufficiently fine to satisfy even the most exacting of critics, and which any ardent Rose lover would travel many miles to feast his eyes upon. And this is an advantage "the National" possesses over all other Rose shows in that, drawing its supply of Roses from a much more extended area, there are sure to be certain favoured localities from which choice specimens may always be expected. In fact, there was even in the poor and scanty display of 1879 one grand bloom of Niphetos which, if my memory serves me rightly, I have never since seen equalled. At all events, such an impression did this flower leave on my mind at the time that I thought it worth while making a special pilgrimage to Hereford in order to worship the plant from which it had been gathered.

The total number of Rose blooms tabulated for the purpose of this analysis has been about 15,000, the number of names taken down from the prize stands at each of the eight exhibitions being as follows:—

1886 1887 1888 1889 1890 1891 1892 1893 Hybrid Perpetuals... 1038 1121 1067 1130 1247 1176 1396 1184 Teas and Noisettes... 509 642 631 662 554 635 854 778 1547 1772 2101 1954 2027 1846 1675 1702 The effect of the abnormal character of the seasons upon our analysis will be at once seen on glancing down the tables and noticing the number of times the different varieties were set up in the winning boxes this year as compared with their average performances at the eight exhibitions. I may here explain that in order to bring these averages (which govern the relative positions of the Roses in the tables) up to date and make them of more practical value, they have this year been recalculated on similar lines to those followed in my last Dahlia analysis.

The Hybrid Perpetuals, which at none of the previous seven shows had been as numerously staged, were the following:—Alfred Colomb, Dupuy Jamain, Horace Vernet, Duke of Wellington, Camille Bernardin, Fisher Holmes, Earl of Dufferin, Duchess of Bedford, Reynolds Hole, and J. S. Mill. On the other hand, Madame G. Luizet, La France, A. K. Williams, F. Michelon, Captain Christy, Lady Mary Fitzwilliam, Marie Finger, Marquise de Castellane, Duchesse de Vallombrosa, and Star of Waltham were never before so scantily shown. It will thus be seen that for once the late-flowering varieties were specially favoured, while those which bloom early in the season were as a rule but indifferently represented.

Mrs. John Laing, an English variety raised by the late Mr. Henry Bennett and first sent out by him in 1887, now heads the list of Hybrid Perpetuals. It is a grand all-round Rose, and well deserves the position it has for the first time gained. Both last year and this it was staged more frequently than any other H.P. in the Show. The fact is, that although distributed six years ago it is only during the last two seasons that plants of it have been grown in sufficiently large numbers by exhibitors generally to enable it to take the place in the table to which it was entitled. Alfred Colomb, a rather late-flowering sort, was almost as frequently staged this year as the premier flower. Camille Bernardin, Horace Vernet, Duke of Wellington, and Fisher Holmes were also to be found in an unusually large number of winning stands.

Last year there were only four Roses on the list of Hybrid Perpetuals which were less than six years old. This year, however, we have six-Gustave Piganeau, Sir R. Hill, Jeannie Dickson, Marchioness of Dufferin, Duke of Fife, and Margaret Dickson. Only one of these new sorts comes to us from France, the remaining five being all of British origin. Sir Rowland Hill (No. 36), a plum-coloured sport from Charles Lefebvre, and the sole representative of the year 1888, was staged twice as often as at any of the three previous exhibitions. Next in order of age comes Gustave Piganeau, an 1889 variety, which I ventured to predict last year would at no distant date occupy one of the leading places in the analysis. I, however, never anticipated that it would rise in the list as rapidly as it has done—at one bound leaping from No. 46 to No. 8. It is by no means a strong grower, but like Mrs. J. Laing is free flowering and dependable. I am rather surprised to find that Jeannie Dickson still remains very much in the same position as last year, but as likely as not this may be entirely due to the peculiar character of the season. It was sent out in 1890, and will be found at No. 47. Both of the 1891 varieties, Marchioness of Dufferin (No. 53) and Margaret Dickson (No. 59), find places in the table for the first time. The past season seems to have suited the former admirably, but cooler conditions of climate are evidently required to bring the latter to perfection. The remaining new Rose, Duke of Fife (No. 59), a bright crimson sport from Etienne Levet, only came out last year, but should it prove constant is sure to become a general favourite when better known.

That beautiful Tea Rose Catherine Mermet still heads the list of Teas and Noisettes. There is no other variety which can show anything like as steady a record or which appears less at the mercy of the seasons. Indeed, at the last seven exhibitions the number of blooms tabulated has varied only from thirty-nine to forty-six.

No. 2349.—Vol. LXXXIX., OLD SERIES.

Comtesse de Nadaillac appeared this year in no fewer than fifty-one different prize stands, or in a greater number than any Rose whatever in the exhibition, and is the only Tea which distinguished itself by being staged more frequently than at any of the seven previous exhibitions. There were, however, eight varieties which

at none of those shows had been as poorly represented as this year viz., Niphetos, Caroline Kuster, Madame de Watteville, Jean Ducher, Madame Bravy, Princess of Wales, Souvenir de Paul Neyron, and Madame Willermoz.

The newer sorts in this section, for some reason or other, appear

HYBRID PERPETUALS.

Analysis.	Average Number of Times Shown.	Number of Times Shown in 1893.	Name.	Date of Introduction.	Raiser's or Introducer's Name.	Colour.
1	43.7	47	Mrs. John Laing	1887	Bennett	Rosy pink
$\frac{2}{3}$	$39 \cdot 4$ $38 \cdot 3$	11 14	Madame Gabriel Luizet	$1877 \\ 1867$	Liabaud	Light silvery pink
4	34.5	25	La France (H.T.) A. K. Williams	1877	Guillot Schwartz	Silvery rose, shaded lilac Bright carmine red
5	33.7	31	Ulrich Brunner	188 1	Levet	Cherry red
6	29.3	31	Marie Baumann	1863	Baumann	Soft carmine red
8	$25\cdot7$ $24\cdot0$	$\begin{array}{ c c c }\hline 24 \\ 24 \\ \end{array}$	Charles Lefebvre	$1861 \\ 1889$	Lacharme Pernet & Ducher	Purplish crimson Shaded carmine
9	23.9	42	Alfred Colomb	1865	Lacharme	Bright carmine red
10	22.6	25	Her Majesty	1885	Bennett	Pale rose
$\begin{array}{c c} 11 \\ 12 \end{array}$	21.9 21.0	$\begin{vmatrix} 20 \\ 11 \end{vmatrix}$	Merveille de Lyon	$1882 \\ 1871$	Pernet	White Comming Tags
$\frac{12}{13}$	20.2	11	Eticnne LevetFrançois Michelon	1871	Levet	Carmine rose Deep rose, reverse silvery
14	200	24	Dupuy Jamain	1868	Jamain	Bright cerise
15	18.4	16	Louis Van Houtte	1869	Lacharme	Deep crimson, shaded maroon
l5 l6	$\frac{18.4}{18.3}$	$\begin{vmatrix} 3\\20 \end{vmatrix}$	Marquise de Castellane	$1869 \\ 1867$	Pernet	Clear cherry rose
7	$\frac{18.5}{18.0}$	17	Baroness RothschildFerdinand de Lesseps	1867	Pernet E. Verdier	Light pink Shaded crimson
.8	17.6	16	Prince Arthur	1875	B. R. Cant	Bright crimson
19	17.5	15	Général Jacqueminot	1853	Rousselet	Bright scarlet crimson
20	$\begin{array}{c} 16.9 \\ 16.5 \end{array}$	28 19	Camille Bernardin E. Y. Teas	$\begin{array}{c c} 1865 \\ 1874 \end{array}$	Gautreau E. Verdier	Light crimson Bright red
21	16.5	26	Horace Vernet	1866	Guillot	Scarlet crimson, dark shaded
2	16 4	24	Duke of Wellington	1864	Granger	Bright shaded crimson
3	$\frac{160}{16.0}$	12	Comtesse d'Oxford	1869	Guillot	Carmine violet
23 24	$\begin{array}{c} 16.0 \\ 15.7 \end{array}$	$\begin{vmatrix} 5\\11 \end{vmatrix}$	Lady Mary Fitzwilliam (H.T.) Duke of Edinburgh	1882 1868	Bennett Paul & Son	Rosy flesh Scarlet crimson
25	15.5	11	Dr. Andry	1864	E. Verdier	Bright crimson
26	15 0	19	Suzanne M. Rodocanachi	1883	Lévêque	Glowing rose
27	14.7	4	Marie Finger	1873	Raimbaud	Light salmon rose
28	$\begin{array}{c} 14.7 \\ 14.6 \end{array}$	$\begin{vmatrix} 16 \\ 28 \end{vmatrix}$	Maric Verdier Earl of Dufferin	1877 1887	E. Verdier	Pure rose Dark crimson, shaded maroon
9	14.0	11	Le Havre	1871	Eude	Vermilion red
0	13.4	9	Heinrich Schultheis	1882	Bennett	Pinkish rose
$\begin{array}{c c} 31 \\ 32 \end{array}$	$\begin{array}{c} 13.3 \\ 12.8 \end{array}$	$\begin{vmatrix} 24 \\ 15 \end{vmatrix}$	Fisher Holmes	1865	E. Verdier	Shaded crimson scarlet
3	12.5	$\begin{vmatrix} 13 \\ 2 \end{vmatrix}$	Marie RadyCaptain Christy (H.T.)	$\begin{array}{ c c c }\hline 1865 \\ 1873 \\ \hline \end{array}$	Fontaine	Brilliant red Delicate flesh
34	12.4	12	Prince Camille de Rohan	1861	E. Verdier	Crimson maroon
35 36	12.3	12	Duke of Teck	1880	Paul & Son	Light crimson scarlet
37	$\begin{array}{c} 12.0 \\ 11.5 \end{array}$	$\begin{vmatrix} 12\\11 \end{vmatrix}$	Sir Rowland Hill	1888 1875	Mack E. Verdier	Deep velvety plum Crimson maroon, shaded purple
37	11.5	7	Pride of Waltham	1881	W. Paul & Son	Light salmon pink, shaded violet
8	10.8	10	Xavier Olibo	1864	Lacharme	Dark velvety crimson
39 10	10·5 10·4	$\begin{array}{c c} 16 \\ 14 \end{array}$	Victor Hugo Madame V. Verdier	1884	Schwartz	Dazzling crimson, shaded
41	$10^{\circ}2$	15	Beauty of Waltham	$1863 \\ 1862$	E. Verdier W. Paul & Son	Clear light crimson Rosy crimson
42	9.9	17	Madame Eugène Verdier	1878	E. Verdier	Silvery rose
43	9.5	12	Duchess of Bedford	1879	Postans	Light scarlet crimson
4 4 45	$\frac{9\cdot3}{9\cdot1}$	10 19	Countess of Rosebery	1879 1873	Postans Paul & Son	Cherry carmine rose Deep scarlet maroon
46	8.8	14	Comte Raimbaud	1867	Rolland	Clear crimson, tinted red
16	8.8	2	Duchesse de Vallambrosa	1875	Schwartz	Flesh, changing to white
47 48	8.5	8	Jeannie Dickson	1890	A. Dickson & Sons	Soft silvery rose
18 18	8·3 8·3	1 4	Star of WalthamViscountess Folkestonc (H.T.)	1875 1886	W. Paul & Son Bennett	Carmine, shaded violet Creamy white, shaded flesh
49	8.1	12	Charles Darwin	1879	Laxton	Crimson
50	8.0	3	Violette Bouyer	1881	Lacharme	Tinted white
$rac{51}{52}$	7·5 7·3	$\begin{vmatrix} 7 \\ 5 \end{vmatrix}$	Auguste Rigotard	1871	Schwartz	Light carmine
53	7.0	7	Marchioness of Dufferin	1882 1891	Margottin	Light carmine Pink
53	7.0	7	Sénateur Vaisse	1859	Guillot	Bright crimson
54	6.9	9	Duchesse de Morny	1863	E. Verdier	Silvery rose
$\frac{55}{56}$	5.5 5.4	0 7	Monsieur Noman	1866 1879	Guillot	Pale rosy pink Violet crimson
57	53	i	Marguerite de St. Amand	1879	Turner	Clear rosy flesh
58	5.2	0	Victor Verdier	1859	Lacharme	Clear cherry rosc
59 59	$\frac{5.0}{5.0}$	$\begin{bmatrix} 5 \\ 0 \end{bmatrix}$	Duke of Fife	1892	J. Cocker & Sons	Bright crimson
59	5.0	5	Magna Charta Margaret Dickson	1876 1891	W. Paul & Son A. Dickson & Sons	Bright pink carmine Ivory white
59	5.0	0	Queen of Queens	1883	W. Paul & Son	Pale blush pink

as a rule to take a longer time than the new H.P.'s in coming into general cultivation. For instance, taking the two varieties sent out in 1887, Madame Hoste (No. 15), and Ethel Brownlow (No. 20), it is only at this year's show that either of these fine Teas has reached double figures. Ernest Metz (No. 7), first distributed in 1888, is, however, an honourable exception to this rule, having been staged twelve times at the 1892 exhibition, and as many as thirty times in 1893. In fact, there were this year only seven other varieties more frequently shown in the prize stands. The year 1889 finds two representatives; of these Souvenir de S. A. Prince, a pure white sport from Souvenir d'un Ami, takes for the first time a good place in the analysis, standing now at No. 10, between Maréchal Niel and Madame de Watteville. Cleopatra of the same year does not seem to have been at all favoured by the past season, having fallen since last year from No. 17 to No. 24. So fine and certain a flower is, however, pretty sure to makes its mark sooner or later, notwithstanding the slender habit of growth of the plant.

Although such a bad year for Roses generally, the summer of 1893 seems to have suited admirably both of the varieties which, in my opinion, are the choicest gems of the two sections into which this analysis is divided. I refer to Horace Vernet, the finest of the dark H.P.'s, and to Comtesse de Nadaillac, the most exquisitely tinted of all the Teas. This is certainly remarkable, as neither Rose can be regarded as by any means a

strong grower.

The sad loss the Rose world has recently sustained in the death of that champion raiser of Tea Roses, Monsieur J. B. Guillot, causes us to look down the two lists and note the many priceless treasures for which we are indebted to the Guillot family. Among the Hybrid Perpetuals we find La France, Horace Vernet, Comtesse d'Oxford, Sénateur Vaisse, and Monsieur Noman; and in the table of Tea Roses Catherine Mermet, the premier flower; Comtesse de Nadaillac, only second on the list, and when at its best second to none; Ernest Metz, the rapidly rising favourite; Madame de Watteville, the lovely "butterfly Tea;" Madame Cusin, the most distinct and charming of the red Teas; Madame Hoste, the most reliable of the yellows; Hon. Edith Gifford, the best all-round Tea; Madame Bravy, the oldest of the Guillot series; Etoile de

Lyon, and Madame H. Jamain. Surely a matchless record this! At the end of this paper will also be found the names of six beautiful "garden Roses," sent out by Guillot during the last ten years. Before closing the analysis it is once more my pleasing duty to express my best thanks to those kind friends who assisted me in taking down the names of the Roses in the winning stands.

To those who have but little experience in Rose culture the following se'ect lists may, I trust, prove of service, as I have endeavoured to include in them only choice varieties of good

growth and constitution.

HYBRID PERPETUALS.—Light coloured varieties.—Mrs. John Laing, Madame Gabriel Luizet, Merveille de Lyon, Baroness Rothschild, Marie Finger, and Jeannie Dickson. Medium Reds.—Ulrich Brunner, François Michelon, Marquise de Castellane, Dupuy Jamain, Camille Bernardin, Comtesse d'Oxford, Heinrich Schultheis. Reds.—A. K. Williams, Marie Baumann, Alfred Colomb, Ferdinand de Lesseps, E. Y. Teas, Duke of Edinburgh, Dr. Andry, Fisher Holmes, Victor Hugo, Sénateur Vaisse, and Earl of Pembroke. Dark varieties.— Charles Lefebvre, Louis Van Houtte, Prince Arthur, Duke of Wellington, Earl of Dufferin, Prince Camille de Rohan, Sir Rowland Hill, and Duke of Connaught.

HYBRID TEAS.—La France, Captain Christy, Grace Darling,

Augustine Guinoisseau, and Viscountess Folkestone.

Teas and Noisettes.—Innocente Pirola, Souvenir d'un Ami, Marie Van Houtte, Ernest Metz, Souvenir de S. A. Prince, Caroline Kuster (N.), Francisca Krüger, Anna Ollivier, Madame Hoste, Hon. Edith Gifford, Madame Lambard, Rubens, and Jules Finger.

Bourbon.—Souvenir de la Malmaison and Mrs. Paul.

Garden Roses.—The following are a few non-exhibition Roses of comparatively recent introduction which I have grown and can recommend. Hybrid Perpetual: Gloire de Margottin*. Hybrid Teas: Bardou Job, Gloire Lyonnaise*, Gustave Regis. China: Laurette Messimy*. Teas and Noisettes: Dr. Grill, L'Ideal (N.), Luciole*, Princesse de Sagan*. Polyantha: Gloire des Polyanthes*. Of the above ten varieties, those marked by an asterisk, six in number, were raised by Guillot.—E. M., Berkhamsted.

TEAS OR NOISETTES.

Analysis.	Average Number of Times Shown.	Number of Times Shown in 1893.	Name.	Date of Introduction.	Raiser's or Introducer's Name.	Colour.
1	41.9	43	Catherine Mermet	1869	Guillot	Light rosy flesh
2	38.0	51	Comtesse de Nadaillac	1871	Guillot	Rosy flesh and apricot
3	37.3	35		1885	May	White, tinged lemon
	37·1	35	The Bride	1878		Creamy white
4	31.6		Innocente Pirola		Madame Ducher	Pale rose
5	· - ·	31	Souvenir d'un Ami	1846	Belot-Defougère	Lemon yellow, edged rose
6	30.3	39	Marie Van Houtte	1871	Ducher	
6	30.3	15	Niphetos	1844	Bougère	White
7	30.0	30	Ernest Metz	1888	Guillot	Salmon, tinted rose
8	29.9	30	Souvenir d'Elise Vardon	1854	Marest	Cream, tinted rose
9	27.7	26	Maréchal Niel (N.)	1864	Pradel	Deep bright golden yellow
0	25.0	25	Souvenir de S. A. Prince	1889	Prince	Pure white
1	24.8	11	Madame de Watteville	1883	Guillot	Cream, bordered rose
2	24.7	17	Caroline Kuster (N.)	1872	Pernet	Lemon yellow
13	23.9	27	Madame Cusin	1881	Guillot	Violet rose, yellow base
14	22.0	21	Francisca Krüger	1879	Nabonnand	Coppery yellow, shaded peach
15	21.0	21	Madame Hoste	1887	Guillot	Pale lemon yellow
6	20 6	13	Jean Ducher	1874	Madame Ducher	Salmon yellow, shaded peach
7	20.4	14	Honourable Edith Gifford	1882	Guillot	White, centre flesh
8	17.8	12	Madame Bravy	1848	Guillot	White, flushed pale pink
9	17.1	10	Anna Ollivier	1872	Ducher	Pale buff, flushed
0	17.0	17	Ethel Brownlow	1887	A. Dickson & Sons	Rosy flesh, shaded yellow
21	14.0	6	Princess of Wales	1882	Bennett	Rosy yellow
2	13.9	14		1877	Lacharme	Salmon, shaded rosc
23	13.8	9	Madame Lambard			White, shaded creamy rose
23 24	11.5		Rubens	1859	Robert	Creamy flesh, shaded rose
		8	Cleopatra	1889	Bennett	Deep lemon
25	11.3	10	Etoile de Lyon	1881	Guillot	Creamy white, tinted rose
26	8.4	4	Souvenir de Paul Neyron	1871	Levet	Creamy white, blush centre
27	6.5	3	Devoniensis	1838	Foster	
28	6.0	3	Jules Finger	1879	Veuve Ducher	Bronzy rose
29	5.7	9	La Boule d'Or	1860	Margottin	Golden yellow, outer petals paler
30	5.2	9	Madame H. Jamain	1869	Guillot	White, shaded yellow
31	5.0	8	Comtesse de Panisse	1877	Nabonnand	Flesh, tinted coppery rose
31	5.0	1	Madame Willermoz	1845	Lacharme	Creamy white

HERBACEOUS PLANTS.

I AM afraid that all growers of these will find at the end of the season that they will have a heavy death roll to enumerate, especially in those parts of the country where water has been scarce. They may not at present have altogether perished, but I imagine that many of them will be in so weakly a condition that they will hardly be able to contend with the attacks of frost should we have anything like a severe winter. In the observations which I now venture to offer I do not lay claim to any special advantage or success, and the plants about which I have to speak are not of those difficult and trying kinds whose habits and wants seem to perplex us, and yet afford to some persons the opportunities they seek for in combating difficulties and triumphing over many obstacles. It is no doubt a delightful thing to be able to point to some plant which has baffled cultivators, and with laudable pride to be able to say, "I have mastered it."

Bearing in mind the controversy that arose some time ago with regard to the definition of these plants I venture to include Lilies amongst them; they are ever to me and to many others one of the most interesting classes of plants that we grow, and perhaps the season through which we have passed has been one of the most trying that we have experienced of late years. To some of them such as L. superbum (the Swamp Lily as it is called) the weather has been especially trying. My plants have grown about 18 inches or 2 feet, and have not flowered at all; while others such as Hansoni and Humbolti have thrown up stems and then withered away without the slightest attempt to flower; others it is true, such as Browni

and dalmaticum, have done fairly well.

While mentioning this beautiful class of plants I may draw attention to some blooms which were sent me the other day by Messrs. Wallace & Co., amongst them was a bloom of that very beautiful novelty Lilium Henryi, which has been frequently exhibited lately and attracted considerable attention, but will it retain that position? It is said that it may be fitly described as an orange speciosum, but it bears so close a resemblance to some of the forms of the Turk's Cap that it looks more as if it were related to them; however, as its price will leave it for some time in only a few hands I must be contented to admire it at a distance, and should I say anything disparagingly it might be set down to the old adage "that Grapes are sour." At the same time they sent me some blooms of fine forms of Lilium speciosum, all of which with one exception I have grown, this was Album novum, a fine form of the white speciosum. It, however, bears a very strong resemblance to one which I received from Holland under the name of Vestal; another was Melpomene which I have grown for some years but which now seems to be becoming more plentiful. It was, I believe, raised by the late Mr. Hovey of Boston, U.S., and is certainly the richest in colour of all varieties of speciosum.

It is remarkable how little has been done in the way of hybridising these Lilies. Some years ago a very fine variety called Parkmanni was figured in the "Florist and Pomologist." It was said to have been raised in America, and the stock came into the possession of Mr. Anthony Waterer; but like one of its parents, auratum, it seems to be a difficult bulb to grow, and although many years have passed he appears to have been unable to get up a stock of it. His want of success in hybridising seems to be the more strange if, as is stated by some botanists, auratum itself is a natural hybrid between speciosum and longiflorum, and is catalogued by some bulb growers as speciosum imperialis. The others were cruentum and macranthum, the former a rich colour variety approaching Melpomene. Amongst other Lilies, Browni succeeded well with me, but have not been able to do anything with Krameri either in pots or the open ground. I have tried it in various ways, even in pure cow manure and sand as recommended by Max Leitchlin, but in all

cases I have failed.

VERBASCUM OLYMPICUM.—I draw attention to this grand herbaceous plant for two reasons. I do not think that it is grown as much as it ought to be, for it is a noble-looking plant, its large leaves 3 feet long, and its grand branching flowering stem from 8 to 10 feet high, with its bright yellow flowers produced in great profusion, make it a conspicuous object and peculiarly adapting it for large places; besides when the centre stem is cut down from eighteen to twenty smaller branches are filled with flowers though not quite so large as those produced on the main stalk. The other reason I have for mentioning it is that although considered as a biennial it is not always so. Öut of the three or four plants that I had there is one which flowered last year, and has thrown up a large shoot from the root with fine vigorous leaves, which will form a good flowering plant for next year.

SCABIOSA OCHROLEUCA.—A plant which I have received under this name is said not to be a Scabious at all, but a Cephalaria; however that may be it is very Scabious like in appearance, and is an effective plant; the flowering stems are 3 feet high, and the colour of the flowers a soft shade of primrose. Of so well known a flower as Scabiosa caucasica it is hardly necessary to say a favourable word, but its long flowering habit, continuing as it does in bloom for three months, and its pleasing shade of colour, ought to secure it a place everywhere.

COLCHICUM SPECIOSUM. — Among the various varieties of Colchicum (or as they are called in Kent Naked Boys), there is none that I have seen equals this for the size and substance of its petals. I received my bulb a couple of years ago from my friend, Mr. Ewbank, and it has now established itself, and is doing well.

ENOTHERA MARGINATA.—This, to my mind, the most beautiful of the dwarf varieties of Evening Primroses, has made itself most thoroughly at home with me, though I have heard of persons who have found it difficult to manage. The worst point about it is its rambling habit. I planted it on one side of the walk, and under which said walk it has found its way and has come up on the other side, having left its original location, and now forms a compact mass about 4 feet square. Enothera taraxacifolia is I believe

very similar to this, but keeps more at home.

EREMURI.—I mention these, not because I have had any success with them, for my attempts have proved failures. Twice I tried E. robustus, and I have altogether lost it; and once I received a root from Holland under the name of Olgæ, which flourished, but turned out to be a worthless Asphodel. I grieved for these failures, especially when last year 1 saw a grand spike exhibited by my friend Mr. Page Roberts at Chester. There are four species under cultivation, but they are somewhat difficult to procure, for though they seed freely it requires five or six years to bring them to the condition of flowering plants. Eremurus robustus is a magnificent stately plant, in colour soft rosy pink with yellow centre, a spike being about 2 feet in length. I have heard the foliage described as handsome, but I cannot say as far as my experience goes that I consider it so. The leaves are long but very brittle, and were constantly broken by high winds. A grand spike of this was exhibited by Mr. Pritchard of Christchurch, Hants, at the Temple Show. E. himalaicus was exhibited in good form last year by Mr. Smith of Newry, spikes of pure white flowers, which is said to be not difficult to grow. E. Olgæ is the latest flowering. I have seen it once exhibited by Mr. Ware at the Aquarium in September, and was much struck by its singular beauty. E. Bungei, another beautiful species not quite so tall. There is, of course, a difficulty about exhibiting, an amateur hardly likes to deprive his garden of so grand an ornament for the sake of the exhibition table.

GYPSOPHILA PANICULATA.—I have before now spoken of this as so valuable for cutting for bouquets, and my object is mentioning it now is that my plant is finer this year than I have ever had it before. Supposing, from its name, that it was a lime-loving plant, I put a considerable quantity of chalk among the roots, but whether its vigour is to be attributed to this or to the hot dry season I cannot tell.

ARNEBIA ECHIOIDES.—Whether it is to be attributed to the dry season or not I do not know, but this plant has flowered well with me a second time, and its bright yellow flowers with brown spots render it a pretty object either in the rockery or border.

ERYNGIUM AMETHYSTINUM.—There are few more striking objects in a border than this Sea Holly with its beautiful metallic blue lustre on leaves, stems and flowers; but one must be very careful in handling it, for the Noli me tangere is much more applicable to it than to the Thistle which Scotland has taken as her emblem. There seems to be some confusion about plants of this genus. Are they biennial or perennial? I have a plant under the name of giganteum which, however, is not nearly so tall as amethystinum and has whitish flowers, but on turning to Messrs. Paul & Son's catalogue I find that variety described as blue. This, however, seems to me at any rate, to be a biennial; then there is alpinum, which I have not grown, but which is said to be very pretty. It is difficult to arrive at the names of plants by the colour of their flowers, for botanists seem to have a contempt for this portion of the description, and I have seen plants very accurately described so that they were easily recognisable, but, alas! when the colour was spoken of it was entirely different.

ASTER BESSARABICUS.—I give this name with some hesitation to a very beautiful variety of Michaelmas Daisy, which has been in flower in my garden for some time. I say with hesitation, because it seems almost impossible to arrive at a correct nomenclature. variety which I have under this name grows to a height of 2 feet to $2\frac{1}{2}$ feet; the flowers are large, and very freely produced, of a bright purplish blue, with a yellow centre. There are many others of the family now coming in, but I think it hardly necessary to note them, for it might happen that the names by which I have received them may not be correct; but most of them are desirable plants at this time of the year.

AMARYLLIS BELLADONNA.—However trying this past summer may have been for herbaceous plants and many Lilies, it has unquestionably suited this autumn flowering member of the group. My own bulbs, planted in the front of a greenhouse facing south, are flowering more freely than I ever had them before; I, however, saw the other day in a friend's garden near here some grand clumps in full flower, reminding me somewhat of a long border in a garden at Bray, in Ireland, which at this time of the year used to be one mass of bloom. Like some other of the family, it requires a warm sheltered border, and also prefers to be let alone. Any ordinary garden soil seems to suit it.

ZEPHYRANTHES CANDIDA.—The dry summer also seems to have suited this delightful little bulbous plant, which is not so often seen in gardens as it ought to be. Its habit is dwarf, the foliage small, and the pure white flowers freely produced. Light and rich

soil seems to suit it.—D., Deal.



CYPRIPEDIUM CHARLESWORTHI.

One of the most distinct Cypripediums of recent introduction was exhibited under the above name at the last meeting of the Royal Horticultural Society by Messrs. Charlesworth, Shuttleworth and Co., Heaton, Bradford, and a first-class certificate was awarded for it. C. Charlesworthi (fig. 43) is a new and beautiful species introduced by the above mentioned firm from the East Indies. It is very dwarf, with long narrow leaves. The flower stem is only 3 to 4 inches long. The lip is short, green, heavily suffused with bronzy brown, and the dorsal sepal is very noteworthy. It is broad and rounded, and the colouring is a beautiful soft rose, delicately veined. The staminode is pure white. A feature of the leafage are the rows of dots on the reverse side. The species is a great acquisition, and will become popular with Orchid growers.

REPOTTING AND SURFACING COOL HOUSE ORCHIDS.

THE present is perhaps the most suitable month in the year for a thorough overhauling, cleaning and repotting, or surfacing as the case demands, of the plants in the cool house. There is a time when all healthy Orchids put forth a flush of young roots, and in the case of Odontoglossums and kindred plants it is usually at this season when the growths are approaching completion. This is the time that Orchid growers should give fresh sweet compost for the new roots to take to at once. It will give the plants a hold on their pots that will stand them in good stead during a long dull winter, and will also assist them materially in swelling up fine healthy pseudo-bulbs.

Masdevallias of the Harryana, amabilis, and Veitchi types, though many prefer to repot in the spring, would often be more easily wintered if given new compost early in the autumn. The soil is frequently in such a fine and close condition after the repeated and copious waterings necessary to their well-being in the summer months, that unless watering is judiciously performed the plants lose the greater portion of their roots in the winter. This is a serious check to the plants, and can only be avoided by keeping the compost in a sweet and open condition, and providing good

drainage.

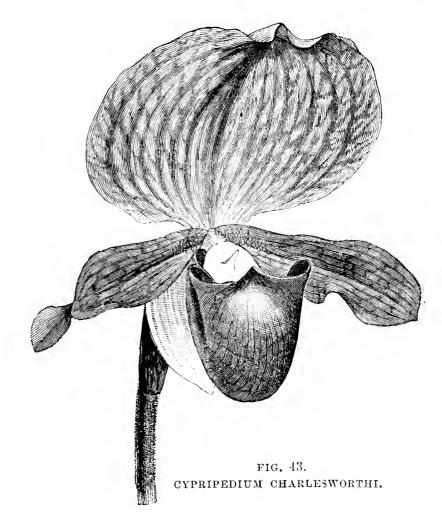
The mode of potting these useful Orchids has often been referred to in the Journal of Horticulture, so that it is only necessary to say that clean pots of as small size as possible should be used, in no case allowing for more than about an inch of compost around the old material. Fill two-thirds of the depth with drainage, use some clean moss as a film, and plenty of finely broken potsherds mixed with the compost. Plants that have the drainage in thorough order and do not require larger pots should have a little of the surface soil removed and fresh compost dibbled in where necessary. After the plants have been thoroughly cleaned, and before they are returned to the house, the stages, glass, and walls should be well cleaned as advised by "Specialist" on page 215.—H. R. R.

OUT OF TOWN.

Worksop in the summer is made lively by ever arriving excursionists. They come from all parts of the country, but the manufacturing districts chiefly, for a visit to the Dukeries. Conveyances of all kinds are crowded, and choral parties sing happily on the way. Glad enough are Sheffield and Manchester workers to get

out of town, and they are out of it very decidedly in the glades of historic Sherwood. The freedom that is granted is a boon to the thousands who avail themselves of the privilege afforded. There are only two Dukes in the district now, but there once were four—the Duke of Norfolk, Worksop Manor, now belonging to John Robinson, Esq.; the Duke of Kingston, Thoresby, now the seat of Earl Manvers, with the Duke of Newcastle, Clumber; and the Duke of Portland, Welbeck. Of the two latter estates the ducal owners are still young, kindly disposed to all and more than popular; yet not more respected than is our guide, and surely no better guide there could be, for Mr. Machin can go anywhere and is everywhere welcomed in the district.

We have a "long day" before us, for Welbeck, Thoresby, and Rufford have to be visited, and then there is a drive of several miles to Southwell. The squire brought a good horse and comfortable wagonette, with something in it, and away we sped on our journey. We skirted the ancient manor of Worksop, embowered in trees, the estate being richly wooded, and in the course of half an hour drove right into the kitchen garden at Welbeck, for the garden "walks"



are carriage drives, in fact everything, seems great about it. The kitchen garden certainly is, for enclosed are thirty acres, and the glass structures are in keeping; then if we look beyond to the huge stone buildings, riding school, and others, with dozens of detached villa-like residences, we have to feel that Welbeck is not as other places are. It is distinct from all above ground and still more so beneath it, and though it cannot be said to be beautiful it must be regarded as wonderful. But we cannot explore, and only a quick rush through some of the houses is practicable while the wagonette is waiting. Mr. Horton was luckily at hand, and we were at ease with him in a moment. He has been nineteen years in the gardens, and has a clear firm grip of his great charge. The demands of the establishment are enormous, and a cart is always at work taking produce from the gardens to the Abbey, but very unlike an Abbey is the huge square pile which stands out bleak and bare with never a tree on the wide expanse of lawn in front of it.

We race through a large vegetable house, onwards through figgeries, peacheries, vineries, and planteries, tropical and otherwise; now we are under a rich canopy of Bougainvilleas and Allamandas, with beautiful decorative plants all around, and anon in one house or another amongst apparently all kinds of fruit grown in this country, but not in all places so well as at Welbeck. Glass ranges 100 yards long appear to be plentiful, and, large as they are, look small when we enter others twice or nearly thrice that length, and all well and profitably occupied, while cleanliness and good order are prevalent everywhere. The pink "Malmaison" is the favourite flower of the Duchess, and great provision is made to meet the daily demand all the year. We entered not the famous underground tunnels, but were content to peep into one above ground, an arcade of Apples and Pears, probably nearly 300 yards long, and then after keeping our

distinguished coachman waiting too long, and doing no sort of justice to the work of a genuine gardener who knows his business and does

his duty, we sped away to the forest.

Soon were we among the Oaks, on some of which the sun has shone for centuries, the Greendale Oak having stood its ground for more than a thousand years, so, no doubt have other of the giants of a far past time, but now mere shells dwindling to decay, yet some of these ancients still fruitful. As we pass along the broad green glades, dodging the flies as best we can, it was pleasing to note the young plantations duly "labelled" with the date of sowing, and the names of the historic trees from which the seeds were gathered; and what striplings were these trees of thirty of forty years old in comparison with their ancient progenitors! Vast as is this expanse of woodland, yet all around we see evidences of care, of love, and of labour in keeping everything in order, yet retaining the characteristics of the sylvan scene.

Eventually, after sundry turnings, as if tracing our way through a gigantic maze, we emerge into the open country and are soon passing through the pretty village of Edwinstowe, a village of refreshments it would seem to be judging by the invitations to tea, luncheon, or modest hot water in windows or garden tablets all along the line, saying nothing about everything else you may want and are ready to pay for, from bread and cheese to a champagne dinner, from a saddled donkey to a four-in-hand coach. good reason to be proof against all such blandishments we enter the forest again and meet a stream of tourists wending their way to the general commissariat. We are soon driving round and admiring the Major Oak under which "parties" are resting, enjoying the shade and mid-day meal. This noble tree will shelter many, for the circumference of its spreading branches exceeds 700 feet. It stands alone on an open plateau of grass, a truly majestic specimen of its kind, and though its huge trunk is said to be hollow the branches appear to be as healthy and the leaves as green as those of young trees not over a century or two old, these in turn being as fresh as thousands not long since out of their teens. The soil, at least on the surface, is sandy and poor, but there must be something better below to support the magnificent arboreal vegetation through which we pass to Thoresby, which is not very far from the "Major.

The drive after entering the demesne is grand almost beyond description, at least to those who admire gigantic Oaks rising from an undergrowth of bracken, the trees standing far enough apart, probably 50 or 60 yards, for showing their individuality, massive trunks, and noble heads. There is no formal avenue of them, or anything approaching thereto, but they stretch away on each side in picturesque irregularity. Thoresby has been described as the "Queen of the Forest," and certainly the view from the comparatively new, large, and ornate mansion, of boldly undulating park, with distant tree-clad hills and pastoral dales, of river and lake, and herds of deer, is in its scope and diversity a scene to be enjoyed and remembered. Yes, it is a queenly place is Thoresby: but we arrive at the gardens, long behind time, and almost "given up" by the genial gardener, whose name is familiar in the horticultural world through long and excellent work in gardening, for who has not heard

of "Henderson of Thoresby?"

"Come in and have some dinner; it has been a long time ready, and not now as we should like it, yet there it is and a good welcome." Such was the greeting. "No, no, Mr. Henderson, many thanks, we are foresters to-day, and our repast must be on the green sward, and our canopy the greenwood tree." He could see we were well provided for when it took two men to carry the luncheon basket for three, and our friend stepped aside with a quiet smile. We feasted as Robin Hood never did on venison pie with the sparkling accompaniment of Moses and Aaron—the old waiter's phonetic rendering of some such sound he had heard as Moët and Chandon. No, the mystic Robin had none of this, though he is credited with a liking for nutbrown ale. But as all things come to an end so did our little pic-nic, and one man could then easily carry the basket into the boot of the

Now to the gardens. As at Welbeck, so here, we could only have a quick march past much that was good to see, and not an inspection. Outside, the crops were suffering from drought more than any others in the Dukeries, as the soil is light and sandy. It is this light soil which renders fruit growing no easy task in the houses, but with the best cultural attention a full and good supply is provided. The glass ranges are extensive, and in them Grapes are produced of excellent Peaches and Nectarines are extensively and admirably grown, while of Figs the supply is bountiful. As showing the influence of soil on Vines Mr. Henderson had by special effort procured enough of a substantial kind for one small vinery border, and the effect was most telling, displayed by growth, foliage and fruit, but sufficient for all the long ranges is out of the question and not really needed, for the fruit is as good as is desired for table, and Mr. Henderson would not increase his fame as a gardener by growing for and winning more prizes at shows. Plants are extensively and

well grown for decorative purposes; the terrace flower garden was highly attractive, young Conifers flourishing, indeed almost growing too fast for each other, and everywhere cleanliness and good order added to the enjoyment of this well appointed and well

After a short rest in the pleasant home of the gardener, who has worked so well for thirty years in his fine charge, and kind attention from Mrs. Henderson, we had to leave Thoresby all too soon, knowing that at a village inn another carriage was waiting. We had there to part company with the generous friend who had done so much for us and whose name will be held in grateful remem-

brance, Mr. Henry V. Machin of Gateford Hill.

Mr. Henry Merryweather now takes the reins, and we make a dash before dark for Rufford Abbey, the seat of Lord Savile, whose gardens are so admirably managed by Mr. R. Doe. Here we found the finest collection of hardy fruit seen during the midland explorations—hundreds of dwarf open bush Apple and Pear trees, models in their way. The varieties had been allowed to assume their natural character, but the branches wide apart standing quite clear of each other, the best of all ways for having them studded with blossom buds their whole length, to be followed by ropes of fruit from base Many of the trees had grown too freely and had to extremity. wisely been lifted, a great work with so many from 8 to 10 feet in diameter, and the work of watering during the roasting summer had been the reverse of light. But there is plenty of water at Rufford, for a beautiful stream runs through the gardens and is made to It was from here that the very form an ornamental feature. symmetrical Beauty of Stoke Apple came that was certificated at Westminster two or three years ago. The tree is excellent in habit,

a good bearer, and Mr. Doe has kept fruits till June.

We run hastily through the houses, for daylight is departing, and

notice Vines in admirable condition bearing valuable crops, Gros Colman established on the Muscat gaining in flavour by the connection. The Vines in one house were lifted, the border cleared out, a new one made, and replanting done after they had started growing and were showing bunches in the spring. This was occasioned by a horde of rats taking possession of the border, and they could not be extirpated in any other way. Notwithstanding the ordeal through which those Vines had passed they were ripening an excellent crop of fruit, good proof of the capacity of the cultivator. Peaches are extensively, and it must be added splendidly, grown at Rufford, and it would be hard to find trees in a better state for bearing full crops of fine fruit. Mr. Doe is also famed as a Tomato The plants are grown in boxes about 3 feet long, made with 11 inch deals, five or six plants in each box, and trained up the roof of a span-roof house. They bear enormous crops and seem proof against disease, though many varieties are grown for testing with the standard sorts—Hackwood Park and Ham Green. It would be instructive if Mr. Doe could find time to record his experience, but he is a busy man-always at work whatever the hour may be when work needs doing. Near the mansion, a huge pile, a large lofty winter garden and museum has been erected. It contains splendid Palms, which could only have been obtained at great cost, but no man is to be envied in having to grow them in a structure so unfavourable to their well being, and if Mr. Doe cannot succeed with them the case will be hopeless. Near the winter garden is a huge Walnut tree which "some folk say" is the finest in England. Its trunk girths 28 feet, so now if any reader can find a finer he may send the dimensions to the Editor. The pleasure grounds are extensive, but the lawns were "burnt up," and flowers in the beds struggling against the heat. Yet, great as this was, beds of a white seedling Pansy in the kitchen garden were a sheet of flowers. The pure white Princess Alice Stock was also fresh and extremely beautiful, far eclipsing all others and worthy of being tried in many gardens.

That is all that can be said about Rufford and the work of its undoubtedly able gardener Mr. Doe. The darkness deepens, the clouds thicken, and the hoped for rain comes down; we have a ten miles treat through it, are distinctly "out of town" and go on our way dripping yet rejoicing to verdant Southwell.—A CITY MAN.

PEARS VERSUS PEACHES.

THE article on this subject (page 259) was interesting, and the reasoning in every way much to the point. The question which "C." there brings forward is of the utmost importance, and the remarks of your correspondent should be carefully perused by all who want to make the most of the space at command. At one time there were many gardens in which Peaches used to be well grown out of doors, but at present such are exceptions to the rule. Seldom does the crop prove a profitable one, and taking the seasons together hardly pays for the labour expended.

The times seem to have changed considerably, and a wall of outdoor Peaches would in the long run fall far short of one filled with cordon

Pears of such varieties as Jargonelle, Williams' Bon Chrêtien, Souvenir du Congrès, Pitmaston Duchess, Doyenné du Comice, Marie Louisc, Beurré Dicl, Thompson's, Prince Consort, Glou Morçeau, Easter Beurré, and other good sorts. Against the few gardens where Peaches do well outdoors, how many have walls with trees trained to them just merely languishing out an existence, and which no amount of skill and intelligence on the part of the gardener can ever make them bring forth satisfactory results? Instead of devoting a whole wall with Peaches it would be better to build either a second loss to be a second lo would be better to build either a case or a lean-to house on a part of the wall, and fill the remainder with cordon Pears. I mention cordons because they are admirably adapted for walls, and much variety may be grown in a limited space. Many more and finer fruits of Peaches could be obtained from an unheated house, although probably not taking more than a quarter of the wall space, in a few years than would be gathered from an outdoor Peach wall in a lifetime.

An instance might be cited. A south wall 120 yards long at one time used to be occupied with Peach trees, a fair crop being the result about every three or four years, and this with every care being taken in their cultivation. My late employer not being satisfied with the results the wall was made 3 feet higher, and a three-quarter span-roofed house 130 feet long erected. The best of the old trees from the wall were selected, and planted alternately with young ones. From the old trees we had a fine crop the first season, and when the young ones wanted more room the former were moved. My employer remarked that in the My late employer not being satisfied with the results first four years he had had more Peaches and Nectarines than from trees grown out of doors in twenty years. The remainder of the wall is now planted with espalier trained Pear trees—it being too low for cordons and these add very materially to our supply of fruit. I have no desire to say that good Peaches cannot be grown outdoors, but in this district (Liverpool) they may be nearly counted on the fingers of one's hand. Good Pears would appear to find a ready sale, for the finer samples of Williams' and Pitmaston Duchess have been selling in the leading Liverpool fruiterers' shops at 3d. and 6d. each,—R. P. R.

THE subject discussed by "C." (page 259) as to whether south walls may be the more profitably utilised for the production of Pears or of Peaches admits of some divergence of opinion. A few days previous to the appearance of the article alluded to I happened to call on a gardener who has under his management south walls planted respectively with Pears and with Peaches. The former were so much in evidence that I remarked in passing they would surely net a larger sum than the latter. But, no! good Peaches at this season bring fair prices, and fine as many Pears are, there are still Peach trees in existence which produce year by year good crops of fruit.

With the general tone of the article in question one is only too pleased to agree. I am hampered with old trees which have changed proprietors so often that they are veritable heirlooms. They are too old to be depended on, are only intermittently fruitful, and never produce fruit of the best quality. For my own part, I should be only too pleased to burn, not all, but nearly every old tree in the garden, root and branch, to be in three to five years in a position to produce with certainty more and better fruit than it is possible to get from our present stock. is, I believe the one reason why Peach growing in the open has declined so much—viz., old trees which proprietors will not allow to be destroyed and replaced by young ones. I know trees that are now doing duty which thirty years ago were aged. Is it reasonable to expect the best or even average results from these? I think not.

It is, however, a point worth considering, whether too much space is set apart to Peaches to the exclusion altogether of Pears from south walls. In an ordinary family the requirements of fruit at one time are, as a rule, not difficult to meet. In my own case I have kept an uninterrupted supply of Pears for over two months almost entirely from a few small trees, and some of these single cordons. The larger of the trees have yielded so much fruit that some had to be sold. In the same way for some time back I have been getting occasional dishes of Nectarines and Peaches from a few trees growing on the low front wall of a plant house. So convinced am I of the utility of a number of small trees that for a few years back I have been planting cordons and

other trees on vacant places on walls. Even with Peaches I do not consider it necessary to go to the trouble and waste of time necessary to lay the foundation of a huge fan-shape tree. If the situation, climate it may be called if that seems a better term, does not suit, it is easy to keep a supply of young trees to take the places of those stricken down. If they never get very large one has less compunction at being under the necessity of removing them.

With Pears it is somewhat different, for on a south wall a tree can be grown to a large size and continue fruitful for many years. here again the question crops up whether it is desirable that a large tree of one sort ought to be grown, or, in its place, several small ones? Many varieties of Pears should be cultivated provided the sorts grown are of good quality. It is, however, not uncommon to find choice varieties limited. A few large trees cover the wall space and there the matter ends. I am referring to the northern parts of the island. But we have now so many Pears really worthy of cultivation that instead of extending the size of large trees we ought rather to increase as much as possible the number of varieties and limit the size of the trees. At present one has a choice of such good sorts as Williams' Bon Chrêtien, Souvenir du Congrès, Beurré d'Amanlis, Louise Bonne of Jersey, Dr. Hogg, Fondante d'Automne, Flemish Beauty, and Belle Julie. Each

of these is in flavour distinct from the other, and one might go on enumerating a long list of sorts to which the same remark would apply. Therefore it can be no loss to limit the space devoted to Peaches, to growing fewer of these, or rather, I should say, to producing smaller trees; and where it is not already done substituting for them medium-sized Pear trees in as many good varieties as it is possible to find room

HAVING returned after a quarter of a century to the same neighbourhood in Somersetshire that I formerly occupied, I looked forward to repeating my pleasant successes of the past in growing Peaches. Accordingly last autumn I filled some empty places in the wall with Noblesse and Sea Eagle, my landlord, "distance lending enchantment to the view," dilating on the size of the Peaches that used to flourish on that wall when he was a lad, where now other tenants had filled vacant places with Pear trees and Plums. Having then planted the Peach trees and taken them under my own special protection, and into the bargain being considerably proud of their appearance, picture my the bargain being considerably proud of their appearance, picture my feelings on reading a fortnight ago that my work was all "Love's labour lost," and that I had much better have put in some Pears! Such a dictum did not at all agree with my own feelings. Certainly the memories of the past painted the Peach trees as more prolific, fruit for fruit, than the Pears. Then I had Noblesse, Grosse Mignonne, and Barrington, and the two former were certainly more fruitful than the Pears Forelle, Beurré Rance, Napoleon, although Williams' Bon Chrêtien, Jargonelle, and Beurré Diel generally equalled in number the stone fruit, the latter a very handsome Pear to look at; but "handsome is that handsome does" applies to it in my opinion, for I consider it in the raw state a worthless fruit, and one that I should never burden my walls raw state a worthless fruit, and one that I should never burden my walls with unless I possessed some hundred yards of the same. I cannot understand its being styled "melting." Of the many fruits that I have tasted I have never met with one that deserved the title of Beurré. All were disappointing.

I have every regard for a really good Pear, it is a splendid fruit; but in my estimation it never could equal a good Peach, although I grant I have heard not a few persons maintain the contrary. Well, as our neighbours say, "Chaçun à son goût;" but even this does not entitle us to advise setting Pear trees in the place of the Peach, or to writing almost as if the latter was of little value. I have little doubt, then, that friends of the Peach will, like myself, feel relieved at the timely words of such an authority as Mr. E. Molyneux (page 287), and so I

gaze at my young trees and urge them to go on and prosper.

My small experience as to "blister" agrees with that of Mr.

Molyneux; it does not prevent a fair crop of fruit, but doubtless this would be altogether better without the infliction. I used to set to work and pick off these bloated specimens of foliage and get rid of them. know that it is often attributed to east winds, but I have always felt that this was somewhat mythical. Is east wind really the cause l wonder what Mr. G. Abbey may say to this. I have always fancied that there is something of the mildew character about it, and that there are If this be so there would be more reason for destroying it as soon as detected. Under a fairly strong poeket magnifier it looks like some sort of efflorescense over the swollen and distorted leaf.—Y. B. A. Z.

I AM quite sure Mr. Molyneux (page 287) will find many readers who will agree with him in his opinion as to the relative value of Pears and Peaches. Those who have gained experience in the marketing of such fruits are best able to judge which may pay the better price, and as Pears may be grown quite as well on other aspects it seems a pity to utilise south walls for these at the expense of Peaches or Nectarines. Either for market or private use Peaches are a summer and autumn crop, and for a just comparison Pears that ripen at the same time should be reckoned with as occupying the position in question—namely, south walls. Early summer Pears certainly cannot claim a very great value because of the short period under which they may be kept sound; and in the autumn there are plenty to be had from garden and orchard bush and standard trees which will reduce the value of wall-grown fruit however good it may be. In the autumn, too, there are, as Mr. Molyneux points out, the French and Jersey Pears to be reekoned with, and it must be indeed good English fruits that can compare with these both for colour and size.

The unpopular opinion that has obtained in so many gardens as regards outdoor Peaches is due more largely to want of proper attention in the matter of spring protection, pruning, and thin training of the branches than any other cause, although it must be admitted that every garden is not absolutely suited to their requirements. Late sorts are not always remunerative, and should be replaced by those which ripen their crop in time to do some pruning before the sunny days are entirely gone. If early and midseason sorts of good repute were chosen more freely for growing outdoors I am inclined to think there would be less cause for complaining about Peaches. Very late sorts, such as Salwey, Golden Eagle, and Lord Palmerston, may help to form variety; but my experience of them is that they are treated more as an ornament to the table than as a dessert fruit by those who know them. It is useless for me to send them to table in a raw condition here; they must be cooked before they are considered acceptable at the table. I am referring, of course, to these Peaches in their proper season—October.

Although I have seen several excellent walls of Peaches outdoors, I think the best was under Mr. Robinson's charge at Heywood. There were plenty of fruits there of Walburton Admirable, Princess of Wales, and Demond weights and Demond and Dymond, weighing 10 ozs. each, the colour and quality being superb. I am quite sure there would be no comparison in the value of a Pear crop occupying the same amount of space as these Peach trees, even if

they were valued at a lower rate than that quoted by Mr. Molyneux; and I am convinced that more than one adverse season must occur before Pears will be accepted and adopted as a more appreciative and paying crop. At Marston a failure in outdoor Peaches is almost an unknown thing, and this year Mr. Iggulden gathered several dishes of fruit in June, and a heavy crop was borne by every tree under his charge. Strong as he has frequently proved himself in Pears, he would not be guilty of filling his warm south walls with these. I have found that an east aspect is better suited than a wall facing west for growing Peaches outdoors. They do not obtain the same amount of sunshine in the latter position, and consequently their wood does not ripen so perfectly, particularly where the walls are lofty. Nor do the leaves blister so badly as a rule in the spring, sometimes not so much so as they do on a southern exposure.—W. S., Rood Ashton.

WEMBLEY PARK.

Wembley Park, the most important of the latest additions to the lungs of London, is situated on the north-western side of the metropolis midway between Neasden and Harrow-on-the-Hill. A new station has recently been opened there, it is thus within easy access of the city, and can be reached in twenty minutes from Baker Street on the Metropolitan Railway, travelling by the Aylesbury line. Although comparatively close to London the whole district at present has a rural aspect, which adds a charm to the surroundings of a picturesque park. At one time Wembley Park formed the grounds to a private residence, but the whole of it was purchased a few years ago by the Metropolitan Tower Construction Company to provide a pleasure resort, including a feature of a unique character. The latter will be known as the Wembley Park Tower, which will doubtless prove a powerful attraction. It is not within the province of a gardening paper to go into details regarding this wonderful example of engineering, but when a Journal representative gazed upon it a few days ago he came to the conclusion that when completed it would be a stupendous erection. It will exceed in altitude by 175 feet the famous Eiffel Tower in Paris, the latter being 955 feet in height, whilst the tower at Wembley Park will be 1150 feet high. It stands on a hill, so that when completed the summit of the erection will be 1300 feet above the sea level. Already the four huge buttresses covering over 2 acres of ground have reached a height of 100 feet, and it is anticipated that the tower will be completed in eighteen months. It will weigh about 7500 tons, and on the three platforms there will be a concert hall and numerous other attractions.

The grounds, however, concern us most here, and, attractive as the Tower is, a brief description of the manner in which these have been laid out by Mr. H. E. Milner will perhaps be more interesting to readers of this paper. The Park is about 130 acres in extent, has an undulating surface, and is remarkably well wooded. There are some fine Oak trees standing in clumps and singly in various parts, and these have been preserved and shown to great advantage by Mr. Milner. On entering from the railway station the visitor's attention is first attracted to a picturesque lake which covers 8 acres and has an uniform depth of 3 feet. This is fed by the river Brent, and the scene has been enhanced by the erection of pretty bridges and the formation of islands. One of the latter is planted with Bamboos, which will form a striking feature when established, as also will the splendid clumps of Golden Elders and other shrubs on the banks. On the north side of the Park there is a wood which will be a charming retreat, and a main road is carried round the grounds until it reaches the Tower. The walks and roadways are laid out in a manner that gives evidence of a masterly hand, the grand sweeps and curves being most conspicuous. Fine groups of shrubs of different kinds have been planted in suitable places, and these have already made good growth. In front of the principal refreshment pavilion a splendid terrace has been formed. This has a bold walk through the centre, leading from the building mentioned to a band stand and then sweeping on each side to other walks. Flower beds are being laid out on the terrace, and these will in due course be devoted to the latest phase of bedding. The principal pathways are bordered with shrubberies in places, and amongst other plants some clumps of Hydrangea paniculata are noticeable. It is obvious that the most has been made of everything. There is nothing petty discernible, but everything is of a bold and sweeping nature which always characterises the work of a good landscape gardener.

Apart from the features mentioned there are others of a more important nature perhaps in the athletic world. Cricketers and football players will be glad to learn that Mr. Milner has formed a splendid ground, which is already in request, as the Old Westminsters, one of the leading amateur clubs of the south, have arranged to make Wembley Park their headquarters this season, the first match probably taking place on October 14th. A magnificent running track, having only two laps to the mile, encircles the cricket ground, which is also bordered with groups of shrubs tastefully planted. Many other similar things are provided, and al fresco entertainments of various kinds will be given when the Park is opened to the public, as it will be shortly.

TUBEROUS BEGONIAS AS BEDDING PLANTS.

I READ with some surprise the sort of half prophecy that "W. P. W." (page 264) is inclined to make anent the future of Tuberous Begonias as bedders. With me they have this year done even better than in other easons. Perhaps it may be the situation that is in favour of a free

growth and abundant blossom. Our best display of these plants is in a bed occupying about a hundred tubers, some of them six years old at least. Dotted here and there amongst the Begonias are Eucalyptus globulus, Ricinus cambodgensis, and Abutilon Thompsoni, with the object of giving relief to the otherwise formal surface. No doubt the latter plants have provided an agreeable shade to the Begonias, as the Eucalyptus and Castor Oil plants are now 6 feet in height. The Begonias have grown fully 2 feet high, have flowered profusely, and are doing so at the present time (September 25th).

In spite of the popularity of Tuberous Begonias as summer bedders, and the ease with which they can be grown, I fear many persons do not manage them as well as they might. Too often growers neglect to provide some slight shade for a week or two after they are planted, if the weather be hot and dry. Some plants receive a check at that time from which they do not recover during the summer. As planting proceeds I provide a slight shade by thrusting in a few green Sycamore or Chestnut boughs amongst the plants. The soil is then kept cool, and plants under such conditions quickly become established. The covering of the soil between the Begonias with some low growing plants such as Sedum Lydium, S. glaucum, or Herniaria glabra is too often neglected, and in a hot season as that just experienced the advantage of so doing has been demonstrated. Not only do they provide an agreeable contrast between the various colours of the Begonias and themselves, but they arrest the evaporation of moisture from the soil by the sun and keep the roots comparatively cool. I have at the present time a very fine display of these Begonias from plants that were raised from seed sown early in February of this year.—E. MOLYNEUX.

BEGONIAS AT FOREST HILL.

To see Begonias in beds everyone should at once pay a visit to Messrs. J. Laing & Sons, Stanstead Nursery, Forest Hill. Catford Bridge, on the South-Eastern, and London, Chatham, and Dover Railways is the nearest station. Those who go will be astonished at the magnitude of the undertaking, a plot of ground over two acres in extent being entirely filled with double and single varieties. The number of plants required for this purpose reaches almost to the stupendous total of 350,000, and it cannot easily be imagined what a spectacle is presented to the eyes of visitors. The plants have this season, as everyone well knows, been terribly handicapped by the dry weather of the past summer, so that now the number of flowers expanded amount to about that which one might naturally expect to see during July. The plants, too, have not made the growths which usually characterise well managed Begonias, nevertheless they are strong, dwarf, and carrying large numbers of excellently coloured, perfectly formed blooms. Bright and beautiful, a picture of health, and an example of untiring intelligence and energy, is this wonderful sight. When we have a bed of Begonias consisting of say 200 plants, we think we have a brave show indeed, and if the plants are healthy and well flowered we are proportionately proud of them, but when we see them by the acre we are able to appreciate them in a larger degree.

The plants have been placed in beds, each containing one distinct colour, and considering that the plants are seedlings it is surprising how tew rogues there are to be found. Here and there amongst the scarlets one sees a pink or a white, but so far from detracting from the beauty of the display they but accentuate the good points by their minority. First comes five beds of dark crimson sturdy little plants, having numberless faultlessly shaped blooms on them. Next came five beds of a very bright scarlet-coloured variety, and which formed, in my opinion, one of the brightest spots in the whole collection. Some beds of a soft pinkbloomed kind attracted me next, then crimson again, after which came a rose-coloured variety of a high order of merit. The yellows were showy, and the whites looked charming in their chaste purity. Those already mentioned belong wholly to the single section, and occupied about half of the space allotted to the Begonias, the other half being devoted to the double varieties, which had been planted in the same manner, but did not present such a show of bloom as did the others, as many of the best had been lifted in order to preserve them from the frosts, which may now be expected at any time. Notwithstanding the fact that many had gone, some grand plants are yet to be seen, and foremost amongst which were some whites of exceptional quality. They carried their blooms in an upright fashion, allowing the pureness of the white and the perfect contour of the flowers to be seen at a glance. No fault could be found when they were closely examined; on the contrary, the more one looked the better the flowers appeared to Then, too, were noticed some scarlets, crimsons, and grand become. yellows, forming a perfect galaxy of beauty.

Conspicuous amongst those that had been placed in pots were some plants having blooms of pleasing colours. As is well known the Tea Roses of the L'Ideal type afford some of the most beautiful combinations of shades one can wish for, and which are practically indescribable. Such is now the case with the Begonias. Yellows can be clearly seen, as also can rose, pink, scarlet, and crimson, and occasionally other shades, so that I may be forgiven for not putting the colour down concisely in one word. However, the flowers in those shades alone are worth a run down to Forest Hill, for they are really exquisite in their delicate colouration. Those who are wishing to see these beds this season will do well to make their pilgrimage at once; they will be cordially received I do not doubt, and will be amply rewarded by the veritable feast of Begonias which will greet them as brightly, if not as heartily, as will either of the Messrs. Laings.

A brief reference to the Begonias in the houses must be made. I can but repeat what has been said so many times before, and that is that they are "perfection." What more can be said? What more can indeed be necessary? and I must let it suffice; let those who are sceptical take the advice given above, and go to see and judge for themselves.—H. J.

INWOOD HOUSE GARDENS, BLANDFORD.

Through Mr. Wilkins' untiring energy, Inwood House Gardens, Blandford, have obtained very high reputation. It is not a place of one thing, a garden of one variety. Everything is well done here, and whilst vegetables have created the greatest interest, plants and fruit are finely grown also. I do not know whether it is just to class Mr. Wilkins as the champion vegetable grower of the kingdom. Some may take exception to that high estimate. But all the same, as an average grower and exhibitor of vegetables, I do not know of his superior, and certainly very few are his equals. However, his record of successes tells its own tale. It is proof that is incontrovertible. Even the best of growers, the most successful of exhibitors, has to take a back seat sometimes; but that is not due to want of ability, but rather to the aecident that just then products are not at their best. When, however, a grower exhibits, and takes the highest aggregate of prizes for vegetables all over the kingdom from June to November, it is evident that such a grower is entitled to the designation of champion. But Mr. Wilkins is not at all a proud man. He is very human so far, that nothing makes him egotistic or elate. He bears honours and reverses with simple ease, and still remains what we rejoice to find is so largely the characteristic of the British gardener, even when on the competitive war path—a plain, homely, intelligent, and most amiable man.

Inwood House gardens are not old, indeed have all been made during the past ten years, and entirely under the present gardener, who came expressly from Motcombe to undertake charge. The situation is an elevated mound or hill, on a base of limestone or sandrock, with a very shallow surface soil. Of course it would have been useless to expect to construct a good garden out of such material, and therefore the upper crust or layer of this rock had to be excavated; a heavy work that was well done, and the bottom made up with soil brought in from anywhere, hence the present depth, the luxuriant growth seen in all directions, and the magnificent produce which has made Inwood so famous. gardener's house is reached by a ride of some two miles from Templecombe Junction, but that hospitable place is still fully one-third of a mile from the gardens, a distance that has some disadvantages and some advantages. Trees are not on such a shallow soil of the most robust order, and that is largely the chief weakness of the place. Get in the kitchen garden, however, and then everything is almost

The plant houses are numerous, and include in their contents a very large number of grand show specimens, foliage and flowering. collection is remarkably extensive, and the bulk of these is found in a long span-house of horseshoe shape, some 200 feet round, literally crammed with plants, above and below, for beautiful climbers here grow as if in their native habitats. Of specimens there is a gigantic Latania borbonica, with huge leafage spreading to an area of 30 feet. This stands on a pedestal in the centre of a large basin of water. There are many other Palms, Ferns in great variety, and fine plants—Allamandas, Clerodendrons, Bougainvilleas, Stephanotis, Lapagerias, Ixoras, Crotons, Chorozemas, Statices, Eucharis, Alocasias, Cycads, and Kalosanthes, showing that it would be easy to make up a collection of 100 fine samples, or of 200 if needed. Distributed through various houses is a most interesting collection of tropical fruiting or economic plants, such as Musas, carrying grand bunches of fruit; Mangosteen, Monstera deliciosa, the Custard Apple, Anona reticulata, the Papaw tree, showing six fine fruits like large Pears; the Guava tree, which has freely fruited; Vanilla, the Nutmeg, Rose Apple or Eugenia Jambos, Stapelia Litchni, the Coffee tree, which has fruited; the Camphor tree, Camphora officinalis, and others. These show, apart from myriads of plants of all descriptions, that Inwood Gardens is something more than a manufactory for prize vegetables.

I will not refer to the fruit houses because there is not time and space to do so. It is enough to say that vineries and Peach houses are all excellent. Outdoors Pears on bush and pyramid trees chiefly on the Pear stock are truly grand. What a pity some of these specimens could not have been photographed, they would have made almost sensational pictures, especially could the size of the fruit on them have been fully pourtrayed. These trees are situated on each side of the kitchen garden walks, and have been planted from seven to eight years. Hitherto, the soil having been too good, and the growth so robust, it has been difficult to induce them to fruit freely, but this year they have been at their bost. It was mentioned that whilst Pears on the walls suffered very much from the spring frosts, the open trees, being later in bloom, escaped, and set fruit freely. I noted but a few out of the many, though some had had their crops already gathered — Calebasse, Duchesse d'Angoulème, Louise Bonne, Thompson's, Zaphirin Grégoire, Maréchal de Cour, Vicar of Winkfield, Soldat Esperen, Beurré Clairgeau, Pitmaston Duchess, Durondeau, Bergamotte Esperen, and Seekle, these sufficing to show that the collection is a large one. Mr. Wilkins is an enthusiastic mulcher, indeed he says that this dry season he owes so much of the size of his Pears, as of all other crops, to heavy mulchings of stable manure. However, as some fifty horses are kept, and the stables

are close by, manure in plenty may be had for the fetching. A somewhat unique arrangement is that of the walled-in bush fruit garden, over the whole of which in the fruit season strong netting may be stretched, to the confusion of the birds, great and small, whilst from below everything is readily accessible. Here, too, as elsewhere, Chrysanthemums are in very strong evidence, some 600, all in splendid condition, being grown, so that there will be plenty of show flowers if needed, and plenty to furnish houses and indoor decoration.

Vegetables here are so fine that it is difficult indeed to do them full justice. Onions alone merit a page, so grand are the samples and so plentiful are they. Mr. Wilkins has finished his bulbs perfectly, and giant Ailsa Craig, a dozen of which average 36 lbs., the heaviest weight ever reached, are as mature and as handsome as bulbs only 3 ozs. instead of 3 lbs. Although not so fine, yet most wonderful are the selected samples of Rousham Park Hero, Lord Keeper, Anglo-Spanish, and Inwood Favourite, a redder variety, product of a cross between Red Globe and Anglo-Spanish, of the flatter bulbs; and of Cocoanut, very deep globe shaped; Wroxton, a grand keeper; Excelsior, hard and handsome; Advancer, yellowish globe; Sutton's A1, very fine; Jarman's International, Pinesfield, and Somerset Hero, all globe shaped, in almost bewildering profusion. These bulbs are all of the new order, of product transplanted from boxes, the seed being sown under glass in January. Now they are fully ripe and stored on broad trellis shelves in an ancient round tower standing in the gardens, and the Onions are probably the finest in the kingdom. Leeks are yet all agrowing. These comprise the Lyon, Prizetaker, and Champion; but Mr. Wilkins holds that he can have

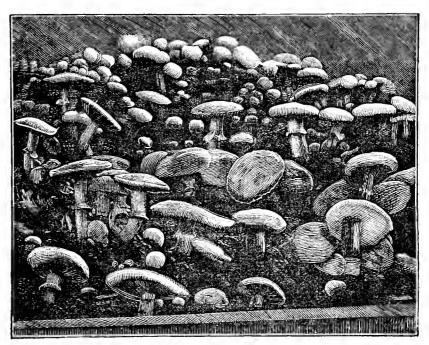


FIG. 44.—MUSHROOMS AT INWOOD HOUSE.

stems long and white, short and stout from any variety, just as they are blanched or otherwise. Some superb Tomatoes of the Perfection type are shown grown on pot plants in a lean-to house that balance other vegetables. Carrots are chiefly now of the Intermediate forms, although Early Gem and Champion or Nantes are grown and largely used for exhibition earlier in the season, when also Asparagus, Sea Kale, and Dwarf French Beans, such as Canadian Wonder and Ne Plus Ultra, are largely grown. Runner Beans are marvellous, several rows of the Inwood selection of Ne Plus Ultra, a beautiful strain, have grown from 16 to 18 feet in height. Cauliflowers are very fine. This most useful vegetable begins with Early Forcing or Snowball, follows with a perfect variety, Sutton's Magnum Bonum, then Autumn Giant and Mammoth, and so the supply extends over a long season.

Parsnips are represented by the Student and Hollow Crown, a large bed being in fine growth; Potatoes by Satisfaction, Sutton's Seedling, London Hero, Snowdrop, Windsor Castle, and International out of many; Peas by Prodigy, Autoerat—this being excellent for dry soils or seasons; and Duke of Albany. Celery for early work and exhibition is chiefly blanched by paper bands and round drain pipes. Veiteh's Early Rose, Standard Bearer, and Aylesbury Red of coloured, and Wright's Giant White and Solid White for pale varieties. Stems weighing 15 lbs. each of Standard Bearer have been produced here after being cleaned and trimmed. Beet is represented by Middleton Park, Pragnell's Exhibition, Cheltenham, Greentop, Sutton's Blood Red; and Brussels Sprouts by Nc Plus Ultra and Exhibition; Cucumbers by Model; Turnips by Dobbie's Selected Model and Snowball. Thus it is seen that the variety is considerable the cultivation of the best, and the product superb. The keep siderable, the cultivation of the best, and the product superb. The keep of the place also is good. Anyone visiting Inwood will go away satisfied that Mr. Wilkins must grow all his produce, for the simple reason that no one else can equal him in production. I might write much more about this place, but the foregoing must satisfy curiosity now; whilst it is a delightful place, the practical gardening in every branch is of the best, and much of it as shown cannot be excelled.—A. D.

[It will be seen by the photographic illustration (fig. 44), which represents a portion of a bed of Mushrooms at Inwood House, that Mr. Wilkins is also an adept in this phase of gardening.]



EVENTS OF THE WEEK.—The Committees of the Royal Horticultural Society will meet at the Drill Hall, James Street, S.W., on Tuesday, 10th, particulars of which are given in a paragraph below. On the 11th inst. a three-days exhibition will be opened at the Royal Aquarium, Westminster, under the auspices of the National Chrysanthemum Society.

- —. THE WEATHER IN LONDON.—Changeable weather has again characterised the past week. Sunday was comparatively mild with occasional slight showers. On Monday similar weather occurred, and rain fell heavily during the night. Tuesday was fine and colder, as also was Wednesday morning. At the time of going to press it is bright with rather a keen wind prevailing.
- —— ROYAL HORTICULTURAL SOCIETY.—The next meeting of the Royal Horticultural Society will take place in the Drill Hall, James Street, Victoria Street, Westminster, on Tuesday 10th October, when prizes are offered for hardy herbaceous perennials. At three o'clock Mr. W. Crump will deliver a lecture on "Pears."
- THE GARDENERS' ROYAL BENEVOLENT INSTITUTION.—As has been notified in our advertisement pages an election of pensioners on the funds of this Institution will take place in January next. Intending candidates must send in their applications on or before October 14th, to Mr. George J. Ingram, 50, Parliament Street London, S.W.
- —— FRUIT CULTURE IN VILLA GARDENS.—Mr. G. Bunyard of Maidstone gave an excellent lecture on this subject at the meeting of the National Amateur Gardeners' Association on Tuesday evening last, at the Memorial Hall, Farringdon Street, E.C. There was a fair attendance, and Mr. T. W. Sanders presided. Mr. Bunyard detailed the best methods to adopt, and specially recommended the bush, pyramid, and cordon systems.
- A New Wood.—According to the "Manchester Courier" a new wood has been discovered in Borneo, which promises to supplant oak as a building material. It is familiarly known as "bilian," very close in grain, having a breaking strain greater than that of oak, and with a specific gravity to that of box wood as 3 is to 4, or one-quarter lighter. It is not unlike ebony in appearance, especially after exposure to the air.
- —— AWARDS TO BRITISH EXHIBITORS AT CHICAGO.—We are informed that the Committee of the floricultural section at the World's Fair have made awards to Messrs. John Laing & Sons, for Chinese Primulas; to Messrs. James Carter & Co., for Chinese Primulas, Cyclamens and other flowers; to Messrs. Kelway & Son, for Chinese Primulas (model crimson); to Messrs. H. Cannell & Sons, for Chinese Primulas; to Messrs. Waterer & Sons, for Pæonies and Phloxes; to Messrs. Dickson & Sons, for collections of Azalea mollis and Rhododendrons; and to Miss Margaret Dickson, for collections of Roses. The awards to foreign exhibitors are as follows:—Germany, forty-six; France, twelve; Holland, six; Austria, one; and Italy, one.
- COMPLIMENTARY DINNERS AT EARL'S COURT.—In recognition of his services, a complimentary dinner was given on the evening of the 28th ult. to Mr. H. E. Milner, Chairman of the Executive Committee of the Gardening and Forestry Exhibition. Professor Stewart, President of the Linnean Society, occupied the chair, the company numbering about 100. The Chairman, in proposing the toast of the evening, said they might congratulate Mr. Milner on the success which had attended his efforts to diffuse a knowledge of gardening and forestry, and to foster and encourage those two sciences. By means of this Exhibition employment had not only been given to a large number of persons, but pleasure had been afforded to many thousands. In conclusion, the Chairman presented Mr. Milner with an antique silver bowl as a souvenir of his connection with the Exhibition, which had been subscribed for by a number of personal friends and members of the staff. Mr. Milner, in returning thanks, acknowledged the hearty co-operation of his fellow directors and of the staff, who had worked so hard to make the Exhibition a success. On Monday evening next, the 9th inst., a

dinner will be given to Mr. H. Turner, Vice-President of the Horticultural Department. Tickets can be obtained from Messrs. H. B. Skinner and R. Dean, Secretaries, Earl's Court Exhibition, S.W.

- —— VENIDIUM CALENDULACEUM VAR. MULTIFLORUM.—When I exhibited this plant at the meeting of the Royal Horticultural Society it was not as an object for pot culture, but simply as a much-neglected autumn flowering annual for the open ground that is very valuable at this season of the year. The plant was placed in a pot simply for the convenience of transit to the Drill Hall.—R. DEAN, Ealing, W.
- "For the last three years our bushes of this showy spring flowering shrub have borne fruit, but this year the crop is much heavier. I note Mr. Thomas staged a dish of fruit of it at the last meeting of the Royal Horticultural Society, when a vote of thanks was accorded. Hanging on the trees the fruit is pretty when it assumes the deep yellow characteristic of its ripened state. Is it possible to make any use of the fruit?"
- Tomatoes.—The Rev. J. E. Symns writes from Woodford Wells to the "Times:"—"I am sending some Tomatoes grown under remarkable circumstances. They are quite ripe, and the largest weighs just 9 ozs. The seeds were sclf-sown; they must have fallen from the fruit of last year. When the plants were strong enough they were removed and put in the open ground under a south wall. They were never under glass, nor protected in any way. I shall be glad to learn if there is a similar instance on record in any part of England."
- —— STRAY TOMATOES.—A Bedminster correspondent writes:—
 "Your readers may be interested in knowing that more than a dozen
 Tomato plants may be seen growing in a field leading to Ashton Hill, a
 few score yards from the pond. The plants vary in size, some being
 remarkably vigorous and loaded with fruit; 4 or 5 lbs. having been
 gathered during the past week, consisting of the smooth as well as a
 wrinkled variety. A couple of small plants (though not in flower or
 fruit) may also be seen near the lower gate of the churchyard. Have
 any of your readers observed any similar strays from cultivation
 growing apparently wild in any other locality?"
- GARDENING APPOINTMENTS.—Mr. James Hill, for nearly four years forman at Hopwood Hall, has been appointed head gardener to Sigismund C. de Trafford, Esq., Croston Hall, Preston, Lancashire. We learn that Mr. T. Kent has been appointed gardener to Captain Van Koughnet, R.N.. of Tyttenhanger Park, St. Albans, in succession to his father, Mr. H. Kent, who had forty-three years' service as gardener at Tyttenhanger Park, to the late Dowager Countess of Hardwick, the late Dowager Countess of Caledon, and the present Earl of Caledon.
- THE members of the WARE HORTICULTURAL MUTUAL IM-PROVEMENT SOCIETY on the afternoon of 28th ult. responded to an invitation of their President, Mr. Hanbury of Poles Park, Ware, to visit his gardens and grounds. Seventy of the members attended and spent an enjoyable afternoon inspecting the many noticeable features, and were afterwards regaled to a substantial tea. The gathering was instructive alike to all, as everything is grown in the most creditable manner by Mr. W. M. Alexander the gardener. The improvements made in the gardens of the four or five years by the present owner show considerable taste and add immensely to the beauty of the place. Mr. and Mrs. Hanbury take great interest in the Society, and have invited the members on seven similar occasions.—E. WALLIS.
- EMIGRANTS' INFORMATION OFFICE, 31, Broadway, Westminster, S.W.—The October circulars of the Emigrants' Information Office, and the penny and other handbooks, with maps, show the present prospects of emigration. A new pamphlet on California is also issued. New branch offices have been opened at the public libraries at Peterborough and Swansea. It is too late in the year for emigrants without money—other than female servants—to seek work in Canada, unless they go to join friends. Work in New South Wales, especially in towns, continues to be very scarce. In Victoria good farm hands can get employment throughout the year at about 15s. a week, and all found; but in the towns, and especially in Melbourne, there is no opening for men without capital at the present time. There is an excellent opening in the south of Australia for Vine growers with a little capital. The recent arrivals in New Zealand have been so numerous that there is no pressing demand for more; but the country is so full of resources, and the population is still so small, that anyone arriving there with knowledge of a trade, and with a little money, should do well.

- A Large Pear.—A correspondent writing from Henfield, Sussex, says:—"This week I gathered from a tree on a wall, with an east aspect, in my garden here, a Grosse Calebasse Pear of the following remarkable dimensions and weight. It has at the thick end a circumference of $12\frac{3}{3}$ inches and one of 18 inches lengthways. Its weight is rather more than $1\frac{3}{4}$ lb. There are a few more on the tree, these are very large though not equal to the one to which I refer."
- THE TOTAL RAINFALL AT ABBOT'S LEIGH, HAYWARD'S HEATH, SUSSEX, for the past month was 3.05 inches, being 0.08 inches below the average; 2 inches of this fell during the last week. The heaviest fall was 0.88 inch on the 28th. Rain fell on sixteen days. Total fall for the nine months 16.08 inches, as against 20.27 inches. The average maximum temperature in the shade was 75° on 6th and 14th. Minimum temperature 33° on 24th; mean maximum 66.05°; mean minimum 46.17°; mean temperature 56.11°, being 1.05° above the average.—R. I.
- MICHAELMAS STRAWBERRIES.—As an instance of the remarkable character of the season, a correspondent informs us that a dish of ripe, good-sized Strawberries of excellent flavour were picked this week in the open garden at the residence of the Mayor of Newbury. Strawberries have also been picked in the open garden of the Dundas Arms Hotel, at the neighbouring village of Kintbury, within the last few days. "L. M." writes from Hawkhurst:—"I have just picked a small dish of ripe Strawberries of good size and colour, the first time I ever had a second crop ripen. There are, too, many on the plants nearly ripe."
- The Weather in Hertfordshire. Mr. E. Wallis, The Gardens, Hamels Park, Buntingford, Herts, writes:—The weather during the past month has been of a dry character with an abundance of sunshine. Wasps during the early part of the month were very abundant, doing much damage; but I was never less troubled with caterpillars. Rain fell upon nine days during the month. Maximum in any twenty-four hours was 0.54 on the 1st; minimum in any twenty-four hours was 0.03 on the 16th. Total during the past month was 1.46 against 2.62 of 1892. By the end of September, 1892, I had registered 18.90 of rainfall; end of September, 1893, I have only registered 13.38. In spite of the very dry season garden crops on the whole have done remarkable well.
- DEATH OF MR. FREDERICK LOTHROP AMES .- We regret to learn from the "Garden and Forest" of the death of Mr. Frederick Lothrop Ames, one of the founders and owners of that journal, who recently died suddenly during a journey from his home in Massachusetts to New York. Mr. Ames was one of the most liberal patrons of horticulture America has produced, and his collection of Orchids was a great source of pride to everyone interested in the progress of the art in which he found his principal pleasure. Mr. Ames' love of Nature was real and profound, and his exact and comprehensive knowledge of the plants in which he was particularly interested has given him an international reputation among orchidologists. Through his liberality the Arnold Arboretum, to which he has always given generous support, and the Botanical Department of Harvard College, in which he was specially interested, have been able to extend their usefulness. For nearly thirty years Mr. Ames was an active member of the Massachusetts Horticultural Society; he has long been one of its Vice-Presidents, and as a member of the Finance Committee has rendered it invaluable service.
- A REMARKABLE BOUQUET .- A correspondent at Cork writes : -"The composition of a small nosegay of fresh flowers gathered in County Cork will seem incredible even to those who have watched the progress of this remarkable summer. The bouquet consists of Bramble leaves dyed with the most gorgeous autumn tints-nothing unseasonable in that !-surrounding Apple blossom developed from buds which should have lain dormant until the awakening breath of next spring aroused them. The flowers are as dainty and perfect as the usual spring bloom, but appear strange in their setting of old leaves instead of the soft delicacy of the undeveloped foliage usually attending these precocious blossoms. Then there are wild Roses and buds gathered from a bush which bore similar blossoms on April 26th of the present year, and lastly groups of Strawberry blossom as jaunty and fresh as those of the early summer, and apparently unconscious at present of the rapid approach of cold frosts which have already spread their icy fingers over counties to the north of County Cork. Reports, too, from Killarney and other places tell of Laburnum trees in full bloom, while adjacent are bushes laden with fruits of deepening hues, and close by the Arbutus displays its richest of crimson-red berries."

- VEITCH'S AUTOCRAT PEA. Mr. H. W. Ward writes: "This grand midseason Pea I have grown somewhat largely during the present year with most satisfactory results. It is an excellent grower and prodigious cropper, producing with great freedom large, straight, handsome, dark green, well-filled pods, which contain on an average ten large deep green coloured Peas of excellent quality. I exhibited two dishes of Autocrat Pea early in August last at Southampton and Taunton Shows, which easily secured a first prize. I am still gathering Peas of this variety from sowings which were made the 1st of June. Sowings of Ne Plus Ultra and British Queen were made the same time in the same plot of ground, the rows being 10 feet asunder, running north and south, and heavily mulched on each side, the same as all my rows of Peas and Beans are served, but the yield from Autocrat as well as the quality of the produce is far in advance of that of those two well-tested varieties."
- THE "KEW BULLETIN" for September, a copy of which has come to hand, is wholly devoted to a description of the Flora of St. Vincent and adjacent islets. "St. Vincent is one of the group of islands known in the West Indies as the Colony of the Windward Islands. The other members of this group are St. Lucia, twenty-one miles to the north, and Grenada, sixty-eight miles to the south-west. Barbadoes, under a separate Government, is 100 miles due east. St. Vincent was discovered by Columbus on the 22nd January, 1498. It is situated in 13° 10' north latitude and 60° 57' west longitude. It is eighteen miles in length and eleven in breadth, and contains, according to the Colonial Office List, nearly 85,000 acres of land, about half the area of Middlesex, with only 13,000 acres under permanent cultivation. The population in 1891 was 41,054. The majority of the adjoining islets, known as the Grenadines, are dependencies of St. Vincent."
- From the same source we learn that in the last century St. Vincent was remarkable for possessing the first Botanic Garden (founded 1765), certainly in the West Indies, and perhaps in any tropical part of the world. An account of this garden is given in the "Kew Bulletin" for 1892, pp. 92-100. It lingered on with a precarious existence till the end of the first quarter of the present century. In 1890 it was revived as one of the system of botanical stations established in the West Indies. The scientific knowledge of the flora of St. Vincent was limited to the present time to the species enumerated in Grisebach's "Flora of the British West India Islands" (1864). He relied upon a collection made by the Rev. Landsdown Guilding preserved in the Kew Herbarium. As will be seen the fact that these specimens were in every case actually derived from the island is not free from doubt. Besides these Grisebach also worked up some other plants in the Kew Herbarium collected by Alexander Anderson, the second Superintendent of the old Botanic Garden, of whom some particulars are given in the "Kew Bulletin" for 1892 (pp. 94-5), also by George Caley, one of Anderson's successors (K. B. l. c. p. 97). These data supplied at first a very imperfect idea of the total flora. It was obviously therefore desirable to take advantage of any opportunity for completing the botanical exploration of the island. In 1889 Mr. F. Ducane Godman, F.R.S., to whom the scientific world is indebted for the munificent investigation of the natural history of Central America, determined to send a zoological collector to St. Vincent. Mr. H. H. Smith, a native of the United States, and an expert of known skill and experience, was engaged. He was accompanied by his wife, and Mr. Godman, thinking that they might also do some useful work, for botany, persuaded them after a visit to Kew to undertake the task. On arriving at St. Vincent they ultimately engaged as assistant in botanical collecting, Mr. G. W. Smith (now Curator of the Botanical Garden, Grenada), a native of the Windward Islands.
- The total number of Species of Flowering Plants collected in St. Vincent and the four adjacent islets—Bequia, Cannouan, Mustique, and Union—including naturalised plants and those inserted on the authority of the early collectors is about 1150. Of these Mr. Smith collected 977, whereof at least 131 are almost certainly colonists, leaving 846 indigenous species, belonging to 490 genera and 109 natural orders. The number of species of flowering plants collected in the small islands was respectively:—Bequia, 375; Mustique, 160; Union, 49; and Cannouan, 30. With regard to the general distribution of the indigenous plants, the principal points are the wide geographical range of the majority and the smallness of the endemic element, conditions that obtain throughout the whole chain of islands from Tobago to the Virgin group, which are in striking contrast to the proportions of the endemic element in Cuba and Jamaica.

—— FINE TOMATOES.—I am sending you a box containing some clusters of Tomatoes (Perfection), and shall be glad of your opinion of the same. I gave a note of the culture as carried out here when sending you some individual specimens (vide page 294, October 2nd, 1890), and there it will be seen that the root space for our plants is very limited. I think the clusters now sent, and of which we could gather many, show the value of artificially assisting fertilisation.— Thomas Crosswell, Homewood, Eden Park, Beckenham. [The cluster referred to by our correspondent was very fine, eight highly coloured fruits of perfect form weighing 4 lbs. 4 ozs. On the previous occasion referred to Mr. Crosswell sent us some of the finest Tomatoes we have ever seen, the largest fruit in that case weighing 19 ozs.]

- THE WAKEFIELD PAXTON SOCIETY.—There was an unusually good attendance at the ordinary weekly meeting of the members of the Wakefield Paxton Society on Saturday evening. Lieutenant H. S. Goodyear occupied the chair, and Mr. G. Gill officiated as Vice-Chairman. The essayist was Mr. George Parkin, a well-known photographer, naturalist, and botanist, and one of the oldest, most active, and useful members of the Society. His subject was "Autumn Foliage," and there was a large and beautiful collection of foliage from plants, shrubs, trees, together with a good display of wild fruits and berries. Mr. Parkin read a most interesting paper, which clearly showed that when taking his country rambles he is a close observer of Nature. A discussion was opened by Mr. W. L. Skinner of the Silcoates Nurseries, who was one of the principal exhibitors of specimens. Several of the other members took part in the discussion, including Mr. Mear of the Woolley Park Gardens, who has obtained an appointment on a fruit farm in Australia.

- THE OLDEST TREES IN THE WORLD.—This subject has again cropped up, and is being discussed in "Notes and Queries." The following list of ages known to have been reached by patriarchs of the respective kinds is given by Mr. J. Collinson: - "Elm, 300 years; Ivy, 335 years; Maple, 516 years; Larch, 576 years; Orange, 630 years; Cypress, 800 years; Olive, 800 years; Walnut, 900 years; Oriental Plane, 1000 years; Lime, 1100 years; Spruce, 1200 years; Oak, 1500 years; Cedar, 2000 years; Yew, 3200 years. The way in which the ages of these trees have been ascertained leaves no doubt of its correctness. In some few cases the data has been furnished by historical records and by traditions, but the botanical archæologists have a resource independent of either, and when carefully used infallible. Of all the forms of Nature trees alone disclose their ages candidly and freely. In the stems of trees which have branches and leaves with netted veins-in all exogens, as the botanist would say-the increase takes place by means of an annual deposit of wood, spread in an even layer upon the surface of the preceding one."

- THE JASMINE HARVEST. - Writing from Grasse, a correspondent of a daily contemporary says :-- "The Jasmine harvest here is in full swing. Grasse is permeated by an overwhelming perfume of flowers. In the factories they are working day and night to extract the valuable essence of the flowers as quickly as possible. There are three ways of doing this. The first and coarsest method, which is used for Lavender, Thyme, Peppermint, and Geranium, is by boiling down the flowers. The second, which is used for Roses, Heliotrope, Lilac, and ordinary Violets, is the old plan of distillation. And the third, which is reserved for Parma Violets, Jasmine, Tuberoses, and such expensive essences, is the so-called cold method, the slowest. and therefore the dearest, but the most effective of all. For this last the flowers, which are first carefully weighed, are heaped upon a table round which are seated about twenty girls, each with a frame before her, like a good sized window pane. The glass of this frame is, so to speak, buttered on both sides with a mixture of veal fat and a little oil. On the glass the girl strews as many flowers as will lightly cover it, and covers them with another glass similarly treated. Then comes another layer of flowers and another glass, till there are ten glasses in a heap. The next day the flowers, which are by that time quite faded and have given out all their scent into the grease above them, are removed, and fresh flowers are strewn in their place. This proceeding is repeated eight or ten times. The perfumed grease is then put into large, closed, copper vats, with an equal quantity of spirit. In the vats are wheels which are turned by machinery. The rapid revolutions of the wheels beats out of the grease most of the perfume it has soaked in; the grease sinks to the bottom, and is used to make soap, pomade, &c., and the spirit which contains the true essence of the flowers is bottled, and fetches the highest prices given for scent."

—— PLUMBAGO LARPENTÆ.—What the Gentians are to the embellishment of the rockery in the spring this Plumbago is in the autumn in the matter of colour. It is flowering finely in spite of the dry season we have experienced. No hardy plant that I know gives the same tint of colouring at this time of the year without it be Lithospermum prostratum, and that is not now in bloom, its season having passed. This Plumbago is an easy plant to grow. Any ordinary garden soil seems to suit it, but a freer growth is secured by the addition of a small amount of manure.—E. M.

— Woods and Trees in Scotland.—The Board of Agriculture desire to direct attention to the increased facilities for the planting of woods and trees in Scotland afforded by the Improvement of Land (Scotland) Act, 1893, which received the Royal assent on August 24th last. Hitherto owners of land in Scotland have been able, with the sanction of the Board of Agriculture, to charge their estates for the planting of woods and trees only in cases where the planting is for the purpose of providing shelter. By the Act in question this limitation has been removed, and applications may now be made to the Board for sanction to charge estates, under the provisions of the Improvement of Land Act, 1864, with the cost of planting whether for shelter or otherwise.

ARALIA SIEBOLDI.—Mr. J. G. Pettenger, Strawberry Dale Nursery, Harrogate, writes:—"It is not uncommon to find this beautiful plant grown in the stove or intermediate house, thus subjecting it to attacks of insects or disease, which very soon stops all growth. This plant thrives splendidly in a cold frame, partially shaded from direct sun. The plants are raised in heat in April or May, and after the first potting in 60's are placed in a cold frame. They are in due time shifted into 5-inch pots, in which they make beautiful plants totally different to any that can be grown in heat. In the winter a house from which frost is just excluded suits them admirably. If signs of thrips appear the leaves are sponged with softsoap and warm water. Aralia Sieboldi enjoys liberal supplies of water in well drained pots. The most suitable soil is good sandy loam."

CHINESE BEAN OIL.—More oil is extracted from the bean than from any one of the other oil-yielding plants of China. The two kinds of bean treated for oil are small in size and oval in shape, one having a whitish yellow epidermis and interior, the other being green throughout. They are probably sub-varieties of the Soja bean. The process of extraction in Formosa is described by Mr. Hosie in a recent report on that island. The beans yield about 10 per cent. weight of oil, and the cakes when removed from the press weigh some 64 lbs. and are worth about 2s. 9d. each. They constitute a very valuable manure, and are carefully macerated before being applied to the soil. The commercial value of this industry is shown by the fact that 60,000 tons of bean cakes were exported from Chefoo during 1890, and Newchang sent over 156,000 tons in the same year. The oil is used both for cooking and lighting purposes.

- FORMOSAN TEA.—The cultivation of the Tea, known in trade as Formosa Oolongs, is referred to by Mr. Hosie in his late report on that island. The Tea vant was imported from the Fuhkien province, and proved a great success. Since its introduction the cultivation has spread rapidly, with the clearing of the hillsides in Northern Formosa. When a slope has been cleared of jungle a crop, such as Sweet Potatoes, is planted, and in the following year young Tea plants are set out in rows 2 feet or 3 feet apart, with a like distance between each plant. In this virgin soil no manure is required, and all the cultivator has to do is to keep the ground clear of weeds and undergrowth. In three years from the date of planting out the shrubs have attained their maximum height of 2 feet to 3 feet, and the time has arrived for picking the leaves. This operation, which is carried out by women and girls for the most part, takes place in the end of April or beginning of May, in July, and in September, for three crops are harvested during the season. The Tea manufactured in Formosa is generally, but erroneously, classed as a green Tea. It is in reality a black Tea, prepared without the usual fermentation, but it possesses a decided flavour of the green variety. The leaf is "fired" when green, and this, taken with the flavour, may account for the popular belief. But between the exposure in the open air and the firing the edges of the leaves are rendered quite soft by being thrown against Bamboos in a revolving machine - a process unknown elsewhere in China. It is said that if the leaves, after being picked and exposed for a short time, were placed in the firing pans they would split up—the Tea leaf is thick and brittle—and lose all semblance to the whole leaf which is so much desired.

CAUSES OF SHANKING IN GRAPES.

In addition to the various theories propounded by your correspondents (page 262) as to the causes of shanking in Grapes, I will venture to add another one, and that the application of too much water, especially if the Vines should be rooting in a retentive soil. This I proved to my own satisfaction some years ago, although it may not concur with the experience of those advocates who advise the application of water to growing Vines in unlimited quantities at weekly or bi-weekly intervals. According to these practitioners it is impossible to overwater Vines, irrespective of the size of the border or the nature of the soil they are rooting in, and is supposed to be the panacea for recuperating their energies if any ill should befall them. There are, however, many cases where not nearly sufficient water is given.

Some time ago I was, like many other gardeners, imbued with the idea that there was nothing like plenty of water for Vines if Grapes of the highest quality were desired, and of this element the borders had a surfeit, and the Vines, too, as I had about as bad an attack of shanking to contend with as there could possibly be. Upon examining the border it seemed cold and inert, with the ends of the young roots decaying away. This was a lesson to me that I shall ever remember. The roots were completely paralysed, consequently they were quite unable to afford adequate support to the Vines at a critical period. Since that time I have always been more sparing in the application of water, never

applying it until the border was in condition to receive it. When to apply water depends upon the size and also formation of the rooting

medium.

I do not dispute in the least the causes propounded on the page mentioned, as if good Grapes are to be secured all are shoals, of which everyone should steer clear. The benefit of a covering of warm leaves as explained by Mr. Ward I can fully endorse, as the beneficial properties of which for forced Vines I have proved repeatedly. This, as many readers are aware, is no new idea, but an old method. There is one error, however, that many cultivators who adopt the practice often fall into, and this of removing the covering too early. Probably a suitable warm covering was placed on the border at the commencement of forcing, this period being either December, January, or even well into February, and kept up till the weather becomes warmer. At this time the covering is removed, and the Grapes are at a critical stage, the colouring process only commencing. This sudden removal of the material undoubtedly gives the Vines a check, the roots becoming quite disorganised, with the result of colouring being arrested and also an attack of shanking. This past season, although the weather was fine and warm, I did not remove the covering from our early Vine border until the Grapes were almost perfectly coloured, and looking back over a series of years I never had early Grapes better or more free of shanking. The Vines are very old, with rods and spurs of an antiquated appearance. Covering with cold manure or exposed to the weather after being put on is of little benefit, as if open to rains and snow the material soon loses heat and becomes a cold inert mass, making the border cold also, consequently it is impossible for the roots to remain active. After placing on a layer of leaves the whole should be covered with properly constructed boards or sheets of corrugated zinc.

The benefit which accrues to Vines from lifting the roots out of deep

and cold borders, and relaying them nearer the surface in suitable compost, is only too well known to those gardeners who have adopted the practice. It is a never failing remedy of rejuvenating the most decrepit of Vines, and where shanking is due, or can be traced to the Vines rooting deeply in a cold and inert soil, this process, with other cultural details well attended to, will arrest it completely.—A. Young.

SHANKING may be caused by overcropping, neglect in growth, tops running wild, and then shortened back wholesale. It is also caused by the Vines growing in an imperfect border, combined with bad drainage. All Grapes have a tendency to thus shank more or less. Shanking in a green state is no doubt caused by defective root-action, the top growth being in advance of roots. Possibly it is caused by the loss of fibrous roots during the winter. In this case it plainly shows a weakness, and can be remedied for the next season by draining and renovating the

border, top-dressing, and applying less water.

Whatever may be said to the contrary, I have proved that chemical manures are far in advance of that from the farmyard. True, the immediate gross growth does not follow the application of chemicals, but, on the other hand, we have sounder fruit of higher flavour, with hard close grained wood for our next season's crop. Vines that are over-cropped are most liable to shanking, though it may also be caused by want of water at the roots in hot dry weather, combined with a low temperature at night or early mornings. In Gros Colman it is a shoulder that is generally affected. This can be removed without any great detriment to the bunch beyond the actual loss of weight. Black Alicante will go at the bottom, the first symptoms being slow colouring. Lady Downe's is often affected on the top where we can least spare berries. Cold sour borders will also produce this disease, but growers can by careful attention reduce it to a minimum. Some persons profess not to have shanking, yet I question if any vinery is faultless for one year.

Should shanking arise from any accidental cause, as overcropping or neglect of attention in the due stopping of the growths in proper season, this will not necessarily follow the following year if attended to. If, however, the fault be at the roots or border it will be more difficult to cope with. In wet sunless seasons with outside borders shanking is generally prevalent. The remedy will be in lifting the Vines or protecting the borders. No doubt there is a form of shanking that arises from unripened wood of the previous year. Damage to the roots will also cause shanking. Some four years since I had several Vines, the roots of which were mutilated by moles, the result being red sour berries. Now they are not quite perfect, but improve every year .- STEPHEN

NEPENTHES MIXTA.

THIS Nepenthes, which is depicted in the accompanying illustration (fig. 45), is an interesting and highly coloured hybrid, being the result

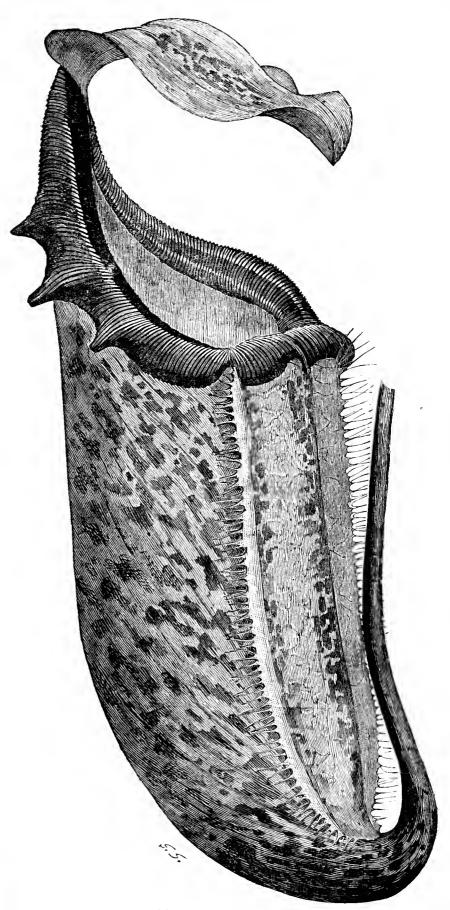


FIG. 45.-NEPENTHES MIXTA.

of a cross between N. Curtisi and N. Northiana. It was raised by Messrs. J. Veitch & Sons, Chelsea, and was exhibited by them at the Drill Hall, James Street, S.W., on Tuesday, September 26th, when the Floral Committee of the Royal Horticultural Society awarded a first-class certificate for it. The pitchers are about 9 or 10 inches in length, somewhat narrow, of a greenish red heavily blotched with brownish red. The ribs which surround the mouth of the pitcher are dark crimson, which enhances its appearance. The plant shown on the oecasion mentioned bore six fine pitchers.



NATIONAL CHRYSANTHEMUM SOCIETY.

AT the Floral Committee meeting held at the Aquarium on the 27th ult. the following varieties were awarded first-class certificates.

Gustave Grunerwald.—An early flowering decorative Japanese of a light mauve colour passing to white. Exhibited by Mr. N. Davis.

Mrs. C. B. Myers.—A large exhibition Japanese, solid and well

Mrs. C. B. Myers.—A large exhibition Japanese, solid and well built, colour white shaded yellow. Sent by Mr. R. Owen of Maidenhead.

President Borrel.—A variety with long petals of the Japanese type, with a striking purple colour and golden reverse. A massive flower, staged by Mr. Rowbottom.

MADAME DESGRANGES CHRYSANTHEMUM.

THE well-known Chrysanthemum Madame Desgranges and its yellow sports are valuable for decorative purposes, and are somewhat extensively cultivated. To grow these Chrysanthemums into good bushes strong cuttings should be secured about the middle of October, preference being given to those springing from the roots, and place them singly into small thumb pots, using loam, leaf mould, and sand in equal parts. Plunge them in a half-spent hotbed, and keep them close until rooted, only admitting sufficient air to dispel superabundant moisture, and thus prevent damping. When rooted they should have abundance of ventilation during favourable weather, and keep them near to the glass, so as to induce a short-jointed stocky growth, nothing being so detrimental to Chrysanthemums as "coddling" at any stage. Grown under airy, bracing conditions, they will bear a few degrees of frost without injury, and although the growth will be slower, yet in the spring the plants will possess far more stamina than those grown under close, warm conditions, and may, moreover, be placed out of doors a month earlier in spring.

When the plants are 6 inches high, pinch off 2 inches of growth; this will induce them to throw out a number of side shoots. Select three of the strongest, and rub off all the others. At this stage, which will be the end of November, they will require placing into 5-inch pots, using a compost of three parts fibry loam and one part each of well decayed manure, leaf mould, and sand, adding 1 quart of bonemeal and soot to each bushel of compost. They should be potted firmly and returned to a cold frame with a south aspect if possible, and as the days are short and damp they will not require keeping close, neither will they need watering for at least a fortnight, and every opportunity should be taken to give air, and on mild days to remove the lights entirely. During very severe weather the lights may be covered in the usual way, but a little frost will not hurt the plants. Damp, however, must be expected during the dull days of winter, but this can be largely obviated by making a wooden slatted stage for the frame, and arranging the plants on it near to the glass, giving them plenty of room. Watering also should be attended to during the early part of the day. Early in February the shoots should again be pinched back and two growths selected which will give six shoots to each plant. Early in March place the plants into their largest pots, using those 8 and 9 inches in diameter.—SPECIALIST.

A GLANCE AT SCOTTISH GARDENS: DALKEITH.

My initial visit to Scotland took place a week or two since, and as I chose Edinburgh as my headquarters I saw much to interest me in as well as outside the city. My first visit was made to Dalkeith, and a most enjoyable and at the same time instructive one it proved. I was unfortunate enough to find Mr. Dunn, the well-known gardener, on the sick list, and unable to leave his house, which latter fact I believe caused him more worry than all the pain, as he is, as many people know, one of the most energetic of men. He did, however, everything he could for me by deputing one of his foremen to show me round the gardens. What struck me particularly at this, as well as at the other places I visited, was the exceptional cleanliness which pervaded the whole—houses, flower, kitchen, and fruit gardens were alike in that respect. This was I think more noticeable here than in many English gardens that I have seen, where the minor details seem to be ignored. In so doing a great mistake is made, for not only is the appearance of a garden much enhanced by this freedom from weeds, but the crops that are planted thrive best on clean, sweet ground. Almost all the fruit from the trees indoors had been gathered, but I was informed there had been very fine crops. A few Grapes were still hanging, and taking those as a criterion the bunches must have been exceptionally fine. Bananas are finely grown, and several splendid clusters of the luscious fruits were to be seen in various stages of ripeness. Monstera deliciosa was also carrying numbers of fruits.

Out of doors, however, there was still a wealth of bloom and an abundance of hardy fruits. Apples have been exceptionally abundant, as also have Pears, and the trees here, as well as those indoors, bear the

impress of excellent management. Signs of the drought which has played such havoc in many gardens throughout the kingdom this year were noticeable. The Plums were practically all gone at what is in ordinary seasons the height of their perfection. Amongst the flowers Dahlias were very prominent and remarkably beautiful, most all of the various types being strongly represented. The Stocks were a wealth of bloom, pure white and red, and of delightful fragrance. They grow well at Dalkeith, and evidently they are highly appreciated, for there seems to be an almost endless supply of them. But how useful they are for cutting! They afford innumerable flowers, which stand well in water, and the perfume is, I believe, almost universally liked. Sunflowers reared their gigantic heads here and there in the borders, whilst the Lobelias in all their dwarf beauty formed the groundwork of some charming beds. Zinnias, too, were noticed in great numbers, providing a diversity of colouration which entitles them to more general cultivation. Their culture is of the simplest, and their beauty cannot be questioned. A walk across the park brought us to the place where the gardens were in bygone days, and of which but one relic remains in the shape of a large stone-built conservatory of much beauty filled with Palms and other plants which have grown too large for the accommodation which the structures in the gardens afford. There were numberless other things seen, but I must leave the good work at Dalkeith and allude to other gardens.

NEWBATTLE ABBEY.

This, the seat of the Marquis of Lothian, is renowed in history, and though there remains little of the old Abbey, yet its style of architecture remains unaltered, as the additions which have been have followed closely the ancient pile. The grounds here are under the charge of Mr. Macdonald, who, though but a short while there, has made his presence and personality felt in the gardens, which are in an excellent condition. Chrysanthemums are a great feature, some hundreds of plants being grown, and if appearances deceive not, will afford some grand blooms. They are clothed almost to the pots with foliage of a rich dark green colour and of exceptional substance. Truly they are splendid plants. The flower garden was bright with brilliant hued Pelargoniums and Calceolarias, between them being turf, better than which one seldom sees. No signs are displayed of dry weather, everything betokens good culture, which signifies nothing less than unremitting and untiring attention. A proof of the exceptional season—if proof is required—is found here in a large Rhododendron which has made a second growth, and was, at the time of my visit, carrying an abundance of medium-sized trusses of well-coloured perfectly developed blooms.

Indoors neatness prevails. "A place for everything, and everything in its place," appears to be one of Mr. Macdonald's mottoes. The collection of Masdevallias is a justly celebrated one, and contains every known species and variety of merit. Unfortunately for me I had come at the wrong time to see them in flower, but one can readily imagine that when at the summit of their beauty they present a spectacle which could not fail to gladden the eyes, and mayhap the heart, of everyone, whether he be an orchidist or not. They would assuredly be worth going many miles to see. These Masdevallias are, I understand, the pet hobby of the Marquis, who is at present engaged upon an exhaustive work on this genus. Another plant worthy of special mention is a grand specimen of Bougainvillea glabra trained to the roof of a cool greenhouse, a position which is evidently well suited to it, as it is carrying an enormous number of flowers. This is a plant often found in a stove, but such a high temperature is evidently not an essential to success in its culture, for a finer plant could not be wished for than that at Newbattle. There is here, too, a delightful fernery, where Adiantums, Pterises, Aspleniums, and numerous other Ferns grow and thrive to perfection. Huge boulders have been procured, with the idea of carrying the fernery underground, to come out into the gardens by a flight of steps of a gentle incline. This project if carried out, and good Ferns planted therein, would greatly enhance the charms of a home which is already beautiful, and would be such a place as Mr. Schneider, of Messrs. Veitch & Sons', would revel in.

I cannot leave Newbattle without a word in praise of the fruit. Peaches and Nectarines had all gone, but Grapes indoors, and Pears and Apples out, were magnificent, and a great credit to the gardener. There were some grand bunches of Black Hamburgh hanging on the Vines, the berries of which were perfectly finished in every way. Many other varieties are grown of course, but these remarks may safely be applied to them.

MELVILLE CASTLE.

Still following Mr. Dunn's advice, I next walked to Melville, one of the homes of Lord Melville, and here, standing out pre-eminently above everything else, is a long border devoted to herbaceous plants. Bushels of blooms might be cut and not one missed, they are so plentiful. To select one plant from the whole as the most beautiful may appear presumptuous; nevertheless, for profusion of flowers, good effect, and general utility, I should certainly give the palm to Anemone japonica alba. I do not remember ever seeing finer clumps. Michaelmas Daisies, too, made a brave show, many varieties being grown. Second only to the Anemones in floriferousness were the Phloxes, these forming a most brilliant feature. Dahlias were also very attractive, the Cactus varieties being particularly showy. Other plants were there in endless numbers, but those I have named must suffice. Dotted here and there in the borders, and forming in places large masses, were some plants of scarlet Verbenas which looked very beautiful, and though said to be shy growers in some places, are certainly worth a trial

where such has not already been given them, for where the plants grow

well they are admired and appreciated by nearly everyone.

The glass houses are not very extensive, and are devoted principally to fruit, Grapes being a good feature. Some large bunches were noticed of the renowned Raisin de Calabre used mainly for decorative purposes. Black Hamburghs were well represented, the berries being very fine. In the structures devoted to plants, Ferns were exceptionally good, as also were Palms and Crotons.

The kitchen and fruit gardens both looked well, the latter having been very heavily cropped. Apple trees were in a few cases blooming for the second time, and this after carrying exceptionally fine crops of fruit. Mr. Mackinnon is to be congratulated on the excellent state of

the gardens which he has under his control.

TYNNINGHAME.

There are many things worthy of mention at this, one of the residences of the Earl of Haddington. The gardens are and have been for many years past in the charge of Mr. R. P. Brotherston, well known as an excellent gardener, and as a contributor to the Journal of Horticulture. The gardens are a credit to any gardener, and though the glass structures have mostly seen their best days they yet contain some fine plants and fruit. Plants are very largely grown for affording cut flowers here, and foremost amongst these come the Carnations, of which a very choice collection has been brought together. Souvenir de la Malmaison in various shades are grown in large numbers, and appear to be in the best of health, though showing, owing doubtless to the extraordinary season, a tendency to premature flowering, which may detract somewhat from the value of the plants next season. The beautiful Germania is also extensively cultivated, many hundreds of layers having been rooted this year. Sweet Peas, too, are a great feature, most of Mr. Eckford's best varieties being grown. Amongst these are some very beautiful colours, one of the best being Countess of Radnor. Affording as they do an abundance of flowers these Sweet Peas must be invaluable. The Blue Pea (Lathyrus sativus) is also grown, and a small clump of it is a very beautiful sight, and is moreover useful for decorative purposes. Mignonette thrives admirably, producing huge spikes of its deliciously scented blossoms, the variety Machet being perhaps the largest.

The flower garden is furnished with Zonal Pelargoniums, Calceolarias, Tritoma Uvaria, and other plants, and was looking very gay when I was there. The crop of Apples has been a wonderfully heavy one, as also has there. The crop of Apples has been a wonderfully heavy one, as also has the Pears, many of both having been gathered and yet leaving bushels on the trees. Pears on the walls were looking grand, many of the very best varieties being planted, notably Clapp's Favourite, Souvenir du Congrès, Williams' Bon Chrêtien, and Louise Bonne of Jersey. Plums too were hanging here and there, but the majority had of course been gathered. Indoors the Vines were looking splendidly, and some very serviceable bunches were hanging. Tomatoes too were fine. The plants indoors were in excellent health, and Crotons especially were very highly coloured. Ferns are grown in large numbers, and some highly creditable specimens were noticed. On the shore of the Firth of Forth, upon which the estate is situated, the Sea Buckthorn was looking beautiful and carrying a huge crop of its brightly coloured berries. There were many other plants and fruits worthy of note, but I must leave those to be dealt with by others at some future time. A visit to Tynninghame will be conducive to thorough enjoyment, and much valuable information may be gained in walking through the gardens with Mr. Brotherston.—NOMAD.

EXPERIENCE WITH APPLES.

AT the time when the characteristics of Apples and the value of the crops can be best judged, a few notes from cultivators would be opportune and instructive. I send three which may perhaps lead to others from cultivators in different parts of the country.

WEALTHY.

In your report of the discussion that took place at the last meeting of the R.H.S. Fruit Committee, I notice that some members expressed their strong disapproval of the growth and bearing habit of this Apple. With me the growth is moderately strong, with a slight symptom of canker showing on one or two shoots of last year's growth. There is, however, nothing to give cause for alarm in that respect, as the cold, heavy soil here is certain to develop canker if the variety is addicted to it in any way. The tree from which the fruit was gathered was a maiden in 1891, and this year bore eight Apples, all equal to those before the Committee. Many were removed by thinning when quite small to give size to those retained. One of the Apples measured 12 inches round. In the Journal of September 21st I note it is being largely grown at Denver, an Apple-growing district in America. Here Wealthy is thought highly of; so much that I hope to increase our stock very considerably in the coming planting season.

ECKLINVILLE.

No Apple that I know will grow better and give a larger return of fruit in a short time than this, but what is the use of the quantity if there is difficulty in disposing of the produce? As is well known this is a "soft" Apple, easily bruised, and fruiterers with whom I have done business refuse to buy Ecklinville at any price. If this is the case in one town, is it not likely to be the same in others? How, then, is it possible to dispose of the fruit? Much as I appreciate this Apple for

its growth, cropping, and cooking qualities, I am compelled to warn others of the risk they run in planting it extensively.

DUCHESS OF OLDENBURG.

Anyone requiring a good early cooking Apple to be grown as an espalier could not do much better than plant this Russian Apple. The finest crop I have seen of it was produced by an espalier-trained tree in the garden at Hill Place, near Bishop's Waltham. The fruit was packed as close as it could be on all the branches, was of large size and magnificently coloured. I was much impressed with the variety after seeing it so successfully grown.—E. MOLYNEUX.

PEASGOOD'S NONESUCH.

This Apple has done well in the neighbourhood of Bristol. TWe recently saw fruit grown in the gardens of Cote House (Mr. Bannister, gardener), on a bush tree, one fruit weighing 1 lb. 12 ozs.; two weighing $3 \text{ lbs. } 7\frac{3}{4} \text{ ozs.}$; six weighing 8 lbs. $13\frac{1}{2} \text{ ozs.}$; twelve weighing 15 lbs. 13 ozs.-Jas. Garaway & Co.

DEATH OF MR. G. BOGUE.

MANY readers of the Journal of Horticulture, as well as ourselves, will hear with deep regret of the death of Mr. George Bogue, of 10, Hill Street, St. Albans, which took place just before midnight on Tuesday, September 19th. The deceased, who reached his eighty-sixth birthday only on the previous Wednesday, was familiarly known throughout the city, owing to his long connection with it. He had been in failing health for some time, yet he was out a fortnight before his death. It was then that he took a cold, and it seemed doubtful if he would recover, his constitution having been impaired by a serious illness in the spring. Mr. Bogue was a native of Lanarkshire, and came to St. Albans as head gardener to the Earl of Verulam, at Gorhambury, about forty-six years ago, and remained in his Lordship's service for twenty-eight years.

Many years ago Mr. Bogue used frequently to contribute articles to this Journal, which were of a sound practical character. Mr. Bogue also for many years supplied annually to the "Herts Advertiser" a rainfall table. As showing the interest Mr. Bogue always took in this kind of work, it might be mentioned that only a few weeks back, when showing the apparatus to a friend, he expressed his wish to have it fitted up, and thought he should begin again. The deceased, during his connection with Gorhambury, was a member of the Committee of the Royal Horticultural Society, and seldom failed to attend the meetings in London, and in the last few years of his life the deceased often referred with pride to this, and would speak in glowing terms of the times when he had set at a Committee meeting with the last few times when he had sat at a Committee meeting with the late Prince Consort. During the last eighteen years Mr. Bogue had lived a life of retirement, and filled the office of churchwarden at Christ Church for a long period. He, however, gave up his position some five years ago owing to increasing age, and on that occasion he was presented with a valuable inkstand as a mark of the esteem in which he was held. There are only a few distant relatives of the deceased in England at the present time, most of his nearer relations having emigrated and attained to very good positions abroad. The funeral took place in the St. Michael's Churchyard, St. Albans, on Saturday afternoon, September 23rd. (St. Michael's Church is within the precincts of the ancient Roman city of Verulam, and contains a fine marble monument of the famous Lord Bacon). The service was conducted by the Rev. W. Horne, and among those who followed to pay a last tribute of respect to the deceased were Miss Henley and Miss Allard (sisters-inlaw), Mr. Horsfield (steward to Earl Cowper), who is a nephew of the deceased's late wife; Mr. Garner, Mr. J. Child, Mr. W. Dunham, Mr. W. Bowes, and Mr. Whitelaw (gardener to Lord Grimthorpe at Batch-

The "Herts Advertiser," from which the foregoing record was mainly taken, did not reach us till after the publication of our last issue. It was while our late contributor, coadjutor, and friend, who has passed away so full of years and honour, was gardener at Gorhambury that articles from his pen appeared in the Cottage Gardener and Journal of Horticulture. These were stamped by the teachings of experience, and

were proof of cultural attainments of a high order.

SOFT VERSUS HARD COLD WATER.

My first remarks upon this subject may, I admit, be open to misconstruction, but were certainly not written with the object of implying "W. P. W." had betrayed confidence in any way, the reverse being the case. I hope in future to strictly avoid touching the very sensitive feelings which "W. P. W." appears to possess, and will now content myself by taking a careful survey of the articles written, and endeavour to explain a few facts, prove a few statements, and accept without hesitation the challenge thrown out by "J. B. R." (page 286), therefore I can only touch lightly upon the first-mentioned correspondent's article to save repetition. The "subtle shaft" which "W. P. W." has hurled with such mighty force falls harmless to the ground, and leaves me still free to concentrate time and attention to "J. B. R.'s" article, in which he distinctly implies that I wish to turn the matter into other channels. This is decidedly wrong; my conviction strengthens rather than diminishes. I have no intention to "play upon words" this communication, my duty being to accept the challenge to quote an authority where "hard cold water" is described in words equal to

"obnoxious drug."

First, What is the meaning of "obnoxious?" Anything in disfavour; and I take that "hard cold water" is distinctly in disfavour with me; "drug," anything used which proves hurtful to the constitution of animals or vegetation. This is my explanation of "obnoxious drug." Now turn to "slow poison," and the meaning reads, anything which is injurious to life, animal or vegetable. Will this explanation satisfy your correspondent? The first authority I quote is "Johnson's Gardeners' Dictionary" (page 818), which reads, "That known as hard water, containing an express of salts of lime or means is invariably prejudicial." taining an excess of salts of lime or magnesia, is invariably prejudicial," in other words injurious. To subject the roots to an excess of this element which "hard cold water" contains, acts as a "poison" instead of a nutriment to the plants. In support of this statement allow me to point "J. B. R." to the experiments recorded in "Thompson's Gardeners' Assistant" (page 57), it will then be for him to prove my statements are "grossly incorrect."

I will advance another step and quote the experience of men whose authority is recognised throughout the gardening world. First, we read in that valuable work the "Fruit Growers' Guide," by J. Wright (page 291), "Water should never be less in temperature than the mean temperature of the house, and it is better if 5° warmer." Now turn to "Fruit Culture," by J. Cheal (page 128) and read, "Be careful not to use cold spring water or the chill will be too great." Would these warnings, I ask, be necessary if "hard cold water" was beneficial? No! they distinctly point out that it is the reverse of beneficial. "Hard cold water," I repeat, prevents heat being carried down to the roots, and when these are chilled they cannot produce healthy vegetation. Knowing this what possible deduction can be drawn from "J. B. R.'s" assurance that "hard cold water" is highly beneficial to vegetation? He commits himself to "dicta," and it is for him to prove that our practical and scientific authorities are wrong. Allow me to return the challenge and ask "J. B. R." to quote an authority outside this discussion where "hard cold water" is described as highly beneficial

to vegetation.

I was surprised to see Mr. Molyneux's communication (page 286) in which he states that "hard cold water" has a distinctly nourishing effect upon Chrysanthemums and other plants, for in his book on "Chrysanthemums and their Culture" (pages 54 and 55) we find, "Where water comes direct from wells or water companies' pipes in a cold state means should be taken to expose it to the sun's rays and air some time previous to using." Now that his ideas have advanced in such a remarkable manner, he ought, in all fairness, to rectify the statement in his book, because advice which is bought ought to be of the best and not subject in any way to contradiction by the same author in other channels.—F. DUNN.

MADAME PATTI'S LOVE OF FLOWERS.

MADAME ADELINA PATTI has contributed a characteristic "Page of Confessions" to a London magazine. In answer to the question, "What flowers do you most admire?" she replies, as I think very sincerely, "I love them all." Nevertheless, like most amateur horticalturists, the prima donna has her special favourites. She said to me some years ago, during the interval at one of her memorable Irish concerts, "If ever you wish me to wear any special flowers when I am singing do not send me Lilies, whose fragrance is so powerful as to have a sickening influence; I would infinitely prefer either Roses or Carnations. I, however, admire greatly the Lilies which you send to me, and though for this special reason I cannot wear them I have them beside me here." I observe on page 292 it is predicted in an interesting article that Lilium Henryi will soon become a favourite with the ladies. Another Lily which might safely be worn by them is L. speciosum Kraetzeri, the fragrance of which is much more delicate that that of L. auratum or L. longistorum.

Madame Adelina Patti is not only a lover, but also a great cultivator of flowers, and her famous conservatories at Craig-y-Nos Castle, in which grow luxuriantly the rarest exotics, are among the finest in the kingdom. All of these are lighted throughout with electricity, and present, when thus illuminated in the evening, a fascinating scene, especially when the subdued radiance from the electric lamps, falling on the river Tawe, transfigures the rushing waters of that mountain stream.—David R. Williamson.

LONDON TREES.

It is quite true, as stated in "The Times" of the 20th ult., and reproduced in the Journal of Horticulture, page 295, that the flowers of the Ailantus have an unpleasant smell. But this, in my judgment, does not militate against its value as a London tree. The scent is scarcely perceptible in the open air in England, and the flowers pass quickly away. The huge tree in my garden is nearly 50 feet high close to the house, so close that the extreme branches overlap the windows. An average of twelve persons, exclusive of visitors, has lived in the house for more than twenty years, and during the whole of that period I have heard but one allusion made to the scent of the flowers. A grove of it might prove objectionable, but there is no fear of annoyance from a short line or lines of trees. I have often admired this tree in the streets in France, notably in the west, and recently saw an advertisement for trees in a German periodical. Flowering in the hottest time

of New York it may be objectionable there, probably is so; of this I have had no experience.—WM. PAUL, F.L.S.

THE following correspondence also appeared in "The Times" insupport of Mr. Paul's contention:—"The scent from the Ailantus tree flowers is quite innocuous and by no means powerful. Just outside the windows of the Palace at Wells may be seen the finest specimen in England, and as his Lordship daily takes a walk beneath its shade, and as he is in his eighty-sixth year, obviously he has not suffered from the proximity of his giant neighbour." Another writer says:—"Referring to recent Another writer says :- "Referring to recent correspondence on this subject in your paper, I may mention there are three varieties of the Ailantus, or Tree of Heaven. Two of these bear evil smelling flowers, while the scent of the third is, as Mr. Paul describes it, scarcely perceptible."

THE "MARTIN" FLOWER RACK.

THE accompanying illustrations represent the "Martin" Flower Rack, a sample of which has been sent us by Messrs. Corry & Co. (Limited), 13, 15, and 16, Finsbury Street, London, E.C. This useful contrivance was invented by Mr. J. Martin, of Messrs. Sutton & Sons, Reading, and it will doubtless prove valuable for exhibiting cut flowers, also for arranging blooms in vases or glasses. The rack depicted in the small sketch can be easily filled with flowers before placing it in the vase, as shown in the larger engraving. It can also be utilised, if

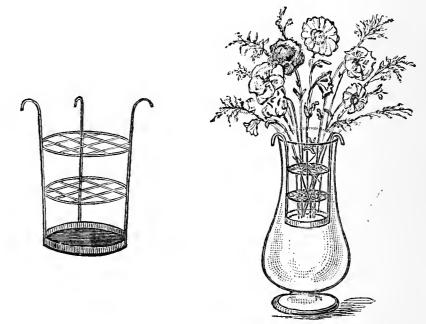


FIG. 46,-THE "MARTIN" FLOWER RACK.

suspended by wire, for displaying dried flowers and grasses, the sides of the rack being covered with green moss. The rack is made in various sizes, from $1\frac{1}{4}$ to $2\frac{1}{2}$ inches in diameter.

THE ROSELANDS, SOUTHAMPTON.

DURING a recent holiday I took the opportunity of visiting the flourishing seaport town of Southampton, and after viewing the new pier and docks I went across the ferry to the pleasant village of Woolston, with the intention of seeing the grounds and conservatories at The Roselands, the seat of W. Garton, Esq.

Mr. F. Jennings, the head gardener, welcomed me, and by him I was shown a fine range of Peach houses. The trees at the time of my visit were carrying a splendid crop of fruit. Some of the trees were moved last year, but they are making fine wood for next season. We next entered the early vinery, in which the Vines are being prepared for forcing. Near the last named structure is a fine span house, filled with Maréchal Niel Roses. In the next house a grand crop of Tomatoes was noticeable. The frames are now filled with Bouvardias, Primulas, Cinerarias, Freesias, and Zonal Pelargoniums. About 1000 Chrysanthemums are grown on the cut-back system. The plants are dwarf, and the foliage is good. We next visited the conservatory, which is a very long span-roofed structure, filled with choice plants. From thence we entered the large fernery, which was designed by Mr. Jennings. There are two fine specimen Palms in the centre, and a host of other plants, that deserve more than a passing reference. A house filled with Crotons, possessing well coloured foliage, is especially interesting. The conservatory, fernery, and Croton house are lit by the electric light, which at night add considerably to their attractions. A large stove, containing the fine specimen plants which Mr. Jennings has exhibited at Southampton the last two seasons, also forms a feature at The Roselands, as does the propagating house, where hundreds of seedling Palms and young

Crotons are grown for decorative purposes.

Besides the early house mentioned, there is a fine range of vineries, containing well finished Lady Downe's, Black Alicante, and Muscats. We next passed through a long archway covered with Pears and climbing plants, the whole presenting an attractive appearance. The lawn is well kept, and the carpet bedding and an avenue of half-standard Acacias were most noticeable. The same may be said of a fine tennis court and bowling green. The grounds are not extensive, but afford many beautiful views, and being well kept reflect much credit upon Mr. Jennings.—A GARDENER.

COUNTY OF GLOUCESTER AND CHELTENHAM ROYAL HORTICULTURAL SOCIETY'S SHOW.—SEPT. 27TH, 28TH.

THE annual autumn Exhibition of this Society was held in the Winter Gardens, which is admirably adapted for the purpose, being a fine, spacious, well lighted, and central building, on the above dates. Taken altogether the Show was a good one. In the plant and cut flower classes there was a falling off both in quantity and quality, but the fruit section was a decided advance, some remarkably fine exhibits being staged. Vegetables were very good for the season.

cut flower classes there was a falling off both in quantity and quality, but the fruit section was a decided advance, some remarkably fine exhibits being staged. Vegetables were very good for the season.

For six stove and greenhouse plants Mr. J. Cypher, Cheltenham, secured, as usual, first honours with large well-bloomed plants, the best being Ixora Pilgrimi and I. Williamsi. Messrs. Heath & Son, Cheltenham, came second with some excellent plants. With thirty plants, in or out of bloom, grouped for effect, Mr. J. Cypher and Messrs. Heath and Son took the honours as named, both staging gigantic plants in prime health and condition. For twenty-four Dahlia blooms, distinct, Mr. Thos. Hobbs, Bristol, was first, Messrs. Heath & Son a very close second, and Mr. Humphries, Chippenham, third. With twelve Dahlia blooms, distinct, Mr. Hobbs was again first, Mr. T. Haskins, Bristol, second. For twenty-four German Aster blooms Messrs. John Price & Son, Stonehouse, were first. Mr. G. Garraway, Bath, occupied a similar position for twenty-four French Asters. For thirty-six Rose blooms Messrs. T. J. Townsend & Son were first, Messrs. Perkins & Son, Coventry, being second. Messrs. Perkins & Son were an easy first for the best bouquet, made up in their usual faultless style. Mr. J. Cypher was first for twelve varieties of herbaceous flowers, Messrs. Heath & Son second. The same exhibitors were placed as named for twelve exotic Ferns, both staging massive well grown plants.

staging massive well grown plants.

For six bunches of black Grapes in two varieties, the Rev. G. Coventry was first, Gros Colman and Gros Maroc very fine; Canon Coventry, Severn, Stoke, second, with fine bunches of Gros Colman and Alicante. For three bunches of black Grapes, Mr. George E. Cox was first; Lieut.-Colonel Rogers second, both showing well finished Alicante. With six Colonel Rogers second, both showing well finished Alicante. bunches of white Grapes, two varieties, Mr. D. Sheppard was first with Bowood Muscat and Muscat of Alexandria; Rev. G. Coventry second. For one dish of white Grapes Mr. G. E. Cox was first, Canon Coventry second, both staging Muscats. For two bunches of black Grapes the Rev. G. Coventry was first and C. Lee Campbell, Esq., was second, both putting up fine, well coloured bunches. With eight dishes of fruit, the Earl of Coventry secured premier honours with good Gros Colman and Muscat of Alexandria Grapes, a fine Smooth Cayenne Pine, a large Melon, and good dishes of Pears, Peaches, Figs, and Plums. C. Lee Campbell, Esq., second, with large bunches of Black Alicante and well coloured Muscat of Alexandria Grapes, a fine Melon, and good dishes of Pears, Apples, and Plums. Mr. E. Hall, Bath, was third. For four dishes Mr. D. Sheppard was first with good Muscat Grapes, fine Pitmaston Duchess Pears, Figs, and Peaches. J. P. W. Butt, E-q., a very good second. Lieut.-Colonel Rogers had the best Peaches; and C. Lee Campbell, Esq., and J. P. W. Butt, Esq., were the most successful in the Melon classes. The Earl of Coventry had the best dessert Apples, showing King of the Pippins; and Mr. H. Shurmer had the finest dish of culinary Apples, with magnificent examples of Peasgood's Nonesuch. The same exhibitor was also first for twelve dishes of Apples. In the vegetable classes Mr. G. Garraway, Mr. H. Shurmer, and Mr. A. Bevan took leading positions for collections. In the single dish classes the competition was keen, but it would take up much space to name them.

Mr. B. Ladhams, Shirley Nurseries, Southampton, was awarded a silver Flora medal for a fine collection of herbaceous flowers, also a first-class certificate for a perpetual-flowering Pink named Ernest Ladhams, which promises to be an acquisition. First-class certificates were awarded to Messrs. Perkins & Son for two beautiful Cactus Dahlias—viz., Purple Prince and Matchless. Messrs. W. Edwards & Son, Sherwood, Notts, exhibited their new bronze-like receptacles for Ferns or other plants. Mr. C. Phillips staged a miscellaneous collection of flowering and foliage plants. Mr. G. Humphries and Messrs. Heath & Son staged Dahlias in variety; and Mr. J. Townsend, Worcester, Dahlias and Roses, not for competition.

TRADE CATALOGUES RECEIVED.

E. P. Dixon & Sons, Hull.—Forest and Ornamental Trees, Shrubs, Fruit Trees, &c.

Dobbie & Co., Rothesay, N.B.—Hyacinths, Tulips, Roses, Carnations, Sec.

Henry Norton, Louth, Lincolnshire.—Dwarf Roses.

GARDENERS' CHARITABLE AND PROVIDENT INSTITUTIONS.

THE GARDENERS' ROYAL BENEVOLENT INSTITUTION.—Secretary, Mr. G. J. Ingram, 50, Parliament Street, London, W.C.

UNITED HORTICULTURAL BENEFIT AND PROVIDENT SOCIETY.—
Secretary. Mr. W. Collins, 9, Martindale Road, Balham, London, S.W.
ROYAL GARDENERS' ORPHAN FUND.—Secretary, Mr. A. F. Barron,
Royal Horticultural Society's Gardens, Chiswick, London, W.



FRUIT FORCING.

Vines.—Early-forced Vines in Pots.—Those to be forced to furnish ripe Grapes in March or April should be started not later than the first or second week in November. Early and free fruiting varieties must be chosen. There are few that are in all points so satisfactory as White Frontignan, Foster's Seedling, Black Hamburgh, and Madresfield Court. If bottom heat can be given to start them they will break well. Provided there is a pit of 3 feet depth and 4 feet width, the pots may be raised upon bricks in pillar fashion, so that their rims are slightly higher than the pit edge, and so that the pots will be in the centre of the bed. Leaves being placed in to fill the pit a gentle warmth will be afforded the Vines, and the roots will pass from the pots into the leaves, deriving support beneficial to the growth of the Vines and Grapes. The temperature at the roots must be moderate at all times, especially at the commencement, 60° to 65° being sufficient about the pots and 70° to 75° at their base. When in growth the temperature about the pots ought to be between 70° and 75°. The house must be light, properly ventilated, and well heated. It should face the south, a lean-to or three-quarters span-roof being most suitable.

Early-forced Houses.—It is not desirable to start permanently planted Vines early in November to afford a supply of ripe Grapes in late March or April where there is convenience for growing them in pots, as it is a great strain on their energies through having to make growth at the dullest period of the year, and to rest at the hottest. The Vines ought now to be pruned, and rest assured by keeping them cool and dry. If the roots are partly outside that part of the border should have a covering of moderately dry leaves with a little litter to prevent them blowing about. This is an effective protection, and need not be used until the soil has been well moistened by the autumn rains, yet before the ground has become soddened and much reduced in temperature. Where the border is entirely outside and early forcing is practised it will be necessary to cover it with fermenting materials about the time of starting the Vines. Three parts of Oak or Beech leaves to one of stable litter will give a more suitable and durable warmth than all manure. The material need not be thrown into a heap until the house is closed, then mix well together, damping if dry, and when getting warm it is fit to place on the b rder. But Vines in outside borders are not desirable for early forcing, though it is sometimes necessary to make the most of them for the purpose, and in that case a supply of fermenting material must be held in readiness so as to renew the heat as required. Fermenting materials are also a great aid in forcing operations where the roots of the Vines are partly or entirely inside, as they generate and maintain a genial condition of the atmosphere, without recourse to so much fire heat or sprinklings from the syringe. In that case the material should be placed in the house when it is closed, turning the heap a time or two more than is advised for outside borders, so as to become well sweetened before being used.

Second Early Houses.—Vines to be started at the new year to afford ripe Grapes in late May or early in June ought now to be pruned and dressed, removing the loose bark only, and washing them with a tepid solution of softsoap, 2 ozs. to a gallon of water. The house also must be thoroughly cleansed, whitewashing the walls, and painting the wood and iron if necessary. Unless the Vines have been infested with insects it will not be necessary to apply an insecticide. If they have been attacked, it would be advisable to dress them carefully with an approved solution. The loose surface soil should be removed and a couple of inches thickness of fresh loam be supplied, sprinkling about 4 ozs. of the following mixture over each square yard-steamed bonemeal two parts, and kainit one part, mixed, and leave it on the surface, unless it is necessary to apply water to render the soil moderately moist, then of course it will be washed in, and the soil will hold its manurial elements. The house should be kept cool and dry, ventilating fully except when frost prevails, and only use fire heat to exclude it or prevent the hotwater pipes becoming frozen and burst.

Midseason Houses.—Where the Grapes are hanging it will be necessary to employ a little fire heat so as to insure a circulation of air and prevent the deposition of moisture on the berries, which is almost sure to be followed by decay. Air should be admitted constantly unless the weather is very damp or foggy, when it will be best to maintain a gentle warmth in the pipes and keep the house closed, not employing more heat than sufficient to keep the temperature at 45° to 50°. If the roof is a leaky one or plants have to be accommodated in the house, it is advisable to cut the Grapes with as much wood as can be spared, and, removing the leaves, place the shoots in bottles of clear rain water placed in an inclined position in a cool dry room, so that the bunches will hang clear of the bottles. Grapes in this way will often keep plump and sound up to Christmas, whereas left on the Vines they often decay long before that time, and the shortening of the bearing shoots to two or three buds above the pruning buds is often beneficial by plumping the latter, also by affording freer access of light and air. It is also a good plan to remove some of the laterals where they are crowded, but

this must not be carried too far where black Grapes are hanging or they

will lose colour through exposure to the sun.

Young Vines.—These often have a disposition to keep growing to a late period, and it should be checked by stopping the shoots moderately, but not so much so as to start the principal buds, as would be likely by large reductions at one time and too closely. It will also accelerate the ripening of the wood, which may be further facilitated by a somewhat high temperature and rather dry atmosphere by day, shutting off the heat and keeping the ventilators open by night except when frost prevails, for the Vines must not become frozen whilst they are full

of sap.

Late Grapes.—These are now thoroughly ripe except where the Vines are in bad condition, or where started late. In the latter case little benefit is derived from fire heat at this season in ripening the Grapes, but it should be used where the wood is not thoroughly ripened for the next year's prospects, maintaining a temperature of 70° to 75° by day and 65° at night, falling 5° through the night, allowing an advance to 80° or 85° from sun heat, continuing this until the Grapes are ripe, at least until the wood is brown and hard. Where the fruit is thoroughly ripe—as it should be, for in that condition only can Grapes be expected to winter satisfactorily—and the wood thoroughly matured, all spray or laterals may be removed down to the main buds, ventilating freely on all favourable oceasions. Fire heat will only be necessary to prevent the temperature falling below 50°. To prevent dust settling upon the berries raking or sweeping must not be practised. Mats or clean dry straw laid over inside borders will to some extent prevent evaporation, assist in keeping the atmosphere dry, and prevent the soil cracking. The outside borders must be covered if the fruit is to keep satisfactorily. Glass lights are best, wooden shutters good, and tarpaulin over dry bracken or straw answers well. About 6 inches thickness of dry leaves, and a little litter over them, is all that is given in many cases, and when the borders are well drained the Grapes keep plump and sound to a late period.

Melons.—Water must now be applied carefully to plants with the fruit advanced towards ripening, but those with fruit swelling must not be allowed to become dry at the roots. Keep up moderate moisture by damping for such plants, available surfaces being sprinkled in the morning and afternoon. Add a little soil to the hillocks of the latest plants as the roots protrude. Remove all superfluous growths as they appear, and maintain a temperature of 65° to 70° at night, 70° to 75° by day, up to 85° or 90° with sun. Keep the bottom heat steady at about 80°. Fruit ripening will be the better of a little extra fire heat and air constantly, which will do much to impart flavour. Any fruit it is desirable to keep for a time should be cut with a portion of stem, and be kept in a dry airy room. Fruits that are nearly ripe in frames may also be cut with a goodly portion of stem and be placed in a warm airy house in the full sun, and they will ripen better than in a moist atmosphere

or where there is a deficiency of warmth.

THE KITCHEN GARDEN.

Celery.—All things considered Celery looks remarkably strong this season, and the quality and keeping properties ought also to be satisfactory. Where there are partial failures this, in many cases, is largely due to want of moisture at the root. Ordinary rainfall bas little or no effect upon Celery in trenches. What the plants want are occasional thorough soakings of water or liquid manure, and that not merely prior to commencing to mould up, but also for some time afterwards. Before either the first, second, or even third addition of soil is banked up against the rows the soil about the roots should be tested with a pointed stick. If found, as it most probably will be, dry, or approaching that condition, give a heavy watering, and delay moulding up for another Unless these precautions are taken the Celery will be worthless before the season is very far advanced, and will seed prematurely.

Earthing up Celery.—The latest rows ought now to be partly moulded up. Pull away the small lower leaves and any suckers there may be, and either tie or hold the outer stalks well up together prior to placing about 3 inches of fine soil about them, re-loosening the stalks so as not to unduly confine the hearts. If slugs are troublesome, soot, or soot and lime, should be freely dusted among the plants before the first and subsequent additions of soil are made. In extreme cases it is a good plan to wholly surround the stalks with either fine dry ashes or burnt earth, Celery also keeping well when thus enclosed. A very large amount of these materials is not required if boards are placed well up to the rows when each addition is made, and soil being banked against to the boards; the latter can be withdrawn and shifted along to the next length. The moulding up of the earlier and successional rows should also be proceeded with, this being completed at about three times. Not till the hearts are well advanced, or say from a fortnight to three weeks after the previous moulding up, should more soil be placed against the plants. This should be made fine, and not pressed hard against the stalks, the latter being disposed so as to exclude the soil from the hearts. At the final moulding enclose about one-half of the leaves, making the soil rather firm about these with the hand, and round off the ridge so as to throw off heavy rains and snow water.

Cardoons .- These also absorb much moisture at the roots, and the stalks will be dry and tough if the plants suffer from want of water. Therefore give more water if necessary. In order to blanch and keep Cardoons effectually the best of the leafstalks ought to be gathered well up together, and kept so by means of haybands wound closely around It is rather rough work, but if the men are furnished with gloves and canvas jackets it can be easily accomplished. Bank the soil well up to the plants gradually, or much as Celery is finally moulded up.

Leeks.—When the plants are dropped into deep fairly wide holes, formed with a dibber, the blanching will be effected without any further trouble. Should the Leeks be planted in trenches or it may be nearly on the level then moulding up must be done. A bandage of strong brown paper or a common drain pipe split in halves placed round the stems would prevent the soil from finding its way down the leaves, but for ordinary purposes there is no necessity to take this precaution. Leeks are perfectly hardy, and need not be heavily moulded up, as in the case of Celery by way of a protective measure.

Onions.—Those which were either sown late last spring, or else failed to come up till very late in the season, have in many cases failed to "bulb" properly. When this happens, the necks are thick and the tops erect and green. Instead of pulling all up and attempting to ripen them sufficiently to store for winter use, the better plan is to pull those that have formed bulbs, the tops also being limp, and to finish the ripening of these, either in an old-fashioned oven after the bread is drawn, or else in a dry warm place under glass. Let the green Onions, or all that are still erect and growing, remain where they are, these being drawn according as they are wanted for use. They will being drawn according as they are wanted for use. survive an ordinarily severe frost, and in any case leaving them alone is the only way in very many instances of being sure of a supply of Onions.

Other Root Crops.—Beet, Carrots, Salsafy, and such like were restarted into active growth by the August rains, and are still growing strongly. Having plenty of strong leaves there is little likelihood of frosts injuring the first-named, and all will most probably keep better if

left where they are for a fortnight longer.

Spinach.—Winter Spinach is in a very promising condition. In many cases the seed germinated well, and unless the plants are freely thinned out directly the leaves are large enough to use premature seeding will take place. Stirring among the plants with a pointed stick and between the rows with a Dutch hoe are good preventives of grub attacks

and the increase of slugs.

Protecting Vegetables. - Globe Artichokes are stronger more plentiful than at any time previous this season. Seeing that they afford a good and well appreciated change it would pay well to protect some of the best of them whonever severe frosts are imminent. A single row or small breadth of plants could be easily protected by means of a few stout upright and cross stakes, these supporting mats or canvas covering. Odd plants throughout a large breadth might be roughly protected with large branches of evergreens securely fixed over them. Some of the more forward heads could be cut, and kept for a few days with their stalks placed in water. Autumn Cauliflowers and the earliest Broccoli are spoilt by a moderately severe frost; but it is rather too early to lift and store these under cover of some kind. All ought to be gone over frequently, strong leaves being gathered from old stumps and carefully tucked over the more forward hearts. Rows of medium height late Peas might be protected with blinds and such like, branches of evergreens also affording sufficient protection in some cases. Have sideboards fixed round breadths of late Lettuce and the more forward Endive, with sufficient cross bars to support light mats or other protective material whenever frosts are anticipated. Tomatoes against walls have formed extra good late clusters of fruit, and seeing that these will ripen better on the plants than off if properly protected. The leaves being healthy, and not cut back unduly, afford a certain amount of protection; but these ought to be supplemented by mats, blinds, or spare frame and pit lights. Should there be any signs of the disease commencing to spread, then ought the clusters of green and ripening fruit to be cut at once, and suspended in warm, dry quarters to colour. The larger green fruit will colour in due course, and be available for cooking purposes, but the small green fruit is only fit for pickling.

PLANT HOUSES.

Zonal Pelargoniums.—Plants that have been standing outside would now be better if they could be placed under cover. Avoid starting them into soft growth if the plants are to flower profusely and continue to do so for a lengthened period. Shallow cold frames will suit these plants for some weeks, so that the lights can be tilted or closed at night to protect them from frosts that may occur at any time. Protect the plants also from heavy rains, but on all fine occasions throw off the lights. If some plants are needed in flower arrange the forwardest in a light airy structure fairly close to the glass. Admit plenty of air to the plants, also give a little artificial manure to the surface of the soil. Do not overwater, for this proves as detrimental to the plants as heavy rains. Remove from all plants that are placed in frames early flowers that are already showing, also bad leaves. Late propagated plants now in 3-ineh pots that have been kept in frames may be placed into slightly larger pots, and if kept in frames, or in a light airy house where they can be given a little warmth, they will produce flowers for a long time.

Ivy-leaved Varieties.—These are most useful, and if they are well ripened by standing outside and are housed at once they will yield flowers for some time. However useful the Zonals may be the flowers of Ivy varieties are very effective in a cut state, especially the delicate

shades of pink.

French and Fancy Pelargoniums.—These may be placed in their winter quarters, such as on shelves close to the glass in cool, airy houses. In these positions with careful watering the plants winter well. The earliest plants should have the points of the shoots removed before they are placed on shelves, and if in 3-inch pots they can be placed into 5-inch pots. In potting firmly press the soil, which should consist of

good fibry loam, one-seventh of sand, and the same amount of manure. Careful watering is necessary, for if kept too wet the foliage is certain Later plants should be treated the same as regards air and water. Young plants that are established in 3-inch pots may have the points of any weak shoots removed; pinehing will induce them to start strongly again into growth, provided they are kept cool. Cuttings that are still in outside borders should be lifted and potted without delay. All that are rooted should be placed into 3-inch pots, and stood on shelves in a cool house. Heat ruins these plants by causing them to

Heliotropes.—If the plants are placed in a light, airy structure, where the night temperature can be gradually increased to 55° in a month's time, the plants will commence growth, and flower profusely for a very long time. A little artificial manure applied to the surface

will prove beneficial.

Bouvardias.—These plants must not be starved. Any that have been planted outside and are only needed for providing flowers may be lifted with good balls and put in a warm frame or low house. Those grown in pots will be showing flower, and if stood in a house where gentle warmth can be given in the course of a few weeks they will soon yield useful flowers for cutting. If placed on ashes the plants invariably root through, and this proves a great assistance to them. Soot water, or artificial manure that acts quickly, proves invaluable to these plants.

Justicia flavicoma.—The growth of these plants is earlier than usual, and already the flower truss in many cases is just visible. A temperature of 50° will suit them, plenty of air being admitted during fine warm days. Soot water and artificial manure may be given. plants if raised from cuttings should be clean, but if scale exists upon

them it ought to be eradicated.

Fuchsias.—Plants that have flowered and have thoroughly ripened wood may be stood outside for a time. Younger plants that have not the wood well ripened may be stored for a time in frames. Do not hurry them to rest by keeping them unduly dry. Young plants that are just rooted may be placed into 3-inch pots and arranged on a shelf,

where they can be kept growing during the winter.

Bulbs.—Various kinds of bulbs should be potted according to the demand until the end of this month. When placed in ashes they should be marked, and the date of potting placed on the label. This saves trouble and disturbing the plants before they are ready for removal. Place all the later potted ones where they can be covered with litter if not ready for removal before we experience severe weather.

Freesias.—All the earliest of these should be growing in frames, where they can remain for some weeks longer. If the frames are needed place the plants on shelves where they can enjoy full sunshine and plenty of air. Freesias are frequently spoiled by a too close confined atmosphere. Later plants must not be allowed to become drawn.



APIARIAN NOTES.

PRACTICAL HINTS FOR BEGINNERS.

(Continued from page 299.)

WITH the exception of depositing the eggs in the cells, which is done solely by the queen, one in each cell, and at the rate of from one to four thousand or more daily, all the other economy of the hive is performed by the workers gathering pollen and honey from the flowers and other sources.

They secrete wax in the form of irregular roundish white scales, which when ready for use project from the segments of their stomachs in pairs. This they utilize for building and sealing their honeycombs, and with a mixture of it and pollen and propolis, they cement crevices of the hive, and seal their brood cells. While they perform this work with ardent care and zeal for the future generations of bees, their work in the field is perhaps of greater importance. Entering blooms for honey and pollen ostensibly for their own use, they fertilize and cross flowers, perpetuating them with greater vigour and beauty. Probably some buds would never expand did the bees not remove the superabundant propolis from them; everywhere and in everything the bee is engaged.

The drones are the male bees, which are sometimes too numerous in hives; advice to their restriction will be given further They are of no use in the hive, unless it be in the case of swarmed hives, where there are a paucity of workers to keep up a proper degree of temperature for the successful hatching of the young bees. In the season of mating they fly out during the warmest part of the day, from one till three being the busiest time. They remain out from fifteen to thirty minutes, flying long distances in hopes of meeting and mating with a queen. During the present summer, while I held a queen, a drone, probably attracted by her odour, flew right into my hand. The speed drones fly at probably exceeds greatly that of the worker, which has never been properly estimated. While standing in an open truck this

year, the engine going upwards of fifty miles an hour, the bees flew from front to rear, evidently with the greatest ease.

Fertile workers are so called because externally they cannot be distinguished from a worker bee, but in the proper sense are imperfected queens. They cannot mate, and were until recently considered utterly worthless, producing, like unfertilised queens, drones only; but these are as perfect as are the drones of fertilised queens. So far back as 1862 the late Mr. T. W. Woodbury proved this by one of them mating with an Italian queen, and I have had experience of many cases since. Their existence seems to be a wise provision in nature, the drones produced from them serving queens at times when no other drones exist. I am not certain, but it appears to me that a queen may be the mother of drones, to be fertilised by one of them, and then be the parent of strong Several cases in my experience point to that being the case; but why workers rear many of these sumptuously in queen cells is a mystery to me. I have never been led into the erroneous opinion, as have been many others, that they were eggs moved by the bees which do not carry eggs from cell to cell. The hermaphrodite is part bee and part drone. The beginner studying these brief but necessary hints will have less difficulty in understanding the proper condition of his hives than if he had allowed ignorance to hold its sway.

BEGINNING BEE-KEEPING.

There is perhaps no better period to begin than at the present time of the year, because by proper management and paying attention to advice given in these pages, most of the after success depends. Beginners should select a good site and locality to keep bees. Size of hives is of great importance. Those of less dimensions than 3500 cubic inches are too small. One prominent bee-keeper told me recently, "I have kept to the three divisions since you at first advised me, when I abandoned the 'Standard' hive, and I have always had more honey, and better of quality." "R. A. C., Kent," writes that his Lanarkshire hives have given him in every case 20 lbs. more honey, and I could quote scores of similar cases.

Youthful queens are what beginners ought to tolerate only, unless where there may be a valuable imported or pure bred one kept for the sole purpose of breeding from. The best time to do this is from the end of May till the end of July, and there is no better way, failing a swarmed stock, than to deprive a strong one of its queen. In ten or twelve days queens are hatched, and then it may be formed into nuclei; twelve from a strong stock may thus be formed. The frames with bees having a queen cell to each lot may be put into roughly made light boxes of a suitable size to hold from three to four or more frames. What is not occupied with combs should have frames filled with foundation. cover screwed on the top completes the arrangement, when they may be set on their site in the apiary, or isolated five to seven miles from other bees for select fertilisation. Put a piece of waterproof over them, and await development.—A LANARKSHIRE BEE-KEEPER.



*All correspondence should be directed either to "THE EDITOR" or to "THE PUBLISHER." Letters addressed to Dr. Hogg or members of the staff often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Bee subjects, and should never send more than two or three questions at once. All articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post, and we do not undertake to return rejected communications.

Exhibiting Tomatoes (A. Creek).—In the absence of any special intimation in the schedule that Tomatoes may be included in a class for fruit, a collection containing them would be open to disqualification. Like Cucumbers and Vegetable Marrows, Tomatoes are exhibited in vegetable, and not in fruit classes.

Blinds in Fruit Room (F. J.).—The blinds suspended along the front of the shelves for excluding light from the fruit would not exclude air to the prejudice of Apples and Pears in a reasonably ventilated room, but it might be necessary to block up the window during severe frost if such occur in your locality.

Soft versus **Hard Water** (T. A.).—We regret your communication, arriving rather late, cannot be inserted this week because written on both sides of the paper. When the writing is on one side only the sheets can be cut into a number of strips for distributing among compositors, and the whole matter is set in type quickly, otherwise, as in this case of yours, the process is of necessity slow. All matter intended for publication should be in accordance with our standing request at the head of this column.

Turfy Loam for Peach and Vine Borders (H.G.W.).—No. 1 is probably the richer soil of the samples, being of a darker colour through the vegetable matter, and contains less grit than the others. It would no doubt answer for the Alicante, Lady Downe's and similar varieties with an admixture of one cartload of old mortar rubbish, one cartload of dry wood ashes, and 4 cwt. of crushed bones ($\frac{1}{2}$ inch to 1 inch) to ten cartloads of the loam. No. 2 is an excellent brown or hazel loam, but deficient of gritty matter, yet it may be made available for Peaches by adding to it one-sixth of clayey marl and a similar proportion of calcareous gravel, with $\frac{1}{2}$ cwt. of kainit and $1\frac{1}{2}$ cwt. of basic slag (Thomas' phosphate) to ten cartloads of loam. The clayey marl should be dried and pounded, incorporating all well together, and making very firm. No. 3 would answer for the Muscats, as it contains more grit than the other samples, yet not enough; therefore to ten cartloads of the loam add two of old mortar or lime rubbish, one of dry wood ashes, one of fresh horse droppings, and 4 cwt. of crushed $\frac{1}{2}$ to 1 inch bones, mixing well. The proportion of Thomas' phosphate named above may be added with advantage.

Apples and Pears from Seed (An Old Subscriber).—The seeds pips which have been selected from first-class fruit during a recent visit to Normandy should be sown now in an open situation, preferably in drills about an inch deep and about 6 inches asunder, or the seed may be kept in sand and sown early in the spring. Some persons sow the pips in pans, and cover them with small-meshed wire netting to exclude mice. In the autumn after sowing the seedlings may be placed in nursery rows about 1 foot asunder, and the plants 6 inches apart in the rows after shortening the tap root and assorting the plants into sizes. The autumn following they may again be transplanted if they require more room, planting in rows 42 inches apart and 2 feet asunder in the rows. Further transplanting will be necessary as the trees require more room, always allowing sufficient space for the sun to reach the ground, and for light and air to have free access to the growths. The transplantings will accelerate fruiting, or it may be furthered by grafting the seedling Apples on Paradise and the Pears on Quince stocks. The age at which seedlings commence bearing varies from five to twelve years, the period depending on the variety; but the time is greatly influenced by soil, situation, and mode of culture. Probably one seedling in a hundred will not afford fruit equal to the parent, but it is possible that something good may be secured.

Artificial Manure as a Substitute for Natural (F. J.).-There is really no substitute for animal manures, simply because they contain matter which, as humus, adds to the staple and improvement To keep the soil in a fertile condition is another thing, and may be effected by the judicious use of the substances containing the needful elements as food for plants. These are mainly phosphoric acid, potash, and nitrogen. Superphosphate supplies the first, also lime, and some nitrogen; kainit furnishes potash, soda, and magnesia, but is mainly useful for its potash; and nitrate of soda contains the essential The phosphoric acid and potash must be in the soil for the nitrate of soda to act beneficially, for in their absence the nitrate may be worse than useless. Two parts superphosphate and one part kainit, mixed, may be applied very early in the spring at the rate of 4 ozs. per square yard, and when the crops are fairly above ground, or have taken to the soil, supply nitrate of soda, finely powdered, at the rate of half to three-quarters of an ounce per square yard. For fruit trees the superphosphate and kainit mixture may be applied in the autumn, when the leaves have fallen, the trees pruned, and just before pointing the ground over lightly. This will be in November or December, but it must not be given later than February, then in the spring sprinkle on the nitrate of soda. All the manure should be spread from the stem outwards to 1 foot beyond the extension of the branches.

Pinus insignis Shoots and Buds Destroyed (E. B.).—The caterpillar is that of the Pinc-bud moth (Retinia turionana), which feeds in the buds and of course destroys them. The only remedy is to cut off all the infested parts and burn them. The earlier this is done in the season the better, so as to give chance of the formation of new buds, which sometimes occur on the shoots that lose their growing We find the best preventive is to coat the trees subject to the attacks of the pests early in July with a petroleum mixture, so as to render them obnoxious to the moths, and thus prevent them depositing their eggs. The beetle is Hylurgus piniperda, which emerges from the tunnel or pupa state from June to September (for there may be two broods) and bore into a young shoot and eat out the pith in the centre, from the base towards the tip. The shoot dies, dries up, and When a number of shoots are affected the consequences are very disastrous. There is no better remedy than to cut off the affected shoots just below the holes and burn them, or a petroleum emulsion may be ejected into the holes, but unless this is done before the beetles reach the pith the benefit beyond destroying the beetles is not material as regards the attacked parts. It is also advised to syringe the trees with a petroleum mixture so as to render them distasteful to the beetles. A fluid ounce of petroleum to 3 gallons of water is sufficient, and it is more efficient when 6 ozs. of softsoap have been dissolved in that quantity of water, keeping the mixture well agitated whilst being applied, which should be on a dry day, and through a fine syringe.

Applying Dissolved Bones and Kainit (T. W. F.).—It is necessary to take all the circumstances into consideration, and supply the manures so as to meet the needs of the crops. This was taken into account in your case consistently with the information supplied, which practically amounted to the soil being deficient in phosphoric acid and potash. It was because we thought it desirable to supply these essentials, so that they would be available for appropriation as early as possible in the spring, that we advised the autumn dressing when the ground is being pointed over or lightly dug before the winter. We did not mention September. What all practical fruit growers know as autumn digging among fruit trees is not done then, but after all the leaves are fallen from the trees. This is in November or early December. Applied then, the loss from the mixture would be trifling—a modicum of nitrogen perhaps, the phosphoric acid and potash being retained and ready for use on the first opportunity. When spring dressings are ready for use on the first opportunity. When spring dressings are advised, some fruit growers have such a dread of losing anything that they apply the mixture too late for benefiting the season's crop, and at the same time prejudice the succeeding year's prospects by inducing late growth. Generally speaking February is a very good time for applying chemical manures to fruit trees that need them, and the advice given in the work you name is perfectly sound. Your case was regarded as special, but if you prefer to apply the manure in February to avoid a possible trifling loss in the winter by all means do so, but we should then use two parts of bone superphosphate and one part kainit. Late autumn dressings of mineral ingredients are much more effectual than late spring applications, and those used in March and April this year did not do half so much good as did those applied in the preceding autumn, the possible loss of a modicum of these notwithstanding. soda need not be given unless a heavy crop of fruit sets, when it should be supplied without delay, for without nitrogen in adequate quantities maximum values cannot be had from the other elements, and nitrate of soda is simply wasted unless the soil contains sufficient phosphoric acid and potash. Kainit contains about 23.43 per cent. of potassium sulphate, and a good quality kainit should contain from 12 to 14 per cent. of potash.

Names of Fruits.—Notice.—We have pleasure in naming good typical fruits (when the names are discoverable) for the convenience of regular subscribers, who are the growers of such fruit, and not collectors of specimens from non-subscribers. This latter procedure is wholly irregular, and we trust that none of our readers will allow themselves to be made the mediums in infringing our rules. Special attention is directed to the following decision, the object of which is to discourage the growth of inferior and promote the culture of superior varieties. In consequence of the large number of worthless Apples and Pears sent to this office to be named, it has been decided to name only speciment and varieties of approved merit, and to reject the inferior, which are not worth sending or growing. The names and addresses of senders of fruit to be named must in all cases be enclosed with the specimens, whether letters referring to the fruit are sent by post or not. The names are not necessarily required for publication, initials sufficing for that. Only six specimens can be named at once, and any beyond that number cannot be preserved. They should be sent on the first indication of change towards ripening. Dessert Pears cannot be named in a hard green state. (I. W., Pershore). — Herefordshire Beefing. (C. D., Wales).—Cox's Orange Pippin. (B. J.).—Beurré d'Aremberg. (C. J.).—Cornish Gilliflower. (W. S. Payne).—Dumelow's Seedling. (H. Neal, Stapenhill)—1, Maréchal de Cour; 2, Doyenné du Comice; 3, Marie Louise; 4, Comte de Lamy. Please do not use needles to affix the numbers; they are dangerous, and some of your numbers were displaced, therefore the fruits cannot be named. numbers were displaced, therefore the fruits cannot be named. (W. Carr).—1 and 6, Van Mons Leon Leclerc; 2, Quite hard and unripe; 3, Doyenné Boussoch; 4, Duchesse d'Angoulême. (T. S. Inch). unripe; 3, Doyenné Boussoch; 4, Duchesse d'Angoulême. (T. S. Inch).—
1, Souvenir du Congrès; 2, Nouveau Poiteau; 3, Josephine de Malines;
4, Maréchal de Cour? decayed; 5, Fondante d'Automne; 6, Quite
hard, and not known. (J. H. R.).—1, Beurré Beauchamp; 2,
Beurré Capiaumont; 3, Comte de Lamy; 4, Marie Louise. (W. R. R.).
—1, Ribston Pippin? not a typical specimen; 2, Certainly not
Ribston—graft the tree; 3, Beauty of Kent. (O. E.).—1,
Dumelow's Seedling; 2, Greenup's Pippin; 3, Gravenstein; 4,
Lewis' Incomparable; 5, Winter Majetin; 6, Kentish Fillbasket. By
driving nails into the eyes of Apples for fixing the numbers, you destroy
one of our aids to identification. (I. Stephens).—The large fruit is driving nails into the eyes of Apples for fixing the numbers, you destroy one of our aids to identification. (I. Stephens).—The large fruit is Kentish Fillbasket; the small one Winter Queening. (W. J. G.).—All the specimens are inferior. 1, Golden Reinette; 4, Swan's Egg; 5, Possibly Bergamotte Esperen. (G. Orpen).—1, General Todtleben; 2, Flemish Beauty; 3, Susette de Bavay; 4, Swan's Egg; 5, Fearn's Pippin; 6, Ross Nonpareil. (J. S. Bailey).—1, Court Pendu Plat; 2, Cox's Orange Pippin; 4, Franklin's Golden Pippin; 5, Beurré Bosc. (G. C.)—Sorry we cannot identify the Apple, especially as it is a good one. (W. P.).—We suspect these to be local seedlings, of greater one. (W. P.).—We suspect these to be local seedlings, of greater promise than the majority and have no recognised names. (F. J. Gray).—1, Dumelow's Seedling; 20, Melrose; 21, Wyken Pippin; 25, Blenheim Pippin; 31, Annie Edzabeth. (H. Hunter).—1, Not recognisable; 2, Blenheim, a grand specimen; the Pear is Beurré Hardy. (C. Russell).—1, Remette de Canada; 2, Ditto; 3, Probably a small Hollandbury; 4, Not recognisable; 5, Greenup's Pippin; 6, Small's Admirable. 4, Not recognisable; 5, Greenup's Pippin; 6, Small's Admirable. (J. H. C.).—1, Duchesse d'Angouléme, the others quite hard, and not in condition to be named. Pears should be sent on the change towards ripening. The above are all the fruits we received up to midday on Wednesday.

Names of Plants.—We only undertake to name species of plants, not varieties that have originated from seed and termed florists' flowers. Flowering specimens are necessary of flowering plants, and Fern fronds should bear spores. Specimens should arrive in a fresh state in firm boxes. Slightly damp moss, soft green grass or leaves form the best packing, dry wool the worst. Not more than six specimens can be named at once, and the numbers should be visible without untying the ligatures, it being often difficult to separate them when the paper is damp. (William Smith). — Scabiosa caucasica. (H. M.). — Aster amellus. (L. B.). — Colutea arborescens. (Amateur).—1, Hoya carnosa; 2, Plumbago capensis. (F. D.).—Habrothamnus elegans. (W. D. H.).—The Powdery Mullein (Verbascum pulverulentum). (James Carolan).—The letter to which you refer as having been posted on the 18th ult. has not reached our hands, nor have we received any specimens from you. (J. J.).—Dendrobium album; Rhododendron Javanico-Jasminiflorum var. Duchess of Connaught. (J. W. B.).—Lathyrus sativus. (G. C.).—Florist flower; can only be named by comparison.

COVENT GARDEN MARKET .- OCTOBER 4TH.

Market steady, with good supplies generally, and readily cleared at last week's quotations.

Apples, per bushel	$\begin{array}{c} \cdot & 1 \\ \cdot & 25 \\ \cdot & 0 \end{array}$	6 1		Peaches, per doz Plums, per half sieve St. Michael Pines, each	1	6 to	8 2	d. 6 0
		VEG	ETA	BLES.				- 1
Cauliflowers, dozen Oelery, bundle Coleworts, dozen bunches Oucumbers, dozen Endive, dozen Herbs, bunch Leeks, bunch	. 0 . 1 . 0 . 2 . 1 . 2 . 1	0 0 4 0 0 3 0 1 0 4 6 3 3 1 3 0 2 0 9 1		Mustard and Cress, punnet Onions, bunch Parsley, dozen bunches Parsnips, dozen Potatoes, per cwt. Salsafy, bundle Scorzonera, bundle Shallots, per lb. Spiuach, bushel Tomatoes, per lb. Turnips, bunch	0 0 2 1 2 1 1	0 0 0	0 3 0 4 1 0 0	1 0 5 0 6 6 0 0 0 5 6

AVERAGE WHOLESALE PRICES.—OUT FLOWERS. Orchid Blooms in variety.

	8.	d.	8.	ď		8.	a.	9.	d.		
Arum Lilies, 12 blooms	6	0 to	9	0	Marguerites, 12 bunches	2	0	to 4	0		
Asters (English) doz. bches.	4	0	6	0	Mignonette. 12 bunches	2	0	4	0		
Bouvardias, bunch	0	6	1	0	Myosotis, dozen bunches	1	6	3	0		
Carnations, 12 blooms	0	6	2	0	Orchids, per dozeu blcoms	3	0	12	0		
Carnations, dozen bunches	4	0	8	0	Pelargoniums, 12 bunches	6	0	9	0		
Chrysanthemums, dozen					Pelargoniums, scarlet, doz.						
bunches	6	0	9	0	bunches	4	0	6	0		
Chrysanthemums, doz. bls.	1	0	2	0	Primula (double), dozen						
Cornflower, dozen bunches.	1	0	2	0	sprays	0	6	1	0		
Eucharis, dozen	4	0	6	0	Pyrethrum, dozen bunches	2	0	4	0		
Gardenias, per dozen	2		4	0	Roses (indoor), dozen		6	1	6		
Lilium lancifolium, dozen			_		" Red, doz. bunches	4	0	6	0		
blooms	1	0	3	0	Tea, white, dozeu	1	0	2	C		
Lilium longiflorum, perdoz.	6		10	0	" Yellow, dozen	2	0	4	0		
Maidenhair Fern, dozen					Tuberoses, 12 blooms	0	4	0	6		
bunches	4	0	6	0							
PLANTS IN POTS.											

		P	LAN	TD	IN PUIS.	
	s.	d.	s.	d.	s. d. s.	
Arbor Vitæ (golden) dozen	6	0 to	o 12	0	Ferns, in variety, dozen 4 0 to 18	
Aspidistra, per dozen	18	0	36	0	Ferns (small; per hundred 4 0 6	0
Aspidistra, specimen plant	5	0	10	6	1 10 de official de la constant de l	6
Asters, dozen pots	3	0	6	0	Foliage plants, var., each 2 0 10	-
Balsams, per dozen	3	G	6	0	Fuchsia, per dozen 6 0 9	0
Begonias, per dozen	9	0	12	(i ity derminano ii ii ii ii i	0
Campanula, per dozen		O	18	0	Lilium lancifolium per doz. 12 0 18	
Chrysanthemums, per doz.	4	0	9	0	Lilium Harrissi, per dozen 12 0 24	-
" large plants, each	1	0	2	0	Ligotopourumo, per deres vv	0
Coleus, per dozen	6	0	9	0	Marguerite Daisy, dozen 6 0 12	
Dracæna terminalis, per					Mignonette, per doz 4 0 6	4
dozen	18	0	42	0	ALYTOICS, GOZOL	0
Dracæna viridis, dozen	9	0	24	0	i dillis, in var caosi	0
Ericas, per dozen	9	0	12	0	" (specimens) 21 0 63	_
Euonymus, var., dozen	6	0	18	0	I Chargonianis, Scarico, act.	0
Evergreens. in var., dozen	6	0	24	0	Solanums, per dozen 12 0 15	0



A WHEAT STRAW.

ONLY a Wheat straw, pulled in an idle mement from a waggon load of it which we passed on the top of a 'bus in a busy London street! Yet a mere glance at it was sufficient to arrest the attention entirely, so strikingly did it serve to illustrate the lamentable condition of corn crops this year on many a farm. It did more. The very fact of its having been sent into market so soon after harvest told of straitened means,

of the urgent need for money that farmers have; and its miserable appearance showed also how small an amount the entire crop both of corn and straw would realise. Very little over a foot in length, not broken, but clean cut by the reaper at the bottom, and as slender as short, it showed how poverty of soil had rendered it unable to withstand the severity of a drought through which corn on land rich in fertility has passed comparatively unscathed. It is quite possible that late sowing in badly worked soil also contributed to its meagre appearance. Whatever may be the causes affecting its growth from seed germination to crop maturity, the lesson taught by it deserves our serious attention.

Is the production of so trashy a crop worth while under any circumstances in this country? No; it is not worth while. Nothing can make it so; not even the exigencies of the present season, when every scrap of fodder has been collected so eagerly, and the bulk of it on many a farm falls so short of the farmer's requirements even for home use. However regarded, the matter resolves itself into a question of profit and loss. It is just a business transaction and nothing else; nothing can be more simple. Profitable farming has nothing sentimental about it. It means a clear gain upon expenditure, a fair interest upon capital invested in the tillage, cropping, and stocking of the land, for which a rent of so much per acre is paid. Every acre must therefore yield enough produce to pay sufficient interest to keep things going—a fair margin of profit. For this to be possible under stress of falling prices and foreign competition there must be judicious cropping, as well as thorough cultivation. It is questionable whether our Wheat straw had either advantage. No doubt it would have been of much more robust proportions had soil fertility been well sustained on the farm where it was grown. But it has come to this with us in Wheat growing, that it is only profitable under every advantage of seed selection, the best mixed soil, thorough timely cultivation, and the possibility of selling both the straw and corn. The straw is now almost as valuable as the corn, a ton of straw being equivalent on the market to 24 bushels of Wheat.

Do we quite realize what foreign competition means? Surely not, or the wild, hopeless endeavour to grow Wheat on poor half cultivated land here would cease. Take one example out of many, that of Manitoba; there Wheat-growing continues to be remunerative under the present cash price of 50 cents., or 2s. per bushel, because it is grown at an average cost of 1s. per bushel. Something considerably beyond the average is realised on the best land where the yield rises to thirty or even thirty-five bushels an acre in favourable seasons. There are thousands of acres of virgin soil as good as the best of this country not yet brought into cultivation. Nor is Wheat-growing in the Far West nearly so speculative as is commonly supposed. From 1882 to 1892 there were six good crops, and four inferior ones owing to drought and frost.

It is estimated that this year Manitoba will export 24,000,000 bushels of Wheat, which certainly implies a very comfortable sum being paid to the settlers. Another thing to be remembered is, that in all good seasons, Manitoba Wheat is superior in quality to our home grown produce. On that vast continent, summer heat, though brief in duration, has an intensity hardly realised by us. There, growth advances so fast in June and July that Wheat sown in May may be ready for the reaper in August. Heavy rainfall alternating with long hot days in May and June induces growth of such extraordinary vigour, that crops are up and fully grown in a wonderfully short time. Then in July comes more settled dry and very hot weather, with many brief thunderstorms, accompanied by heavy rain, then Wheat ears develop and mature in a manner which would be thought marvellous in this country, and in all good seasons the reaper is at work by the third week in August. Clearly then our Wheat straw with the grain it carries must be of the best for the grain to retain a place on market in competition with that grown in the Western States as well as in India and other countries.

WORK ON THE HOME FARM.

Glad were we to hear from an energetic correspondent farming 2000 acres of land that by bringing his steam cultivator into full action immediately after harvest, and keeping it going daily, he had got the whole of his arable land clean, and either ready for sowing with winter corn (which was being done when he wrote to us), or thrown up for He also said that he had fed, sold, and got the money for upwards of 4000 pigs already during the current year. We told long ago of a tenant of our own who paid all the labour of his three farms with his "pig money." With cheap corn and dear pork every sensible farmer has largely increased the number of his store sows. It is men who meet the times promptly, making judicious changes, and throwing their whole energy into the work, that continue fairly prosperous.

Well, now, a set of steam tackles is only to be met with occasionally, but much may be done, much has been done this autumn by keeping horses and men going at full pressure. Some extra corn, extra pay, the master's eye and hand guiding and leading has told so well that the on-coming of winter will be welcomed. Severe weather will probably set in early (3 inches of snow fell in Cumberland on the 24th of September), and it will be well to clear roots off the land tolerably early in October. Mangolds ought certainly to be in clamps before the end of the month. To all who resolve to increase their swine stock we say, Resolve to keep them and their surroundings thoroughly clean. It pays. Filth retards growth, engenders disease, and eventually leads to those disastrous outbreaks of swine fever which are so ruinous and altogether deplorable. Breed well, keeping only young compact sows, paying especial attention to the selection of a pure-bred male parent; a Middle hite answers best for porkers, and porkers really well bred and well fed, weighing about 50 lbs. when dressed, have proved more profitable with us than any other class of swine.

NEW ZEALAND-A WARNING TO FARMERS.

SINCE 1874 the profits from farming land in Great Britain have diminished so steadily and surely, that few men can now obtain a commercial return on the capital in the occupation therein, and many are not able to make ends meet, even with such assistance as owners are able or willing to render. The home papers, which I read as eagerly as when living in England, show that numerous panaceas are offered to the farming public by those of their own craft and by city tailors. Some might be useful, but I cannot see how the farmer can live as in the past now that British enterprise has brought to his own market the produce

of the virgin lands of the whole earth.

During my twelve years' experience as a successful New Zealand farmer I have had wide opportunities of forming an opinion of my fellow colonists' abilities in that direction. My sole object in writing this is to warn farmers not to be misled by the colonising agents, who, in professing to be the friends of the poor farmer, are far more interested in disposing of the large areas of land which now lie as an incubus on the banks and loan companies, greatly aggravated by the crushing graduated land tax. A British farmer landing in New Zealand with his family and a few hundred pounds, but without the necessary colonial experience, will most surely live to regret leaving the old country. Suppose he lands in Auckland. He will have to find a house, food, and fuel, at a cost of £2 to £3 a week, until he can look over the offered land, perhaps 150 miles away, and by the time he has satisfied himself his capital has considerably diminished ere disappointment and failure begin. only men whom I advise to emigrate are farmers' sons who can bring money, powerful limbs, and a stout heart. These alone are the men who have a chance of success. Let them place their money in the Post Office Savings Bank and go to work at the lowest rung of the ladder.

Many of my fellow colonists would strongly object to my showing the intending emigrant farmers the rocks ahead. They would say "Let them come and find it out for themselves, as others have; we require money and population." I am first an English farmer, the only son of a long line of octogenarian tenant farmers, and I feel that it is my duty to warn men who have some years' experience of the dear old country, and probably families of young children, not to leave home unless they have

brothers here to care for and direct them.

Thousands of men during the land boom, the offspring of the huge borrowing and squandering policy of Sir Julius Vogel's Ministry, bought up far more land than they could profitably occupy, much of which would be dear at a gift. These broad acres must be got rid of by hook or crook, and many hooks and crooks have been invented to secure the unwary. I think I know most of them. One only need here be mentioned as a sample. A land agent took me over an estate which was for sale in the North Island. There were on it a few hungrylooking calves roaming at will, the only cultivated land being a small field, in which grass was just coming up. This was shown to me as a fair sample of what the soil could produce when improved by cultivation. Finding a Government engineer laying out roads close by, I stole a private interview, and gathered from him that, along with the grass seeds, half a ton of finely powdered bones had been sown per acre. I escaped; but the next man was hooked.

I rejoice to say that very many farmers are prosperous and contented; but they are, for the chief part, such as I have previously described having bought up land at from 5s. to 40s. per acre, and, by years of unremitting toil, fenced, cultivated, and built homesteads. When

Wheat was worth twice as much as it is at present, they were able to pay off the whole or part of the mortgages, and now wool and the frozen meat trade enables them to live in ease and plenty. At present selling prices of that land the purchaser would have as hard a time of it as the British farmer, and moreover, would have to reckon with the moneylenders, who are a different race of beings to the average English and Scotch landlord. Good farms within easy distance of a shipping port are realising from £20 to £40 an acre. If your climate were equal to this, I believe that many colonial farmers would emigrate and take up land at home.—SENTINEL (in the "Field").

ACORN POISONING.

THE following circular has been sent to us by the Board of Agricul-

ture, 4, Whitehall Flace, S.W.:—

The attention of the Board of Agriculture has been called to the unusual abundance of the crop of Acorns this season, and it is considered desirable to warn stockowners who are accustomed to turn cattle into parks, on to commons, or other places where Acorns are plentiful, that there is considerable risk of injurious effects arising from the consumption of large quantities of Acorns, which in the present dearth of herbage, owing to the long drought, are certain to be eaten with avidity.

In the years 1868, 1870, and 1884, which were remarkable for a large yield of Acorns after a long dry and hot summer, serious losses among young cattle occurred from outbreaks of what is known as the Acorn disease, or Acorn poisoning. In many districts, notably in Middlesex, Kent, Hertfordshire, Warwickshire, Lincolnshire, Northamptonshire, Wiltshire, Gloucestershire, Devonshire, the New Forest, Sussex, Surrey, Suffolk, Norfolk, and Derbyshire, extensive outbreaks of the disease occurred. Young cattle up to two years old suffered most severely. Milch cows and cattle over three years old were selected. affected. Sheep and pigs appeared to be unsusceptible to the poisonous action of the seeds, and only two or three cases of the disease were reported in these animals, while entire herds of young cattle were attacked and a large proportion of them succumbed.

Acorn poisoning is quite distinct from indigestion due to eating an excessive quantity of Acorns. This accidental disorder may occur in ordinary seasons when animals are first allowed access to pasture where Acorns abound. But the true Acorn disease is distinguished by progressive wasting, entire loss of appetite, diarrhoa, discharge of an excessive quantity of pale urine, sore places inside the mouth, discharge from the nostrils and also from the eyes, which are always sunken, giving to the animal a peculiar haggard expression. No fever is present from first to last, but, on the contrary, the temperature is commonly below the normal standard.

On post-mortem examination it is frequently noticed that all traces

of the Acorns have disappeared. The morbid changes are such as are seen when an irritant poison has been given.

Remedies of various kinds were tried in the great outbreaks of the disease, but no cure was discovered. Prevention is comparatively easy when the risk is realised. It is only necessary for absolute security to keep cattle from the pastures while Acorns are falling. The danger will be materially lessened by collecting the Acorns from the pastures, but this device does not prevent a considerable consumption of the nuts which fall during the night. It has also been suggested that when cattle are only allowed access to Acorns during the daytime they should be supplied with a liberal allowance of food before they are turned out. It cannot be affirmed that these plans have always proved successful in practice.

METEOROLOGICAL OBSERVATIONS. OAMDEN SQUARE, LONDON. Lat. 51° 32′ 40″ N.; Long. 0° 8′ 0″ W.; Altitude, 111 feet.

DATE.	DATE. 9 A.M.						IN THE DAY.				
Contombor 50	Hygrometer.			tion of	Temp. of soil		Tem- ture.	Radi: Tempe	Rain,		
	Barc at 33 Sea	Dry.	Wet.	Wind.	1 foot.	Max.	Min.	In Sun.	On Grass.	2 € no.	
Sunday 24 Monday 25 Tuesday 26 Wednesday 27 Thursday 28 Friday Saturday 30	Inchs. 29·979 30·004 30·002 29·800 29·854 29·366 29·290	deg. 48.6 53.9 52.1 59.1 56.9 57.9 55.0	deg. 44·2 49·3 49·9 56·4 53·1 53·9 52·4	N.W. S.W. S.W. S.W. S.W. S.W.	deg. 52.5 51.9 52.6 53.9 54.9 55.2 55.0	deg. 60·3 61·9 65·0 67·8 62·6 65·9 63·2	deg. 35·3 39·3 45·7 52·1 48·3 53·9 51·4	deg. 104.9 103.1 106.4 107.8 79.9 105.3 104.2	deg. 30.9 35.4 40.6 49.9 45.2 50.2 48.4	0.220 0.122 0.074 0.010 0.426	

REMARKS.

REMARKS.

24th.—Almost unbroken sunshine by day; brilliant moonlight night.

25th.—Frequently sunny in morning; generally overcast in afternoon; spots of rain from 4.30 to 6 P.M.; moonlight night.

26th.—Overcast early; generally sunny after 11 A.M.; spots of rain about 6 P.M.

27th.—Rain from 1 A.M. to 4 A.M., and showers after; generally sunny during day, and bright night; lunar halo.

28th.—Sunshine early and solar halo from 8.30 to 9.30 A.M.; overcast from 10 A.M., with frequent spots of rain, and showers in afternoon.

29th.—Bright sunshine and high wind almost throughout; spots of rain once or twice in the afternoon, and rain at night.

30th.—Overcast till 10.30 A.M., bright and breezy after; sharp shower at 1.5 P.M., but uninterrupted sunshine.

A touch of frost on grass on the morning of the 24th, but on the whole a mild fine

A touch of frost on grass on the morning of the 24th, but on the whole a mild fine week.—G. J. SYMONS.



SPECIAL interest attaches to Tomatoes this season, for it has been an altogether exceptional one in respect to natural advantages, and consequently the crops have been abundant. Remunerative returns have been secured throughout the season, these varying, as they always will do, according to the market and the quality. At the middle of July a capable grower in the midlands told me that he had been securing 1s. a pound up till that time, and although the majority of the cultivators in the south who supply the principal London markets have not realised so much, their returns have been consistently good, and they will have cause to look back upon 1893 without the sadness and regret which tinge their recollections of some previous seasons.

It is disappointing, to say the least of it, that when the Eden of the Tomato growers was at its fairest a new serpent should have entered. Phytophthora infestans and the Cladosporium have often proved their capacity for giving quite as much trouble and embarrassment as most growers are able to cope with, and the advent of a fresh enemy in the Bacterium Halstedi, so graphically described by Mr. Abbey a few weeks ago, is something approaching the nature of the proverbial last straw. In all likelihood this bacterial affection of the Tomato is quite unknown to the majority of the growers, and especially to such of them as consider themselves quite above the necessity for reading the papers; but it is quite likely to spread widely unless something of its cause and origin are known. All cultivators are not open to knowledge when it is imparted as the result of microscopical investigation. For one reason or another they connect such inquiry with abstruse and devious scientific calculation that has not, and never can have, any practical bearing. There is certainly justification for such a view in some cases, but I venture to think that where the investigator is not only a scientist, but a thoroughly practical gardener, what he has to tell us is deserving of the most careful consideration. Some of the market growers, as well as a number of private cultivators: are of the same opinion, and I happen to know that the success of Mr. Abbey's able inquiries into the Tomato disease and the Chrysanthemum mite have attracted the attention of some of the best and most enlightened of our cultivators.

About the middle of August Mr. Wood, foreman to the energetic Kentish market grower, Mr. E. Vinson, wrote-"I have been reading the correspondence on Tomatoes dying in the Journal of Horticulture, and if you could give me a call you would see for yourself what the disease is capable of doing. We have 8000 plants in one block of houses, three parts of them dead; in another block over 8000 plants carrying a grand crop, and we have not lost fifty plants out of the latter. If you will come I will give you my views of the cause." I took an early opportunity of going, and saw what I can only characterise as a very remarkable sight. First let me say that Mr. Vinson is not a Tomato man merely. He is a large Hop grower, and has numbers of acres of Strawberries, Raspberries, Potatoes, Scarlet Runners, Cauliflowers and others. Probably there is no more enlightened and energetic man in the whole trade. He grows many things and does them all well. In the case of Tomatoes it would be very difficult indeed to find better grown plants than his. Those in the fruiting batch were splendid examples of culture, being stout, sturdy, short-jointed examples, bearing almost from the ground to the ridge of the house. There were about twenty-five houses of Cucumbers and Tomatoes, but the latter were the most strongly represented. The variety chiefly grown is Earliest of All, which is well known to be a very free setter, but has more or less corrugated fruit. In this case it is, however, found to sell well so long as good and well coloured fruit is sent to market, but it may be noted that there is a great deal of variation exhibited by the fruits, some being very much smoother than others.

I draw attention to the good quality of the fruiting plants, because I want to make it clear that Tomato growing is well understood by Mr. Vinson's foreman, and that the loss of so many plants from the disease which Mr. Abbey has told us about is not due to ignorance of the wants of the plant. That the disease is Bacterium Halstedi there can be little doubt, and Mr. Wood was of that opinion from the moment of reading the article on page 471, June 15th, 1893. The plants went off exactly as there indicated, beginning to droop as a rule just when the first bunch of fruit was swelling, as though they were too feeble to undergo the strain. There was the browning of the wood under the skin at the base of the plant, which gradually spread upward, and soon the whole of the foliage was wilted and drooping. The spectacle they presented as they hung withered and lifeless was a most melancholy one, and the wholesale manner in which they had gone off was a striking testimony to the potency of the minute

The questions now arise: What causes the attack, and can it be averted in any way? These queries are of the greatest moment to all classes of cultivators, and particularly to those who grow Tomatoes as a means of livelihood. If the disease is capable of carrying off thousands of plants in the hands of a really capable man, what guarantee is there that it will not deal out similar destruction to those of others, and so become a most formidable enemy? I might go even further, and without wishing to pose as an alarmist, ask what security we have against the disease becoming as terrible an enemy to Tomatoes as the Puccinia was to Hollyhocks, rendering their successful cultivation almost an impossibility. Fortunately Mr. Wood is not a rule of thumb grower, but one who uses his brains, and he has paid the closest possible attention and given the utmost consideration to the task of finding out the true cause of the attack which has rendered a large proportion of his work futile and entailed no inconsiderable loss on his employer. And he has been rewarded by what he thinks to be a complete solution of the problem. The explanation turns on a purely cultural point, and may perhaps be too simple for Mr. Abbey to accept, but such as it is I draw attention to it for the benefit of others.

Excess of moisture is at the root of many fungoid attacks, but it is the opposite condition which the Kentish grower holds responsible for the bacterial attack in his Tomatoes. He holds strongly that drought is as much the predisposing cause as soddening is of the Phytophthora, and in support of his argument he points to the differing condition of two sets of plants. One was put out after Cucumbers had occupied the space last season. The soakings the latter received resulted in the ground becoming thoroughly saturated. Here the Tomatoes have done splendidly, bearing heavy crops of fine fruit, and very few plants have been lost. The other set, where such havoc has been wrought, were planted in compost placed on a dry subsoil. They have been watered, but owing to the terribly parching season the lower soil has never been completely soaked, and here the Tomatoes have gone off wholesale. These facts are very significant, and even if everybody does not accept them as a solution at once they will doubtless admit that "there is something in it." As affording further evidence of the great benefits of an adequate supply of water Mr. Wood pointed out how much better and more fruitful the Tomatoes which are near the tanks, or near a leaky tap, or where the hose has been thrown down, are than those in other parts of the houses. Not only have the plants grown better, but they have given much finer clusters. Perhaps others who have been so unfortunate as to experience the disease will be able to say if they have made any observations with respect to water, whether for or against the theory here suggested. And if the explanation is wrong perhaps Mr. Abbey is capable of putting us right.

The point is a cultural one, as I have said, and it opens up the question whether the great majority of attacks, both of this and other diseases, may not be classed in the same category. When in Mr. Bunyard's nursery a few weeks ago I saw one of the best houses of Tomatoes I have ever seen, and his manager, Mr. Buss, expressed a strong opinion that good culture was equal to keeping away these insidious enemies. He maintains that diseases may be controlled with the watering pot and the ventilator, and fears none of them. Giving or withholding water and air are, he holds, at the bottom of them all, and with judicious management they may be circumvented. This is saying a great deal, and may perhaps be going too far for many people; but those who look below the surface will not be too hasty or too loud in their denunciations. Why does one person resist, and another succumb to, an infectious disease; or why, in one system, does a cancerous growth form and spread, while in another it is absent? It is in all probability from the same cause that some plants escape ravishing diseases while others fall a prey to them-namely, from the blood or sap, as the case may be, becoming morbid or impure. With pure air, adequate but not excessive moisture, and wholesome food, the stream of life flows with vitalising force, and the system is fortified against the mysterious agencies that hover unseen around and open to the unprotected the gate of death.—HYGIENIST.

HARDY FLOWER NOTES.

Still, as Allingham says, "Autumn's fire burns slowly through the woods," and they are aglow with the delightful tints of the dying leaves fast falling to join the bracken below, which, too, is bright with the colours with which it adoras itself ere its season is over. Yet to the gardener it seems as if he were standing betwixt the autumn and winter, and that the weeping clouds are mourning the bright days, and in their grief are striving to quench the thoughts with which the remaining flowers would cheer us. It is hard when drenching showers and chilly night air are our usual fare to drive away the pessimistic feelings all too surely pressing upon us. To the lover of flowers, however, pessimism is not a fitting mood. Passing clouds of sadness may dim the brightness of the sunny thoughts which find their way to his heart, but they are but fleeting, and ere long the visions of beauty which are ever present to his mind will exorcise the gloom, and he is free once more to feel, as Longfellow says, that

"For him the wind, ay, and the yellow leaves, Shall have a voice, and give him eloquent teachings."

While, as he commits to the soil the bulbs which another year will fill him with delight as he gazes upon their hues and forms, he has cause to look forward with hope. The present, too, affords much joy. The autumn Crocuses are full of chastest beauty as we look upon them in clumps in the borders or rockeries, or even when, as with the rarer kinds, only a few court the faint sunshine of October. The Michaelmas Daisies are beautiful as before, nay, shall we not say more delightful now, than when in the earlier months they had to rival the more gorgeous flowers of summer. The late sown annuals are still bright, and seem to say that they, too, are well entitled to at least a modicum of praise from our pen. The Godetias are still beautiful with their cups of ruby, of pink, or of delicate white, though they are dripping with wet, and though the welcome sun shines so faintly upon them. Sweetly comes the odour of the fragrant Mignonette from the borders, and the Asters with massive yet perfect blooms are beautiful. The Cornflowers of various colours, from brilliant blue to the soft white or the purple hued, have been of greatest value. But of these one might speak for long, and other flowers perhaps more seasonable would pass unnoticed.

Very charming is a clump of Crocus longiflorus, which has been striving unsheltered to face the furious showers which have come upon us of late. It cannot be said that it has escaped unhurt, but when planted thickly together these little Crocuses are better able to withstand the gales and rains of the autumn. Few there are who

fail to admire this exquisite plant with lilac flowers, with yellow throat and scarlet stigmas, and possessing the merit of being somewhat irregular in its flowering, some clumps giving flowers much later than others. Although a native of South Italy, Sicily and other parts in the same region, this Crocus appears to have proved perfectly hardy since its introduction in 1843. It is low in price, and is one which should be in every garden of hardy flowers. According to Mr. Maw's arrangement of the Croci, C. longiflorus belongs to Division I. or Involucrati—i.e., species with a basal spathe from the summit of the corm, and to Section II., Reticulati, "with a corm tunic of distinctly reticulated fibres." Very pretty also is C. medius, belonging to the same division and section, but having bright purple flowers veined in the inside with deeper purple, and with yellow anthers and scarlet stigmas. Not so showy as the Long-flowered Crocus, its colour is distinct, and its inclusion in the garden is to be desired.

Among the most graceful of the Coreopsis is the beautiful C. verticillata, the Whorled Tickseed, which has been in full beauty for a long time, and is extremely attractive with its finely divided leaves arranged in whorls, its furrowed stems, and its rich golden yellow flowers, not so large as those of some of the family, but still about 1½ inch across. It generally grows 2 feet in height, but varies according to the soil and treatment it receives. Introduced from the United States so long ago as 1780, it is somewhat surprising that it is still so seldom seen. C. verticillata appears to be synonymous with C. tenuifolia, although they are frequently

catalogued as distinct.

From the fact of its having received a first-class certificate when exhibited at the Fern and Begonia Conference of the Royal Horticultural Society in 1892, and having thus received what may be called the "hall-mark" among flowers, the flowering of Helenium autumnale striatum has been looked for with considerable interest in many gardens this year. There would appear to have been a great demand for this plant, and in all likelihood it has been extensively propagated, and the plants thus rendered temporarily weak. This, with the dry season, will account for the comparative disappointment felt at the appearance of the blooms when fully expanded. A well grown specimen planted in 1892, which I saw recently, was so good that one can fully recognise the merits of this addition to our autumn flowers, its orange and red flowers produced in great numbers rendering it very fine indeed. There appears, however, to be some confusion as to its nomenclature which it would be well to have corrected at as early a period as possible. When exhibited by Mr. T. S. Ware it was certificated under the name of H. grandicephalum striatum. In the Journal of Horticulture for September 22nd, 1892 (page 267) an excellent woodcut appeared, and in the notice of the plant the name is given as H. autumnale striatum. From a careful examination of the plant and comparison with a flower of H. grandicephalum which has reached me, I believe H. autumnale striatum to be the correct

Of Michaelmas Daisies there is no end, and from seed there is so much variation that to endeavour to clear up the nomenclature of the genus, or to speak correctly of them under name, would be a difficult and hopeless task. This, at all events, may be safely said, that we have too many to choose from, and that it would be well to see the plants in flower and select those which commended themselves to the intending purchaser. There are few which can well surpass the beautiful Aster amellus bessarabicus, of taller growth than the typical amellus, which, it may be, is the plant whose root Virgil in his fourth Georgic prescribes for sickly bees. Though we would gladly have this association wedded to the Bessarabian variety, its beauty in itself is a claim which admits of no denial, the fine large heads of deep purple flowers commanding admiration everywhere. Very fine also is one grown as A. spectabilis, which grows to about 2 feet in height, and has extremely deep coloured purple blue flowers, more starry, per-haps, than A. bessarabicus, but of much deeper colour. I must say, also, that I prefer the habit of A. bessarabicus, but A. spectabilis, which comes from North America, is good enough to be included in any garden. Of A. ericoides, the Heath-like Michaelmas Daisy, it may be said that few more pretty flowers adorn our gardens in September and October with its graceful foliage and white flowers in endless profusion. These and many other Michaelmas Daisies are of the greatest value in the garden of hardy flowers, and afford the highest pleasure to their owner.

The hardy Cyclamen still in flower reminds me that, having mentioned in some recent notes that C. gracum was in flower in my garden, an eminent authority on hardy flowers has in the kindest possible manner brought to my notice that what I had under this name was only a variety of C. hederæfolium, which is now recognised by botanists as C. neapolitanum. The latter species varies so much in foliage that it is difficult to recognise the various deviations as belonging to the same species, and as I had several

plants of the same character bearing the name of græcum and differing from all of a large number of C. hederæfolium or neapolitanum, I did not feel at liberty at the time to reject the name, especially in a genus so confused in nomenclature as the Cyclamens. It appears, however, that the true C. græcum is not known to be quite hardy in this country, and I am glad to have the opportunity of correcting an error easily made in connection with this difficult genus.—S. Arnott.

WINTER TREATMENT OF CANKER.

IMPROVING OLD FRUIT TREES.

Would Mr. Abbey kindly give some advice respecting the above?

I have recently succeeded to a garden where the fruit trees are all more or less cankered, and am very anxious to deal with the pest as promptly as possible. What means would he advise me to adopt between now and next spring? Obviously, these old trees cannot be cut down and thrown away, as young ones take time coming into bearing. Consequently it is of pressing necessity to attempt to deal with the canker, and if possible exterminate it. Of course I shall immediately cut out and burn all diseased branches that can be spared, but as many of the main stems and large limbs are affected remedial measures must be attempted.

Would, therefore, Mr. Abbey recommend paring and cutting away all diseased bark and wood, afterwards painting the wounds with neat petroleum, or, if that fungicide be too potent, with warm gas tar? So far as my experience goes, canker has a great dislike to

an application of hot gas tar.—INQUIRER.

[Although it is hardly possible to cure old trees of canker, much may be effected towards rendering them more satisfactory in their growth and crops by judiciously operating on their heads and supplying nourishment to their roots. The results in many cases exceed the expectations, so that trees that were doomed to be destroyed as soon as others could be grown to afford an adequate supply of fruit have become so profitable that their uprooting has been postponed indefinitely. Besides, the retention of old trees is in some cases an absolute necessity in order to have a supply of fruit, which, if not so good in quality or large in quantity as desired, is yet useful, and saves buying. The resolve, therefore, of "Inquirer" to make the most of his old trees, afflicted though they be with canker, until young ones planted in properly prepared ground arrive at a productive age, is a wise one, and worthy of adoption by others similarly circumstanced.

wise one, and worthy of adoption by others similarly circumstanced. The mode of procedure suggested by "Inquirer" is the correct one—that is, cut away all the dead and as much of the cankered parts as can be spared consistently with the prospects of productiveness. All such parts must be burned, not on ground occupied by the roots of the trees, but where the fire will do no harm, and the ashes resulting should be at once spread on the ground beneath the trees, and a foot further from the stem than the branches extend. This is one of the best possible manures for fruit trees, and restores to the soil, a small part it may be, yet some portion of the elements abstracted from it by the roots. Leached ashes—those washed by rain—have little manurial value; fresh ashes are a powerful

fertiliser.

"Inquirer" may then, as he proposes, cut away all the diseased bark, or such portions of it that is brown and dead, but it is not advisable to cut the wounds of old trees into the quick or live bark with the object of removing the mycelium of the fungus, if any, for the swellings in some cases almost encircle the limbs, and to cut these away entirely would be tantamount to ringing and killing the parts above them. The wood must not be interfered with, for it is unaffected by the fungus, and is necessary for the stability of the limb: After cutting away the diseased and dead bark, or so much of it as can be removed without damage to the live bark, dress the wounds with a solution of sulphate of copper, 4 ozs. dissolved in $6\frac{1}{4}$ gallons of water, applying with a brush, and well washing out the wounds, but without the liquid running down the stem. The wounds should be dry, and if fine weather follows, so much the better, as more copper will be absorbed by the bark and wood than if rains prevail. This will do much to arrest the growth of the mycelium of the fungus, and the tree will take advantage of it in the coming season to throw out more callus around the wounds, striving its utmost to cover them with new bark, which may be further accelerated by plastering the wounds with a mixture of clay and fresh cow manure.

In addition to the pruning, trimming, and dressing the wounds and cankerous parts, "Inquirer" may uproot perennial weeds and burn them, turn the ground over without disturbing the roots more than can be helped, yet burying soft weeds that will decay. This should be done as soon as the leaves fall, and the pruning, trimming, and dressing of the trees completed. Then apply the following mixture:—Steamed bonemeal and kainit in equal parts, mixed, spreading it evenly from the stem outwards to a foot beyond the

spread of the branches, at the rate of $3\frac{1}{2}$ lbs. per rod, and as the surface is loose it may be left for the rains to wash in. But if the soil and subsoil be dry, make holes with a crowbar, and fill them with water time after time, following with liquid manure, then fill the holes with fresh soil pressed firmly down.

Before the buds commence swelling in the spring, spray the trees when they are dry with a solution of sulphate of copper, 1 lb. to 25 gallons of water, using the knapsack pump "Eclair." This should be followed by a dressing of nitrate of soda to the soil when the trees are starting into growth, using $1\frac{1}{2}$ lb. per rod if the ground be naturally moist, or 2 lbs. if inclined towards dryness, applying it from the stems to a foot beyond the spread of the branches.

This is the whole of the prescriptions I advise "Inquirer" tofollow, except if the soil requires draining it must be attended to first thing, for no fruit tree can thrive in a badly sanitated soil. The prescriptions will be as useful in subsequent years as at present, only they must be used according to circumstances, and in a less.

drastic manner.

I strongly advise "Inquirer" to have nothing to do with petroleum, and still more so as regards gas tar. Both are strong, yet dangerous medicines, for though they destroy many insectal and fungal germs and pests, they may also kill the patients, if not cripple them for life. I have a strong objection to all oils and fats for applying to the stems and branches of fruit trees on account of their slow but certain reactions, and even when saponified, as in soft and hard soap, there is danger in using them at great strength, say 8 ozs. of softsoap to a gallon of water, as is often recommended for dressing Vines, and the result is they break badly in consequence. Gas tar is still worse, and often enters into the composition of cart grease to such an extent as to kill the stems of trees to which it is applied to prevent the ascent of wingless moths and beetles.—G. Abber]



CATTLEYA BLESENSIS.

When exhibited on the occasion of the meeting of the Royal Horticultural Society at the Drill Hall, Westminster, on September 26th, by Messrs. B. S. Williams & Son, this pretty Orchid attracted attention. It is the result of a cross between Cattleya Loddigesi and Lælia pumila. The flowers are of a mauve shade, but the lip is richly coloured with purplish magenta. Judging by the plant exhibited the pseudo-bulbs are of a slender growth, nearly a foot in length, and each bears two bright green leaves. As already reported in this Journal an award of merit was adjudged for this interesting hybrid.—C.

STENOGLOTTIS LONGIFOLIA.

This is a comparatively recent introduction, and as yet is scarcely known in gardens. It was sent to Kew by Mr. Medley Wood, Curator of the Durban Botanic Gardens, Natal, and flowered for the first time in England in 1889. Previous to this Stenoglottis was regarded as a monotypic genus consisting solely of S. fimbriata, a pretty little terrestrial Orchid not uncommon in gardens. S. longifolia does not differ very materially from S. fimbriata in general appearance, but is a much larger and finer plant. The chief distinction between them, apart from the difference in size, is in the leaves. S. fimbriata has short oblong leaves, freely blotched with black, while the leaves of S. longifolia are longer, ensiform, and lack the blotches. The flower-scape is erect, about 15 to 18 inches high, and the upper half is densely clothed with small, deep mauve flowers with fimbriated lip.

flowers with fimbriated lip.

S. longifolia and S. fimbriata are both natives of S. Africa.

They require a cool or intermediate temperature, and should be potted in a mixture of loam, leaf soil, and sand. Abundance of water during the growing season is essential.—A. B.

CYPRIPEDIUM EURYANDRUM.

This is a handsome and distinct hybrid Orchid that has been in cultivation for many years. It was raised by Mr. Seden, of Messrs. J. Veitch & Sons, I believe, from crossing the free-flowering and useful species Cypripedium barbatum with pollen from the beautiful C. Stonei. The result was a form quite intermediate in character between the two species, and possessing a large share of the attractions of each. The hybridity is especially

noticeable in the petals, which, though considerably longer than those of C. barbatum, are yet proportionately shorter than those of C. Stonei, and the colouring is shared in an equal degree. The labellum has a near resemblance to that of C. barbatum, but differs in the greater size it attains. The obtuse upper sepal—tinged with crimson, striped with green and black—also imparts a very distinct attractive appearance to the flower. The petals are fringed with hairs, and bear on the upper surface numerous peculiar wart-like protuberances, while the labellum is dark-coloured, crimson and brown shades being combined. The foliage is also handsome, being of rich deep green, in which an approach to tessellating is faintly visible, and the plant is of vigorous habit, flowering freely, with similar treatment to that required by other Cypripediums.—Specialist.

THE PRINCIPLES OF HEATING:

INCLUDING THE ARRANGEMENT OF HOT-WATER PIPES FOR (a) FRUIT HOUSES;
(b) FORCE G HOUNES WITH BOTTOM HEAT; (c) BEST KINDS OF FUEL, WITH
THE MANAGEMENT OF FIRES, AND THE REGULATION OF TEMPERATURES.

Silver Medal Essay by Mr. HARRY CORLETT, Foreman, Woolton Wood Gardens, Liverpool.

INTRODUCTION.—This subject covers a very large area, and it is one which, I am sorry to say, that many gardeners know too little about. It seems quite sufficient for some of them to know that a house, or a range of houses, has been erected and fitted with hot-water apparatus by a horticultural builder; and, although the work done may be satisfactory to the builder, yet it does not always meet with the requirements of the gardener, and as he is the person who, very often, has to earn his livelihood by the products grown in the houses, the necessity of having some knowledge of the principles of heating at once presents itself to him. I trust the day is not far distant when young gardeners will be taught a thorough knowledge of heating, in a similar manner to what they are now taught when they should water a plant, because I consider one quite as necessary as the other from a practical point of view. When this becomes part of their education we shall then hear of less damage being done to boilers, pipes, and plants. I will treat the subject from a scientific point, yet making it plain and practical, with tables and diagrams attached, for the benefit of those who may require its assistance, making link by link, as it were, thus forming a chain of information which should be in the possession of everyone who works in, or receives any benefit from, an horticultural structure heated by hot water.

This paper must be divided into eight distinct parts — viz., (1) Principles of heat, because we must first learn how, and why, hot water heats a house; (2) Houses with their various positions, plants, and temperatures; (3) The thermometer, to ascertain the different temperatures; (4) Pipes to secure the various temperatures; (5) Boiler to heat the water in the pipes; (6) Fuel to heat the water in the

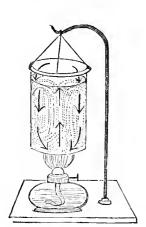


FIG. 47.

boiler; (7) The stoker to work the fuel; (8) The duties of the stoker. Each part being individually treated, and, as one is, practically speaking, of no use without the other, they must be all linked together to obtain a final and satisfactory result.

(1), HEAT AND ITS TRANSMISSION.

A body or substance becomes heated when brought in contact with or placed under the influence of any other body or substance hotter than itself, the colder body receiving the heat by either of three modes, viz., convection, radiation, or conduction.

In the "convection" mode the smallest parts of the body nearest the heat are the first warmed, and these when heated begin to move

throughout the body, their place always being taken by the colder parts, and the motions thus started are called convection currents. A very simple and interesting example of this is to take an ordinary glass (fig. 47), nearly fill with clean cold water, place a spirit lamp under the bottom of the glass, and then watch the results. The particles of water first heated begin to rise in a direct line from the lamp flame to the top of the water. The colder particles of water from around the sides of the glass, being heavier than the heated particles, at once begin to descend, and thus two currents are formed, the direction of which can be made more apparent by adding a little fine sawdust to the water previous to putting the lamp under the glass. This example shows that convection currents carry the

heated parts of a body away from and bring the colder parts nearer to the source of heat.

In the case of "radiation" the mode of transmission is different to either of the others, the heat being carried through a material medium. Take an example. Expose a piece of steel to the direct rays of the sun; its temperature soon begins to rise from its original point, whilst the atmosphere around it is scarcely changed, thus showing that one body may be heated by another body, yet the space between the two will not be noticeably changed in temperature.*

By "conduction" we have yet another mode of transmitting the heat from one body to another, for a body heated by conduction always moves in the direction where the temperature is colder, and each particle of the body, as it moves through the mass, is slightly robbed of its heat by neighbouring particles. The heat by which the water in a kettle is boiled is transmitted from the coals through the bottom of the kettle by conduction.

The three examples given will show the principles by which our houses are heated. First the heat passes from the furnace through the boiler plates to the water in the boiler by conduction. It is then transmitted through the mass of water into the pipes by convection, and from the pipes to the air in the houses by radiation, and the atmosphere thus warmed is then at our disposal.*

(2), Houses, their Positions, Plants, and Temperatures.

Assuming there is a particular piece of ground allotted, upon which a certain number of houses have to be erected, I have drawn a ground plan as a guide, this, I think, being the most systematic way of laying a foundation to work upon. The dimensions are given in each case, which can either be enlarged or reduced to suit various circumstances.

As will be seen by the plan (fig. 48) there is a wall running north to south on one side, and a wall running east to west on the other side. The two remaining sides are hedges. Along the wall running east to west are placed the early, medium, and late vineries, early Peach house, and propagating Pine house, all of which are three-quarter span-roofed. The wall running north to south is occupied by a late lean-to Peach house, while the remainder of the ground between the late Peach house and the opposite hedge is utilised by three Melon houses, one Cucumber house, two forcing houses, and one fruiting Pine stove, all of which are span-roofed. If two forcing houses are not required then J can be substituted by L, and an orchard house M would occupy the position of L. On the plan will be found the exact position of the houses, boiler, sheds, Mushroom house, office, the direction of the hot-water pipes; also showing how, by the assistance of valves, each house can be individually heated without affecting any of its neighbours. The pipes will perhaps be shown more clearly in the section (to follow)...

VINERIES.—The early house should be started in December at a temperature of 45° at night, allowing a rise of 5° during the day. The heat should be gradually raised until it reaches a night temperature of 65°, and by this time the Vines will be in flower, when the heat must be decreased to 60° until the stoning period is over; then further increase it to 65° night. This temperature may be continued until the Grapes are ripe, which will be about the middle of May. After the fruit is cut admit abundance of air to ripen the wood.

The second, or medium vinery, must be started about the end of February at a night temperature of 45°. The various temperatures of the early house will answer admirably for this structure excepting when occupied by Muscats; then an addition of 5° throughout will be necessary. The fruit in this house will be ready to cut about the middle of July.

The Vines in the late house will start about the beginning of April, when the night temperature must be kept about 50°, and as the season advances and the growth makes headway the night temperature should be raised to 60°, with 70° during the day, allowing a rise of 10° by sun heat. The fruit in this house will be ripe by September, thus maintaining a supply of Grapes from May until January.

PEACHES AND NECTARINES.—The early Peach house may be started in January at a night temperature of 45° to 50°, gradually raising the temperature to 55° about this time, when the trees will be in flower. After the flowers have set again increase the heat until it finally reaches a night temperature of 60°, always taking advantage of sun heat by closing the house early, and by so doing raising the temperature to 75°, which will be found very beneficial to both growth and fruit. Under such conditions the latter will be fit for the table by the middle of May.

The late house will naturally start of itself about the end of

^{*} R. W. Stewart, B.Sc., Lond., "Text Book of Heat," chap. x., pp. 191, 192. Published by W. B. Olive & Co., 13, Booksellers' Row, Strand, W.C.

February, when a night temperature of 45° will be required. This temperature should be gradually raised as the season advances; the night temperature never exceeding that of 60°, so that very little fire heat will be necessary to produce ripe fruit by the end of June, when the trees in the orchard house or those grown on a south wall will afford a succession.

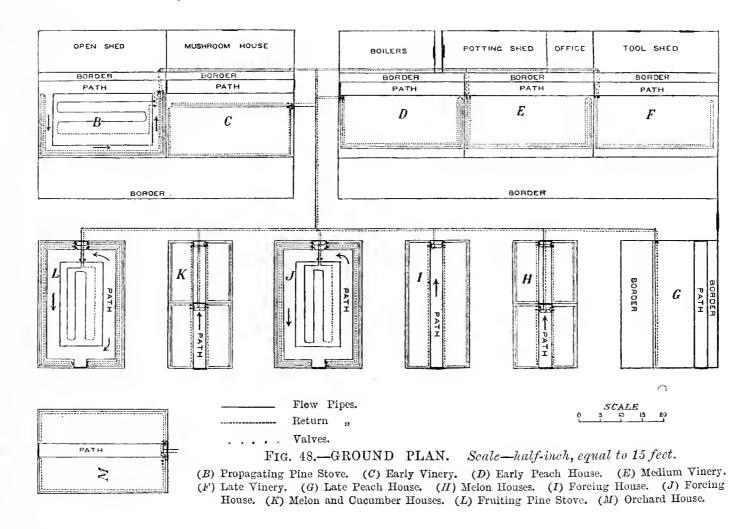
MELONS.—The first Melon seed should be sown early in January in a temperature of 60° at night and 65° by day. This will be found high enough for seedlings at that time of the year. After they are finally planted raise the temperature to 70° at night, while that of the bed must not exceed 80°. In this temperature the fruit should reach maturity by the end of April.

For the second house crop the seed must be sown in the middle of February in a temperature of 65° night. After the young plants are transferred to the bed afford a rise of 5°, allowing the temperature to increase to 80°, or 85° sun heat. This crop will be ripe early in June.

Seed for the third house should be sown by the end of March in a heat of 70° night. The temperatures given for the second house will

of 75° to 80°, with a night temperature of 65°, that of the bed being a steady heat of 85°. In this temperature the young suckers or crowns will readily root, and as they grow and the winter approaches the tempe rature may be reduced to 55° night, 60° day, and that of the bed 75°. The largest plants in the bed should be grown at one end so that they may be used as succession plants. The fruiting house will be occupied by a selection from the succession plants, and they will require a night temperature of 60° to 65° for winter. As the flowering period arrives increase the night heat to 70°, and the day temperature 75° to 80°, a dry atmosphere being necessary at this time, and again when the fruits show colour a similar atmosphere will be essential, including the admission of a little air night and day.

ORCHARD HOUSE.—Here we have a structure which can be used for the purpose of securing early fruits of Plums, Apples, Pears, Apricots, Cherries, &c.; also late crops of Peaches, Nectarines, and Strawberries, the Strawberries having been forced on shelves in the early vineries or Pine stove. The two great essentials in an orchard house are abundance of light and air. Artificial heat will not be in much demand, as a night



also suit this house, and the fruit will ripen about the middle of July. After this house is cleared of its fruit it may be utilised by having late Tomatoes, which would yield a good crop if grown in a dry, cool atmosphere, and as the winter approaches, the minimum temperature being 55°.

CUCUMBERS.—This one house will be found ample, by alternately planting each side of the house. By sowing seed in September, and keeping a moist atmosphere of 65° night, while that of the bed is 75°, Cucumbers will be ready for cutting by Christmas. If seed be sown at intervals of six weeks there will always be a number of young plants ready to take the place of the older ones, thus ensuring a regular supply throughout the year.

Forcing.—These houses are used for compelling plants to bloom at unnatural seasons. If there are two houses at our command, one should be kept from 60° to 65°, and the other 70° to 75° night, because the majority of plants yield the best results when placed in a mild temperature until the buds have swollen, and then placed in the stronger heat of the warmer house. As a general rule, plants subjected to too much heat at first often drop their buds, and thereby frustrate the object in view. Although the plants will be forced principally by artificial heat, yet advantage should be taken of all sunshine procurable, when the temperature may be allowed to rise 10° or 15°, which will greatly benefit the occupants of the houses. One end of the coolest house may be used for the cultivation of Figs.

PINES.—The propagating house will require a summer temperature

temperature of 45° will be all that is needed, and even this can be dispensed with when the weather is not severe; but should the weather prove dull and wet during the flowering period, a little fire heat would be advisable to insure a good setting of fruit.

(To be continued.)

OUT OF TOWN.

WET and shivering, with almost a chattering of teeth, was the condition of the quixotic "foresters" on arriving at the longed for destination on one of the rare, cold, rainy nights of the passing away summer; but all temporary discomforts quickly vanished on entering the cheery home of Mr. Merryweather-a home of sweet flowers, Even such whitewarm welcomes, good fare, and bright music. bearded and silvery headed ancients that hobbled about after frisky Fenn at Sulhampstead not long ago must soon forget past shiverings under a change so pleasant. What wonder, then, that the younger and buoyant spirits which emerged from the wild forest should resume their wonted gaiety at once when brought back to the luxuries of civilisation? What! Mr. Merryweather young; he who has grown-up sons who stage Roses so well at the shows! Surely No, he is as fresh his locks must be "silvered with past years." and active as they, and can share in the refined pleasures of life with equal zest, and is just as quickly, keenly, critical as they are over They are like the merits and defects of the last new Rose. brothers, are these two generations of Merryweathers, in their pleasant home at verdant Southwell: and to hear them talk about Roses as if no one was there is a treat.

"We could have staged grandly to-day, couldn't we, Harry? Did you ever see such a Pig? and then that Duff, it was wonderful, wasn't it? Yes; and Dick was lovely, wasn't she?" and so on through an ideal forty-eight that "Ned" was enumerating to his brother, but all for the ear of Henry, the head, who would keep suggesting faults in this Rose and that. "Ah, but you should have seen the blooms," rejoined the youngster. "You don't know what you have missed. We could have run Cant hard to-day; pity there wasn't a show before the rain spoilt 'em," and so on. This perversity of Roses in opening between the shows appears to be chronic and incurable. It seems to display itself everywhere; and the references to varieties by workers among them, and who become familiar with them, are somewhat puzzling to an outsider. Fancy the bold liberty in calling the Marchioness of Dufferin, "Duff;" Margaret Dickson, "Dick;" and Gustave Piganeau, "Pig," and all in the way of endearment, too! Is it not peculiar? But they will do it will these earnest men, who spend their lives among Roses, and talk to each other about them.

them.

"You have done pretty well at the shows this year—blooms rather small perhaps, but fresh and bright," observed he of the city; "but don't you think you want a little more size?" "Well," said the youthful senior, "we can get colour here, there is no doubt about that; and give me good form, brilliancy, and freshness, and they can take the dingy big 'uns. But all the same, we mean to have more size; bought a fine piece of land 4 or 5 feet deep of sound loam. You must see it." "Another piece! Then how much land have you now?" "Sixty-five acres." Thus has the once little nursery grown, the result of sound knowledge, good judgment, cultural skill, diligent work, and business enterprise—just the qualities that have made many a once-small local nursery famed throughout the land, in the case under notice the growth being mainly stimulated by "Bramley's and Roses."

"And how are the Bramley's this year?" "Oh, they are all right. You must see them." "And what do you think of the newer Roses?" "Well, some are good; we must look at them in the morning. The host appeared to be getting uneasy; in fact, he was under "influence," for his clever daughter was presiding at the piano in the drawing-room, and sundry friends were singing. He could endure our prosy talk no longer, and cut it short with a "Come, now, let us stop this, and have some music." "What, music after midnight! It's bedtime." "Bed or no bed, we must have music. I have a few friends in the house, one or two local celebrities, and we have to hear them." Open flew the doors, and there was a general movement of happy humanity. "Ah, Herr Jumpi, allow me to introduce you, also Signor Ponderoso, to my friend, Mr. Cityman." Then the concert began, and after it ended we had not long to wait before it was time to be out and among the Roses.

No doubt the rain had done something to freshen vegetation, but it could not have transformed the burnt up pastures of the south into a mass of green verdure in a night. Refreshing green was everywhere around—on banks, lawns, hedges, and fields. Flowers were flourishing as if there had been no drought. Masses of Delphinums 8 feet high, golden pillars of the stately Verbascum olympicum still higher, the pure white bell-shaped Campanula persicifolia grandiflora, one of the finest of the family, with most of the best hardy border flowers in season. On the rockery glittering golden sheets of Genista tinctoria flora-pleno, in contrast with dwarf Campanulas of the beautiful turbinata group in various tints, and Tropæolum polyphyllum trailing over the ground densely laden with its yellow flowers—all these and others told us there had been no such drought exhaustion as had to be endured by flowers and their cultivators in the south. No doubt the soil in the valley of this fertile district of Nottinghamshire is naturally rich, deep, and retentive; but it was hard to think there had been "no rain worth mentioning" for several weeks. Yet go where one might an idea seemed to prevail that the brunt of the heat and drought was borne by that self-same place, no matter how green the fields and bright and fresh the gardens. True, the sun brought out the Roses too quickly-did not give them time to "fill up," but all the same, broadly and generally speaking, the land has been a veritable Land of Goshen in the north this year in comparison with the Sahara-like aspect of country along the south-east coast, though rich soil and deep culture have told there like oases in the desert; but we are scanning the Roses at Southwell, noting more particularly the newer varieties that had flourished the best under the burning sun of 1893.

Amongst Hybrid Perpetuals the following were giving satisfaction:—Bruce Findlay, regarded as a valuable addition to the

very bright red Roses, particularly free and attractive in colour; Danmark, very fine indeed, after the style of La France, but more globular, the petals thicker and thus more lasting than the old favourite named; Duchess of Albany, another of the La France family, but deeper in colour, in other respects identical with its parent; Gustave Piganeau, one of the finest of the newer Roses, has flowered as well this dry season as during the wet period of last year, plants dwarf in habit, hardy, and floriferous; Germaine Caillot, a flesh-coloured variety, flowered well this season; Jeannie Dickson, rosy pink with paler margins, one of the most useful of the Irish raised Roses; La France de 1889, a fine large-petalled Rose of pleasing red colour; Marchioness of Dufferin, a very full Rose of a peculiar shade of pink, attractive when young, but inclined to coarseness; Margaret Dickson, a beautiful fleshy white Rose, evidently liking a hot season, being so much better than last year, and very vigorous.

Amongst Teas Ernest Metz is regarded as one of the best pink varieties of recent years, the stiff flowerstalk holding the blooms erect; and Waban is looked upon as a distinct form of Catherine Mermet, being darker in colour. The Hybrid Tea Gustave Regis is charming when the swelling buds show their clear canary yellow colour, tinted darker on the edge, and the variety is expected to be a favourite for buttonholes, sprays, and allied forms of decoration; and the Bourbon Mrs. Paul is a great favourite, flowers a pleasing blush white, and plants robust in growth. Those were the most prominent moderns; but no one could see the floriferous masses of the charming Polyantha Roses without admiring them, Madame A. M. de Montravel, Etoile d'Or, Golden Fairy, George Pernet, Little Dot, Perle d'Or, and The Pet appearing as if each were trying to outrival the other in productiveness and chaste beauty. Southwell has evidently a good Rose soil, and the collection of We must, however, leave the Roses varieties is very complete. and glance at the fruits.

Every Apple-loving visitor to Southwell is bound to notice Bramley's Seedling, for the simple reason that he cannot help it. Large old standard trees here and there excelling all others in their loads of fine fouit; young orchards in fine bearing condition—trees which, if practically let alone, open themselves out naturally and prevent overcrowding, and a forest of young stock standards and dwarfs, distinct by their sturdy vigour and robust leafage. "Merryweather has Bramley on the brain" once observed a brother in the craft. Yes, he has; and will keep it there. It makes no difference to him whether he sells 20,000 trees of it or of other varieties, but he likes to see his favourite go, as he is convinced that it will do him more credit than will several others, against which he has nothing to say; but his faith is unshaken in his protégée, indeed it seems to increase with experience. "Look at the trees," say, as he points to their dark green heads and fine fruit shining on the branches; "then look at others around them. Doesn't it speak for itself? I tell you Bramley's is a topper—never anything the matter with it; fights his way through everything—frost or heat or canker, and the fruit is always wanted in March." Then he goes on to say, "And I will tell you another good Apple-Lane's. Yes, if I were planting for money-making my two chief Apples would be Lane's Prince Albert as dwarfs, with Bramley's in that form, and as standards. Lane's will bear tremendously and soon pay, but cannot wear like Bramley's. Find a better pair if you can for planting by the dozen or the hundred. I cannot, and I think I have all the best sorts in cultivation." As early Apples the two Southwell favourites are Domino, one of the best of growers and bearers, in demand not only for new plantations but for filling vacancies in existing orchards; and Russian (Duchess of Oldenburg) hardy, early, a free grower and bearer of attractive and refreshing fruit.

For grafting old trees—putting new and fruitful heads on old trunks—Bramley's, by its inherent vigour, excels all others, but Mr. Merryweather's method of grafting old trees differs from the usual procedure of cutting the main branches down to within 6 or 8 inches of the trunk. He simply saws through the stem below the branches, pares the top smooth, and inserts scions an inch or two apart all round between the bark and the wood. Even if the trunk is cankered new matter is deposited by the young and vigorous growth, and thus the faulty old stem is encased in new wood. The strong growths also, as must be the case, promote corresponding root extension, and previously worthless old trees are transformed into bearers of excellent fruit.

I cannot go into other kinds of fruits, except to say that Plums are grown extensively in Nottinghamshire, Victoria being the favourite, a purple local variety known as Johnny Raw being also in demand. As an early dessert Plum of the first quality Mr. Merryweather says Early Transparent Gage should be grown in every garden in the land, and perhaps its raiser, Mr. Rivers, will agree with him. But there must be an end of writing, and so, as

our American cousins say, I stop "right here," and begin to pack up for home.

"No you don't," sounded an imperative voice, "there is to be a meeting to-night of the Gardeners' Society, and all the best men will be there." This implied that in the opinion of the speaker gardeners are the best men around Southwell. Well, the meeting was a good meeting of good men, and Mr. Merryweather delivered a good lecture on fruit growing generally, and the capacity of the district for sharing more largely in the general supply of high class produce. Your correspondent ventured modestly to suggest that the lecturer was right, then hastened away, as he began to feel his "out of town" exercise rather trying, and was glad to get to London for quietness and rest.—A CITY MAN.



NATIONAL ROSE SOCIETY-MR. MAWLEY'S ANALYSIS.

THE analysis of the Rose seasons of 1886-1893 by Mr. Mawley (page 303) is very interesting and of great service to exhibitors; but I should like to call attention to some of his deductions, which, I think, are partly based on erroneous premises and incorrect arithmetical calculations. Mr. Mawley compares the Crystal Palace Rose Show of the N.R S. in 1893 with that of the same Society in 1879. Although a member of the National at the time I have no recollection of the Show of 1879, but I think for a fair comparison of the two years it would be also desirable and necessary to have the comparative number of members and the number of classes open to exhibitors in each year. These I cannot give, not having a report for 1879; but the members' subscriptions to the Society in that year were £217, and for the current year should be at least £380. Last year they were £368, and I am aware of a considerable addition to the roll of subscribers since the last balance-sheet was published. Another point also to be fully con-idered is the enormous strides taken in horticultural affairs and increased interest in Rose growing since 1879. If, for instance, one only went back even five years and compared the position of the R.H.S. (the lealing Society of horticulture) and its list of members in 1887 with its roll now, it would show how this interest has increased. These facts all taken together prove that a bad Show in 1893 is a much more important item than an indifferent one in 1879, a date at which the strong revival in flower culture was really only in its initial stage, and I therefore take exception to the statement that visitors and exhibitors should as a matter of course expect bad Shows in a season—a glorious season, too, in many respects!—like that of 1893. The remedies are numerous and obvious, and there were splendid R ses seen this year at other places, notably on the 24th June at Reigate, although there were not many instances of good flowers at the Crystal Palace on the 1st July; but as long as our Society is bound down by hard and fast rules, and, so to speak, tied to the Crys'al Palace, so long shall we be subject to the caprice of fortune in regard to the weather at the date to which we are fixed six months in

In going into the analysis, of the average number of times certain Roses have been shown, Mr. Mawley has made a serious error in regard to Gustave Piganeau. Last year, as he himself states, it was forty-sixth and shown eight times; he now says, "at one bound" it has leaped to No. 8. But it has done nothing of the kind. It was as I say shown in eight boxes last year and in twenty-four boxes this year, so that according to arithmetical average it has been shown sixteen times, and should be bracketed as twenty-third and not eighth. I should also like to know in how many of the professional and big amateur boxes it was shown, as I should think that the twenty-four exhibits came almost entirely from these sections.

I also find that Ernest Metz should not come in the Tea Rose analysis at No. 7, but bracketed at No. 15 with "Madame Hoste," as the average for 1892.3 is 21—viz., 12 + 30. My view of Ernest Metz is quite in agreement with that recently expressed in your Journal by Mr. D'Ombrain (page 201). The Rose is apportally a great pet of some of the professionals, although, strange to say, they have not higher the professionals, although, strange to say, they have not hitherto shown it to great advantage or to any extent in the N.R.S. class specially set apart for it at our metropolitan meeting.

There is no doubt, and in this I entirely agree with Mr. Mawley, and have elsewhere stated so, that Horace Vernet and Mrs John Laing have been most satisfactory Roses to many exhibitors this year. I do not suppose Horace Vernet has ever been so frequently and so splendidly staged as it has been in 1893, and the flower which won the N.R.S. medal at the Crystal Palace for Messrs. Harkness was probably the finest specimen shown during the year.

I am surprised that Mr. Mawley has not named Mr. B. R. Cant's Prince Arthur amongst the H.P.'s which have been a great success this season. It has seldom been seen to greater advantage, and with Roses such as Duchess of Bedford and Earl of Dufferin as well as Horace

Vernet (which three are difficult of culture) shared the honours amongst the deep reds.

In reference to what Mr. Mawley says about the peculiarity of the season in certain varieties and his deductions therefrom, I should not describe Dupuy Jamain or Duke of Wellington as late-flowering varieties in any year, nor would I class La France merely as an early bloomer, but as a true perpetual, flowering early and late; and as to A. K. Williams, I may mention that in the N.R.S. new catalogue that Rose is specially described (why, I cannot tell) as "good in autumn." A. K. Williams is always good, but it is better in the summer than autumn with most people.

I am very pleased to see that Mr. Mawley has at last brought the beautiful Rose Ethel Brownlow into his analysis, and literally and truly "at a bound" it takes the position of No. 20. If that position were on the year's exhibits Ethel Brownlow would be No. 14. There is no Rose which excels it in beauty of form and colour, and its rival in these qualities I consider to be Comtesse de Nadaillae, which in 1893 has been the Tea Rose most frequently shown, the hot weather suiting it to perfection.—CHARLES J. GRAHAME, Croydon.

EVERY Rose lover will unite in tendering hearty thanks to "E. M." and those who assisted him for the interesting analysis of our favourite flower in the last issue. Personally I have never felt that this was the best way of arriving at, say the best twenty or thirty Roses for an intending aspirant for Rose fame to select; but it is none the less interesting on that account. I have always thought that it showed rather the Roses that stood best the test of certain seasons; this has been particularly brought out in the present analysis. I fancy that any exhibitor would prefer Ulrich Brunner to Marie Baumann, and yet the average is nearly four higher in the former. Only our old departed friend "Rushton" Radcliffe, I think, would agree with this, and he never could forgive her modest behaviour in hanging down her head, and on this account would never place her amongst the first forty-eight!

Then a season that is inimical to a certain Rosc has an effect of a very damaging character on its position for many years. La France, fo instance, has disagreed with this dry season, or vice versa. Although it often refuses to unfold in wet weather, certain it is that in the early and in the thickest portion of the exhibition season the specimens of La France were not only few and far between, but they were also mediocre in character. Marquise de Castellane being one of the earliest in bloom, I suppose had retired from the fray before the National; whilst Marie Finger with me declined to exhibit her charms till late, but then I thought her finer than usual. Gustave Piganeau is a great acquisition. It may not be a very good grower, yet it gives many blooms and these decidedly large, and it is in my experience one of the very best autumn bloomers. I should think this will be considered the Mrs. John Laing year, and it is one of the brightest gems in the Rose crown of my old friend who was too early taken from us, the late Mr. Henry Bennett. A curious circumstance connected with this Rose and showing how much it enjoyed the past season was the fact that at one of the West of England Exhibitions (Bath, I think) in the class for any variety of Rose, twelve blooms, there were five stands, and every one of them was Mrs. J. Laing. I looked down the list to find Augustine Guinosseau. Though so similar except in its colour to La France, with me it has this season given more beautiful flowers than La France, and yet my plants of the latter are as four to one. I am disappointed to see her only conspicuous by her absence.

In the Tea classes Catherine Mermet will always be hard to beat. Her sports will probably be her most dangerous competitors, but it must not be forgotten that by the date of the National Exhibition the great beauty of its most dangerous rival, Maréchal Niel, is a glory of the past. I apprehend very few exhibitors would place Maréchal Niel at its best at No. 9. In form, substance, and colour it is the equal of Catherine Mermet, whilst in size it surpasses her without the shade of coarseness which size sometimes brings with it. Maréchal Niel requires a sort of protection when grown in the open; its weight makes it a hanging flower, and the peculiar formation of the seed vessel is provocative of decay in wet weather. The stem is inserted into a hollow as it were, and in dripping times this hollow is generally full of water, and this proves, in my experience, a fertile source of decaying blooms. Hence, were I growing Marechal Niel against an outside wall I should always endeavour to give a foot of shading at the least overhead. The sports of Catherine Mermet seem to follow the good example set by the parent. The Bride and now Ernest Metz are splendid Roses. Will Waban, another of the tribe add to the éclat of the parent? I have only seen it on starved plants, and therefore hard to judge; but form, substance, and colour are there, and I think it must soon be found in the analysis.

"E. M." (page 303) will forgive my suggesting the date of Cleopatra as too recent. This must be the case unless my friend Mr. H. Bennett sent me a plant before he put it into commerce, as, unless I make a great mist..ke, it was in 1888 when he sent it to me. It is certain to rise above its present position. "E. M." has this year, I think, added very much to the value of the analysis by giving, for the benefit of beginners, a select list of good varieties. To this list few will take exception; but they may wonder with me why, in the face of the analysis, Catherine Mermet, Comtesse de Nadaillac, and The Bride are omitted from the Tea list! Still, thanks many to "E. M." and his

helpers.—Y. B. A. Z.



THE WEATHER IN LONDON. — Since publishing our last issue much rain has fallen in the metropolis. On Friday evening it rained heavily for several hours, as it likewise did late on Saturday. Sunday was fine, the same applying to Monday, but an inch of rain fell on the evening of the latter day in some localities. Tuesday night was wet, and Wednesday opened similarly, the rain continuing throughout the day.

— THE WEATHER IN SCOTLAND.—Mr. G. McDougall, Ravenna Cottage, Stirling, writes:—Rain fell here in September on twenty-two days. The greatest amount in any one day was 0.385 inch, on the 29th. Total for the month, 1.447 inch. Warmest day the 2nd, with 793° maximum and 55° minimum. Coldest day the 21st, with 49·1° maximum and 33° minimum. Frost occurred on three nights, 10th, 12th, 11th severest, 30·8°. Mean maxima 63·2°, mean minima 43·6.

— COMPLIMENTARY DINNER TO MR. H. TURNER.—On Monday evening last Mr. Harry Turner, of Slough, was entertained at dinner by a number of friends at the Gardening and Forestry Exhibition, Earl's Court, in recognition of his services as president of the horticultural section of the Exhibition. Mr. Milner, F.L.S., C.E., presided, and warmly eulogised Mr. Turner's services in organising the numerous floral exhibitions that have been held during the season and in the decoration of the gardens. A handsome epergne was presented to Mr. Turner as a memento of the occasion,

— The Royal Gardeners' Orphan Fund.—Intending subscribers are respectfully reminded that the collecting cards recently issued amongst the gardeners and general nursery trade throughout the country should be returned during the course of the ensuing month. It may be stated again that every 5s. collected will secure a vote for the next election, and every £5 a vote for life. It is earnestly hoped a very liberal response may be made to this appeal in order to meet the requirements of the present year. Collecting cards may still be obtained on application to the Secretary or any member of the Committee.—A. F. Barron, Hon. Sec., Royal Horticultural Gardens, Chiswick.

- HELP FOR GARDENERS' ORPHANS.—A grand evening concert will be given at the Assembly Rooms, Surbiton, on Wednesday evening, October 25th, 1893, in aid of the Royal Gardeners' Orphan Fund. Among other distinguished patrons of the concert are the Mayor and Mayoress of Kingston, the Recorder (C. W. Bardswell, Esq., J.P.), Sir Douglas Fox, J.P., and Lady Fox, J. P. Trew, Esq., Mrs. Shrubsole, W. A. Bevan, Esq., and Mrs. Bevan, H. K. Studd, Esq., Mrs. Nops, G. C. Sherrard, Esq., J.P., and Mrs. Sherrard, H. C. Paice, Esq., and Mrs. Paice, E. T. Coppinger, Esq., and Mrs. Coppinger, W. Furze, Esq., and Mrs. Furze, and Ernest V. Douet, Esq. The concert will commence at 8 P.M. Carriages at 10.15. The prices for admission are—Stalls, 5s.; numbered reserved seats, 3s.; centre seats, 2s.; back seats, 1s. An excellent programme has been arranged, and tickets may be obtained of Messrs. Bull & Son, Victoria Road, Surbiton; Mr. W. Drewett, Market Place, Kingston; of any member of the Committee; and of the Secretary, Mr. A. Dean, 62, Richmond Road, Kingston.

—— Potatoes at Chiswick.—The late Potatoes grown in the trials at Chiswick this year were examined on the 5th inst., and the cooking qualities of some of the best cropping varieties tested. Three marks of merit were recorded for the following varieties:—Major T. Neve, large white round, clean, heavy crop, and tubers of good quality. Success (Alpen), large, oval-shaped white, very good crop and quality. Crawley Prizetaker, flattish round, great crop, uniform good sized tubers of satisfactory quality. Similar marks were recorded for Boston Q. Q. (Quantity and Quality) and Conference, thus confirming their excellence of last year, and the certificates subsequently awarded.

— FLORAL DECORATIONS FOR ROYALTY IN SOUTH LONDON.—
The Prince of Wales and the Duke and Duchess of York paid a visit to
Camberwell in order to open the new South London Art Gallery,
Reading Room, and Lecture Hall on Monday last, and then the Prince
proceeded to open the Central Library and Public Garden, which are

situated a short distance away in the Peckham Road. The floral decorations on these occasions were done by Messrs. E. D. Shuttleworth and Co., Albert Nurseries, Peckham Rye, S.E.

— A SUBTROPICAL BOTANICAL laboratory has been established at Eustis, Florida, under the direction of Prof. Swingle. According to "Nature," the diseases of fruits belonging to the "Aurantiaceæ" are a special subject of investigation.

—— STRAY TOMATOES.—In reference to this subject (page 312) I always find many plants come up about midsummer on the plot of land in my garden that was cropped with Tomatoes the previous year; I have never moved them into a suitable position and given them proper attention. Would a strain selected in this manner be likely to prove more hardy?—Y.

— SIREX GIGAS (page 288).—This insect is far from rare, but is often confounded with the hornet. I have from time to time had several specimens in my possession. It has no sting, hence in this regard it is wholly harmless. It is or used to be classed as a Tenthredo, and belongs to the tribe of the saw-fly, so greatly abhorred by farmers and gardeners. It has merely an ovipositor and accessories. It is these which are mistaken for the sting.—J. E. ROGWARD.

— Gardening Appointments.—Mr. Charles Puddiphatt, for six years second in the gardens with Mr. G. Garner, late of Amberwood, Christchurch, has been appointed head gardener to Sir Anthony Cope, Bramshill House, Winchfield, Hants. Mr. J. Bennett, late gardener to the Hon. C. H. Wynn, Rûg, Corwen, N. Wales, has been appointed by Mr. Wynn to the position of steward and bailiff on the same estate. It is pleasing to note this recognition of merit, and Mr. Bennett may well be trusted to give a good account of his stewardship in his new position. We presume that Mr. Bennett will now terminate his exhibiting career. It is, however, very fitting that he should finish by securing the chief fruit prize at Shrewsbury, which he did two years in succession. Mr. W. Coleman, for many years the skilful head gardener at Eastnor Castle, Ledbury, is now appointed estate agent, and is succeeded as gardener by Mr. Frank Harris.

THE USE OF ALLOTMENTS.—In Lincolnshire, where there is an enormous number of allotments under cultivation, the reports from the different villages show that in spite of the hot season the occupiers have had a very successful harvest. In numerous instances the men have secured two quarters from a rood of Barley, and as much as 2 tons of tubers have been raised from a rood of Potatoes. The latter, especially, have paid remarkably well, and some labourers have made as much as £5 of their surplus produce after providing for their domestic requirements. The demand for additional allotments and small holdings still continues.

THE WAKEFIELD PAXTON SOCIETY.—At a recent meeting of this Society, Mr. Campbell, gardener to Mrs. Micklethwaite of Painthorpe, read an essay on "The Apple." For flavour, the essayist considered the English Apple was second to none, and if cultivated with care it would hold its own against the American and Australian Apples that were being so largely imported. During an interesting discussion Mr. Hudson strongly recommended Potts' Seedling to amateurs, as better even than Lord Suffield, being firmer, good bearing, and keeping longer. Mr. Skinner, Silcoates Nursery, offered some valuable remarks on Apple culture, and in reply to questions said that if he were planting an orchard for posterity he would use the Crab stock, but if for quick and heavy bearing for a few years the Paradise stock was preferable. He also commended judicious branch and root pruning, and condemned ringing as unnecessary.

— Gardening versus Farming.—A daily contemporary remarks:
—"What the shrewder sort of country people are doing in face of the agricultural depression is very well shown by the tabulated census returns. The farm servants, it appears, have decreased to the extent of about 10 per cent., but counterbalancing that there is a very large increase of gardeners, seedsmen, and nurserymen. In other words, the rural population, for good or ill, are acting on the belief that it does not pay to be connected with farming while there is still a living to be made in gardening and the various industries dependent on it. Never in history was gardening more popular than it is just now. Some take it up for profit, but many more for pleasure or convenience. It has become the countryman's source of livelihood and the citizen's recreation. The poor man has found out how advantageous it is to cultivate vegetables for the table, and the rich middle classes have tasted the delight of growing flowers."

- —— PROPOSED PARK FOR MANCHESTER.—It is reported that the Manchester Corporation are negotiating with the owners with the view to purchasing 134 acres of the Booth Hall Estate, including the picturesque Boggart Hall Clough, for the purposes of a cemetery and an open space.
- DR. O. LOEW, OF MUNICH, well known for his investigations of the nature of protoplasm in connection with Dr. T. Bokorny, has, we understand, been appointed Professor of Agricultural Chemistry in the University of Tokio, Japan; and Dr. D. Brandis, Professor of Forestry in the University of Bonn.
- ECKLINVILLE APPLE.—I agree with Mr. Molyneux (page 317) as to the tenderness of this Apple when ripe, but would point out the fact that it is of a sufficient size and good appearance in a green state to "market" early in the season, when it would not bruise more than other Apples.—Y.
- EARTHING UP WINTER GREENS.—Mr. G. Garner, Cadland Park, Southampton, writes—"A few weeks since I advised in this Journal those who were troubled (as we were at that time) with clubbing in winter Broccoli to thoroughly tread the ground around each plant and then draw some soil up to the stems. At the present time the advantage of doing this is plainly to be seen here in the mass of small white roots which have emanated from the stems and taken full possession of the soil."
- RIPE RASPBERRIES IN OCTOBER.—The same correspondent observes: "On October 4th I gathered a small dish of ripe Raspberries in these gardens. It is not a very uncommon occurrence I know to be able to gather the above fruit so late as this month, but the Raspberries referred to grew upon summer fruiting sorts, and were of excellent flavour."
- POTATO EXPERIMENTS IN AMERICA.—We learn from the "Garden and Forest" that some Potato experiments have been conducted at the Michigan Agricultural College for two or three years past, with a view to show the results of growing Potatoes under a mulch as compared with the ordinary method of cultivation. In a dry season it was considered that mulching may be profitable. The Potatoes grown under the mulch were of excellent quality and almost entirely free from scab. The unmulched Potatoes were badly affected with scab, and although the yield was heavier, the quality was inferior.
- DISTRIBUTION OF PLANTS. In addition to the previous announcement regarding this subject (vide Journal of Horticulture, September 28th, page 289), it is stated that the Commissioners of Her Majesty's Works and Public Buildings intend to distribute this autumn among the working classes and the poor inhabitants of London the surplus bedding-out plants in Hyde and the Regent's Park and in the Pleasure Gardens, Hampton Court. If the clergy, school committees, and others interested will make application to the Superintendent of the Park nearest to their respective parishes, or to the Superintendent of Hampton Court Gardens, they will receive early intimation of the number of plants that can be allotted to each applicant, and of the time and manner of their distribution. Any costs of carriage must be borne by the recipients.
- TEA CULTIVATION IN CEYLON.—An Indian paper observes "We have more than once lately pressed upon the attention of our planting readers that their lands cannot go on producing Tea crops from year to year from the same soil without eventual exhaustion sooner or later of some one or more of those ingredients which are essential to the quality of the Tea that the land produced when it was first cultivated It may be, and we believe it is true, that there are comparatively few Tea estates where the restorative process has become imperative; but what we contend for is timely help to those which have not yet begun perceptibly to suffer for the want of it. Tea is a much more critical product for the cultivator than Coffee ever was. Though the bush is hardy in growth, and in some senses easy to grow, the leaf when grown cannot in the course of Nature remain permanent in quality while the soil that produces it is being drawn upon year by year for the same essential ingredients. One by one, as each in turn becomes scarcer, the leaf will feel more and more the deficiency. Tea planting in Ceylon is as yet a young enterprisc. Estates that were old before they were planted with Tea, become more quickly exhausted than younger oncs; but as yet they do not form a large proportion of the whole, and they would benefit by an early application of restorative ingredients and conditions such as are not of merely stimulating nature."

- THE BRUSSELS BOTANIC GARDEN.—It would appear that the King of the Belgians takes an interest in horticulture, for on Saturday, September 23rd, His Majesty paid a visit to the Botanic Garden. M. Louis Lubbers, the Director, conducted the royal visitor through the various departments of the garden, and into the principal houses.
- THE NATURAL HISTORY SOCIETY OF DANZIG has offered a prize of 1000 marks for the best essay on the best means of producing and spreading fungus epidemics for the destruction of insects injurious to the forests in Western Prussia. The essays, says "Nature," must be written in German or French, and are to be sent in before the end of the year 1898.
- —— GREEK AND PERSIAN FLORA.—Some interesting reports of the botanical excursion of Dr. E. von Halácsy in the Pindus range in Greece, and of that of Dr. J. Bornmüller in Persia, were recently given in a foreign contemporary. Dr. Bornmüller describes the flora of the neighbourhood of Bushire in March as being especially rich and beautiful.
- —— SUMMARY OF METEOROLOGICAL OBSERVATIONS AT HODSOCK PRIORY, WORKSOP, NOTTS, FOR SEPTEMBER.—Mean temperature of month, 55·3°. Maximum on the 4th, 75·5°; minimum on the 12th, 30 2°. Maximum in the sun on the 3rd, 128·5°; minimum on the grass on the 12th, 22·1°. Mean temperature of air at 9 A.M., 57·1°; mean temperature of soil 1 foot deep, 56·7°. Nights below 32°, in shade one; on grass ten. Total duration of sunshine in month, 134 hours, or 36 per cent. of possible duration. We had one sunless day. Total rainfall, 0·85 inch. Rain fell on twelve days. Approximate averages for September: Mean temperature, 55·5°; sunshine, 110 hours; rainfall, 2·26 inches. Another fine and dry month of average temperature. The rainfall is less than in any previous September, except 1884.—J. MALLENDER.
- —— THE WEATHER LAST MONTH.—September was chiefly bright and dry until the 22nd, but more changeable and showery afterwards. We had nineteen bright days, three of which were clear. Wind was in a westerly direction nineteen days. The total rainfall was 1.20 inch, which fell on thirteen days, the greatest daily fall being 0.40 inch on the 8th; the total is 1.81 inch below the average for the month. Temperature was higher than usual. We had not enough frost to injure the Dahlias and other tender plants, which is quite unusual for this locality. Highest shade temperature was 79° on 6th, lowest 34° on 12th; lowest on grass 29° on 24th. Mean daily maximum, 66.23°; mean daily minimum, 45.93°. Mean temperature of the month, 54.26°. Barometer, highest, 30.34 inches at 9 A.M. on 12th; lowest, 29.28 inches at noon on 30th. The garden spring ran 11 gallons per minute on 30th.—W. H. Divers, Ketton Hall Gardens, Stamford.
- JAFFA ORANGES. The British Consul at Jerusalem has recently sent to the Foreign Office a translation of a report by an engineer of the Turkish Government on a scheme for irrigating the plains and Orange gardens of Jaffa, in which, incidentally, some interesting information is given in regard to the famous Jaffa Oranges. The town, it is said, owes its importance to its climate, which is extremely favourable for Orange growing. In consequence the port is surrounded on the land side by Orange groves, covering an area of about 1780 acres. Jaffa Oranges, on account of their excellent flavour, have of late years acquired a world-wide reputation, and while some eighteen years ago they were known only at Beyrout, Alexandria, and Constantinople, enormous consignments are now exported to Europe, America, and even to India, and the cultivation has consequently increased to a very considerable extent. A special feature of Jaffa Oranges is that they will keep from thirty to forty days, and, if properly packed, for two or even three months. New Orange groves are continually being laid out, and the total number is now about 400, against 200 fifteen years ago. The exports for the last few years have averaged 36,000 boxes per annum, and owing chiefly to this trade Jaffa ranks next to Beyrout in importance among Syrian coast towns. Orange growing in Syria is conducted exclusively by natives. Each Orange garden contains about 2000 square feet of planted area, equal to about 1300 trees to 2½ acres. The trees begin to bear the fourth year after planting, but it is estimated that it takes seven and sometimes eight years before an Orange orchard yields a remunerative crop. During all this time, and even afterwards, the orchards have to be watered continually, and this irrigation is the most difficult and laborious part of the work, inasmuch as the water has to be drawn by means of primitive water-wheels from wells dug in the gardens 90 feet and even 100 feet deep.

- THE WEATHER IN WEST YORKSHIRE.—The weather in the Bingley district still continues of an open character, no frost having been experienced of any consequence. Borders and beds are still gay with Dahlias, Sunflowers, Chrysanthemums, and other flowering plants.—T. H. B.
- HAMPTON COURT GARDENS.—About 4 acres of private gardens at Hampton Court Palace, which have hitherto been maintained out of the privy purse, but to which the public have for many years had free access, are about to be transferred to the management of the Board of Works, and the expense borne by the Parliamentary vote.
- The members of this Society will open their winter season by giving a concert in aid of their library and the Gardeners' Royal Benevolent Institution. The Chairman of the evening will be Holbrook Gaskell, Esq., J.P. The Committee have also arranged an excellent series of papers for the winter meetings.—R. P. R.
- The Potato Problem (pp. 266-288).—The solution of this is that owing to the weather the crop of late Potatoes is growing again generally and well, as I experience to my cost, some becoming flabby, others watery at the end and uneatable. In many instances people took up their early Potatoes safely, and at once replanted, the result being now a good crop of sound young Potatoes. On one occasion when the tubers began growing again I let them remain till late in the season, using for the table the young ones which came, and bestowing the others in the piggery.—J. E. Rogward.
- SOPHORA JAPONICA.—As an ornamental tree this Sophora, says an American contemporary, is hardly appreciated. It is very hardy, of good habit, free from the attacks of insects and fungal diseases, and the leaves are of a beautiful dark glossy green. The yellowish white pea-shaped flowers are produced in great terminal clusters, and well-established trees flower freely during two or three weeks. This Sophora is certainly one of the best of the medium-sized exotic trees which we can plant. Large specimens are not common in America, although S. japonica was one of the first of the eastern Asiatic trees introduced into European gardens, where it was sent by Thunberg, who found it cultivated in Japan more than a century ago, and who mistook it for a Japanese tree.
- THE ORIGIN OF THE PEACH.—It has never been clearly ascertained what was the original parent of the Peach. It is, however, well known that the Peach, the Almond, and the Nectarine can all be developed, the one from the other; and it is, therefore, reasonable that all had the same origin. It has been supposed that the Almond was really the antecedent of the other two. Recently, however, there has been found a wild plant in the north of China, which is considered a good species, and has been named Amygdalus Davidiana, and it is believed that this is really the parent of the Peach and its allies. According to "Meehan's Monthly," all that is known of the Peach and Almond is that they were in cultivation as garden plants as far back as written history goes.
- A COCOA PALM WEEVIL.—A Jaffna correspondent writes:-"About here Cocoa Nut trees in full bearing, and generally the best bearing trees, are attacked by the red weevil. The presence of the larvæ is detected by a black spot, from which there flows a reddish liquid, sap or otherwise. It is asserted that a Cocoa Nut tree attacked by the red weevil can be saved by cutting a hole in it, extracting all the weevil grubs that can be found, and fumigating the hole with the smoke of burned Chilis to kill any grubs that may remain in the tree; but we do not think there is any experienced Cocoa Nut planter who believes in this remedy. We have tried it without success; and we have also tried injecting turpentine into the tree with a syringe, but this also did no good. Of the alleged remedy of driving nails into the tree we have not previously heard, and it would not be safe to try it without being sure of its efficacy, because if it should fail the larvæ would mature into beetles, and the beetles would in turn breed progeny to destroy more trees. We believe the best thing to be done with a tree attacked by the red weevil is to chop it in pieces, feed the fowls with all the grubs that can be found, and burn the remains of the tree so as to destroy any weevils or weevil grubs that may be concealed in the pieces. Our opinion is, that a tree attacked by the red weevil is doomed any way, and that all that can be done is to prevent more trees from being destroyed by the progeny of the weevil and weevil grubs which it contains."

- MR. GEORGE CANNON.—Mr. Cannon, who has been for a number of years manager in Messrs. C. Lee & Sons' nursery at Ealing, is about leaving their service, as he has taken to the business carried on for so many years by Mr. George Weeden, St. John's Nursery, Matlock Lane, Ealing. Educated at Osborn's Nursery, Fulham, and then four years with Messrs. R. Smith & Co. at Worcester, he twentynine years since entered the service of Messrs. C. Lee & Son, taking charge of the Ealing nursery, the business of which he developed to a considerable extent, and made a reputation as a successful cultivator of fruit trees, shrubs and trees of all kinds, and especially as a landscape gardener, having with marked ability laid out many gardens and pleasure grounds at Ealing and elsewhere, and planted open spaces. Mr. Cannon is so deservedly popular in the trade, and especially so at Ealing, where he is widely known, that a host of good wishes will follow him as he enters upon business on his own account.
- THE KINGSTON AND SURBITON GARDENERS' ASSOCIATION.-The new quarters of this Society, the hall adjoining the Y.M.C.A., Eden Street, was occupied for the first time by the gardeners on Tuesday evening, October 3rd, when, as previously announced, Mr. James Martin, from Messrs. Sutton & Sons, Reading, gave a most interesting address on the Begonia. There was a large attendance of members, and Mr. J. P. Trew presided. Some new members were also admitted. The lecture was illustrated by a number of plants showing diverse forms and species of the Begonia, both tuberous and fibrous rooted, also very fine double and single flowers. The President, says the "Surrey Comet," expressed the exceeding pleasure he felt in being present, honoured the gardeners for their evident desire to increase their professional knowledge, and said that life without beautiful flowers would be almost unbearable. At the close of the lecture, listened to with deep interest, a very hearty vote of thanks was proposed to Mr. Martin and to Messrs. Sutton & Sons and unanimously carried, as was also a similar compliment to Mr. J. P. Trew.
- ALLOTMENTS. -So customary is it the case now that allotments for working people are found in rural districts, that I was greatly surprised when recently in a somewhat pretentious parish in Surrey, where there is a railway station and a large population, with soil for garden purposes of the very best, to find that there were no allotments. Possibly the local authorities have not yet begun to realise that to have made no provision for allotments is becoming a matter of reprehension. Why, in myriads of thinly populated, indeed almost poor parishes, one meets with them, and it is one of the most pleasing aspects of the subject that workers manifest such desire to possess allotments, that tenants can be found in abundance provided the conditions of letting are such as can be agreed to by workers. There is a considerable number of workers of various sorts in the parish I have referred to, and it would be interesting to learn whether these have made a request for a supply. Sometimes landowners offer ground ere application is made, frequently after, and occasionally failing any supply of allotments in that way the local authorities have to intervene. That is the case here in Kingston-on-Thames, where, the land being largely in request for building, it has been found needful to invoke the aid of the Corporation, and as ground for the erection of an isolation hospital seems to be absolutely essential, the local authority have agreed to purchase 11 acres of land on the eastern side of the town, on a small portion of which to locate the hospital, and the remainder will be available for allotments. The ground is to be purchased for £140 per acre, not too high a price for the locality provided it proves suitable for the purpose. No doubt by far the best site for allotments on the north side of the town, where some 5000 of the working class reside, is the open or Lammas land on the Dysart estate, and which is at present let for six months of the year only for market garden crops. This, if it could be secured, would enable some 200 good allotment to be provided easily.—A. D.

AGAVE LEOPOLD II.

THE Agave shown in the illustration (fig. 49) is one of the best of its class in cultivation, and when exhibited by the raiser. W. B. Kellock, Esq., of Stamford Hill, at the recent Agricultural Hall Show, the Floral Committee of the Royal Horticultural Society awarded a first-class certificate for it. As before remarked in this Journal, the plant has an interesting history. It is the result of a cross between A. Schidigera princeps and A. filifera, the latter being the pollen parent. The plant from which the seed was obtained was exhibited by Mr. Kellock about fifteen years ago at South Kensington, and was much admired by Her Majesty the Queen whilst on a visit to the gardens of the R.H.S. at that

time. The Agave depicted likewise gained the admiration of the King of the Belgians a short time ago, hence its designation, the plant having been named by permission of Leopold II. It is an effective Agave, the spines being narrow, and from 18 inches to 2 feet in length, covered with white woolly filaments.

NATURE'S HELPS TO GARDENERS.

Every one heartily in love with the world of flowers, especially when he or she takes up with one or more of them as pets to be thought over, and cared for by day and often dreamt of at night, frequently suffers from heartache. I was lately in the greenhouse of a lady who has only the last year or two acquired this love, and as I admired the glories of her Begonias, Tuberoses, Carnations, and Tomatoes, for which she took first prize at our local show, I congratulated her warmly. "Yes," said she, "but you cannot think how much time it takes, for I do it almost all

Earwigs in confinement will eat the smaller fry, but I fear that in the open they care far more for the petals of our flowers, and must be counted as decided enemies. They are very difficult to catch at their evil deeds; they prefer the dark like other evil doers, and by the light of a candle at night in the greenhouse and a pair of forceps the rascals may be caught; but it needs a sharp eye and quick and steady hand, or the enemy will soon hide himself amongst the petals and be no more seen. There are many other ways of trapping these gentry—dry Bean stalks, a bit of Apple rind in a long piece of paper folded up several times laid on the pot, or some dry moss are all useful helps. Woodlice, too, prefer darkness, and whilst in search of earwigs may often be found creeping from their haunts.

But perhaps there is no insect so troublesome to the gardener as the aphis; diminutive it may be, but its wonderful powers of reproduction make up for its lack of size. I have heard some persons declare that they only attack unbealthy plants; that is not at all my idea. Roses with splendid succulent shoots, Liliums in robust growth, Chrysan-

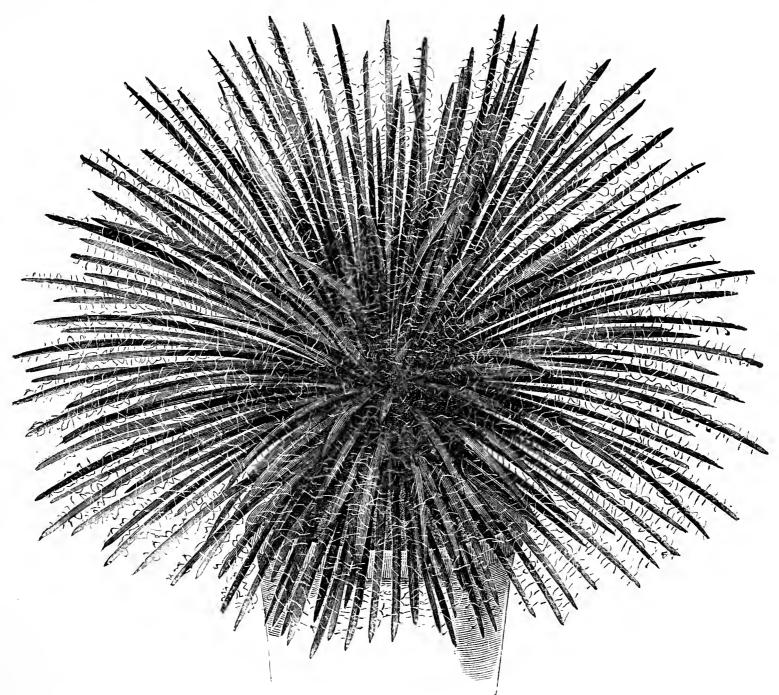


FIG. 49.—AGAVE LEOPOLD II.

myself." My reply was, "Indeed I can; I see the time or its results there, and, it is a great pleasure to look at them." This she thoroughly allowed. From the greenhouse I went to the Chrysanthemums looking fairly well. She enlarged on the horrors of green fly and the other trials to which the temper of a gardener often falls a prey, and I then tried to initiate her into some of the helps that Nature, or rather the beneficent Creator, has provided as helps to us.

It seems to me that all gardeners should be taught to distinguish in the insect world their helpers from their foes. Probably the natural inclination of every gardener is to apply finger and thumb with a more or less forcible pressure to every insect that he sees travelling over his pets. It needs a closer application and a greater expenditure of time than a gardener when in full work has at his command to watch the habits of some insects, and there is little doubt that many a friend is sacrificed which would have done him service if he had left it alone. Many years ago, I recollect reading somewhere that the large yellow slug fed on smaller specimens of the slug tribe, and that therefore he might be looked upon as a friend. I believe then that slugs may feed on their fallen relatives, but only after these are dead. If this be the case cannot see that they are any helps to those who love their flowers.

themums in full vigour, and almost every plant may be rapidly covered by them and soon be made to look sickly if these pests are left to feast on it. Of course they are not lovers of the weed, but tobacco smoking is not always so harmless as it is supposed to be, and I have never known it succeed in killing aphides inside the sheath of a Lilium for instance, and whilst our Chrysanthemums are out of doors they are continually pestered by these little wretches in the heart of the shoots, where it is most difficult to dislodge them without injury to the plant.

It seems to me, then, that our aids in Nature against these little pests should be known to every gardener. There are several that for safety and certainty in executing their work are not to be equalled by any human fingers, and yet I feel that nine out of every ten gardeners would kill most of them the moment they saw them. Of these I will write later; but ere I close, having never been able to say a good word for the sparrow, let me now give him absolution thus far. I think the last two or three years I have noticed that at times he takes an aphis meal—at least, I have seen him pitch on a Rose shoot covered with green fly and appear to be enjoying a feast, and this, if it be true, is about the only honest labour for our good that I have ever seen him accomplish,—Y. B. A. Z.

A CALL AT SAWBRIDGEWORTH.

A VISIT to the famed fruit nursery of Messrs. T. Rivers & Son is at all times interesting, but at none more so than in the autumn. period the trees are laden with luscious fruit until the end of September, and once seen the sight is not readily forgotten. October finds the bulk of the crops gathered and safely housed, but the trees, although deprived of their rich appearance, are by no means devoid of interest from a planter's point of view. Now is the time when persons contemplating planter's point of view. planting should make their selections, and a visit to the nursery in question, amongst others, could be made with advantage. This is the conclusion the writer came to whilst taking a hasty run through the extensive grounds devoted to fruit growing. Although harassing in many respects, the past summer has been a grand one for fruit taken as a whole, and the trees are now in prime condition, auguring well for the For many years trees of various kinds have been raised in immense numbers at Sawbridgeworth, and it would appear that the impetus given to fruit cultivation throughout the country is being felt The demand for trees suitable for planting orchards is now enormous, but fortunately the supply has grown correspondingly. the neighbourhood referred to the soil, being a deep loam full of stamina, is peculiarly adapted for the production of good trees, and as the plantations are situated on sunny slopes the wood becomes well ripened, which, as all fruit growers know, is of the greatest importance.

APPLES AND PEARS.

All kinds of fruit trees are grown at Sawbridgeworth, upwards of 150 acres of land being devoted to this purpose. Apples and Pears, as may be expected, come in for their share of attention, these being well Of the former no less than nearly 600 varieties are grown, but Mr. T. F. Rivers is of the opinion that fifty of these would be sufficient, and in many cases the list might be further condensed. Still there are persons who will grow both Apples and Pears of a common character, and so long as a demand exists for such varieties the supply will be furnished. Notwithstanding, as before remarked, Mr. Rivers considers that too many varieties are planted, and when such is "Upright done the results are not always of a satisfactory nature. growing trees of choice reliable sorts should be planted," observed our guide, and to illustrate his remark he pointed out a plantation of Cox's Orange Pippin. The trees in this case are planted in rows 12 feet as under and 6 feet apart in the rows, but will eventually be thinned out to double that distance. All are half-standards, with well trained heads, and the ground beneath is planted with Strawberries. An orchard of this kind cannot be other than profitable, and it is worthy of imitation. The foregoing is but a case in point, for many similar instances are to be seen here. In addition to these, however, there are acres of young trees, two, three, and four years old, all now in excellent con-The Apples are represented by bushes, pyramids, dition for planting. and standards, on the Nonesuch, Paradise, and Crab stocks, and all are characterised by remarkably fine growth. The young shoots are long, and in many cases as thick as a man's finger, and, as may be expected after a prolonged period of sunshine, have ripened wonderfully well. They are, moreover, bristling with fruit buds in a manner that one does not always find. Bismarck is largely grown, and so are Bramley's Seedling, Duchess of Oldenburg, Cox's Pomona, Betty Geeson, Lane's Prince Albert, Blenheim Orange, Nancy Jackson, King of the Tomkins County, and many other choice varieties. Enormous brightly coloured samples of the above mentioned Apples were displayed in the fruit room, but Mr. Rivers is not a believer in huge Apples. Firm, well coloured, medium-sized fruits are preferred by the Sawbridgeworth principal.

What has been said in regard to Apples applies with equal force to Pears. Of these there are plenty to select from, and intending planters will find trained trees for walls and espaliers as abundant as cordons, and bushes as numerous as pyramids. These are worked on the Quince and Pear stock, and in certain cases are double grafted, which in some varieties is a great advantage. All the select kinds are grown, and the trees being dwarf and well trained are under control. They have, notwithstanding the drought, made fine growth this season, and the wood is so well covered with fruit buds that trees transplanted now would, if allowed, carry a good crop of fruit next season. Like the Apples, large Pears are not appreciated here, and although some wonderfully fine samples are grown, Mr. Rivers, for private use, pins his faith on a seedling Bergamot of his own raising. This is rather a small Pear, sweet and juicy, and of a delicious flavour. Conference is a new seedling Pear that is likely to prove a valuable market variety, the tree being most prolific. The fruit is large, flesh melting, juicy, and rich. It is doubtless a Pear of the future.

PLUMS AND CHERRIES.

Plums form a special feature, and thanks to the efforts of the Sawbridgeworth firm in raising new varieties some delicious fruits are now forthcoming. Thousands of standard, pyramid, dwarf, and trained trees are grown in a similar manner to the other fruits, and by making a choice selection it is possible to have ripe Plums from open-air trees from early in July till October. All the leading varieties are represented, but a large breadth of Rivers' Early Prolific arrests attention. This is a grand culinary variety, and one that should be found in every orchard or garden. Although but medium in size, it is one of the heaviest Plums in cultivation, and is a prodigious cropper. For making preserves this is a valuable fruit, and for that purpose it is being extensively cultivated. As an early dessert Plum The Czar is very popular, and consequently the supply is maintained according to the demand. As

is generally well known, the fruit is large, rich, and good flavoured, usually ripening the end of July. Another valuable market Plum raised at Sawbridgeworth is the Monarch, and anticipating a brilliant future for this variety Mr. Rivers has grown it extensively. Trees of various sizes, suitable for orchard and garden planting, have been produced, and those three years from the graft have this year borne heavy crops of fruit. It is a late variety, ripening in ordinary seasons at the end of September, although this year the fruit was fit to gather several weeks earlier. The fruit is very large, of excellent quality, and the tree is an abundant bearer. Grand Duke is another splendid late Plum that might be individualised out of the many grown here, this variety being sometimes in prime condition as late as October.

Regarding Cherries a few words will suffice, for the firm has long since gained a reputation for these. Visitors to the summer shows in and around the metropolis have often been charmed with the delicious looking fruits sent by Messrs. Rivers, and no doubt will be again. Trained trees on the Mahaleb are a feature here, cordons also receiving special attention. The Morello is now grafted on this stock, and has been found useful to be grown as pyramids in gardens. Apricots are likewise looking well, the trees being vigorous in growth, which has

become exceptionally well ripened.

FRUIT TREES IN POTS.

This perhaps is the most interesting phase of fruit culture, and to see it well carried out a visit to Sawbridgeworth is desirable. Here we find Apricots, Apples, Cherries, Pears, Plums, Peaches, Nectarines, Figs, Oranges and other fruit trees in pots grown very extensively. Numerous houses are devoted to their culture and apparently with great success. Last week trees of the Apple Bijou from 2 to 3 feet high and in 8 and 9-inch pots were carrying two or three dozen fruits of excellent quality. Other choice kinds are similarly cultivated, and the same may be said of Pears. The latter are very fine, and it is surprising that they are not more generally grown in pots. Trees about 4 feet in height and bearing from one to two dozen fruits of a large size are very plentiful. The following varieties are recommended by Mr. Rivers as being suitable for growing in pots.—August: Jargonelle, Beurré Giffard and Clapp's Favourite; September: Williams' Bon Chrêtien, Beurré d'Amanlis, Madame Treyve, Beurré Superfin and Souvenir du Congrès; October: Louise Bonne of Jersey, Fondante d'Automne, Beurré Hardy, Gansel's Bergamot, Marie Louise, Maréchal de Cour, Glou Morçeau and Pitmaston Duchess; November: Durondeau, Beurré Bachelier and Beurré Diel; December: Winter Nelis, Josephine de Malines and Bergamotte d'Esperen; January: Nouvelle Fulvie. After fruiting, the trees are stood outdoors in sunny positions to ripen the wood properly.

Peaches and Nectarines too are exceedingly good, and the trees are now

Peaches and Nectarines too are exceedingly good, and the trees are now being repotted. They vary in height from 3 to 12 feet, many of the latter being remarkable specimens of cultural skill. Trees of this kind in suitable size pots bear five dozen fruits of superior quality and could be induced to carry more. They are grown in a compost of loam, decayed manure and chalk, and during the season are top-dressed with a mixture of horse droppings, night soil, and kiln dust. In this the roots ramify, and by the autumn form a matted mass. Trees of a smaller size are plentiful, and these produce one to two dozen fruits. Such trees as these might advantageously be given a place in every garden where a suitable glass house exists for their reception. Plums in pots are likewise given special attention, and the same can be said of Figs and other fruits, although the majority of the trees are now maturing their wood in the

open air.

GRAPE VINES AND ORANGES.

A brief reference must be made to the pot Vines. A close inspection of these was not made, but it could be easily seen in passing that they bear the impress of good cultivation. There are hundreds of well ripened stout canes that will produce good fruit next year if properly treated. These are for the most part under glass, but where an abundance of ventilation is given. The orangery is an interesting feature here, inasmuch as about fifty varieties of Oranges, Lemons, and Citrons are grown. The trees are in pots, ready for transit, and most of them are now carrying a good crop of fruit, which is commencing to ripen. Generally home-grown Oranges as seen in private gardens are not of an excellent quality, but matters are entirely different at Saw-bridgeworth. An opportunity of tasting a fruit convinced the writer that, given a good variety and grown under proper conditions, Oranges cultivated at home are superior to the majority of those imported from The chief essentials in the successful cultivation of Oranges are obviously moderate heat and a well ventilated house, so as to maintain rather a dry atmosphere, which imparts flavour to the fruit. There are many other features at this nursery, but pressure on our space forbids further details. It may be mentioned that despite the extreme drought the young grafted trees of all kinds of fruit are looking remarkably well, the scions having taken well, this being partly the result of deep and judicious cultivation, which assisted much in reserving moisture

Although the fruit trees above referred to are so largely grown by Messrs. T. Rivers & Son, it must not be thought that they constitute the whole of the Sawbridgeworth stock. Raspberries are well represented, there being thousands of canes of such standard sorts as Hornet, Fillbasket, Baumforth Seedling, and Lord Beaconsfield, the last named a comparatively new variety of great excellence. The autumnal Raspberries are also extensively cultivated, the best of these being the October Red and October Yellow, both reliable varieties. All the most popular Strawberries are likewise grown, the young plants being strong

and vigorous. Crabs of various kinds suitable for decorative purposes receive attention, as also do Coniferæ, evergreens, and other ornamental shrubs. Nor are Roses forgotten, for in addition to the hundreds of plants growing outdoors several houses are devoted to their culture. remarkably fine vigorous young plants of Maréchal Niel are noticcable, and these would under ordinary circumstances produce an abundance of bloom next spring. The stems are thick, upwards of 12 feet in length, and well ripened.—C.

ROYAL HORTICULTURAL SOCIETY.

OCTOBER 10TH.

CONTRARY to general expectation, there was a fine display at the Drill Hall, Westminster, on this occasion, fruit being particularly good. Orchids were only moderately represented, the same applying to the other floral exhibits.

FRUIT COMMITTEE.—Present: Phillip Crowley, Esq. (in the chair); Messrs. J. Lee, H. Pearson, T. Francis Rivers, J. Cheal, T. J. Saltmarsh, P. C. M. Veitch, G. Bunyard, Alex. Dean, Harrison Weir, J. A. Laing, W. Bates, G. Mills, Chas. Ross, G. H. Sage, Jas. Hudson, Geo. Wythes, H. Balderson, F. Q. Lane, G. Norman, A. Moss, the Rev. W. Wilks, and

Dr. Hogg.

Messrs. J. Veitch & Sons, Chelsea, sent a splendid collection of Apples and Pears, comprising upwards of 200 dishes. The Apples were large and handsome, as well as being richly coloured. Lane's Prince Albert, Watson's Dumpling, Lord Derby, Mère de Ménage, Beauty of Stoke, Mrs. Barron, Sandringham, and Bismarck were among the best. The Pears were also fine for having been grown on pyramid trees, especially the new variety Beurré Tonqueray, a splendid hardy Pear, in season during October, for which a first-class certificate was A gold Knightian medal was recommended. Messrs. G. Bunyard & Co., Maidstone, also sent a large collection of Apples and Pears, about 160 dishes of fruit being staged. The Apples in this contribution were very richly coloured. Noticeable amongst others were Fearn's Pippin, Woodstock Pippin, Cellini, Wealthy, King of Tompkins County, Worcester Pearmain, Mabbott's Pearmain, Gascoyne's Scarlet Seedling, Cobham, and Pearson's Plate. The best of the Pears comprised Madia January Pippin, Consequence of Pearson's Plate. Marie Louise, Beurré Bachelier, General Todtleben, Beurré Diel, Grosse Calabasse, Pitmaston Duchess, and Beurré Bosc. A gold Knightian medal was recommended.

P. Saillard, Esq., Buchan Hill, Crawley (gardener, Mr. John Martin), sent a fine collection of Apples and Pears, and a silver Knightian medal was recommended. The best of the Apples were Warner's King, Peasgood's Nonesuch, Cox's Pomona, and Fearn's Pippin. The Pears also were exceedingly good. Messrs. J. Cheal & Sons, Crawley, sent ten varieties of Pears and a dish of the recently introduced Atalanta Apple. Among the Pears were Princess, Duchesse de Nemours, Duchesse de Mouchy, Kieffer's Seedling, Magnate, Bon Vicar, Belle William, Beurré Alexander Lucas, and Belle de Bruxelles. A dish of Crawley Prize-

taker Potato was also shown by the same firm.

Messrs. H. Lane & Son, The Nurseries, Berkhampstead, had a dish of splendid Lane's Prince Albert Apple. Major Hambling, Dunstable, sent two dishes of an Apple named Hambling's Seedling. This is a large Apple, greenish-yellow skin, and a first class certificate was awarded. Mr. Sidney Ford, Cowfold, Horsham, Sussex, sent three dishes of Marie Louise Pears, and Mr. E. Molyneux, Swanmore Park, Bishop's Waltham, had some fine Bramley's Seedling Apples, the produce of maiden trees planted in 1891. A vote of thanks was accorded for this exhibit. Messrs. Laxton Brothers, Bedford, sent a dish of Apple Mr. Hooper, a well coloured variety. C. C. Tudway, Esq., Wells, Somerset, staged twelve Doyenné du Comice Pears, the total weight being 13 lbs. A bronze Banksian medal was recommended. Lane, Palgrove, Diss, sent a seedling Apple, but no award was made. The same exhibitor had two dishes of Grosse Calabasse Pears, and a vote of thanks was accorded. A. W. Druce, Esq., Upper Gatton, Merstham (gardener, Mr. W. Mancey), sent two dishes of very large Pitmaston Duchess Pears, for which a bronze Banksian medal was recommended. It was stated that twenty-seven fruits, weighing 38 lbs. 2 ozs., were taken from one cordon tree. Mr. J. Masterson, Weeston House Gardens, Shipston-on-Stour, sent two dishes of Pears (cultural commendation). A grand Smooth Cayenne Pine, weighing 9 lbs., was exhibited by Mr. O. Thomas, Royal Gardens, Windsor. A cultural commendation A similar honour went to Mr. S. Mortimer, Swiss Nursery, Farnham, for a box of Jones' Perfection Tomatoes.

A magnificent collection of Apples and Pears was shown by Messrs. J. Laing & Son, Forest Hill, prominent amongst which were Apples King of the Pippins, Royal Russet, Cox's Orange Pippin, Beauty of Kent, Alfriston, Golden Reinette, Grenadier, Hollandbury, and Blenheim Orange, all well coloured. Noticeable amongst the Pears were Souvenir du Congrès, Beurré Clairgeau, Glou Morçeau, Duchesse d'Angoulême, and Maréchal de Cour (silver Knightian medal). Mr. W. Crump, Madresfield Court Gardens, sent an admirable collection of Pears, amongst which were some grand examples, notably Pitmaston Duchess, Beurré Diel, Marie Louise, Doyenné du Comice, Beurré Bosc, Van Mons Leon Leclerc, and Beurré Capiaumont (silver Knightian medal). Mr. Owen Thomas, Royal Gardens, Windsor, arranged a creditable collection of Pears, which was comprised of sixty dishes of the leading varieties (silver Banksian medal). Mr. John Watkins, Withington, Hereford, staged a collection of Apples and Pears, cider varieties being very prominent amongst the Apples. A silver Knightian medal was recommended. Mr. Jas. Day, Galloway House, Wigtonshire, was recommended a bronze Banksian medal for a collection of Pears, which consisted of some excellent fruits. Mr. J. Miller, gardener to Lord Foley, Esher, staged a Gourd weighing 154 lbs., for which he was awarded a cultural commendation.

In addition to the Potatoes mentioned on page 332, first-class certificates were awarded for the following varieties: - Jeanie Deans, shown by Messrs. Carter & Co., High Holborn; Conference, Mr. Dean, Ealing; Early Regent, Messrs. J. Veitch & Sons, Chelsea; Nelly Langley, Mr. H. Fletcher, Annerley; Radcliffc Kidney, Mr. Jelley. Awards of merit went to Onions—Southport Yellow Globe, Southport

Red Globe, and Deverill's Cocoanut, Mr. H. Deverill, Banbury; Globe Madeira, Italian Tripoli, and Prizetaker, Messrs. Vilmorin, Andrieux

and Co., Paris.

FLORAL COMMITTEE.—Present: W. Marshall, Esq. (in the chair); Messrs. Owen Thomas, Robert Owen, H. Herbst, R. Dean, G. Stevens, H. B. May, C. J. Salter, J. Jennings, R. B. Lowe, Chas. E. Pearson, J. D. Pawle, W. Watson, Henry Cannell, Chas. E. Shea, T. Baines, Chas. Jeffries, J. T. Bennett-Poë, Geo. Gordon, Edward Mawley, and the Rev. H. H. D'Ombrain.

Mr. S. Mortimer, nurseryman, Rowledge, Farnham, arranged a group of Show and Fancy Dahlias, amongst which were some excellent blooms (bronze Banksian medal), and also three boxes of Stephanotis floribunda, the flowers being of much merit. Mr. A. H. Rickwood. gardener to Dowager Lady Freake, Fulwell Park, Twickenham, staged a fine group of seedling Begonias. The blooms being arranged with Fern and Asparagus fronds produced a fine effect. A highly creditable collection of Chrysanthemums, prominent amongst which were La Cherine, Coronet, Duchess of York, Cesare Costa, and Comte de Germiny were exhibited by Mr. Wells, Earlswood. Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, staged a basket of Aster grandiflora, the plants in which were profusely flowered. The same exhibitor also had a small collection of Dahlias and Nerines. Mr. Ware received a first class certificate for Nerine elegans alba, and an award of merit for Pompon Dahlia Emily Hopper, and single Dahlia Ettie Swan, for descriptions of which see below. Messrs. Pitcher & Manda, United States Nurseries, Hextable, put up some magnificent Chrysanthemums. Noticeable in this exhibit were Mrs. F. L. Ames, Bouquet des Dames, Vm. Seward, Golden Wreath, and many promising seedlings. A group of Adiantums was staged by Mr. H. B. May, Dysons Lane Nurseries, Upper Edmonton. The plants were clean and well grown, and A. farleyense, A. formosum, A. tetraphyllum acuminatum, A. Lathomi, and A. peruvianum were amongst the best (silver gilt Flora medal).

Mr. Robert Owen, Maidenhead, showed some very fine Chrysanthemum blooms. Rose Wynnc, Mrs. P. Blair, and Edith Owen were very prominent. A box of seedling Begonias was staged by G. A. Farini, Esq., Dartmouth Lodge, Forest Hill, S.E. From the Royal Gardens, Kew, came some fine seedling Streptocarpus, and also Tecoma Smithi, Kniphofia modesta, Ptychoraphis angusta (first-class certificate), Solanum Wendlandi (first-class certificate), Disa Premier (first-class certificate), Bomarea patacænsis (first-class certificate). Messrs. Jas. Veitch & Sons staged beautiful hybrid Rhododendrons of the Javanicojasminoides section, amongst the best of which were luceo-roseum, Maiden's Blush, amabile, and Lord Wolseley. A box of hybrid Strepto-carpus were also staged, and also a basket of Caryopteris mastacanthus. The same firm also showed plants of Carnation Mdlle. There'se Franco, for which they were accorded an award of merit (see below), and also a basket of Amasonia punicea, which, arranged with Pteris Victoriæ, produced a very striking effect. Messrs. Perkins & Sons, Coventry, received an award of merit (see below) for Cactus Dahlia Purple Prince. Mr. H. J. Jones, Ryecroft Nurseries, Lewisham, showed a basket of Pompon Dahlia Ryecroft Gem. Mr. R. Sanders, gardener to Alfred de Rothschild, Esq., Halton, Tring, exhibited nine baskets of fibrous-rooted Begonias, amongst which B. semperflorens atropurpurea, B. s. La France, B. Afterglow, and B. floribunda rosea were particularly noticeable (silver Flora medal). Messrs. Henry Cannell & Sons, Swanley, showed Chrysanthemums in excellent condition, also some Dahlias, amongst which were Old Gold, to which an award of merit was accorded (see Messrs. Cannell also arranged a box of their celebrated Zonal Pelargoniums, amongst which were Madame de Bondeville, Etoile de Lyon, Souvenir de Mirande, Jacques Callot, M. Duterail, and a charming

seedling (bronze medal).

Messrs. R. Veitch & Son, Exeter, showed Plumbago Larpentæ, Zauschneria californica, Pink Ernest Ladhams, and Colutea arborescens purpurea. Cactus Dahlia George Phippen was shown by Mr. J. Phippen, Reading; and Dahlia Miss Arnold by Mr. J. Arnold, Stoke, Devonport. Mr. A. Waterer, Woking, sent foliage of Quercus americana splendens (first-class certificate, see below). Messrs. G. Bunyard & Co. had a collection of ornamental foliage (bronze medal).

collection of ornamental foliage (bronze medal).

In the class for twelve bunches of hardy herbaceous flowers, Mr. G. H. Sage, The Gardens, Ham House, Richmond, was deservedly awarded the first prize. The exhibit was composed of Aster multiflorus, A. sibericus, Anemone japonica alba, Erigeron speciosum, and Solidago rigidus amongst others. Miss Debenham, St. Peters, St. Albans, was placed second with a fair collection.

ORCHID COMMITTEE.—Present: H. J. Veitch, Esq. (in the chair); Messrs. O'Brien, De B. Crawshay, H. M. Pollett, Thomas Statter, H. Ballantine, E. Hill, H. Williams, W. H. White, T. B. Haywood, and S. Courtauld.

Messrs. Hugh Low & Co., Clapton, sent a small group of Orchids comprising some choice species and varieties. Amongst others Vanda Kimballiana delicata, Cattleya maxima, Cypripedium radiosum superbum. Some plants of Lilium nepalense made a good background (silver Banksian medal). A J. Hollington, Esq., Forty Hill, Enfield, sent a plant each of Cattleya Davisi, Cypripedium Smithi, and C. Richardsoni. A very fine form of Odontoglossum grande was shown by J. Foster Alcock, Esq., Northchurch, Berkhamstead, Herts, who also had a good form of Cattleya labiata. Messrs. J. Veitch & Sons, Royal Exotic Nursery, Chelsea, showed Cattleya × Chloris (first-class certificate); Cypripedium × Arthurianum pulchellum and Cattleya × Pherdona (award of merit). A hybrid between C. maxima and C. intermedia. Messrs. F. Sander & Co., St. Albans, contribute! a small intermedia. Messrs. F. Sander & Co., St. Albans, contribute! a small group of Cattleyas and Cypripediums, also plants of Pescatorea Klabrochorum and Phalænopsis Lowi (silver Banksian medal). Sir Trevor Lawrence, Bart., Burford, Dorking, sent a plant of Cypripedium conco-Lawre having a neatly formed flower with two lips, also Dendrobinum Mirpellianum. A basket of the bright flowered Habenaria militaris came from the same source (silver Flora medal). Messrs. B. S. Williams & Son, Upper Holloway, had a small group tastefully arranged with Ferns (silver Banksian medal).

The L'Horticulture Internationale, Brussels, sent some choice species. Amongst these were Cartleya Warsqueana fascinator (award of merit) Cypripedium Spicerio Lowianum (award of merit), Cattleya Eldorado Oweni, Lælia elegans Lucani (award of merit). and a grand form of Cypripedium Rothschildianum. A first-class certificate was also awarded for Cattleya Eldorado Lindeni. The same firm also staged a fine plant of Hæmanthus Lindeni (first-class certificate), and Anthurium Wambeckianum, a white form (silver Flora medal). S. G. Lutwyche, Esq., Eden Park, Beckenham, staged a collection of Cypripediums, Odontoglossums, and a fine plant of Zvgopetalum Mackayi amongst other Orchids (bronze medal). Messrs. W. L. Lewis & Co., Southgate, sent a plant of Habenaria cinnabarina, for which a botanical certificate was awarded. Major-General Berkeley, Bitterne, secured an award of merit for a plant of Odontoglossum Uro-Skinneri album.

CERTIFICATES AND AWARDS OF MERIT.

Anthurium Wambeckianum (L'Horticulture Internationale). — A strong growing form, with a pure white spathe (first-class certificate).

Bomarea patacoensis (Kew Gardens).—A beautiful species, with orange red flowers (first-class certificate).

Cattleya Chloris (J. Veitch & Sons).—This is a splendid hybrid, being the result of a cross between C. maxima and C. Bowringiana. The sepals and petals are dark mauve, and very distinct. The lip is large, heavily suffused with rich purplish crimson (first-class certificate).

Cattleya Eldorado Lindeni (L'Horticulture Internationale, Brussels). —This is a good form with medium sized flowers. Sepals and petals roay mauve, lip fringed deep purplish crimson, throat orange yellow

(first-class certificate).

Cattleya Pheidinæ (J. Veitch & Sons).—This is a hybrid, being the result of a cross between C. maxima and C. intermedia. The sepals and petals are white faintly tinged with pink. The lip is exceedingly pretty, being white, veined crimson and rich yellow in the throat (award of merit).

Cattleya Warsequana fascinator (L'Horticulture Internationale).—A magnificent form that attracted much attention. The sepals and petals are large, and of a rosy mauve shade, the lip being richly coloured with

a white margin (award of merit).

Carnation Mary Godfrey (W. J. Godfrey).—A pure white flower with fringed petals, Clove-scented (award of merit).

Carnation Reginald Godfrey (W. J. Godfrey).—A delicate pink Clove-scented variety, good form, fringed petals (award of merit).

Carnation Malle. Thérèse Franco (J. Veitch & Sons).—A fine

variety, with large salmon-pink blooms, faintly Clove-scented (award of merit).

Chrysanthemum Mrs. P. Blair (R. Owen).—An incurved Japanese,

silvery pink, suffused carmine (award of merit).

Cypripedium Spicerio Lowianum (L'Horticulture Internationale).-A beautiful Cypripedium. The petals are narrow and twisted, green heavily spotted with chocolate, bronzy tips. The dorsal sepal is white, with a green base, tinged crimson, the lips being a dull green (award of merit)

Dahlia Emily Hopper (T. S. Ware).—A Pompon yellow variety of

good form (award of merit).

Dahlia Ettie Swan (T. S. Ware).—A single variety, with terra cotta coloured flowers, the lower part of the petals being red (award of merit). Dahlia Purple Prince (Perkins & Sons).—A rich purplish magenta Cactus variety (award of merit).

Dahlia Miss Arnold (J. Arnold).—A decorative variety, rosy pink flaked with purple in the centre (award of merit).

Dahlia Old Gold (H. Cannell & Sons).—A beautiful Cactus variety of a shade that is indicated by the name (award of merit).

Disa Premier (Kew Gardens).—This is a hybrid, the result of a cross between D. Veitchi and D. tripetaloides. The plant shown had one spike which bore six flowers. The latter are very attractive, being deep rose pink (first-class certificate).

Hæmanthus Lindeni (L'Horticulture Internationale).—The plant exhibited bore three large spikes of flowers of a salmon pink colour

(first-class certificate).

Lælia elegans Luciana (L'Horticulture Internationale).—The plant of this that was exhibited had one spike which bore six flowers. sepals and petals are greenish white, tinged with rose. The lip is dull white, margined rich purple crimson (award of merit).

Nerine elegans alba (T. S. Ware).—This is a pure white variety. The plant shown was about 9 inches high, and bore one spike of flowers (first-class certificate).

Odonto, lossum Uro-Skinneri alba (Major-General Berkeley).—A pretty variety, with greenish yellow sepals and petals, and a pure white

lip (award of merit).

Ptychoraphis angusta (Kew Gardens).—A graceful Palm with finely

cut foliage (first-class certificate).

Solanum Wendlandi (Kew Gardens).—A handsome plant, with large

pale blue flowers (first-class certificate).

Tecoma Smithi (Kew Gardens)—This is a hybrid from T. capensis and T. velutina. Three plants were shown, and they bore rich yellow flowers singed with brownish red (first-class certificate).

Quercus americana splendens (A. Waterer).—A variety with large richly coloured foliage (first-class certificate).

At the afternoon meeting Mr. W. Crump, Madresfield Court Gardens, Malvern, read an essay on "Pears." Being an experienced grower Mr. Crump dealt with his subject in a practical and interesting manner, and was attentively listened to by an appreciative audience.



CHRYSANTHEMUMS AT BATTERSEA PARK.

THE Exhibition of Chrysanthemums by the London County Council will be open to the public in the Frame Ground of this park on Saturday, 14th October.

A CHRYSANTHEMUM BOOK.

WE understand that Mr. John Newton of Temple Gardens intends to bring out the nineteenth edition of his work on the Chrysanthemum, the first edition of which appeared in 1871.

HIGHGATE AND DISTRICT CHRYSANTHEMUM SOCIETY.

WE have received the annual report of this Society, whose Exhibition this year will be held at the Northfield Hall, Highgate, on November 2nd and 3rd. The report states that the £10 challenge cup last November was won by Mr. Rowbottom, gardener to H. R. Williams, Esq.; he having won it twice in succession, it now becomes his own property. Some moderate prizes are offered, and there should be a good display at the Exhibition. Mr. E. Vince, Highgate Cemetery, is the Secretary.

AN EAST END CHRYSANTHEMUM SHOW.

THE East London Amateur Chrysanthemum and Floricultural Society will, we are informed, hold their third annual Exhibition on November 6th, 7th, and 8th in the Queen's Hall and Winter Garden of the People's Palace, Mile End Road, E. The rates of admission to the Show will be fixed at such a price as to allow the poorest inhabitants of that thickly populated locality to enjoy the benefits of a bright display of flowers. The Secretary is Mr. W. F. Clarke, 23, Parmiter display of flowers. The Secre Street, Cambridge Heath, N.E.

SHEFFIELD CHRYSANTHEMUM SOCIETY.

THE annual Show of the above Society will be held in the Corn Exchange, Sheffield, on November 17th and 18th. A comprehensive schedule has been prepared, and liberal prizes are offered, the leading classes in the cut flower section being for twenty-four incurved blooms, and a similar number of Japanese, in not less than eighteen varieties in each case. The prizes in both classes are £8, £5, £3, and £2, which should bring a good competition. According to the annual report, the Society, financially, is in a strong position. Mr. W. Houseley, 177, Cemetery Road, is the Secretary.

CHRYSANTHEMUMS IN IRELAND.

As show days loom in the near distance with all their attendant hopes and fears, it is somewhat disappointing to find so few recording their experience of an exceptional season in this department. I would venture to supplement the short notes previously sent of prospects of Chrysanthemums this side of the Channel, with one brief note of thanksgiving that "All are safely gathered in ere the winter storms begin." There is another side of the question on which I could wish an abler pen than mine to touch, viz., the valuable recent article on the bud mite (page 291). It is a matter of vital importance to know our enemies and how to fight them, and I take on myself to return thanks of growers generally, and particularly from—E. K., Dublin.

HULL AND EAST RIDING CHRYSANTHEMUM SOCIETY.

MR. EDW. HARLAND, one of the Honorary Secretaries of this important provincial Society, favours us with the illustration (fig. 50) of the "Hull cups," of which it will be admitted there is an imposing display.

The challenge vasc (central figure on pedestal), value 20 guineas, is presented by James Reckitt, Esq., in the 100 square feet group class. The upright silver cups on each side of the central vase, value £5 5s

each, are offered for twenty-four incurved blooms, and twenty-four Japanese, in separate classes, a money prize of £10 going to the winner in each case. Are not these the best prizes of the year for twenty-four blooms?

The two end silver cups on pedestals, value £2, are given by Messrs. E. P. Dixon & Son for twelve blooms incurved, and twelve blooms Japanese, respectively, in addition to the money prize. The class is confined to growers twenty miles round Hull. The two silver cups on the table, value £2 each, are given by the Society for twelve incurved blooms, and twelve Japanese blooms in the amateurs' class.

The challenge plate, in a case, value £5 5s., is for the dessert table decorations, ladies' class.

I) The encouragement thus afforded by the Hull Society and its generous friend ought to insure a high class and spirited competition. The illustration is reproduced from a photograph by Messrs. Kirk & Co., Limited, Hull, Leeds, and Liverpool. The exhibition will be held on November 15th and 16th.

NATIONAL CHRYSANTHEMUM SOCIETY.

On Monday evening last, the 9th inst., a meeting of the General Committee of this Society was held at Anderton's Hotel, when Mr. R.

ultimately be placed before the schedule sub-committee. The principal speakers were Mr. Beavan, Mr. Rowbottom, Mr. Gibson, Mr. Geo. Stevens, Mr. G. Gordon, Mr. Crane, Mr. Harman Payne, Mr. Witty, Mr. Wynne, and one or two representatives of affiliated Societies. Mr. Pearson replied and received a vote of thanks for his paper, which it is intended shall be ultimately printed in the schedule for the coming year, together with the remarks of those who took part in the discussion.

SOFT VERSUS HARD COLD WATER FOR PLANTS.

I HAVE been deeply interested in the correspondence which has been carried on for several weeks in the Journal under the above title. But what is meant by the words, "hard water?" I have read every word which has appeared in the Journal, but fail to find a definition of the word "hard." If I may be allowed to give my opinion on what I take If I may be allowed to give my opinion on what I take to be the meaning generally understood by gardeners of "hard water," I should say it is nothing more or less than water which contains a large per-centage of lime.

Your correspondent "J. B. R." (pages 239 and 286) has made mention, to serve as illustrations, of the market growers, but I cannot



FIG. 50.—HULL AND EAST RIDING CHRYSANTHEMUM SOCIETY'S CUPS.

Ballantine took the chair. The minutes of the previous meeting having been confirmed, and various letters read resulting from new nominations and elections, the Secretary reported that prize money to the amount of £17 17s. 6d. was awarded at the recent September Show, of which £3 was contributed by Messrs. Sutton as special prizes for vegetables. There were also three medals awarded to exhibitors on that occasion. A rough financial statement was submitted, showing the receipt of £201 4s. 10d., a much larger sum than was received jast year up to the same date. The Secretary also announced that since the up to the same date. month of February last ninety new members had been elected and eight societies affiliated. A further addition was then made to the list by the nomination and election of eighteen new members and Fellows. reserve fund now amounts to nearly £40 and it was hoped the fund would be largely increased by the close of the year.

The chief interest of the meeting was the reading by Mr. C. E. Pearson of Chilwell of a paper entitled "How to Improve our Chrysanthemum Shows," which was listened to with very great interest and attention. Mr. Pearson dealt with the whole subject, from the staging of the cut blooms in long monotonous lines upon the show board, and instanced the improved American method of setting up the blooms in vases with long stems, to the formal method of arranging the groups, and the questionable utility of the rigidly trained specimens.

An interesting discussion thereupon ensued, in which a large number of members took part. Many of the remarks were favoura le to Mr. Pearson's suggestions, and the subjects upon which he touched will

see how this has strengthened his argument, unless he can also prove that the water these growers use contains a large per-centage of lime; because, in my opinion, it is the lime that does the mischief, or at least the greater part of it, and not the low temperature. "J. B. R." must bear in mind that the lime, where it is contained in water to the extent of 4 or 5 per cent., as is the case in the neighbourhood from where I write, has a very injurious effect on plants when used in a cold raw state. Why? Because it, so to speak, burns the small hair-like roots or spongioles, hence the action of chill on them. Your correspondent has asked why it is that the market growers who have to depend on water drawn directly from the companies' mains succeed in growing such fine plants if cold hard water is "slow poison." I think that most of the water which is used in London and neighbourhood is drawn from the Thames and New River. This being so, if "J. B. R." will analyse it, he will probably find that it contains very little lime indeed; moreover, it cannot be said that it is cold to the extent of chilling the roots of plants after being exposed to the sun and air so long, even if it is confined, and undergoes the various processes to which it is subjected. At any rate, 1 venture to say that the difference in temperature between the London water, which has to be pumped up from a depth of over 200 feet, and that of the town from whence I write, is very considerable. Herein, then, I think, lies the whole question at issue between your several correspondents.

Would it not be useful as well as interesting if each of those gentlemen who have taken part in this question of hard and soft water would send to the Journal office a statement as to the depth from which the

water they have to use is drawn, its temperature, and the amount of lime it contains? I shall be pleased to do so, and I cannot but think that this would help to convince the readers of this paper that it is not the low temperature merely, but the combination of that and lime. I am led to this conclusion from the fact that the water I have for using in the kitchen garden is drawn from a lake fully exposed to the air and sun, but which contains very little lime. Rhododendrons, Azaleas, Heaths, Kalmias, and similar plants flourish when watered with it and no other water while in the garden; but immediately they are removed to the conservatory, where the water is drawn from the companies' mains, these plants very quickly turn a yellow sickly colour. Frequently they have to be shaken out of the old soil and repotted before they can be restored to their former health.

The water from the pond is surface water, as there are no natural springs to feed it, and in the winter, while many hundreds of people are skating on it (for it is some 9 acres in extent), it is used in its cold state; yet the plants flourish. Does not this point to the absence of lime, and substantiate what I have suggested above? I am speaking of stove and greenhouse plants, but the same applies to Chrysanthemums and other plants outside. My neighbours have been complaining this summer about the pale yellow colour of their Chrysanthemums; all of them attribute it to being compelled to use the water from the mains

after exhausting their store of soft rain water.—T. A.

YOUR correspondent Mr. Dunn (page 317) is certainly to be congratulated on the ingenious manner in which he conducts his case in this discussion, but I fear his ingenuity will avail him very little. his first communication he modestly sweeps the entire field of practical horticulturists out of existence by declaring in bold tones—any person who watered his plants with water from the tap or pump were verily killing them; again, that it was quite impossible to keep plants clear of insect pests by the use of the "obnoxious drug;" finally winding up his remarks by challenging anybody to prove by practical demonstration that his ideas were other than correct.

Judging from his last communication he has obviously been reduced to his last shot, and that a harmless one. Mr. Dunn has evidently been hunting through his library for instances bearing on the point, and comes forward with a few brief sentences, selected most judiciously from the works of three well-known men, but unfortunately they do not assist him in the least degree, as neither of those authors would venture to make such a sweeping assertion as your correspondent has done.

When I look round me and see the splendid results achieved by practical men in every branch of gardening, who use water such as I have described for eight months in the year, I require no further proofs, from authorities great or small. When I can see better produce grown by the advocates of soft water, then, and only then, shall I be ready to change my line of front. This question is one of the small number of "old-fashioned ideas" dying a hard death in the ranks of the garden-

ing community.

It would be interesting to know how many gardeners have had to rely on tap or well water throughout the past summer, and equally valuable to know how their plants are looking in consequence. Mr. Molyneux has evidently been using it with good results, like hundreds of other growers. Where a man's living depends on the value of the crop he produces he is bound to look about him pretty smartly in these days for the means of achieving the best results. As a body the market-growing community produce as good crops with tap or well water as, I think, Mr. Dunn has seen. In his zeal to make a showy case for his hobby he has allowed himself to be carried past the post of modern teaching and practice.-J. B. R.

ON AN EXPERIMENT WITH SHANKING GRAPES.

My communication (page 238) coupled with the Editor's footnote appended thereto, has had precisely the effect I most desired to seenamely, the commencement of a controversy that must be both interesting and profitable to Grape-growers, successful or otherwise. Controversies of any kind are not much in my line, but I will endeavour to reply to your correspondents to the best of my ability, merely premising that what I have to say is intended to apply to summer or midseason

(page 262) idea of thinning the bunches on every other Vine is identical with my own, but I was over-ruled in the matter, and in this instance I do not regret it. The fiat went forth that by this experiment the Vines were to be "mended or ended." If "R. P." refers to my notes he will see I used the word "borders" in connection with

the use of liquid manure.

I do not agree with "F. G." (page 263) in excluding the sun's rays from the Vine border during the summer months. Mr. H. W. Ward's note of interrogation attached to the word "magnificent" on the same page is not surprising, but to judge by the sturdy nut-brown canes and large stout leaves, the Vines have to all appearance been equal to the occasion. I have all along practised the system Mr. Ward advocates of bringing up new rods in place of the old ones with their long barren spurs.

In reply to Mr. Roberts (page 263), the drainage was rectified at the time the roots were lifted. Mr. S. T. Wright's views on the same page

coincide with my own as to the use of manures.

Mr. Abbey's exhaustive article on page 292 is in some respects a revelation to me, but beyond stating that the variety left unthinned last year was Black Hamburgh, I will only say that I am a gainer by

its perusal. Mr. Young's and Mr. Stephen Castle's notes (page 315) afford additional proof of the complexity of this subject.

Your correspondents seem to be unanimously agreed that I am putting forth the theory of non-thinning as a universal remedy for shanking in Grapes. Nothing could be further from my mind. What I said was, that I had no doubt that "dispensing altogether with the scissors had something to do with the result." My meaning was this. I took into consideration the enfeebled state of the Vine roots through want of proper nourishment, and it occurred to me that if I spared them the innumerable wounds caused by thinning the bunches it might perhaps afford them some relief. This idea may appear to some readers rather far-fetched, but I think this year's crop proves to demonstration that my surmise was a correct one.

To sum up, it has been abundantly shown in these columns that shanking exists from a variety of causes, from impoverished borders as well as those in which the roots are overfed. Knowing as I do the past history of the Vines under my charge, and knowing also that they have not had to contend with such contributory causes as injudicious summer pruning, bad ventilating, and other evils, I can only reiterate my previously expressed opinion that in this case "poverty at the root is the chief cause of shanking." — Thos. RICHARDSON, The Gardens, Simonside

Hall, South Shields.

NEPENTHES AT CHELSEA.

PERHAPS in no other nursery in England is there such an excellent and complete collection of Pitcher plants as at Messrs. J. Veitch & Sons', Royal Exotic Nursery, Chelsea. As with other things of which this firm make a speciality, the plants under the charge of Mr. Tivey are admirably grown. They always look clean and healthy, and the structure devoted to them is one of the most attractive in the nursery. It has always been strange to me that Nepenthes are not more largely grown in private places, where they would unquestionably enhance the beauty of a stove. True, some cultivators experience a difficulty in inducing the plants to pitcher, but this is often the fault of the growers. If the plants are allowed to grow rampant they will not form the pitchers, but if they are carefully attended and the luxuriant leaders judiciously pinched, pitchers will be formed in abundance, always providing the plants have had proper treatment in other ways.

They are very easily grown, the temperature maintained in the generality of plant stoves being exactly suited to the requirements of Nepenthes. Sphagnum moss and good fibrous peat form the necessary compost, and these with water rationally applied are all that is required in the cultivation of Pitcher plants, and the popular name will no longer appear a misnomer, as it at present does, when one sees the miserable specimens, destitute of pitchers, growing, or rather existing, in many stoves throughout the country. It is, I should say, practically certain that if Nepenthes can be cultivated so well at Chelsea, where the densest and blackest of the London fogs are experienced, and which it is acknowledged have such an enervating effect on most plants, that they could be grown at least equally as well in the country, where they would have the manifold advantages found in pure air, and to which all

plants are, like human beings, so thoroughly partial.

It will doubtless be interesting to many readers to know what species and varieties are now looking their best. I will therefore enumerate a few of those which I considered most worthy of mention. The one figured so excellently on page 315 of the last issue of the Journal, N. mixta, is a beautiful hybrid with large striking pitchers, several of which measured 10 inches in length. The grand N. Mastersiana must still be placed in any eollection, for with scarcely an exception it is the freest growing variety known. The pitchers are also of good size and of a rich deep red colour. N. Hookeriana earries pitchers of an entirely different shape to the two previously mentioned varieties, they being different shape to the two previously mentioned varieties, they being short and very broad. This variety, besides having fine bold pitchers, has the merit of retaining them longer than any other, the pitchers frequently hanging for twelve months, and being at the end of that time still in good condition, though deficient in eolouration. N. Northiana is a handsome variety with bold and effective pitchers measuring 8 inehes long and 9 inches in circumference. The ground colour of this hybrid is a greenish red, which is spotted and streaked with crimson. A plant of N. Chelsoni presented an extraordinary appearance. This example was in an 8-inch basket, and was carrying no less than twenty-five fully developed pitchers, amongst which were several 7 inches long, and as many or more in girth. This was the only variety I could see which rivalled N. Masteriana in freedom of pitchering. To N. Rafflesiana belongs the honour of bearing the largest pitchers, many of which are capable of holding nearly a pint of water. This kind also is free, and the plants present a really imposing sight, as I am confident everyone would admit on seeing them.

N. Amesiana is a variety of much merit, with chocolate red pitchers of great substance, many being 8 inches long and 11 round. N. Burkei excellens is a handsome species which was figured at page 161 of the Journal for August 21st, 1890. The pitchers, in many instances, measured from 8 to 10 inches in length. A charming hybrid is found in N. Dicksoniana. The predominating colour is light green, which is profusely spotted with bright reddish crimson. The average length of the pitchers measured on plants of N. Dicksoniana was 9 inches, by which an idea may readily be gained as to the striking nature of the plant. The blood-red pitchers of N. Curtisi superba are very beautiful, and are streaked with greenish yellow markings, which produce a unique

and at the same time pleasing effect.

Those mentioned are well worthy of cultivation, but let me recommend admirers of these plants to go and judge for themselves. They will then be better able to form an idea of what they can do in their own stoves with the aid of perseverance, and a little of that intelligence which they lavish so freely on such plants as Chrysanthemums and Roses.—H.

UNITED HORTICULTURAL BENEFIT AND PROVIDENT SOCIETY.

ANNUAL DINNER.

THE members of the above Society held their seventh anniversary dinner at the Cannon Street Hotel, E.C., on Tuesday evening, Oct. 10th. P. C. M. Veitch, Esq., occupied the chair, and there was a large attendance, upwards of a hundred gentlemen sitting down to the tables. Amongst others present were H. J. Veitch, Esq., N. N. Sherwood, Esq., Clarence Smith, Esq., M.P., H. Rivers, Esq., Messrs. Arnold Moss, G. J. Ingram, W. Marshall, P. Barr, H. Cannell, J. Cheal, J. Hudson, B. Wynne, G. W. Cummins, N. Cole, J. R. Chard, W. Collins, Secretary, and numerous other horticulturists and their friends.

Mr. P. C. M. Veitch, after the customary loyal toasts, gave that of "The United Horticultural Benevolent and Provident Society," coupled with the name of N. N. Sherwood, Esq. In his opening remarks the Chairman said he looked upon it as a great honour in being asked to preside that night. He had been brought up amongst horticulturists, and took great interest in gardening, and especially in this Society. One always admired the benevolent institutions, but there was something particularly attractive in this, as a man might not only provide for himself in case of sickness, but for his wife and family. (Hear, hear). A great deal had been said of late about old age pensions, and many would agree with such a scheme if nearly all the money invested was not eaten up by the management. This Society was the right and true system of old age pension. (Hear, hear). He would ask all gardeners present, and others, to bring the Society and its good work before their young men. It was the proper thing for gardeners to join whilst they were young. As regards the progress they had made, it was gratifying to know that whilst in 1877 there were only 109 members, there were now 500 on the books. This was largely due to the annual dinners. There were now more than £8000 invested, and these figures would show that the Society was in a very satisfactory condition. After referring to the small expenses connected with the Society, the Chairman observed that the Convalescent Fund, which was started about two years ago by Mr. Sherwood, was not, he was sorry to say, in a very strong condition. Every member should subscribe as much as possible to it. The Benevolent Fund was satisfactory, but he hoped it would not entrench upon the older institutions. The motto of the Society was, "Union is strength," and he would conclude by wishing them more power. (Cheers.)

Mr. N. N. Sherwood in responding, observed that he thoroughly agreed with all that the Chairman had said. He thought that if the objects of this Society were better known they would have three times as many members. The Society filled a most important link between the other two gardening charities. It teaches men to be thrifty, and it was the duty of every man to save something. As regards the Convalescent Fund he might ask could not gardeners put the matter before their employers, and urge them to do something towards it? In order to celebrate the jubilee of the firm with which he was connected (Messrs. Hurst & Co) he would add £50 to the Convalescent Fund, and he hoped

it would not be allowed to dwindle out (applause.)

Mr. J. Hudson proposed the "Honorary and Life Members," and briefly remarked that on the previous evening they had opened a new departure in this respect by electing a lady as an honorary member.

Clarence Smith, Esq., M.P., and W. Marshall, Esq., responded, the first named gentleman remarking that although there as a visitor on that occasion, he hoped to be elected an honorary member before next

Mr. H. J. Veitch briefly gave "The Officers of the Society," coupled with the names of Messrs. J. Wheeler, W. Collins, and J. Hudson, who subsequently responded. Mr. Veitch remarked that he should have pleasure in subscribing 5 guineas to the convalescent, and a similar sum to the management fund.

Mr. Arnold Moss proposed "The Chairman," to which Mr. P. C. M.

Veitch briefly responded.

The tables were tastefully decorated with flowers by Mr. J. R. Chard and others, and some excellent fruit was kindly given by various friends. The surplus fruit was presented to the inmates of Guy's Hospital. The musical arrangements were under the direction of Mr. Herbert Schartau.

THE SALISBURY DAHLIAS AT HOME.

HAVING seen blooms of the various sections of the Dahlias in Messrs. Keynes, Williams & Co.'s first prize stands at horticultural exhibitions in various parts of the country within the last few weeks, a natural wish to see these flowers "at home" was realised on the 11th ult., when I was fortunate enough to find Mr. W. H. Williams "at home" also. Under his courteous and able guidance a move was at once made in the direction of the Dahlia ground. Here we found the veteran grower and able manager of the Castle Street Nurseries (Mr. John Wyatt), and one of his skilled assistants, creating havoc in a plantation of seedling Dahlias, only here and there a "plant of promise" being left standing for growing another year.

But in allowing the eye to wander from this somewhat desolating

scene in another direction what a floral picture presented itself! Here 1600 large plants, including all sections of the Dablia, and in grand flower, met the gaze and made a display impression on the mind that will not easily be forgotten. In front were rows of the show and fancy kinds, the blooms being of great depth and breadth and fine in form. Conspicuous among the show varieties were the white-tipped, crimsonedpetalled Maid of Kent, the pure white Gloire de Lyon, and the bright, scarlet coloured Walter H. Williams. Prominent among the Pompons was Leila, reddish buff tipped with white, and further on row after row of the Cactus Dahlia, comprising pretty well every shade of colour between white and crimson, many of the blooms of individual varieties being a combination of pleasing hues. The most striking blooms observed among this section of the Dahlia were Lady Penzance, soft yellow (not yet in commerce); Dawn, lemon, deepening to orange; Countess of Radnor; Kaiserin, sulphur yellow, the outer florets being tinged with lemon; Gloriosa, an improvement on Juarezi in size, colour (rich crimson) and form of flower; Countess of Pembroke, delicate lilac, a very attractive variety; Kynerith, rich vermilion; Dr. Masters, blush white tinted with lilac; Bertha Mawley, cochineal colour, a grand flower; Duke of Clarence, deep crimson with scarlet shading towards the top of the petals; Black Prince, flowers very large and velvety blackish maroon in colour; Delicata, light salmon at base of florets gradually shading off to a delicate pink; and St.

Katherine, soft reddish amber, a fine variety.

I may be permitted to say, by way of showing the amount of labour that was involved in watering the Dahlias at Messrs. Keynes' during the past four or five months, that each of the 1600 plants grown received 20 gallons of water every week—equal 32,000 gallons per week; the ground between the rows and plants being also heavily mulched with substantial manure.—W. H. W.

ROYAL AQUARIUM.

OCTOBER 11TH, 12TH, AND 13TH.

An Exhibition of Chrysanthemums, Begonias, and other flowers opened at the Royal Aquarium, Westminster, on the 11th inst., and will continue the two following days. Chrysanthemums were not so extensively shown as many expected, but the flowers were fairly good.

Fruit was excellent, and some vegetables were staged.

The leading class in the cut bloom section was for twenty-four Japanese, and there were five competitors. Mr. H. Shoesmith, gardener to M. Hodgson, Esq., Shirley Cottage, Croydon, was first with a stand of grand blooms. The best flowers were Colonel W. B. Smith, John Shrimpton, W. Tricker, Mrs. C. H. Payne, President Borel, Sunflower, Mons. Bernard. The second prize went to Mr. C. Cox, gardener to John Trotter, Esq., Brickendon Grange, Hertford; and Mr. W. Higgs, gardener to J. B. Hankey, Esq., Fetcham Park, Leatherhead, was third. There were six competitors in the class for twelve Japanese blooms, and after a close fight Mr. W. Collins, Ponsbourne Park, Hertford, secured the first prize. The flowers were fresh and even, the best being R. C. Kingston, Sunflower, Avalanche, William Holmes, and Stanstead White. Mr. T. Wilkins, Inwood House, Blandford, was second; and Mr. E. Rowbottom, The Gardens, The Priory, Hornsey, N., third. Mr. Rowbottom, however, was first with a dozen incurved blooms, the best of which were Mons. R. Bahuant, Mrs. Dixon, Baron Hirsch, and Refulgens. The second prize was secured by Mr. J. Agate, Havant, Hants. Messrs. W. Collins and J. Agate divided the prizes for six incurved

Mr. E. Tickner, gardener to J. Watney, Esq., Reigate, was given the first prize for twelve Japanese blooms. There was no other competitor in this class. The same exhibitor secured the leading prize for six blooms of Japanesc. For six blooms of new varieties, Mr. F. Agate was awarded a silver medal. The varieties shown were Princess May, Mrs. Fowler, Miss Watson, Charles Davis, Duchess of Devonshire, and Beauty of Exmouth. Miss Debenham was first for twelve bunches of Pompons in the amateurs' class; and Mr. D. B. Crane, Highgate, secured prizes for these Chrysanthemums. Mr. T. Osman, Ottershaw Park, was first for twelve Japanese blooms. The prizes for groups of Chrysanthemums went to Messrs. Davis and H. J. Jones. Mr. Jones also had a collection of cut blooms, not for competition.

For a table of bouquets, wreaths, and sprays composed of Chrysanthemums, Mr. J. R. Chard, Stoke Newington, was first with a charming arrangement. Mr. Chard also secured the first prize for three vases arranged with foliage and flowers in a graceful manner. Mr. F. W. Seale, Vine Nurseries, Sevenoaks, was second, and Mr. D. B. Crane, Highgate, third. Extra prizes went to Mr. A. Minden, gardener to Dr. Paul, Camberwell, S.E., and Mr. W. Molc, Hemel Hempstead, Herts.

Miscellaneous exhibits were numerous. Messrs. J. Laing & Sons,

Forest Hill, S.E., arranged a charming group of Tuberous Begonias with a background of Palms. Mr. T. S. Ware, Tottenham, sent a hamper of Aster grandiflora, blooms of new Dahlias, and the pretty Mr. T. S. Ware, Tottenham, sent a Nerine elegans alba which was certificated at the Drill Hall on the previous day. Mr. W. J. Godfrey, The Nurseries, Exmouth, staged a dozen splendid blooms of Beauty of Exmouth Chrysanthemum, proving, as remarked last year, that it is one of the finest varieties in cultivation. The same exhibitor had blooms of several new varietics, including Charles Davis, Duchess of Devonshire, Eda Prass, and Madame E. Rey. with others were placed before the Floral Committee for certificates, but when our reporter left no awards other than in the competitive classes had been made. Messrs. Perkins & Sons, Coventry, had blooms of Dahlias Matchless, Purple Prince, and Mr. F. W. Seale sent Dahlias Daisy Seale and Roy Douglas Seale. Mr. W. Cross, Green Cottage, Sidmouth, staged two plants of a dwarf growing dark coloured seedling Japanese Chrysanthemum, and Mr. J. Haws, Clapton, N.E, had watering cans in variety. Mr. J. H. Witty, Nunhead Cemetery, had a group of Chrysanthemums, and Mr. W. Wells, Earlswood Nursery, sent some cut blooms. Mr. S. Mortimer, Swiss Nursery, Farnham, showed Dahlias, Stephanotis, and Tomatoes. Messrs. Pitcher and Manda sent a stand of new Chrysanthemums, as also did Mr. R. Owen, Maidenhead. Messrs. W. Edwards & Son, Sherwood, Nottingham, exhibited examples of their new "Edwardian" vases, which are admirably adapted for all kinds of floral decoration when filled with Ferns.

As before mentioned, fruit was largely shown. Mr. J. Watkins, Withington, Hereford, had a collection of Apples and Pears; and Mr. C. C. Tudway, The Cedars, Wells, sent a dish of splendid Doyenne du Comice Pears. Mr. J. Masterson, Shipston-on-Stour, sent two dishes of Pitmaston Duchess Pears; Mr. T. Perkins, Thornham Hall, Suffolk, Hero of Lockinge Melon; and Mrs. Barret, Renfrew Villa, South Ealing, some stewing Pears. Messrs. J. Laing & Sons, Forest Hill, had a fine collection of Apples and Pears. Messrs. H. Cannell & Sons, Swanley, staged Apples and a splendid collection of vegetables, also some Begonia blooms. Messrs. J. Cheal & Sons, Crawley, sent Apples and Pears, and some very fine Dahlias tastefully arranged.

The prizes offered by Messrs. Sutton & Sons for vegetables brought forth a fair competition. Mr. T. Wilkins secured the leading prizes for Cauliflower and Beet; Mr. C. Osman, Sutton, being second in each case. Mr. C. Waite was first for Carrots, Leeks, Onions, Celery, and Tomatoes. The other prizewinners in various classes were Messrs. T. Wilkins, S. T.

Cook, and D. M. Hoyler.



HARDY FRUIT GARDEN.

Lifting Fruit Trees .- One of the surest methods of inducing fruitfulness in young trees is to lift and replant. This checks strong growth and keeps the roots of a fibrous character, which favours sturdy, short-jointed growth. In some places Peaches, Nectarines, Apricots, and Plums make late growth which does not ripen well. Lifting, when the trees are not too large, will check the late growth, and benefit the wood already made by encouraging it to ripen earlier, also preventing strong growth the following season. With the fruits mentioned the work of lifting may be proceeded with early in October. It should be done quickly, not on any account exposing the roots for a lengthened period to dry air. Do not commence too close to the stems, as it is important that all the fibrous roots be preserved and kept moist. Sever the long and strong roots found, trimming them smoothly and leaving no jagged ends. Replant a little higher than formerly, and bring some of the fibrous roots nearer the surface, affording all good soil to ramify in, compressing it firmly about them. Mulch the surface and a foot beyond the space the roots extend with half-decayed manure. Previously to this water the trees to maintain the foliage fresh, applying shade also for a time if the leaves flag, and syringe regularly every dry day. these precautions lifted trees with a large proportion of foliage will soon make fresh roots and be much improved by the slight check given.

Stations for Planting Fruit Trees.—Where it is not possible to prepare a large extent of ground by digging or trenching it all over, prepared stations may be formed at the required distances. They should be 6 feet square, and hold 2 feet of good soil, resting on a gravelly, chalky, or stony subsoil, which insures perfect drainage. Land with a clavey, wet, and retentive subsoil will, in order to prevent the roots striking into an undesirable medium, causing strong unfruitful growth, require an artificial foundation of concrete, across which may be laid drain pipes connected with a main drain and outlet. The depth of the concrete should be 4 inches, over which and the drain pipes must be laid 6 to 9 inches of rubble made secure from being choked with soil by a

layer of turf grass side downwards.

Distances Between Stations.—The distances between stations must be guided chiefly by the fact whether the trees are on the free or restricted stocks, this being mostly important with Apples and Pears, which, in the case of large orchard standards grown on free stocks, should be 24 to 30 feet apart. Plums and Cherries may be planted in stations formed at similar distances. Dwarf and standard-trained trees for walls may be for Apricots, Plums, Peaches, Nectarines, and Cherries 15 to 20 feet asunder; while Pears on Pear stocks should be 20 feet, and on Quince stocks 12 feet apart. Horizontally trained trees for espaliers and walls ought to be Apples on Crab stocks, Pears on Pear stocks, and Plums 20 feet apart; for Apples on the Paradise, and Pears on Quince stocks 12 feet suffices. Bushes and pyramids on free stocks should be 8 to 10 feet apart, 2 feet less when root-pruned. Apples on Paradise stocks, Pears on the Quince 6 feet apart.

Root-pruning.—When fruit trees grown on the various restrictive systems assume year after year a chronic state of unfruitfulness there is something wrong either with the roots or the methods of managing

the branches. Making too much wood in summer, before any attempt is made by the cultivator to restrain the natural vigour within proper bounds, is usually the cause of destroying the necessary balance between root and branch. Summer pruning does much to restrain the growth of wood and concentrate the sap in the fruit-bearing spurs, as well as in the formation of buds that will eventually be fruiting spurs. But sometimes, owing to the excessive vigour of strong roots, correct pruning and branch management are not sufficiently capable of sustaining trees in a permanent bearing condition. Root-pruning then becomes absolutely The production of a large amount of gross wood and correnecessary. spondingly ample area of leafage has a powerful effect on the roots, which, as a rule, when receiving extraordinary stimulus, descend perpendicularly. In doing so, especially in rich ground, they become very strong. The same result also occurs in a moist subsoil. The results then are coarse, thick roots followed naturally in the growing season by gross watery wood.

Mulching Fruit Trees. — While the ground is comparatively warm and the roots unusually active there is no better time than the present to assist weakly trees. The benefits in some cases may not be apparent until next season, when it will be visible in stronger growth. Trees with abundance of fruit buds require some assistance, in order that the bulk of these may become plump and prominent before active movement of the sap ceases. A mulch of rich manure over the roots is of material assistance now, the virtues contained in it being washed down to the roots and stored in the soil for future use; the residue left

can be raked off in the spring for the sun to warm the soil.

Top-dressing Peaches and Nectarines.—Old trees will be greatly benefited by having the loose surface soil pared off down to the roots, being careful not to injure the fibres, and a dressing of fresh compost supplied chiefly composed of turfy loam, mixed with some calcareous matter, such as pulverised lime rubble, a little manure, and charcoal, spreading it over the roots as far as the latter extend, compressing it firm, and finishing with a light mulch of short manure.

FRUIT FORCING.

Pines.—Young Plants.—Arrange these so that they will obtain the fullest benefit of light and air. Make an inspection of the plants about once a week, and when water is needed apply it copiously at about the same temperature as the bed. Ventilate freely when the external conditions are favourable, paying particular attention to this in the early part of the day. As the sun heat declines a corresponding diminution of temperature must take place at night until it reaches the winter standard of 55° to 60°, and 65° in the daytime by artificial means.

Plants to Fruit Early.—Queens are the best for this purpose, but to insure their starting into fruit with certainty they should be given a period of comparative rest after making a good growth. Plants intended to show fruit early in the year ought to be kept in a temperature of about 65° in the daytime by artificial means, 60° at night, ventilating at 70°, closing at that temperature, and allowing the bottom heat to fall to 70°. Water the plants only when necessary, not, however, permitting them to become so dry at the roots as to cause limpness of the foliage.

Plants Showing Fruit.—Any plants now showing fruit will be valuable, as it will come in when it is scarce, therefore afford such plants the best position in the house. Maintain a temperature in this department of 70° at night, 75° artificially by day, up to 85° or 90° with sun, closing at 85°, sprinkling the pathways when their surfaces become dry, and sprinkle the plants occasionally on fine afternoons. The bottom heat should be kept steady at 85° to 90°. Examine the plants about once a week for watering, and if any require it afford a copious supply of clear liquid manure at about the same temperature as the beds. Particular care must be taken not to over-water, as that has a tendency to cause the fruit to become black at the centre, which affects its keeping.

Peaches and Nectarines.—Earliest House. — The trees in the earliest house must now be pruned, and everything put in proper order for a fresh start. If the growths have been kept rather thin, and care taken to equalise the vigour, there will be little need for the knife. Any weak wood may be cut out in favour of sturdy and well ripened, shortening leading growths, so as to originate shoots for furnishing the trees. Where too crowded the bearing shoots may be thinned. Severe winter pruning is undesirable, as it generally results in spasmodic and sappy growth the following year. Untie the branches from the trellis, cleanse the house thoroughly, and dress the trees with an approved insecticide before securing them to the trellis. Allow plenty of space in the ligatures for the swelling of the branches. Remove the surface soil down to the roots, and supply a dressing 2 inches thick of fresh turfy loam, with an 8-inch potful of steamed bonemeal and a similar quantity of wood ashes to every large barrowload of loam. If wood ashes cannot be bad use half the quantity of kainit. Make firm, and follow with a good watering if the lights are fixed. The outside border should be dressed in a similar manner. The roof lights if removed may remain off until bad weather sets in, otherwise ventilate to the fullest extent.

Second Early House.—The trees to be started at the new year or soon afterwards will now have all the foliage down, and it is best to prune and dress them, also cleanse the house without delay. If the trees have been properly managed there will be little wood to cut out. But it will be necessary to look them over and remove any useless parts having escaped attention. Any shoots too long may be cut back to a triple bud or a wood bud, making sure of the latter whether the bud be a double or triple or single one, leaving sufficient wood for securing a

crop. Shoots 12 inches length or under must not be shortened, nor need those that are very much longer. Leaving too much wood weakens the trees in flowering, and there is not space for training-in the necessary growths for future bearing to insure their thorough exposure to light and air. Admit all the air possible at all times. If the roof lights are off do not replace them until the time arrives for closing the house. Where the lights are fixed avoid permitting the borders to become too dry, which is more pernicious than a wet soil at any time.

Midseason Houses. — The foliage in these will be approaching maturity, but there must not be any attempt at its forcible removal, though the falling of the leaves may be assisted by lightly brushing the trees with a broom. The lights should be kept open day and night, except when frost prevails, for it is not desirable to cause the sudden collapse of the foliage through freezing. When the leaves are all down the roof lights may be removed. This will ensure complete rest and the even and well moistening of the soil. If any lifting or root-pruning is intended these operations should be attended to as soon as the wood becomes firm and the buds developed, but before the leaves have all fallen, as there is then a better chance of fresh roots being formed than at a later period.

Late Houses.—The fruit in these structures has ripened quite a fortnight to three weeks earlier than usual, and there is now a scarcity of fruit in many places, though some still have good fruit through ventilating freely in the summer, even taking off the roof lights in broiling weather. The wood that has borne fruit should be cut out to the successional growths at the base, unless they are extensions. Trees growing too luxuriantly and late should have a trench taken out at such distance from the stem as will check their vigour and cause the buds to become plump. Such trees should be lifted as soon as the wood is sufficiently ripened. It should be done with dispatch, all the materials being in readiness. See to the drainage; if defective make it thoroughly efficient. Shorten back any strong roots, and bring any that are deep nearer the surface, making the compost firm. Good loam, rather strong, with an admixture of one-sixth of old mortar rubbish forms a suitable compost. If the soil be light add a fourth of clayey marl, and if very strong a similar proportion of road scrapings. Manure is preferably given at the surface. Give a good watering after lifting and completing the operations, and the roots will soon become established in the fresh material. Trees judiciously treated at the roots whilst they have some foliage seldom fail to set and stone the fruit satisfactorily the succeeding year. Any borders in a sodden and sour state at the surface may have a dressing of quicklime quite an inch thick, mixing it with the soil as deeply as the roots allow without much disturbance, and this will effect some improvement.

Cucumbers.—Plants in bearing require looking over not less than once a week, removing any bad leaves and exhausted growths, trainingin young shoots, pinching out their points one or two joints beyond the show for fruit, avoiding crowding and overcropping. Maintain a night temperature of 65° to 70°, 70° to 75° by day, advancing to 80° or 85° with sun, closing early, so as to rise 5° to 10°, advantage being taken of favourable opportunities to admit a little air, yet avoid drying currents and cold draughts. The floors should be sprinkled with water about 8 A.M. and 4 P M. respectively, dispensing syringing the plants except on fine days, when a light bedewing may be given at closing time. Reduce the supply of water at the roots, but not to cause flagging, and encourage surface roots by an occasional light dressing of loam and sweetened horse droppings. Keep the glass clean and the foliage rather thin, so as to secure thoroughly solidified growth.

THE FLOWER GARDEN.

Carnations and Picotees.—Layering has been a very successful operation in spite of the dryness of the season, and since a showery period has set in the roots have increased rapidly. No time should be lost in detaching these rooted layers from the parent plants, all being lifted with a small ball of soil about the roots. In some districts it is a good plan to place some of these young plants in 3-inch or slightly larger pots, using fresh fibrous loam, with a little old Mushroom bed manure and sharp sand added. If these are kept near the glass in dry frames or pits, given air freely when the weather permits, and further protected from severe frosts, very sturdy plants will be available for planting out next spring. Some of the strongest layered plants are flowering freely, and these might well be lifted and placed in pots that will hold them comfortably, a good succession of flowers being had under glass accordingly. The early raised plants of Marguerite Carnations are also flowering exceptionally well in the open borders, and something should be done to protect them. Span-roofed or other deep frames freely ventilated would prolong their beauty considerably, or if plants have not been kept in 6-inch pots, the best of those in beds might well be lifted, potted, and placed in a greenhouse to finish flowering.

Forming Fresh Beds.—Seedlings ought ere this to have been planted out, but the layered plants have not suffered from their long connection with the parent plants. No time, however, should be lost in completing the planting of all not placed in small pots. Let them have the benent of some fresh loamy soil, old Mushro m bed or other short manure, and road grit. They thrive best in slightly raised beds, the latter being about 6 feet wide, with 1-foot alleys between. Make the soil rather firm about the roots. Slugs must be trapped, as these quickly spoil the plants. A mulching of old Mushroom bed manure, leaf soil, or tanners' decayed bark acts beneficially, and in particular prevents frosts upheaving the ground and loosening the plants to an injurious extent.

Pinks.—Cuttings of Pinks are slow in rooting, especially where no bottom heat is afforded. At the present time they may present a sickly appearance, but will yet develop into neat plants by next spring. Any that are strongly rooted and hardened may be at once put out into raised beds, much as advised in the case of Carnations, only less room should be allowed—a distance of 9 inches apart each way suiting them well. The finest flowers are had from young plants, and a fresh bed ought to be formed every year. No cuttings having been rooted, the old fashioned plan of pulling healthy plants to pieces and replanting these should be adopted. These divisions will have rather long stems, some being furnished with roots and others not. All should be planted rather deeply or well up to the tops.

Pansies and Violas.—If neat plants raised from seed are transplanted to raised beds a good early display of flowers will most probably be forthcoming next spring. Autumn-raised plants should be kept under glass, and quite cool till the spring. Both Pansies and Violas have stood the dry season rather better than anticipated, and are now forming young shoots freely. It is these latter that make the best cuttings, though the flowerless tops will also root readily, and push up fresh growths from their base. No bottom heat is needed for either. Place a frame or frames on bricks, half fill with old heating material, making it quite solid, and on this dispose a layer 4 inches deep of soil, finishing off with a good surfacing of fine sandy compost, a little sand being sprinkled over this. Shorten the cuttings to about 3 inches in length, and insert them 3 inches apart all over the bed. Give a gentle watering, and keep the frame close and shaded from bright sunshine till the cuttings are rooted, after which abundance of air should be admitted.

Calceolarias.—Cuttings are late this season, but where the old plants were kept alive are becoming fairly plentiful. Now is a good time to attend to the propagation of these. If many plants are required next summer, prepare a suitable frame for the cuttings. Mulch as advised in the case of Violas, while hand-lights or shallow boxes may be used for smaller numbers. Give the preference to short-jointed moderately firm shoots, cutting these just below the third joint and trimming off the lower pair of leaves. Do not allow them to flag badly, but dibble them out quickly just clear of each other. See that the base of the cuttings rest on the bottom of the holes made with the dibber and fix them well, as otherwise they will not strike roots. Water, put on the lights, and shade from bright sunshine. They will require more protection during the winter than Violas, but if not unduly coddled will not be injured by an ordinarily severe frost.



APIARIAN NOTES.

PRACTICAL HINTS FOR BEGINNERS. (Continued from page 321.)

BEYOND raising queens at the proper season from full strength hives, and discarding very small queens, the bee-keeper has no control of improving or selecting the best. Medium-sized queens are often the most prolific and the longest lived, and as a rule are fertilised at an earlier date than extra large queens, the latter very often coming to grief through failing to mate, which sometimes takes place within twenty days from the deposition of the egg that produced her, and occasionally as late as fifteen weeks. I have had several cases of the latter. As previously stated, queens sometimes deposit eggs almost immediately after birth. Imperfect queens do that, but in every case of the kind the progeny are drones, and the mother remains a confirmed drone breeder. In the other cases, the queen in an unfertilised state produces drones only; but when mated, and then becomes a fertile queen, she breeds both workers and drones.

Swarming and the control of it depends very much upon the state, fertility and non-fertility of the queen. During the early spring a hive having a fertilised but non-egg-producing queen, swarms out entirely, leaving behind it anotherwise well-stocked hive. Incipient disease has apparently the same effect, as well as under-fed hives. Premature swarming takes place when a duality of queens are in a hive, either from a stranger entering that belonging to another hive, or when one or more has been reared by the bees at too early a date. Sometimes a similar result occurs when the queen regnant shows signs of collapsing, but at others when no reason can be assigned a queen caged contiguous to the bees on the top of a hive causes swarming, and this is the reason we destroyed one (the old one) When near the of the two queens in the one hive system. honey flow there is no advantage gained by allowing both to A very prolific queen having too little breeding space, and a much less prolific one having too much, are both causes of swarming.

The prevention of swarming is best effected by deposing the queen regnant, introducing a youthful fertilised one, giving

additional breeding space equal to receiving 5000 eggs daily; but this will also have its limit. A lengthened period of honey gathering as occurs on the moors may upset all calculations. Super room will not tend to prevent swarming; it must be breeding room, while after queen cells with eggs or larvæ are being raised, nothing short of winter will prevent it. Bees always prepare for swarming eight to ten days beforehand. Destroying queen cells will not prevent it, especially during a honey flow, for immediately after their destruction the bees will raise others, even although a youthful and fertile or unfertilised one be safely introduced, which fully exposes the fallacy of "direct introduction of queens."

As a rule, the mother queen leaves with the first swarm, but there are many exceptions. If the prime swarm leaves before the tenth day after the commencement of the first queen cell, then the old queen is sure to be with the swarm. If delayed longer the old queen may be destroyed, and one or several young ones may accompany the swarm. In such cases the whole of the swarm, after being hived, may abscond. Whenever the bees are secured a piece of queen-excluder zinc should cover the entrance, which will, in some cases, prevent the loss of the bees and after swarming. The surest of all methods is to destroy all surplus queens and queen cells eight days after the issue of the first swarm, and at the same time remove or transfer to another hive all unsealed brood. I had several cases this year at the moors, where swarming was repeated five times in all its phases, and yet the old queen remained regnant during three of the times, which in all occupied seven weeks. In some instances the old fertile queen remained in the hive, and left with the third and fourth swarm respectively. In others, the young queens being fertilised at an early date, when there was, comparatively speaking, little breeding space, they soon filled it, and the raising of queens followed, then swarming. The most tantalising of all phases of swarming is when queens are preserved for weeks long after the expected time of the deposition of surplus queens. This year I experienced, in several cases, queens piping from three to six weeks after they had commenced to pipe. These are, no doubt, exceptional instances, but they occur oftener than most bee-keepers

Introducing alien queens sometimes bothers the beginner. To accomplish this safely the hive must be deprived of its queen regnant, making sure there is no other perfect or imperfect ones, known by the bees raising queen cells. After there are no unsealed brood the queen cells ought to be destroyed, leaving the bees without a chance of rearing one perfect or otherwise, when they will make a commotion towards evening. This is a sure indication that they are queenless and will accept a queen. Introduce her by caging first in a safety cage, which consists of two apartments, one for the queen and the other for the bees, separated from each other by a piece of wire cloth or perforated zinc, and covered with glass sliding in grooves. When the bees are willing to accept the alien queen they cluster loosely against and under her, and she will be active or adhering firmly to the zinc anxious to join the bees. The little slide in the end of the cage may then be drawn up and the work is done. If, on the other hand, the bees show a great desire to get to the queen they are not in a pacified state to receive her. A little experience soon teaches the beginner when to admit the union. So long as the bees show white necks they are too frenzied, and would in all probability kill the queen.

As a substitute for the safety cage, remove the lid, admit the bees to the crown of the hive, place the cage upon its edge, and cover with a bell-glass. Watch their proceedings, and when favourable remove the glass, lifting the wire cloth a little so that the bees can get at the candy. They will eat it and join peaceably with her, when in a day or so the encumbrances may be removed and the covering of the hive adjusted.

Hiving is sometimes as provoking to the beginner as it is interesting, as the bees when leaving the hive are not known by the bee-keeper where they will settle. I will in another chapter give some particulars forming the guidance of beginners.—A LANARKSHIRE BEE-KEEPER.

(To be continued.)

GARDENERS' CHARITABLE AND PROVIDENT INSTITUTIONS.

THE GARDENERS' ROYAL BENEVOLENT INSTITUTION.—Secretary, Mr. G. J. Ingram, 50, Parliament Street, London, W.C.

UNITED HORTICULTURAL BENEFIT AND PROVIDENT SOCIETY.—Secretary, Mr. W. Collins, 9, Martindale Road, Balham, London, S.W.

ROYAL GARDENERS' ORPHAN FUND.—Secretary, Mr. A. F Barron, Royal Horticultural Society's Gardens, Chiswick, London, W.

TRADE CATALOGUES RECEIVED.

H. Cannell & Sons, Swanley, Kent.—Carnations, Picotees, Pinks, and New Chrysanthemums.

P. J. Loozmanse & Sons, Ondenbosch, Holland.—Ornamental and Forest Trees, &c.

M. Vigneron, A. Olivet, Orleans.—Roses.

W. Wells, The Earlswood Nurseries.—Chrysanthenums.



*All correspondence should be directed either to "THE EDITOR" or to "THE PUBLISHER." Letters addressed to Dr. Hogg or members of the staff often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Bee subjects, and should never send more than two or three questions at once. All articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post, and we do not undertake to return rejected communications.

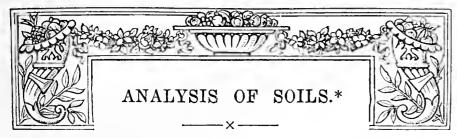
Poetry (*Planta*).—We do not know the book from which the laboured verse is taken, and if we did should decline giving it an advertisement in the form you appear to desire. Why did you not send your name and address? We do not desire any more anonymous inquiries of this nature.

Beet Seed (G. Craig).—The wholesale price of this, like other seeds, is governed by the supply, and it is not unlikely that the prices for many kinds will rule higher than usual this season. We cannot give the "average" prices of any kind of seeds. The information can only be had by consulting wholesale price lists over as many years as you wish the "average" to be based—three, five, ten, or twenty as may be thought desirable for your object.

Pansy Celtic Gem (Alex. Lister).—The yellow self Fancy Pansy bloom sent is of large size, rich gold colour, with an immense bronzy maroon blotch in the three lower petals, which are much rayed in the margin. It is a grand decorative variety, and if the blotch had been cleaner cut on the margin and the lower petal a little wider it would have been a very fine exhibition flower. We find that with the cooler autumnal weather some very fine Pansy blooms are now to be seen, and many such come under our notice. The flower in question of Celtic Gem is 3 inches in diameter.

Crinum capense (J. G.).—Presumably you did not see our reply in the issue for July 20th, page 66. The plant should have completed its growth now, and be fully exposed to every ray of sunshine possible, and have abundance of air. The supply of water should be gradually diminished until the plant can be kept dry, but not sufficiently dry to cause the thick fleshy roots to perish. By this treatment the plant will not be quite deciduous, but when grown in a warm position outside the whole of the foliage is invariably destroyed by frost. The Japanese Honeysuckle to which you refer is perfectly hardy, and may be planted in a sheltered place outside, where we have no doubt it will do better than in your conservatory. We have known this plant fail under glass by being kept more or less constantly growing. A season of rest is important to secure good growth and perfect health.

Original Testimonials (X. Y. Z.).—We conceive that while an employer receiving "generally addressed" testimonials would not be liable for their accidental loss or destruction (seeing that the holder should carefully guard his interest in them by sending copies), that employer cannot retain possession of originals after notice to return them to the owner. The entrusting of their carriage to the care of the post office is no evidence that the owner intended to part with them. So long as the original testimonials are in transmission within the unbroken envelope, the envelope and its contents belong to the addressee. After reading the testimonials he has a qualified right of possession as against everybody but the owner, to whom he must yield them on demand. The position is more clearly seen by supposing that the testimonials have been stolen from their rightful owner and sent to the addressee by an impostor. The mere fact of the impostor sending them through the post cannot confer an absolute right of possession to them on the addressee. He is then in the position of a holder of stolen or lost property, who has a mere qualified right of possession to the property, and which yields to the absolute right of the owner when he appears. The sender of original testimonials, by transmitting them through the post, no more parts with his ownership than by losing them, though he takes the risk of their becoming irrevocably lost or destroyed upon himself.



NALYSE the plants you require, see what they are composed A of, and then analyse your soil and see if these things are in it; if not, put them in. How simple, refreshingly simple, is it not? What a glorious discovery! Why, we can grow what we like, and where we like, and very nearly when we like. Why did not somebody think of this before?" These were something like my thoughts once upon a time. I was younger then and youth has its enthusiasm, its illusions, and afterwards its awakening. then I have found that matters do not always turn out as we think they ought. There is usually a hitch somewhere, sometimes two or three, and not seldom you begin to think there is nothing but hitches. Then a kink comes out, one of the hitches unravels, and you recommence with renewed energy; the next hitch straightens out, and the fever of enthusiasm once more possesses you, but you again find something has gone wrong, and sit down discouraged. There was a time when I thought I held the science of agriculture in the palm of my hand. A few attempts to put theory into practice convinced me that some of it was oozing out between my fingers, then I began to wonder if I had not a handful of disconnected facts to play with, and to-day I see that scientific farming only looms hazily and lazily in the distance.

Oh! these visions of the young enthusiast, how they mock our eager souls! I was going to analyse every field and register the composition of its soils, and would henceforth know exactly what it wanted, and this is how it worked, or rather did not work. I put my views earnestly before a typical farmer, who listened to them all with a patience I have often since wondered at. Then he said, "Umph; so you are another of 'em, are you? You're a clever young fellow, I daresay; but you see, I am an old farmer—so was my father, so was my grandfather, and so was his for anything I know. They learnt summat, lad, by a lifetime's work, and left their experiences to their sons, and I've got the benefit of it all and added my own, and you'll excuse me if I think I know more about farming than you do." He thought he was crushing me, but I said, "Do you admit that many great improvements have been made in agriculture, and especially in agricultural implements of late years?" "Oh yes!" said he, "that's right enough, we've made wonderful progress, lad." "Oh!" said I, "have you? Is there a single farmer, born such, that has not opposed every new thing with all his might? Has there ever been an improved implement brought out by a farmer? Has any one of these improvements been brought about by the farmers themselves? Have not every one of them been suggested and planned by outsiders—people not to the manner born?" This rather startled him, I think, but, of course, did not convince him. Eventually I induced an amateur farmer to let me experiment, and the success was encouraging; but a knock-down blow was in store for me. I had as I thought an exceedingly clever way of getting at the nature of the soil of a large field. I procured 16 or 32 half ounces of soil from as many parts of the field, and so obtained (I imagined) a fair sample of the whole. One day I had a sample of soil thus selected, and found it so full of iron that I said, "This soil will grow nothing at all," and was met with the reply, "Why, it is the best land we have." Still, I was right; I could only judge by the sample I had in hand, and it was

full of iron. A number of iron hoops had been left to fall to pieces on one part of the field, and from thence a good portion of my sample had been taken. I had already found out that to analyse soil for potash, lime, magnesia, phosphates, sulphates, nitrates, and chlorides involved eight different processes, and that to be fairly sure of the result each experiment had to be repeated twice or thrice, and that the farmer thought all this analysing could be paid for by "thanks" (I did not always get that), and when these iron hoops trundled up I just resigned that part of the business, and informed the farmers that if they wanted their soils analysing any more they must let their sons learn chemistry, or do it themselves, or pay from £5 to £10 for the work.

The foregoing indicates some of the difficulties of soil analysis. An accidental spill of some material in one part of the field may totally deceive the chemist. He can but report what he obtains from the sample sent him. That sample may give a fairly correct idea of the bulk, but there is at least an equal chance that it may not, and till our farmers are also chemists, and can spend their evenings and rainy days in slowly ascertaining the nature of their soil, it will be best and cheapest to analyse crops, see what they are built up of, and put those materials into the soil as manure in the proportions found in the crops, and take no care for what may or may not be in the soil already. Of course where large quantities of certain materials are known to be in the soil, such as lime or magnesia, those may be kept out of the manure; but where there is a doubt it is best to add all.

Nearly all plants and roots of plants contain phosphates, nitrates, sulphates, as well as soda, magnesia, potash and lime, and hence it may be argued (and fairly) that these materials must be available. Wheat, broadly speaking, analyses into 32 per cent. potash, 3 per cent. soda, 12 per cent. magnesia, 3 per cent. lime, 47 per cent. phosphates, 1 per cent. sulphates, and a little iron and silica. The straw of Wheat is more than half silica, that is flint, so that without silica you would get no Wheat at all, at least in its present state. As a creeping plant it might still flourish, and perhaps do better so. The things we do not know are vastly more numerous than those we do. It may be that the superabundance of silica alone causes the Wheat to rise upright, and that this is an interference with Nature's first intention. Wheat, Oats, and Barley are all evidently the same plant modified by circumstances and environment. What they may eventually modify into no one can guess. A crab is a lobster with its tail curved in and set fast, and Indian Corn as a variation of Wheat is less astonishing. We know not what anything may develop into. Chrysanthemum growers should see something of the vast latent power yet unused in Nature's storehouse. Who can say what a simple Buttercup could be made into by constant attention and abundant supplies of all plant food? Food can make a worker into a queen bee. What could it not do if we knew how to utilise it to best advantage? Environment is everything, the vast potentialities concealed in every speck of protoplasm are not to be measured by our stunted yard sticks. Potatoes analyse into about 60 per cent. potash, 1 per cent. soda, 3 per cent. lime, 5 per cent. magnesia, 1 per cent. iron, 17 per cent. phosphates, 6 per cent. sulphates; Mangel Wurzels into about 30 per cent. potash, 30 per cent. soda, 6 per cent. phosphates, and other things. It is clear enough from this that Potato manure does not want soda, and Mangel Wurzel manure wants large quantities of it. The composition of Strawberries is very like that of Mangel Wurzels, and I am not at all sure that if you were to try very hard and patiently you could not succeed in making a Mangel Wurzel into something very like a huge Strawberry. I am far from sure even now that Mangel Wurzel is not made into Strawberry jam.

By this time you have begun to see that the question is not one of remarkable simplicity. The secrets of Nature have to be wrung from her by force of patient investigation, experiments long continued and often repeated. We have learned that all vegetable products are composed of various chemicals. Most

^{*} Read by Mr. W. PICKARD at the Monthly Meeting of the Sheffield Chrysanthemum Society, held in the Society's meeting-room, Oct. 11th, 1893.

people associate chemicals with some sort of inferior goods made to represent, or as substitutes or adulterants for the proper article. It does not occur to them that there is not one thing in Nature, from the central grain of matter in the heart of this solid earth to the uttermost depths of the starlit universe, that is not a chemical, and subject to all the laws of chemistry. Every speck of dust is a mass of chemicals; the air you breathe is 76 parts nitrogen, 23 parts or ygen, and a little carbon. The air of Sheffield contains a great deal of carbon, but it is in the shape of a gas—carbonic acid. The carbon in smoke is carbon only—particles of charcoal, not carbonic acid. The water you drink is a chemical, hydrogen and oxygen. Table salt is chloride of sodium; the table, tablecloth, knives and forks, plates, and all you can put upon them, yourself, are all chemicals. It's no use saying, "No chemicals in mine." You must either live entirely on chemicals or die of hunger; there is nothing else in the whole universe. When you despise chemicals you despise your parents in more senses than one, and yourself also.

Let us get back. I said that we had learned that all vegetation was formed of various chemicals. These are mainly potash, soda, lime, magnesia, and iron, and their salts, nitrates, sulphates, chlorides, and phosphates, but we have yet to learn what or which of these salts are best for particular crops. When we have learned these facts we have to go deeper still, and find out if we can how the plants get hold of them. We say (as an easy way out of it) that these chemicals have to be dissolved in the water in the soil, and then the rootlets—the fine fibrillæ of the roots—absorb the liquid—drink them if you like; but we are only guessing. We cannot get down there with our microscope. Nature is too much for us. With all our skill and perseverance of inquiry and search we do not know with any sort of certainty whether plants absorb nitrogen (the nitrate maker) as nitrogen, as nitrates, or ammonia. You will perhaps have wondered why I have so far said nothing about ammonia, which we all know to be a good fertiliser. The reason is, I have included it in the term "nitrates." Ammonia is a nitrate of hydrogen. Every chemist who makes a discovery of a new compound, is or has been allowed to christen his invention by some name of his own choosing, so that we have many names for the same thing, which is confusing to the ordinary Chemists are often made fun of in those omniscient newspapers, who know so much and so little of everything, for using such long words. I am sorry any other kind were ever used, they simplify matters amazingly, in spite of the battalions of letters. Di, Nitro, Polyl, Amido, Phenyl, Amine look ferocious enough, but a chemist glancing at it knows pretty nearly how it is made, but if it had been called Manchester Blue or Sheffield Scarlet it would have conveyed no information.

I do not know what a Chrysanthemum analyses into, but I should say about 32 per cent. potash, 2 per cent. soda, 12 per cent. magnesia, 10 to 20 per cent. lime, 9 per cent. phosphates, 3 per cent. sulphates, 6 per cent. silica. This is the analysis of red Clover, which is such a lover of lime that if you apply this material heavily on almost any field you will get a crop of Clover, even if you have not put a single Clover seed into the soil. This brings on the tapis another of Nature's economies, or if you like it better we can (and without being paradoxical at all) call it one of Nature's extravagances. The soil is full of seeds. Nature has provided a thousand ways of transporting seeds of all kinds to all places. A whole series of very interesting papers might be written on the infinite variety of Nature's methods in this respect. Suffice for the present to say that all soils are more or less full of all kinds of seeds. Which of them comes up depends on the soil. Many kinds are there waiting opportunity—waiting, one may say, for the suitable partner; when that partner turns up, the orchestra strikes up the music of the spheres, and the waltz begins. When lime is used plenteously it destroys some seeds, paralyses others, but wakens the dormant Clover seed into joyous life. When the Black Forest in Germany was on fire years

ago the Fir trees were burnt to the ground, and the seeds and roots destroyed also. Beneath these lay the waiting Beech seeds, and up sprang a forest of Beech trees where formerly had been Fir trees.

(To be continued.)

MICHAELMAS DAISIES AT CHISWICK.

NOTWITHSTANDING that the perennial Asters, or Michaelmas Daisies, as they are popularly termed, have for many years been grown in gardens, their merits for a lengthy period were unrecognised. They were formerly cultivated, moreover, in a very haphazard manner, hybridised, and named perhaps indiscriminately, with the inevitable result that much confusion has existed regarding the nomenclature of the numerous species and varieties. To a certain extent this difficulty still remains, and it is the opinion of some authorities that it cannot be entirely overcome, but much good work in this direction was accomplished last year by the Sub-Committee appointed by the Royal Horticultural Society for the purpose of revising the nomenclature of this extensive genus. comprising this Committee found the species (of which there are something like 250 known to botanists), varieties, and hybrids, with their synonyms in a confused mass, but, thanks to their efforts, more order has been maintained, and when a choice collection of the best kinds is grown, as at Chiswick, it is possible to recognise the better forms and identify them with accuracy. Improvements, however, might still be effected in this matter, and the work of elimination so well begun could be carried on with advantage in trade circles. Were this accomplished systematically there would be less cause for complaint, now often heard, as to the "weediness" of Michaelmas Daisies, and instead of this they would occupy a foremost place amongst autumn-blooming plants.

Regarding the collection of Michaelmas Daisies in the gardens of the Royal Horticultural Society, it is perhaps the finest that may be found in any one garden. All the best cultivated forms have been gathered from the various sources in Britain, and being planted on a long border by themselves, an excellent opportunity for observing the distinctive characteristics of the respective species and varieties is thus afforded. A glance at these during the autumn will convince the most sceptical that the better perennial Asters are deserving of all that can be said in their favour. Here can be seen the type of any one particular species, and by its side the varieties or improved forms may be noticed. The most conspicuous improvements that have thus been effected are apparent to all, and those who observe keenly will see a distinction between the varieties that are grown. Some may be distinguished by the colour of their stems, and others it is possible to recognise by a broad or narrow, or squarrose or adpressed involucre, as well as the height, habit, and time of flowering. These characteristics are detailed in the descriptions of the best species and varieties drawn up by the Committee referred to, and published in the Journal of the Royal Horticultural Society, vol. xv., parts 2 and 3. In some parts of the border we find clumps of the taller growing species, some loose and graceful, others compact in habit, and close by are plants of the dwarf forms covered like the former with blossoms that sparkle brilliantly in the sinking sun of an autumn day. This year many of the perennial Asters flowered prematurely, as did numerous other plants, and on visiting the collection at Chiswick last week the writer found the majority of the earlier kinds past their best, but sufficient remained to afford an additional proof (if such were needed) as to their adaptability for garden decoration. The later plants were loaded with blossoms, and the names of the species and varieties that were in blossom may be acceptable to readers who take an interest in this genus.

It has been pointed out by an authority on Michaelmas Daisies that the "weakest point about them is their colour, or rather want of There may be some truth in this assertion if applied to the ordinary types generally seen in gardens, but it is scarcely applicable to the better forms as grown at Chiswick. Here we find a harmonious blending of colour, beautiful if not brilliant, and Various shades of sufficient to brighten a garden at this late period. purple predominate in the blooms it is true, but these only render more conspicuous the blue forms and those that have white flowers. Amongst others now in bloom at Chiswick are some very fine varieties of Aster novæ belgii, and these alone comprise a choice selection. A. n.-b. Robert Parker is a free-flowering form about 5 feet in height, but rather a straggling grower. Another good variety with deep rosy lilac blossoms is A. n.-b. Minerva. The well-known A. n-b. Harper Crewe is also seen to advantage at Chiswick, and this still remains one of the best white Michaelmas Daisies in cultivation. A form named Pluto, belonging it would appear to A. lævis, but labelled as a variety of A. novæ-belgii, is exceptionally fine, growing from 3 to 4 feet in height, and covered with large light coloured flowers. For making a display late in the autumn

A. lævis floribundus is well adapted, the flowers being of dark rosy purple shade, and the plant compact in growth. A. n.-b. Archer Hind is apparently a valuable late-flowering variety, attaining a height of 4 feet, with rosy lilac flowers; and the same may be said of A. n.-b. Leda, which has rather small dark coloured flowers. A. n.-b. Juno (given as a variety of A. lævis in the list mentioned) is one of the brightest varieties now in flower in the collection, the flowers being moderately large and of a rich purplish blue shade. An unnamed seedling from A. novæ-belgii x A. lævis was also noticeable, this being dwarf in habit, with a profusion of white medium-sized flowers. Another dwarf variety worthy of extensive cultivation is A. n.-b. densus, which is very compact in growth and the flowers lilac purple. Other good forms of A. novæ-belgii in flower last week included Albion, Fortuna, and Calliope. That confusion in the nomenclature of these plants still exists is indicated by the fact that whilst several kinds at Chiswick are labelled distinctly as varieties of A. novæ-belgii they are given in the Journal referred to as forms of A. lævis. This probably is because a large number of the perennial Asters grown in gardens are hybrids between A. lævis and A. novæbelgii; but notwithstanding it would prevent further confusion if the varieties were labelled correspondingly with the list to which allusion has been made.

Late-flowering varieties of A. novæ-angliæ do not appear to be quite so plentiful as those of the species above mentioned. The type is an attractive plant when well grown, being nearly 5 feet in height, and as a rule laden with fine rose-coloured flowers in October. Beautiful as the species is, however, the form known as A. n.-a. rubra is even better. At Chiswick this is about 3 or 4 feet in height, and bears an abundance of bright rosy red flowers. A. n.-a. pulchella is another very fine variety, rather dwarf in growth, with large deep violet flowers. Like A. n.-a. rubra this is very distinct, and should be given a place in every garden. Although rather straggling in growth and bearing medium-sized rose-coloured flowers, A. n.-a. roseus forms a pleasing feature when grown in a mass. A. n.-a. præcox is another desirable variety, which attains a height of 3 feet or so, and yields a profusion of light purplish flowers. The wellknown A. acris is a remarkably showy plant when seen at its best; but A. acris nanus is a decided improvement on the type from a decorative point of view. The plant is more dwarf and compact in growth, and the beautiful star-like purplish flowers harmonise splendidly with the graceful foliage. It is a grand variety for growing on rockeries. Those who favour the small flowered forms, many of which are exquisitely graceful if not particularly showy, will find A. cordifolius Diana worthy of at ention. This had white blooms and finely cut leaves. A. cordifolius elegans, as its name implies, is another good form, and the same may be said of a variety labelled A. cordifolius albula. The varieties of A. Drummondi have their good qualities, especially A. D. cora, which is rather tall in growth, and a fine late-flowering plant. A. versicolor Antigone (syn. discolor major) is a charming form, as also is A. v. Themis (syn. discolor), the latter being about 2 feet high, and of a compact habit. A. paniculata (syn. carnea) W. G. Grant, too, is deserving of more than a passing notice, and the same applies to A. lævis Virgil, which is a very fine form. Among the dwarf - growing kinds A. Amellus stands pre-eminent, but it is not so good as A. Amellus majus, which is, according to the plants grown at Chiswick, later flowering than the popular A. a. bessarabicus. It has large rich violet purple flowers. There are many more species and varieties grown in the collection referred to, but as before said, they were for the most part past their best at the time of my visit, hence a reference to the late-blooming kinds must suffice for the present. These are exceptionally valuable for the embellishment of gardens during October

Relative to the culture of the Michaelmas Daisies, that cannot be said to be a very difficult matter. With few exceptions they will flourish in any ordinary garden soil provided it is of a fertile character, but they repay any extra attention that may be given them by producing flowers more abundantly. This should not be overlooked by those who grow the perennial Asters, and a top-dressing of decayed manure in the spring is by no means a waste of labour. In some cases annual division when commencing growth in the spring is desirable, this treatment suiting many varieties of A. novæbelgii and A. lævis. The dwarf forms, such as the beautiful A. Stracheyi, alpinus, Amellus majus, and others might advantageously be employed for bedding, inasmuch as apart from their freedom in flowering many of them possess a graceful growth which well merits attention.—C.

NERINE ELEGANS ALBA.

This charming Nerine was exhibited by Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, at the last meeting of the Royal Horticultural Society, and a first-class certificate was awarded for it. The plant shown was a small one, and bore one spike, about 6 nches high, carrying nearly

a dozen pure white flowers, as shown in the illustration (fig. 51). The exhibitor informed us that Nerine elegans alba "is a native of South Africa, probably Natal. It is not a garden form, but a wild species, and has been in his possession for two years only. It is almost hardy in this country, but he would recommend the protection of a cold frame during the winter in order to protect the leaves from injury, which would spoil the plant for a whole year. Of course, it requires its proper season of rest." Although less showy than the scarlet-flowered types, a white Nerine is somewhat of a novelty, and usually arrests attention.

FEEDING TREES AND PLANTS AND ENRICHING THE SOIL IN THE AUTUMN.

It has frequently occurred to me when advocating the adoption of definite cultural practices, that were we always to do it with the full force of our conviction we might unconsciously lead

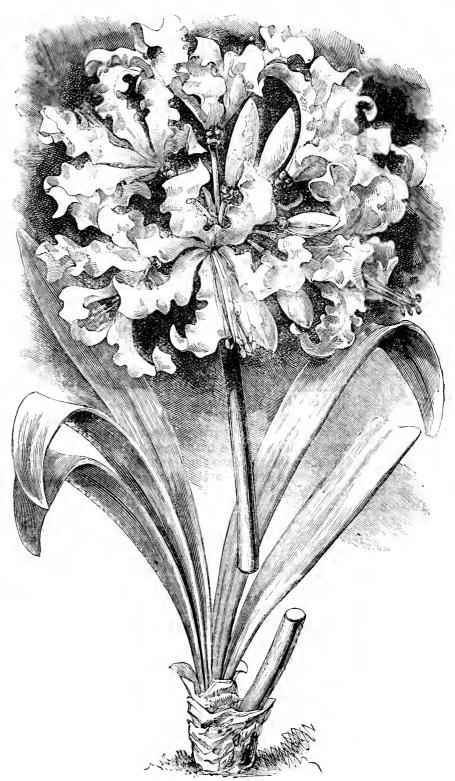


FIG. 51.—NERINE ELEGANS ALBA.

others to believe that the very existence of the plant or crop under notice depended upon carrying out to the letter the precise method of culture advanced, whereas we know well that equally good results may sometimes be obtained by pursuing a course which differs considerably in its cultural details. In the majority of instances, however, there are local circumstances, or the attainment a different object attempted, which fully account for the ultimate success of practices apparently at variance with each other. If these considerations are steadfastly borne in mind by gardeners of all grades many valuable lessons will be adduced which will help them to determine the best course to pursue at times when cultural problems present themselves, and which must

be overcome before cultivation of the highest order can be achieved.

Intimately connected with this subject of high culture is that of feeding plants and crops, indeed it is the very foundation of it, but the essential conditions to ensure success are that whatever fertilisers be given must be applied at the right time and in the proper way. Much injury may be done hy over-feeding or hy giving stimulants at the wrong time, and I have repeatedly pointed out in the Journal of Horticulture the disastrous effects of applying liquid manure in too strong a condition, or before root action is sufficiently advanced to require it. The whole question hinges upon the exercise of sound judgment in determining when this stage is reached, and the knowledge requisite for the purpose can only be gained by observation and experience. Let this point once be mastered and there is no comparison between the results achieved hy those cultivators who feed their plants and crops continuously and those of others who follow only haphazard or irregular methods of doing it. The former keeps innumerable diseases and insects at hay, which are a continual source of trouble to the latter, for it is an undoubted fact that vegetation of all descriptions speedily become a prey to their attacks when weakened through want of nourishment, or get out of health from other causes, while, on the other hand, when health and vigour are maintained insect pests are generally conspicuous by their absence.

The foregoing will show I hold the opinion that many of the ills from which plants suffer are hrought about directly or indirectly through lack of a sufficient supply of nourishment; hut let it he distinctly understood I add the saving clause, that this nourishment must be given under the right conditions if the hest results are to be obtained. In the spring and early summer our thoughts naturally turn to the practice of enriching the soil with manure, or feeding crops hy means of natural liquid manure or chemical fertilisers. This has become so much a matter of routine that in many instances feeding is carried on with a lavish hand during the period above named, and singularly neglected or only indulged in

spasmodically during the greater part of the year.

The question arises in my mind, Do we pay sufficient attention to feeding (especially in the case of fruit trees and plants in pots) during the late summer and autumn? I think not. The roots of the former are known to be extremely active during that period, and trees which have borne heavy crops of fruit derive immense benefit if liheral applications of liquid manure are given, either before or after the leaves have fallen, preferably before, as the buds are then enabled to develop to their fullest extent; the leaves heing kept healthy and robust continue to perform their functions till the gradually lowering temperature diminishes the flow of sap and causes them to turn yellow and drop very slowly, hanging with great tenacity to the branches till the last vestige of green has left them. The buds are thus nourished to their fullest development, and the trees begin the rest of winter in a sound healthy condition. With hard prominent buds and a natural fall of foliage the prospect for the succeeding year is always good. Contrast the condition of such trees with that of others which may have heen equally healthy during the previous summer, but having borne heavy crops of fruits were, hy the beginning of the autumn, in a partially exhausted state, and no special means being taken to enable them to recoup their energies, the leaves fall early and quickly, while the huds are neither so hard nor prominent as they should be. Trees which go to rest in this enfeebled state can scarcely he expected to produce vigorous flowers in spring, neither do they. Blossom there may be in abundance, but it either fails to set properly, or the greater part of the fruit drops in its early stages. Thus the loss of a crop of fruit may be distinctly traced to the neglect of feeding at a critical time. I am convinced there are thousands of fruit trees which would give infinitely better results if this matter received greater attention, though, unfortunately, in many instances, through pressure of other work, it is impossible for gardeners to give it, except in the case of choicer fruits, such as Peaches, Nectarines, and Pears on walls. Numbers of other fruit trees of various descriptions which have gradually drifted into a sterile state through neglect and continual starvation may often he met with. It is surprising how greatly old trees in this condition may be improved provided the branches are sound and free from canker, but too much must not he expected in one season.

In the case of old wall trees which have covered their allotted space, a regular thinning of both spurs and branches and the laying in of young shoots, if carried out in conjunction with judicious feeding at the roots, will in the course of a few seasons convert them into vigorous fruitful trees. No better time than the present could be found to give them the attention they need at the roots. The surface soil should be removed, starting at a distance of from 4 to 6 feet from the main stem, and gradually working to it. Occasionally roots will he found near the surface, but generally they are fully a foot beneath it, except near the main stem. Strong roots destitute of fibre may be frequently noticed striking deeply into the soil, or extending a great distance from the Trees in the condition above indicated derive their principal support from these; it is therefore unwise to disturb many of them until new roots have been formed nearer the stem; some, however, should, if possible, he traced to a point where they hranch into numerous smaller ones, there be cut asunder, trimmed at the points with a sharp knife, and afterwards notched at intervals of a foot throughout their entire length. A compost consisting of good loam six parts, fresh horse droppings one, wood ashes half a part, with a little soot, and should the loam he heavy lime rubble added, is an excellent one with which to replace the worn out soil removed. First place a layer of this underneath the hared roots, so as to bring them to within 6 inches of the ground line. Next draw the points of the long roots which have been severed and notched toward the main stem so as to confine them if possible to within a radius of 5 feet, secure them in position by means of strong wooden pegs, then cover them with the prepared compost, which should he trodden moderately firm. The surface when finished ought to be slightly above the ground level to allow for sinking. Over this a layer of short manure should be placed. In order to keep the roots of younger trees within bounds, a trench should be dug out every three years, at ahout 4 feet from the stem, the points of the roots cut with a sharp knife, and the trench filled in with the compost above described, a few inches of the surface soil between the trench and the stem heing also removed and replaced with fresh soil, always finishing off with a layer of short manure, unless the trees have a tendency to grow too strongly.

A certain position of this work should be carried out periodically, otherwise it will assuredly get in arrears. In all instances in which trees must perforce stand over for another season before they receive this necessary attention, much help may be rendered them by applying liquid manure during the autumn and winter months. Every drop of this valuable fertiliser obtainable may be turned to good account in this way, by storing in the soil the food, which the roots of trees and crops will not be slow to appropriate during their season of need.—H. Dunkin.

(To be continued.)

ARE TOMATO DISEASES CONTROLLABLE?

BACTERIAL AND EELWORM TROUBLES — SPECIMENS

"Hygienist" (page 325) may be congratulated on his endeavour to reconcile theory with practice-scientists with cultivators. This cannot too soon be effected, for there is really no difference between sound theory and successful practice. The one is of no value without the other, and I have come to regard them as synonymous for all

useful cultural purposes.

As regards hacteria it may safely be concluded that these bodies generate heat, inasmuch as they act on the principles of a ferment, and are most active under droughty conditions of the atmosphere or surrounding medium and in high temperatures. In this way only can we account for the deposits of nitrate of soda in Chili and nitrate of potash in India. It is also well known that the micro-organisms which render soils fertile are active in the summer when the soil is driest and warmest, and are passive in the winter when the soil is wettest and coldest. But we must bear in mind that hacteria, like other forms of life, may-nay, must-be separated into the useful and malignant, and it is important that the one be known from the other, else the first cannot be encouraged and the latter discouraged. When a soil is excessively manured year after year or cropped with the same plant in consecutive years, we know that something will sooner or later befall the crop. It may be that the ground of a kitchen garden becomes sodden and sour, but we rarely consider that we have encouraged the micro-organisms whose office is to convert matter into elements poisonous to the crops we desire to grow. Now, instead of pursuing this disastrous course, manure is withheld and we give a dressing of lime. What happens? The chemist will tell us that it effects certain changes, liberates ammonia, and does many other things. He will only tell us what he knows. There is no theory about; it has all been found out by scientific inquiry and hardheaded practice. I know what the result is from a cultivator's point of view; but I also want to know how, therefore must acquire chemical knowledge, and when I can ascertain whether the chemist's theory is correct and my practice sound. Many cultivators acquire this intuitively or glean it by a round-about system of empirical practice and repeated experiments, which are characterised by more losses than gains, and the outcome is that as little is known of the why and how at the close as at the commencement.

The chemist can only tell us so much and no more. ammonia liberated by the lime is not a particle of use as food for the crop until it is converted by one organism into nitrite, and hy another into nitrate. Therefore by the action of the lime we set machinery

at work, which converts the ammonia into nitrate of lime and potash, and the result is that instead of the crop, say Potatoes, being all top, there are abundance of tubers. The fact is we have checked or destroyed the malignant organisms, and brought into activity the useful. That is the way to come at facts, and it is only by so doing that we are able to give a satisfactory account of our practice.

Bacterium Halstedi is a malignant micro-organism. Its business is to live and perpetuate its species. It requires plants—Tomatoes, Cucumbers, Melons, Vegetable Marrows, and perhaps Potatoes to live upon, and in no instance has it been found upon native plants. This by no means points to the necessity of its being introduced, for it may after all prove to be a native of this country, just the same as Oïdium Tuckeri has been proved to be our very common Erisyphe communis, and the Potato fungus traced to Solanum Dulcamara. The worst part of the matter is that Bacterium Halstedi thrives under the same conditions as the useful bacteria do potentially in behoof of the cultivator; but in the present state of our knowledge of these micro-organisms it is hardly possible to arrive at any satisfactory deduction, nevertheless the malignant forms are certainly as foodrequiring as the useful, and it may safely be conceded that they are incapable of manufacturing that upon which they subsist, for all life is dependant upon that of another, or all life is parasitic, each and all doing its best to maintain place in the "struggle for existence."
"Hygienist" attributes fungal diseases to wet and bacterial

attacks to drought, and from a hygienic standpoint considers all to be due to some predisposing causes. Hygienists are all very well upon general grounds, but when anything special or particular occurs no one thinks of appealing to them, but wisely seeks aid from duly qualified specialists, and we may take it for granted that every cultivator of Tomatoes knows what suits his cultures. If we raise a number of plants from seed there is a difference in the individuals, both as regards health and fruitfulness, yet all are treated precisely What is the predisposing cause? Why is one strong and the other weak? Predisposing cause for sooth! heterodoxy, any and everything intangible, immaterial, may or may not exist, always subject of argument! But Bacterium Halstedi can be seen, examined, made sure of. It cannot be overlooked, it is past the region of hypothesis or metaphysical subtlety, is a substantial fact, which all may comprehend. If water will render it latent, for it can hardly kill a parasite living in liquid, all the better.

What I, however, particularly desire at the present time is a few inches of the stem and a similar portion of the root part attached of a Tomato plant infested with eelworm. If it has growth springing from the collar all the better, and to satisfy my requirements the part sent must be alive, for I want to ascertain if the nostrum I wish to subject it to is as safe to use as it is sure to kill the eelworm. If the result is satisfactory, anyone may make sure of the recipe by expending 3½d. in the Journal of Horticulture in which it may appear.—G. ABBEY.

[Any specimens that may arrive at this office for Mr. Abbey will

be forwarded to him.]

In reply to "Hygienist" on page 325, I should not like to say hastily that the Tomato disease is absolutely controllable, but I am convinced it is favoured by too close planting, and too much moisture both at the roots and in the atmosphere. As preventives, experience leads me to recommend-

1, Never plant closer than 2 fect between the rows, and 15 to

18 inches in them.

2, If disease appears pull out the plant first attacked at once.

3, Let a current of air pass right through the house, which will bring firm and short-jointed wood, so essential to good Tomato growing.—J. G. Pellinger, Harrogate.

A LARGE HOLLY TREE.

MAY I venture through your columns to describe a Holly tree which may be the largest in Great Britain, situated within ten paces of my house, which is $10\bar{40}$ feet above the sea?

I have in my possession a report which was made on it in January 1836, and at that time the tree "measured in circumference above the roots thereof 27 feet 6 inches, and estimated to be 60 feet in height, and

is very branchy, and the general opinion is that it is 400 years old."

The circumference of the tree now is 30 feet, and its height 43 feet, and has sixteen main branches, two measuring in circumference 11 feet 7 inches, and 8 feet 2 inches. It covers a circle, the diameter of which is 54 feet, and its branches have numerous initials and dates cut on them, those which can be still deciphered ranging from 1700 to 1864. The most legible is that of J. Broughton, 22nd August, 1756, which is almost as clear as the day on which it was cut. Many of the branches are half eaten through with rot, and I have had all the sixteen supported by iron rods. The tree still shows great vitality, each year bringing forth numerous young shoots. It is rather curious that on the opposite side of the valley is another large Holly tree, which measures 17 feet 6 inches in circumference.—Geo. W. LLOYD-VERNEY, Colonel, Clochfaen, Ulanidlage N. Wales Llanidloes, N. Wales.



LÆLIA GRANDIS TENEBROSA.

THIS is quite distinct from the type, and greatly superior to A plant I have in bloom now has flowers 6 inches across. The sepals and petals are wavy chestnut red, the lip is rose colour, elegantly fringed, and with darker lines leading to a blotch of dark rich purple in the throat, a really superb variety.

CATTLEYA BICOLOR.

Although this species is not so showy as some others, vet its distinct appearance should ensure it a place in every collection. The side lobes of the lip, which in most Cattleyas enfold the column, are entirely absent in C. bicolor, leaving the column exposed. The sepals and petals are brown; the lip is crimson, in some types with a distinct white margin, in others the colour gets fainter towards the edge. The flowers are produced on upright peduncles, which bear from five to twelve blooms each. It is a Brazilian Orchid, and grows and flowers freely with ordinary care.— H. R. R.

ORCHIDS AT CLIFFE HOUSE, HESSLE.

WHILST paying a hurried visit to Hessle last week I was invited to see the collection of Orchids in which B. Whitaker, Esq., of Cliffe House, is so deeply interested. I found some exceedingly fine plants of the better species present. Mr. Jarvis first took me to where two fine specimens of Cattleya Dowiana aurea and Cattleya chrysotoxa were in full bloom. The blooms were in excellent condition, very fine and well constituted. Some good flowers of Lælia purpurata were in the same house. A spike of Oncidium crispum had sixty-four flower buds on it, looking remarkably fresh. Several other good plants were in bloom. The Cypripediums, I thought, were especially healthy, and included Curtisi, Morgania, grande, Alice, callosum and Chamberlainianum.—W. CLAYTON.

ROYAL HORTICULTURAL SOCIETY.

OCTOBER 10TH.

SCIENTIFIC COMMITTEE.—Present: Mr. McLachlan (in the chair), Prof. Church, Dr. Müller, Mr. Blandford, Rev. W. Wilks, Dr. Bonavia,

and Rev. G. Henslow, Hon. Sec.

Peach Disease.—With reference to the diseased Peaches brought to the last meeting by Dr. Müller, Mr. G. Massee of Kew reports as follows:—"The Peach disease is caused by the fungus Glocosporium fructigerum, Berk., or rather by G. lacticolor, Berk., which is in reality only the former species modified by the host, as proved by cultures. In America, where the disease is too well known, and has also attacked Grapes during the last two or three years, it has been found that the fungus can be kept well under control by two or three sprayings of potassic sulphide (½ oz. to a gallon of water) applied in June or July. Of course, it is too late to attempt spraying this year, but all diseased fruit should be removed and destroyed to prevent the diffusion of the spores." Dr. Müller observed that he had seen the disease twice soon after the setting of the fruit. This appeared to be locally arrested in growth where the fungus occurred, the rest of the Peach growing normally.

Pyrus japonica Fruiting.-Mr. Blandford exhibited specimens, and commented on the very large size to which the fruit had attained this year. They do not appear to be capable of being put to any use

as yet.

Oranges from Australia.—Dr. Bonavia communicated the following remarks on a curious phenomenon connected with Oranges:—
"On the 12th July, 1893, a box of Oranges was shipped to me by a friend in South Australia. It contained four varieties of the so-called 'Portugal' Orange, viz., the 'Navel' Orange, a large and a small Blood Orange, and the Egg Orange. Each Orange was wrapped in tissue paper, and the whole were packed tightly in hay. They reached me after having been about five weeks on the sea in very sound condition, with the exception of one which was spoilt. Probably this had been bruised before it was packed.

"On the voyage the Oranges sweated and the hay became damp, for when I opened the box a musty smell of damp hay pervaded the whole

box; and now comes an interesting point.
"I unpacked all the Oranges and freed them from paper and hay. They all had a musty smell. I washed some of them and dried them. Apparently the musty smell was completely removed from the outside; but on cutting open the Oranges every one of them had not only a musty smell in the juice carpels, but also a peculiar musty flavour.

"It would appear that the mustiness of the damp hay penetrated through the peel and pervaded the whole interior of the Orange, giving

a peculiar and unpleasant flavour to the juice.

"There was no difference in the four varieties. They were all equally contaminated by the musty smell and flavour, although otherwise quite sound, and when washed the mustiness could not be detected

in the rind.

"I ate some of them every day, and by keeping the mustiness of the juice became less, till about the fourth week after unpacking the

mustiness in the juice was scarcely perceptible.

"All the varieties were rather thick-skinned and were very juicy, and all kept very well. Probably the soft hay packing may have had something to do with their not getting bruised on the way. The 'Navel' Oranges were more juicy than the same variety we get in London from California.

"I hardly know how to explain the contamination of the juice by the musty air in the box. The peel contains a large quantity of essential oil. This may have absorbed the musty aroma, and then, when saturated, passed it on to the juice vesicles which also contain a considerable proportion of essential oil. By keeping and exposure to the air, this process may have been reversed."

With regard to the cause of the flavour of the Oranges Prof. Church explained it by the fermentation of the hay and osmose causing the scent to enter; then transpiration would subsequently bring about the odour externally. It was remarked by Mr. McLachlan that certain Oranges were eaten green in Java and Ceylon. Dr. Bonavia added that such became yellow subsequently, though they were edible in the green state. They have been illustrated by Miss North among her paintings at Kew.

Pears Diseased. - Messrs. J. Cheal & Sons forwarded samples of Pitmaston Duchess Pears affected apparently by a fungus, giving the

fruit a warty appearance. They were referred to Kew for examination.

Salisburia Diseased.—A branch of this tree was received from South
Dorset, evidently in a very enfeebled condition. It was the general
opinion that the mild, damp, maritime climate of the situation was
unfavourable to it, and the probable cause of its unhealthiness.

Wasps and Pears.—Mr. Blandford observed on the habit of tomtits,
which he had seen pearing helps in Pears, which gave wasps access to

which he had seen pecking holes in Pears, which gave wasps access to attack the juicy tissues. Application of nicotine to the wound kept them at bay for six hours. Mr. Henslow added that he had noticed wasps attacking mealy bugs in a vinery before the Grapes were ripe. Mr. McLachlan added that he had noticed tomtits attacking Cob Nuts

for the purpose of extracting the grubs within them.

Cypripedium, Synanthy.— Sir Trevor Lawrence exhibited a plant having two flowers welded into one. It possessed one lower smaller sepal, two large ones above, three nearly equal sized petals, two perfect labella, and two staminodia; the ovary showed the fusion by a longi-

tudinal groove.

Rhododendron Hybrid.—Mr. Henslow exhibited a specimen received from Mr. Veitch, the result of crossing "Lord Wolseley" by the bigener "Indico javanicum," this having been the result of crossing "Lord Wolseley" with Azalea indica Stella. The flowers were more or less malformed, having a strong tendency to be polypetalous; the stamens were occasionally epipetalous or sub-petaloid. The form of the flower showed no improvement on that of Indico javanicum, though it was a little brighter in colour (crange) was a little brighter in colour (orange).

Oak Galls.—Some curious many-pointed galls on the acorns of Oaks at Versailles were sent by Mr. Belt of Ealing. Mr. McLachlan reports that they are the product of Cynips Calycis, and that this species of

gall has never been found in this country.

Matricaria Chamomilla Rayless.—Mr. Henslow exhibited specimens found by road sides in Ealing. They appeared to be particularly abundant last year. Seed obtained failed to germinate in the present dry season.



THE BATTERSEA PARK CHRYSANTHEMUMS.

WE are informed that upwards of 4000 persons passed through the Chrysantbemum house in Battersea Park on Saturday, Sunday, and Monday last, the number of visitors on Sunday being 3080. The plants are in admirable condition, and the display is increasing in beauty every day.

CHRYSANTHEMUMS AT WATERLOW PARK.

THE large conservatory and vineries at this park were opened to the public for two months on Saturday the 14th inst., from ten till four cach day, for the Chrysantbemum Show. There are over 2000 plants coming in flower, and these will make a better display than last year. There is also a collection of other flowering plants.

CRYSTAL PALACE SHOW.

THE Chrysanthemum Exhibition at the Crystal Palace this year will take place on November 3rd and 4th. Cut blooms, as usual, will form a feature, the principal class being for "forty-eight blooms, twenty-four Japanese and twenty-four incurved, in not less than eighteen varieties of each or more than two of one variety." The prizes offered are good, those in the class mentioned being £10, £7, £5, and £3, which should bring forth a keen competition. Mr. W. G. Head, Superintendent, Garden Department, Crystal Palace, S.E., will supply schedules and entry forms. WEST OF ENGLAND CHRYSANTHEMUM SOCIETY.

As announced in our advertisement columns the annual Exhibition of this Society will be held in the Guildhall, Plymouth, on November 14th and 15th. A comprehensive schedule has been prepared and liberal prizes are offered. The leading class is for forty-eight blooms, to consist of twenty-four Japanese and a similar number of Incurved in not less than eighteen varieties of each, the five prizes being £15, £10, £5, £2 and £1 respectively. Messrs. Wilson and Damerell, 4, North Hill, Plymouth, are the Honorary Secretaries.

CHARLES DAVIS.

LOVERS of Chrysanthemums generally, and especially cultivators of cut blooms for exhibition, are no doubt anxiously looking forward for the first appearance or report of this novelty. To many it is known that it is a yellow sport from that deservedly popular Japanese Chrysanthemum Viviand Morel.

I lately saw the variety under notice in bloom in the nursery of Mr. J. Agate, Havant, and have no hesitation in saying that it quite comes up to expectation. Like all sports it retains the habit of its parent, and splendid flowers are produced on plants 3 feet high. The first buds produce blooms pale primrose in colour decidedly pleasing. The blooms from the second buds are deep yellow in the centre, fading with age to a lighter tint towards the extremity of the petals, having here and there a tinge of colour. The later blooms develop as the published description gives them—canary yellow, beautifully tinted rosy bronze. upon Mr. Agate's plants measured 8 inches in diameter, and gave promise of proportionate depth.—E. MOLYNEUX.

NATIONAL CHRYSANTHEMUM SOCIETY.

WE are requested by the Honorary Secretary to state that on the occasion of the great Exhibition at the Royal Aquarium on Nov. 7th, 8th, and 9th, the flowers competing in class 27 of the amateurs' division will be considered when the special medals are awarded. This class was unfortunately omitted from those mentioned on page 64 of the schedule Also that the awards in class 48, being special prizes offered of prizes. by Mr. E. C. Jukes, will be the silver-gilt, silver, and bronze medals of the Society. The Floral Committee will meet on the second day of the Show, Wednesday, November 8th, at two o'clock, and not on the first day as heretofore.

CERTIFICATED CHRYSANTHEMUMS.

THE following new Chrysantbemums were awarded first-class certificates at the Floral Committee meeting at the Aquarium on the

Charles Davis (Mr. H. J. Jones).—A deep bronzy yellow sport from the well-known Japanese variety Viviand Morel.

Eda Prass (Mr. Godfrey).—An American seedling of the Japanese type; colour, soft salmon rose. Madame Edouard Rey (Mr. E. Beckett).—A large Jaranese incurved

flower, light purple amaranth, with rosy reverse.

Louise (Mr. N. Davis).—A fine large white Japanese incurved variety, with deeply grooved florets, tinted blush.

Malle. Thérèse Rey (Mr. H. Shoesmith).—A large Japanese, with long drooping florets. This and the two preceding were raised by Mr. Ernest Calvat.

Edith Rowbottom (Mr. E. Rowbottom).—A Japanese bloom, colour lilac amaranth, petals rather narrow; a seedling raised by the exhibitor.

Among other interesting flowers, of which more may be heard later on, were L'Ami Etienne, Vice-President Jules Barigny, Lizzie Seward, Violetta, Mrs. P. Blair, and G. W. Childs.

CHRYSANTHEMUMS AROUND LIVERPOOL.

ONCE more the season is at hand when notes relating to Chrysanthemums are of special interest. On all sides the opinion expressed is that the early blooms will be somewhat coarse, yet, notwithstanding, a very fine display is anticipated. To Liverpool people the great event of the forthcoming Show is the prize given by Messrs. R. P. Ker & Sons for twelve incurved, twelve Japanese, and twelve reflexed blooms. The prize consists of a magnificent challenge wase, value 20 guineas, with 10 guineas in each wash was until finally man to be a second was a s with 10 guineas in cash each year until finally won, to be won twice consecutively or three times in all, open to growers within twelve miles consecutively or three times in all, open to growers within twelve miles radius of the Liverpool Exchange. In 1891 it was won by the late Mr. A. R. Cox, and last year by Mr. Jellicoe, gardener to F. H. Gossage, Esq., who will do his utmost to secure the trophy this year. Another event is at the neighbouring Grassendale Show, where Mr. Donald Forbes, gardener to Alfred Holt, Esq., Crofton, Aigburth, the winner of the 10 guinea cup presented by A. L. Jones, Esq., and also last year's winner of the 10 guinea prize at Liverpool, means to make a bold bid for the retention of the cup as his own property. As in former years I for the retention of the cup as his own property. As in former years I can only note the more important of the growers, at the same time bearing in mind the fact that good work is being done by smaller growers, although not figuring on the exhibition boards. The remainder of my notes will be completed next week.

LINGDALE LODGE, OXTON, CHESHIRE.

A GENUINE lover of the Chrysanthemum was the late Mr. George Cockburn, who has passed away since my notes of last season, but it is gratifying to find that their cultivation is being continued by the family, who all share the same interest. Mr. George Burden, now well known, has this season 400 plants, his Japanese varieties being very good. The most noticeable are W. H. Lincoln, Puritan, Stanstead White, Mrs. F. Jameson, Etoile de Lyon, Viviand Morel, Mdlle. Marie Hoste, Mons. Bernard, Mrs. Wheeler, Edwin Molyneux, G. C. Scwabe, Sunflower, Mrs. Irving Clarke, W. Tricker, and Avalanche. Of newer kinds the most promising are Beauty of Exmouth, Lord Brooke, William Shrimpton, and Princess May. Amongst incurved the Queen family is represented by fine plants and stout foliage, but Mr. Burden is afraid that the buds are not so kind in opening as in other seasons, but he will have fine blooms nevertheless. Princess of Wales, Mrs. Heale, and their sports are fine, as are also Prince Alfred, Lord Wolseley, John Salter, Jeanne d'Arc, Refulgence, and Lady Harding. Of the newer kinds Mons. R. Bahuant is grand, but inclined to be early, whilst Madame Darrier is superb.

BOSCOBEL, NOCTORUM, CHESHIRE,

The residence of C. J. Proctor, Esq., the esteemed President of the Birkenhead Chrysanthemum Society, is well worthy of mention, by reason of the excellent blooms which Mr. J. Williams, Mr. Proctor's gardener, exhibited last season. They grow over 200 plants which are this season most promising. The best of the Japanese are W. H. Lincoln, Stanstead White, Mrs. F. Jameson, Etoile de Lyon, Viviand Morel, Mdlle. Marie Hoste, Mons. Bernard, Avalanche, Mrs. Wheeler, W. Tricker, Sunflower, G. C. Scwabe, and E. Molyneux. The incurved are very fine, and particular mention should be made of Princess of Wales types and those sometimes "miffy" ones, John Salter and Refulgence. Madame Darrier is excellent.

CROFTON, AIGBURTH.

Here Mr. Donald Fornes has some grand plants, fully equal to former years. The fine summer seems to have suited especially such kinds as E. Molyneux, Mrs. C. Wheeler, Beauty of Castlewood, G. C. Schwabe, W. Tricker, Mrs. F. Jameson, Viviand Morel, Gloire du Rocher, Colonel W. B. Smith, W. H. Lincoln, Avalanche, W. Lane, Aïda, Coronet, Mdlle. Marie Hoste, and Stanstead White. Of newer kinds, those which at present stand out prominently are Wm. Seward, Dorothy Shea, Mrs. C. Harman Payne, Mrs. E. D. Adams, L'Ami Etienne, Chas. Davis, Brookleigh Gem, Lucy Kendal, Henry Perkins, and Baron Hirsch. The Queen and Princess types are most promising. The open weather has been most favourable since the plants were housed, and should it continue the prospect is good for our early Show.

AIGBURTH HALL,

The residence of Mrs. Arthur Cooke, is a fresh addition to these notes, but as the gardens are presided over by Mr. Charles Osborne, who made his name famous when at Aymestrey Court, Woolton, all readers will be glad to hear something of his doings in his new charge. Though rather late on entering his duties here, he has a good collection of fine healthy plants, the best Japanese being Bouquet de Dame, Anna Hartzhorn, two varieties; Sunflower, E. Molyneux, W. Tricker, Puritan, Stanstead White, Boule d'Or, W. W. Coles, and Mrs. F. Jameson. These are excellent, and rightly timed. Newer varieties very good in bud are R. C. Kingston, Florence Davis, Col. Smith, and W. Lane. Of incurved, the Queen family on early buds are inclined to be rough. Plants stopped the first week in June are very promising. All the Princess family are just unfolding; these were stopped the second week in June. Mons. R. Bahuant is very fine, and Lord Wolseley and Madame Darrier, as elsewhere, are excellent. Viviand Morel on the early bud is exactly similar to Meg Merrilies without a tinge of pink in it.

About fifty plants in 6-inch pots for conservatory decoration are worth mentioning. The main plants were run on to four shoots after the break, and the second week in July one top shoot was taken from each plant, placed in thumb pots and put under handlights in the greenhouse. As soon as rooted they were transferred to 6-inch pots. Now they are from 3 to 22 inches high, with grand buds and every promise of proving a welcome change from all those grown on the

orthodox system.

CLEVELEY, ALLERTON.

Never on any previous occasion has Mr. Cromwell had such a promise of fine flowers, the 700 plants being perfect. The Princess family have fine shapely buds. Those of the Queen types, which are excellent, are Queen of England, Mrs. Robinson King, Lord Alcester, Empress of India and others. The Japanese are very good, and the following are now developing into substantial blooms, viz., Beauty of Castlewood, W. Tricker, Florence Davis, Mdlle. Marie Hoste, Sunflower, Viviand Morel, Stanstead White, Mrs. F. Jameson and others. Of the newer ones, Wm. Seward is very fine, and we must bid adieu to Jeanne Delaux to make way for the new comer, which hesides its colour, has such a robust constitution. G. W. Child, John Shrimpton and Colonel W. B. Smith are developing into fine flowers. Baron Hirsch is very promising as a new incurved, and one of the best of its colour.

To the above I may append a note which should not be overlooked by gardeners who grow Chrysanthemums for decoration as to the usefulness at the present time of the three varieties—Bouquet de Dame, Mons. Wm. Holmes and Gorgeous, white, red and yellow, which flowers in advance of the general collection. The corridor at Cleveley at the present time contains 120 plants of these varieties, each plant carrying three fully developed blooms, and I need hardly say that the effect is

grand.—R. P. R.

LESSONS OF THE DRY SEASON.

[Read by Mr. George Bunyard at the last meeting of the Horticultural Club.]

THE year 1893 will stand out in the memories of all connected with gardening and agriculture as an unprecedented one, the absence of rain for such long periods and the extreme heat having in some cases had disastrous effects alike on garden, arable field, and pasture. In

opening a discussion on this question one is struck by the many-sided phases of the subject, and it will be only possible to take up that embraced by the word Horticulture. Starting in February, we had a month of almost continued wet. The land was happily saturated, and lucky were those whose soil permitted them to get in the main garden crops early while the moisture was able to assist germination. In the vegetable garden the crops most affected were Peas, Broad Beans, Beet, Turnips, and Onions. Some of the seeds of these never germinated, and until the May rains came there seemed little chance of crop, but when the plants began to grow they made quick progress, and from the evidence of many vegetable shows most excellent examples were produced.

Never has there been a year in which the cultivators have so beaten the mere "growers," for where deep cultivation and frequent loosening of the surface soil by hoeing was carried out the crops did not suffer to the same extent as where the land was left alone; and on the farm it was the same, grand crops being secured where high-class farming was

carried out.

Naturally the vegetables liking warmth, or native to warmer climes, have done well, Tomatoes ripening thoroughly outside; Dwarf French Beans grew rapidly, but soon became too old for the kitchen; Runners grew, but the hlossom fell off wholesale, and there was one crop near the ground and another at the top. Marrows grew finely where they had any food to live on, but outdoor Cucumbers were nil. At one time it looked as if Winter Greens and Sprouts would be altogether lost, but they have pulled round. These results emphasise the fact that all the hard work of a kitchen garden should be done in the winter—i.e., trenching, manuring, and preparation of the seed beds. So far for vegetables.

In the fruit crops the summer has done wonders. Starting with Strawberries, where these were planted on decply trenched and enriched land they gave splendid results, and many second-rated kinds came to best quality, as Noble, Competitor, John Ruskin, and others. The Queen race did not do so well, the late ones were unable to hold out till Strawberries from Hampshire were in the London the crop set. markets on the 4th May, and extraordinary prices ruled for the early pickings. Paxtons made 10s. 6d. per gallon. The lesson we have in these useful fruits is evident where growers had left beds over two years old. They failed to get a crop worth the trouble of picking, and it was the same in gardens. I am more than ever convinced that two years is the full limit of a paying Strawberry crop. We have had several pounds of fruit in October from Vicomtesse Héricart de Thury. Gooseberry and Currant crops were in many cases quite dried up, and in July put on their September garb, but what fruit was saved was of fine flavour; and Raspberries were almost a failure. These again are left too long on the same land. If planted on well prepared ground and thoroughly surface dug they will last good for six years, but new beds are better then made, and the manure should be put on the surface.

As may be supposed, extra fine Peaches and Nectarines have been grown on open walls this year where care has been taken to water the trees freely and to keep them syringed. Apricots have borne the best crop for many years, and no doubt the well ripened wood in these stone fruits will remain a witness to the grand time they have had. Nectarines from their more tender skins were sadly spoiled and shrivelled by the scorching sun, and the lesson we may learn from this is that they will in such times pay for a partial shade, and more foliage should be left on them than we usually leave on Peaches. The flavour of both has been exceptionally fine, and the crop from two to four weeks earlier than usual where these fruits were grown in an orchard house. They have needed great care, and some shade was necessary to

reduce the excessive evaporation.

Pears were literally scorched off the trees by the heat and sun in April. The few remaining on some trees naturally came to an abnormal size, and the fruit shows have given us notable and record examples. On walls the crop has been good generally except where very hot, as We had a long line of cordons quite fruitless because we stated above. put them on a tarred fence and omitted to whiten it over. Many kinds which only come to perfection in such seasons as the past have been extra fine and clear in the skin, I allude to such as Glou Morçeau, Bergamotte Esperen, Easter Beurré, Madame Millet, Beurré Rance, Chaumontel, Duchesse d'Angoulême. Beurré d'Anjou, being grand in size and without a crack or spot. The palpahle lesson here is that we ought to place all such good, but "difficult-to-grow" sorts, on south or south-west walls, where they would in many cases do better than Peaches and Nectarines, especially in those old gardens where the nailholes in walls form a happy hunting ground for aphides, red spider, and that evil family. Many sorts have taken on grand co'our, and the open cordon Williams' Bon Chrêtien have been equal to the imported fruit in point of colour and clearness of skin. Never before have we seen such grand crops of this Pear on standards, in which form many others came large and fine in colour and quality. I anticipate the late and fine sorts, such as Beurré Rance, Doyenné d'Alençon, Duchesse de Bordeaux, and Olivier des Serres, will, beyond the above, be of fine quality, while healthy wood fully ripened will, in a great measure, prevent canker. Pears, usually ranked second-rate, has been grand; General Todtleben, Beurré Clairgeau, and Grosse Calebasse quite fine.

Apples, the great British crop, have been a grand exhibition. All kinds have developed not only size but splendid colour and clear skin. There is only one that has failed to reach its maximum—ie., Ecklinville. It may be that it misses the frequent showers of its native Emerald Isle. Calville Blanc, Reinette de Caux, and even Newtown Pippin have been quite good outside, and no kind has shown any spot or crack where cultivation has been carried out liberally. The so-called growers of fruit in neglected orchards have had a reverse, which it is

hoped will open their eyes to see that unless they thin out their trees and give them some root assistance by liquid manure or mulching, they can never get a profitable crop in face of the fine examples now put on our market from well-managed trees on cultivated land. More and more it is evident that if fruit culture in this land is to succeed we must bring into it all the gardener's thought, care, and attention. In passing, a word as to the marvellous colour in Apples this season. A preacher said recently, that after he had seen the vineyards of the south, and the flowers and fruits of that region, he should readily give the palm to an Apple orchard in its wreath of September coloured fruit. The Winter Queenings, Colonel Vaughan, and others were scarlet in colour. As an expert I have fruit sent from all parts for naming, and it has been a "lesson of the season" to see the same kinds from different people, in some cases four times as large as that from trees not properly cared for.

I am of opinion that we should grow some of our Apples on walls, the beauty of the fruit and the fulness of flavour then obtained seems to indicate they ought to have some such warm position. Calville Rouge, Sturmer Pippin, Washington, and other fruits, which have not always time to finish in our short summers, are very fine this year. Many kinds have been so large as to suggest a doubt as to their authenticity, Kerry Pippin, several Pearmains, Duchess of Oldenburg, being twice or three times their usual size; other Apples passing as kitchen sorts are sweet table fruit. I am inclined to think the far travelling and deep rooting nature of the Apple has been much in their favour. Canker in such sorts as Lord Suffield has been quite wanting, and the trees are wonderfully strengthened for future crops by an abundance of hard well ripened wood. It is remarkable that the surface rooting Paradise stock has given such fine fruit in a dry season, as even where mulched early there has not been rain enough to set free the stimulating properties of the material used.

I anticipate in lifting time we shall find they have made more tap roots than usual. Where land is full of porous and water-absorbing stones the drought has been little apparent, and it may be well to add this to our other lessons, and introduce stone of the nature of our Kentish surface ragstone where these do not exist on one of the most stony spots in our nurseries. The maiden Apples are grand and sturdy, and close to 6 feet tall. On flinty or gravelly lands they have suffered severely. Naturally, as a pomologist, I dwell much on this subject; but I trust not more than its importance deserves. It is quite evident we try to grow many sorts of fruits which our capricious climate does not as a general rule suit, and from the knowledge thus gained we may learn much. Where the land has been kept clean by constant moving of the surface soil no doubt a store of good has been laid up for many years to come, and as far as fruit is concerned I look upon the Indian summer

just passed as an untold blessing.

Passing now to the flower garden, what a trying time we have had! Herbaceous plants completely dried up, with us no flower on Pæonies or the tall growing Campanulas, Alpines gone never to return, Roses over in a "flash in the pan," and only here and there in the season a glimpse of what they might have been, until the autumn when they have, so to speak, made up for lost time, and given us a grand display. The Teas have naturally done best, and those who have cultivated deeply will have reaped a reward; but most will have, like myself, to find comfort in the fact that if the trees have made little wood that it is well ripened, and may resist a strong frost successfully. The worshippers (and they increase fast) of the Daffodils have been seriously curtailed in their devotions, for the flowers literally rushed out and then withered, several not even showing their beauty. Possibly they look to more highly developed bulbs for a grand display in 1894.

Bedding out was a serious matter, yet the display has been bright, because there has been an absence of coarse leafage, telling us to keep these beds a little less rich. Begonias with me have failed when they did show flower; a gale generally scattered the half-opened blossoms, and never have the beds been gay. They seem to like a partial shade; in this position I have seen good beds. Cactus Dahlias have been extra fine, and the Pompons very chaste. A dry time evidently suits these; it says we should start them early and grow into size, so as to make the most of our summer. I must not touch Lilies, Chrysanthemums,

and the like.

I now pass to Conifers and forest trees. The early leafage of these was grand, and seldom was it seen to such advantage. Many trees have, however, died outright from want of food, and here we may learn to persevere in Philip Frost's system of surface feeding for choice examples. Flowering shrubs have been very short-lived, and Lilacs were burnt up while half opened; on the other hand, the double kinds were grand. I would here put in a plea for all these striking shrubs, and ask if we treat them fairly by relegating flowering shrubs to crowded shrubberies and plantations. How seldom we see a fully developed example of any of them on our lawns, and when we do, how grand is their proportions, and what a glorious sight they are in flower! I refer to such as Guelder Roses, Lilacs, Syringas, and the Sumach. I have not alluded to the trying time for plants under glass demanding extra care on the gardener's part. It is, however, evident that the lesson here is—provide more shading that can be used at short notice, and remedy defects in the want of more ample ventilation.

The utmost care has had to be exercised in keeping down aphides, and all garden pests and wasps have never before been so numerous. Lay in a store of materials ready to begin battle should they appear in 1894. I have wandered in my subject, and have rather outlined a map, and will leave others to fill in the details and point out the omissions and defects of my paper.



EVENTS OF THE WEEK.—But few events of horticultural interest will take place in the metropolis during the ensuing week. The Committees of the Royal Horticultural Society will meet at the Drill Hall, James Street, Westminster, S.W., on Tuesday, the 24th inst., when, as mentioned elsewhere, a special display of vegetables and fruit is anticipated. A meeting of the Floral Committee of the National Chrysanthemum Society will take place at the Royal Aquarium, Westminster, on Wednesday, the 25th inst.

THE WEATHER IN LONDON.—As mentioned in another paragraph, the weather has been unusually mild in the metropolis during the past week. Much rain has also fallen at intervals. Sunday proved fine, as likewise did Monday, but it rained more or less all Tuesday. Wednesday opened fine and bright, similar weather continuing at the time of going to press.

ROYAL HORTICULTURAL SOCIETY.—The next meeting will be held on Tuesday, October 24th, in the Drill Hall, James Street, Victoria Street, Westminster. The Council of the Society have offered special prizes for Apples and Pears grown in the open air, and also for Grapes. At 3 P.M. Mr. A. Dean, F.R.H.S., will deliver a lecture on the cultivation of Onions, examples of which would be welcomed at the meeting.

DEATH OF MR. H. E. C. BEALE.—We regret to hear of the death, on the 12th inst., of Mr. Herbert Edward Child Beale, eldest son of Mr. E. J. Beale, of the firm of Messrs. J. Carter & Co., High Holborn. The deceased, who was a very amiable and promising young gentleman about thirty years of age, was educated at King's College, and then took a prominent position at Holborn, but his health broke down, and we understand he has spent most of the last two or three years in California, Jersey, and the south of France.

HORTICULTURAL LITERATURE.—A GOLD MEDAL AND 10,000 FRANCS (£400) PRIZE. At a meeting of the National Society of Horticulture of France on the 10th of August, 1893, the President called attention to the paper of M. Charles Baltet on the Comparative Study of French and of Foreign Horticulture. The subject was one of six which had been proposed for treatment at the Horticultural Congress in May, 1893, and for it M. Baltet had been awarded the gold medal which the National Society of Horticulture had placed at the disposal of the Congress. Also that in consideration of the same work the National Society of Horticulture had seen fit to award to M. Charles Baltet the prize of 10,000 francs bequeathed by the late Dr. Joubert de l'Hyberderie for the purpose of encouraging literature conducing to the advancement of horticulture. We are informed that this is the most distinguished honour of its kind hitherto conferred in France, and congratulate the distinguished pomologist on its acquisition.

- THE FRUITERERS' COMPANY. - A dinner was given on Wednesday evening the 11th inst., at the Mansion House, by the Lord Mayor and the Lady Mayoress, "to meet the court of the Fruiterers' Company." It was preceded by the presentation by the Company, in accordance with ancient annual custom, of a choice collection of English-grown fruit, the ceremony taking place in the drawing-room. After dinner the Dean of Rochester (chaplain to the Fruiterers' Company), in proposing the health of the Lord Mayor and Lady Mayoress, remarked that there were times when fruit had become a most important factor in the prosperity of the country. As regarded the owners, the occupiers, and the labourers on the soil, he regretted to say that there was most profound ignorance with respect to fruit, in connection with which he thought we had rather retrograded than progressed. Leaving out Herefordshire, Worcester, and Devon, the orchards of England were generally a disgrace, but there was really a grand future open for fruit. The farmer had been standing still, while the manufacturer had been making immense progress. Every landlord ought to try and get his tenant to make a profit from all sources on his farm. There were great possibilities in the advancement of the culture of fruit, and he was proud to belong to a society which had done much in this direction.

- —— DEATH OF-MR. W. Y. DRAPER.—We regret to hear of the death, on the 7th inst., at 14, Addison Crescent, Kensington, aged sixty, of Mr. William Yates Draper, the head of the firm of Messrs. J. W. Draper & Son, the well-known salesmen of Covent Garden. The funeral took place at Brompton Cemetery on the 11th inst.
- The concert in aid of the Library and Gardeners' Benevolent Institution which had been promoted by members of the above Society was held last Thursday, and was a great success artistically, and it is to be hoped financially. The gardeners decorated the room in a manner worthy of all praise. The chair was occupied by Holbrook Gaskell, Esq., J.P., Woolton Wood, who made a few appropriate remarks during the interval.
- A NEW SOLANACEOUS PLANT.—It is stated that M. de St. Quentin, in the course of a voyage of exploration in Uruguay, has discovered upon the banks of several rivers a Solanaccous plant giving edible tubers in abundance, analogous to those of the Potato. According to the Illustration Horticole, the Horticultural Society of Marseilles has decided to offer a gold medal to the importer who shall introduce this new plant into Europe in a living state. Another gold medal will be decreed to him who shall obtain the first return or produce of the new plant in question.
- RIPE STRAWBERRIES IN OCTOBER.—Mr. G. Freeman, Akeley Wood, Buckingham, writes—"In last week's issue (page 333) your correspondent Mr. Garner gives an instance of having gathered a dish of ripe Raspberries on the 4th inst. On going over my Strawberry plot on the 9th inst. I discovered several clusters of fruit, some of the berries showing colour; trusses of flowers are also noticeable. The Strawberries were produced by plants that have already fruited in the open, and not by those that have been forced and planted out. It would be interesting to learn if other gardeners have experienced similar results."
- MILD OCTOBER WEATHER.—A great rise of temperature was experienced over our islands on Friday last, and the following two days the air has been singularly mild and humid. On Saturday the shade temperature rose to between 60° and 65° in most parts of England, and in the course of that night scarcely any change took place, the minimum readings being in many cases as high as 58° and 59°. In London, where the thermometer did not sink below 58°, the night was, with one exception, the warmest experienced in the month of October for more than twenty years past. The only warmer night was in 1876, when the minimum on the 9th was as high as 61°. On Saturday last the maximum day and the minimum night temperature were identical—57° in Battersea Park, a circumstance that has not been previously observed by Mr. Coppin, the Superintendent.
- Ostrowskia Magnifica.—Apropos of the remarks of Mr. S. Arnott (page 282) regarding this plant the following, written by a correspondent in "Garden and Forest," may interest readers. "Herr Max Leichtlin states that this plant was flowered at Baden-Baden in 1877, where it is as hardy as a weed. It prefers a sandy, deeply worked soil, as it has thick brittle roots some 2 feet long. It was first discovered by Dr. A. Regel in Eastern Bokhara, and described in 1884. My plant has passed two winters safely, and has not appeared above ground until all dangers from spring frosts are over. It is four years old, now flowering for the first time. As it dies down to the roots soon after flowering it should have a position where it is not likely to be disturbed by careless digging, for though it is propagated by division of the roots it is not a plant which should be disturbed. My plant is in a position where it receives little moisture in late summer, but I do not know that this precaution is necessary."
- LARGE SOFT APPLES. Having one of the best private collections of Apples nearly all on bush trees, at Maiden Erleigh, the samples cannot be excelled anywhere on trees of similar growth, Mr. Turton is in a good position to judge of the keeping merits of the diverse sorts this season, and he told me the other day when looking through his fruit room that all the large samples were keeping badly, and would soon be over. Thus it would seem that having had one of the finest Apple seasons of the century (Pears included) we should have to pay the penalty of finding all our largest fruits to be very fugitive in quality. This bears out what I have learnt in other directions. One famous Pear grower told me that he had found very fine Pitmaston Duchess Pears to waste 5 ozs. weight in a fortnight. Practically these large fruits are some 60 per cent. of water. That is what so rapidly wastes. Solid fleshed Apples, especially the small firm section, will keep very well. So also will Pears, but generally we shall see all varieties spoiling earlier than usual.—A.

- WEGETABLES AT THE DRILL HALL.—Hardy fruit having had such a good innings at the late meeting of the Royal Horticultural Society, we are pleased to learn that on Tuesday next vegetables are expected to be seen in fine form. Amongst others Messrs. Sutton and Sons will, we learn, exhibit a very large collection of Onions and other roots, and other kinds of interest. Vegetables are seen too seldom at these meetings, but few exhibits create more interest, or are of greater usefulness.
- Belladonna Lily.—The bed of the above Lily mentioned in the description of Grimston Park, Tadeaster, a short time ago (vide Journal of Horticulture, July 20th) was, when I visited that place a little over a week since, in the height of its beauty. This bed is 35 yards long by 18 inches wide, faces the south, and is backed by the plant stoves and fernery. I counted 375 spikes, all in bloom, some with five, and one or two with six flowers on a spike. Only those who have seen such a sight can realise the grandeur of this flower, which, having no foliage as a background, has to rely entirely upon its own natural beauty to prove its claim to a place in gardens.—W. CLAYTON.
- Turton at these gardens the other day, I could but notice in walking round the truly wonderful crop of long handsome pods he had hanging upon very tall lines of Runner Beans in two diverse gardens. Asking if they were novelties, I was told that whilst one variety was Sutton's Selected Scarlet Runner, certainly a splendid selection, the other was Sutton's Prizewinner. Mr. Turton said, "We have had a wonderful crop, having been gathering by bushels, and of either it would be difficult to find a handsomer, cleaner sample." The Prizewinner had been sown at the usual time, middle of April, being employed to enclose an area usually occupied with hardwooded plants in the summer, and had gone up 12 feet in height. The others had been sown a month later, and of the two were then the heavier cropped. Still on October 14th there were very heavy crops hanging on the row sown just six months previously.—A.
- Covent Garden Supplies.—The exceptional summer we have been getting seems to have had hardly so great an influence on Covent Garden supplies as might have been expected. Through the drought supplies of green stuff fell off enormously so far as our own market gardens within a short distance of London were concerned. The Superintendent of Covent Garden tells us ("Daily News") it irequently happened that the supplies from the grounds around London were fifty waggon-loads short of what they would have been with a normal amount of rain. But the falling-off in Fulham and Kent was to a large extent compensated for by an inflow from the Fens and from Yorkshire. The recent rains have, of course, rapidly brought on crops nearer home. The effect of this was manifest in last Saturday's market, and prices will soon drop to a point at which it will no longer pay to send produce to London all the way from Yorkshire.
- VERY large consignments of APPLES have come to London from our own orchards this autumn, and foreign supplies have been quite out of it. In scarce years we get large consignments of Apples from Germany, Belgium, Holland, and Denmark, as well as France. French growers send us some very fine fruit, and we can always do with some of their Apples; but the other countries named grow chiefly very inferior fruit, and have no chance at all when our own orchards are fairly fruitful. We are getting some from France, but Worcestershire and Devonshire growers have of late years recognised the importance of growing only the finest kinds, and they are able to hold their own against all comers, and this year their consignments are very fine indeed. We obtain our late supplies from America ordinarily, and many Apples of very fine quality have been coming to us from Australia. Both have imported some of our best kinds, and have been successful in their cultivation, but English growers who have been careful and enterprising are now holding their own against all comers.
- THE wisdom of the BENGAL PEASANT CULTIVATORS finds expression in proverbs, of which a collection has been made by a Babu in the Agricultural Department of that province. His appreciation of the outwardly revered Brahmin betrays itself incidentally in the maxim, "Rain and inundation disappear when south winds blow, like the Brahman as soon as he has received his fee." Other Bengal rural aphorisms are: "Have the land which receives the washings of the village, and the bullock which walks fast, and marry the girl whose mother is good." "He who works in the field himself with the labourers gets the full profit; he who, being unable to work himself, supervises the workings of the labourers, gets half the profit; he who orders the labourers from his house does not get enough to eat."

GARDENING APPOINTMENTS.—Mr. J. Brooks, for over four years foreman in the gardens, Cringle House, Cheadle, Cheshire, has been appointed gardener to J. Johnson Houghton, Esq., Westwood, Neston, Chester. Mr. G. Stones, for the past two years with T. D. Grimke-Drayton, Esq., Golborne Park, Newton-le-Willows, as head gardener to R. Heywood Thompson, Esq., Nunwick Hall, Penrith, Cumberland.

— EXHIBITION AT LYONS.—We are informed that arrangements have been made to hold a universal, international, and colonial Exhibition at Lyons in 1894, and to include a section devoted to horticulture. There will be a permanent horticultural Exhibition open from April to October, divided into sections, including exhibits relating to all branches of horticulture, arboriculture, and market gardening, as well as various temporary shows, which are to be held every month, and to last for a week. Applications for space in the horticultural section should be directed to M. J. Claret, Palais Saint Pierre.

—— STRAY TOMATOES.—Many thousands of Tomato plants are growing on the extensive sewerage farm at Beaumont Lees belonging to the Leicester Corporation. They appear to attain the greatest vigour on the one-year-old sediment, which is pumped from the tanks into large beds surrounded with turf tanks, in which the sediment is about 2 feet in depth. There is no doubt these plants would have ripened very fair crops this season if they had been thinned in good time, as is proved by many isolated plants which have done so. Seeds of Apples, Pears, Oranges, Grapes, and a host of exotic Grasses and other plants, also germinate and flourish for the time being, especially in the neighbourhood of the tanks, with great vigour. Many fields of Rye Grass have yielded four full crops this season on this sewerage farm.— J. H. W.

- HYBRIDISATION AND CROSS-FERTILISATION.—This was the subject of a lecture given by Mr. C. E. Pearson of Chilwell Nurseries, Nottingham, at a meeting of the Wakefield Paxton Society on the 7th inst. Mr. Pearson spoke for about an hour, and his practical and valuable observations were listened to with the closest attention. At the outset he particularly impressed upon his hearers who desired to hybridise and cross-fertilise plants, the great importance of selecting good parents for their stock. Speaking as one who had been extensively engaged in the work for twenty years, he explained the most successful mode of fertilising Zonal Pelargoniums, Primulas, Begonias, Chrysanthemums, and other flowering plants, and also fruits, more particularly Grapes. He recommended that plants which were being experimented upon should be isolated from other plants, and the hybridiser must not be a lazy person, but should be in operation at an early hour in the morning. If they intended to be successful they must also be methodical, and take notes and keep records just the same as is done by breeders of horses and shorthorns. In concluding his excellent lecture, Mr. Pearson referred to the pride and pleasure it afforded a fertiliser to raise any new plant, flower, or fruit, and said that the names of such men were never forgotten.

- HORTICULTURAL CLUB.—The first dinner and conversazione for the session of 1893-94 took place on Tuesday in last week. There was a good attendance, although several members of the Club were engaged at the United Horticultural Benefit and Provident Society's dinner at the Cannon Street Hotel. There were present the Rev. W. Wilks, Rev. F. H. Gall, Messrs. John Lee, J. S. Cousens, Geo. Monro, J. Webber, W. Assbee, A. Watkins, A. H. Pearson, Geo. Bunyard, T. Francis Rivers, H. Selfe Leonard, and others. The discourse was opened by Mr. Geo. Bunyard with an interesting paper "On the Effects of the Drought as affecting Horticulture, more especially in its Relation to Fruit." An interesting discussion in which nearly all the members took part followed, and from which much valuable information was obtained. Much stress was laid by Messrs. Webber and Monro of Covent Garden on the imperfect way in which fruit was packed for market, inferior fruits being put in and the samples not properly sorted. It was also stated the extreme earliness of the season had completely disorganised the foreign fruit market. As a proof of the extreme fertility of the crop it was stated that in one orchard in Kent 8 tons of Goffs (a second-rate Apple) have been gathered off nine trees. Mr. Bunyard also placed upon the table a large dish of Vicomtesse Héricart de Thury Strawberries gathered from the open air of good size and excellent flavour. He also contributed some dishes of Beurré Bosc and Beurré Fouqueray and Pitmaston Duchess Pears, the two first of which were pronounced excellent, though preference was given to Beurré Bosc; Pitmaston Duchess is universally condemned as worthless in quality. A cordial vote of thanks was given to Mr. Bunyard for his excellent paper, which will be found in another part of our present issue. EXETER GARDENERS' ASSOCIATION.—At Exeter Guildhall last week, Mr. D. C. Powell, of Powderham Gardens, read a most interesting and instructive paper on "Pears and their Culture," in connection with the Devon and Exeter Gardeners' Mutual Improvement Association. Since the establishment of the Association the gardeners of the district have shown the utmost interest in its affairs, and have greatly benefited by the practical and comprehensive manner in which a variety of subjects, especially relating to gardening, have been dealt with. The paper read by Mr. Powell was the first of a series of essays which will be discussed during the winter session. Mr. G. B. Carlile presided over a large attendance.

Sweet Scabious.—Mr. W. H. Divers, Ketton Hall Gardens, Stamford, writes:—"I noticed a fine row of this in full flower recently at Orton Hall Gardens, Peterborough. Mr. Harding had planted it along the front of a Vine border near the walk, where it had a very fine effect, and the plants were carrying a large number of flowers. It has also proved very useful with me this summer for cutting. Most ladies are very fond of it, as the colours blend well together, and if a few of the bunches of seeds are judiciously used with them, it enhances the effect of the flowers. The culture is simplicity itself. All that is required is merely to sow the seeds thinly on a mild hotbed early in April, and plant out in the open borders in May as is done with other annuals."

OXFORD BOTANIC GARDENS.—Mr. W. R. Guilfoyle, Director of the Melbourne Botanic Gardens, recently gave a lecture entitled "Glimpses of Some British Botanical Gardens and Their Conservatories," from notes taken during his visit to Europe. He said, "I saw much during my travels in the way of gardening and horticulture that was really interesting and useful to me." Of the Botanic Garden at Oxford, of which he speaks highly, though only a few acres in extent, he considers it contains some wonderfully fine specimens of rare and beautiful trees. It is the oldest of British Botanic Gardens, having been founded in 1632. A tree of Sophora japonica measures 11 feet 3 inches in circumference of stem at 5 feet from the ground. There are also some noble examples of different kinds of Ash. A Copper Beech measured 11 feet 6 inches in girth. Near the college are two Elms, one 26 feet 8 inches in girth, and the other is 21 feet 6 inches in girth.

TECOMA SMITHI.

At the Drill Hall, Westminster, on the 10th inst. three plants of Tecoma Smithi, from the Royal Gardens, Kew, were exhibited, and by reason of their attractiveness much interest was centred upon them. The plants shown were about 2 feet in height, and each bore a large terminal cyme of yellow blooms tinted with brownish red. An idea as to the character of the flowers may be gathered by referring to the illustration (fig. 52), and it will be readily conceded that this Tecoma is likely to prove useful for decorative purposes, meriting the first-class certificate awarded by the Floral Committee of the Royal Horticultural Society. Tecoma Smithi is a new hybrid, the result of a cross between T. capensis and T. velutina.

FLORAL NOMENCLATURE.

In last week's "Saturday Review," in an article on flower names, I came across the following:—"Gladiolus (Gladiolus, ma'am, not Gladiolus, as some use, or Gladiolus, as others) is perfect," &c. I presume there can be no doubt that this (with the four vowels all short) is the correct form, notwithstanding the use of the others. Granting that the pronunciation of a Latin word used as a plant name may be occasionally altered by custom, that does not affect the case, as the controlling custom must be consistent; here we have two conflicting customs. Personally, I find it rather goes against the grain to call the plant either Gladiolus or Gladiolus, though I am content to do so if the world at large will only consent to adopt one or the other. Of course I should prefer the world adopting the correct form, but I fear the fourshort vowels are a feeble minority and must submit to be driven in the way in which they should not go. Will you kindly exert your influence to obtain an authoritative declaration of the mode of pronunciation to be hereafter adopted, with a proviso that such declaration shall be not open to change?

As I am on the subject of plant names I will ask permission to go on and protest against the use of Latin plurals that has grown up of late. It began with names ending in us; I have seen it extended to others ending in a, and there seems no reason why it should not creep on to um, and so to the Greek derivatives in is, ma, and ops or opsis, &c., if it has not already done so. There are nurserymen's catalogues that may give a hint of the glorious confusion into which plant nomenclature may fall. The pages of your own Journal (please do not suppose I am attacking the Editor) will furnish an illustration. It is not many months since I noticed in it a report of a Narcissi Show. I can point to

other rather conspicuous instances, but shall not do so. There is one, however, that is not horticultural, so there is little danger of offending any of your readers. Some five or six years ago I picked up a novel in which the author wrote of Omnibi! It shall be nameless, if for no other than for the very sufficient reason that I have forgotten its name.

ever their origin, when adopted for everyday use] without alteration are to be taken as incorporated in the English language, and to be treated for all purposes as English words, and that they must therefore be subject to the same modifications as other words of similar terminations.

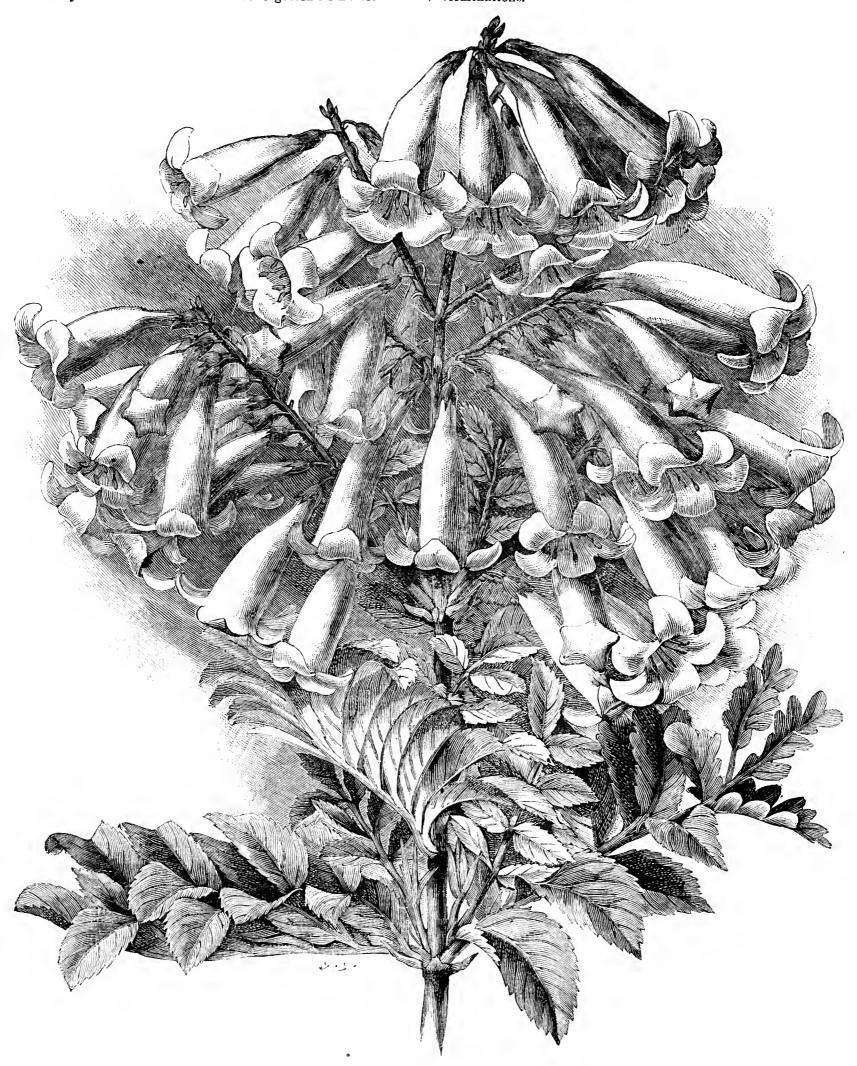


Fig. 52.—TECOMA SMITHI.

It is clear to me that in these cases we should have had Narcissus and Omnibuses but for the bad example of a few men with a prejudice against the agglomeration of sibilants in a plural of the latter form (though how they would get out of the difficulty in the case of the "buses" I cannot conceive; their knowledge of Latin would hardly admit of a resort to "bi").

With all duc deference to them, I submit that names of plants, what-

In a few instances the sibilant plural may be somewhat cacophonous, but do you really think such a word as "Croci" is more euphonious than Crocuses, leaving alone the trap for the unwary you set in the second "c" of the former? I do not. We have reached Nemophilæ. I saw it in the Journal. We have not yet had Rosæ shows, but we shall do so if somebody does not interfere. Do support my protest, and enable me to sign myself—A GRATEFUL OLD SUBSCRIBER.



HOT SEASON ROSES.

THE past season has offered a good opportunity for taking notes of such Roses as may fairly be called by the above title, and I think the general opinion would be that while some have fairly lived up to or even beyond their reputation, others have given disappointment. Though it certainly has been a hot and very dry year, it seems to me, from general impression and not from observation of the thermometer, that hot nights have not been many compared with those of some past years. The general idea is, I think, that a hot and dry year is favourable to the light H.P.'s, but causes the dark ones to "burn," and that a cooler and duller year is therefore best for these latter. I am not at all sure that the "burning" or browning of the petals of dark H.P.'s is caused by bright hot sun, or at least by this alone. At all events, it is worthy of notice that I have in other years, at times when "burning" has been prevented soon bads which appears to the same brown noted. has been prevalent, seen buds which opened with some brown petals even in dull weather, and that during the past season I had not, to my remembrance, a single brown petal among all my dark H.P.'s. I should like to hear what others may have to say on this subject. If caused merely by the sun, why should one or two petals alone turn brown in a Rosc, while others remain of the normal colour? With me the dark H.P.'s were quite good this year, and some of the old fashioned light coloured ones were not successful.

Of generally reputed hot-season Roses, Marie Rady was most disappointing; the blooms "came" badly altogether. It is quite a different Rose with me now, being not nearly so reliable or good in colour as it was ten or a dozen years ago. Monsieur Noman was good, but all over long before show time, as it is quite one of the earliest. Pierre Notting was decidedly better than usual; it opened freely, but was as late as ever. Reynolds Hole was magnificent, better I think than I have ever had it; it often "burns" badly, but I did not see a discoloured petal. It is generally late, but this year was quite early, before many others, and even on maidens was all over before the shows began. Waltham was disappointing, and came to no good in the first crop, but produced unusually fine blooms, good enough for any show, in

September. Duchesse de Vallambrosa and Madame Lacharme are two fineweather Roses, which used to give us a good deal of anxiety; but neither of them with me is worth growing for show now, except in quite large collections. The latter was simply extinguished by Merveille de Lyon, which at once surpassed it on all points, and superseded it altogether. Good old Général Jacqueminot is a thin-petalled Rose, but with me it is decidedly better in hot seasons, being better formed and even more lasting at such times. Some extra full or even coarse Roses were, as might be expected, better than usual. Paul Neron and Mr. James Brownlow were well shown, and I had some presentable blooms of Madame Hippolyte Jamain. Mrs. Paul delighted me in the early part of the season with perfect show flowers, but a little later, when there were some shows at which to exhibit them, the blooms were quite shapeless. This seems to be absolutely a summer Rose. I have not, this year or last, on maidens or cut-backs, seen a single autumnal bud. Madame Gabriel Luizet had more autumn blooms than usual, but François Michelon showed no improvement in this respect.

For Teas it has been an ideal season, as these Roses require drought even more than heat. Unfortunately of late years thrips have become a most serious pest in my neighbourhood, and in a really dry season they spoil an immense number of blooms. I consider they do more injury than mildew, and are very much more hurtful than aphides or orange fungus. The end of September and beginning of October my Teas (though of course rather small) are, I think, in some varieties distinctly better than they were in the height of the season, the thrips have disappeared, each bloom is clean and well shaped, and the colour is extraordinary. I have had Marie Van Houtte with the yellow as deep as Perle des Jardins, and the pink charming; and The Bride with splendid pink outer petals as decided as in Mrs. James Wilson. I take this to be the result of cooler and duller weather without rain following close after dry heat, which seems to be ideal weather for the perfection of all Roses. I do not know whether those who grow Roses in pots under glass move them into a dry and cooler house for the actual blooming, but such a course seems to be indicated.

Of reputed hot-weather Teas, Comtesse Panisse was very large, but much wanting in colour at midsummer; it is very different now. Jean Ducher at least reminded us of what it might be under favourable circumstances; but I was unfortunate with my few plants, which gave me nothing really good. I have one in my memory which gained the amateur medal at a national show at South Kensington several years ago, but I have seen nothing like it since. La Bouled'Or was very good, and opened well, too well on a south wall. Madame Margottin was a hopeless victim to thrips, but gave some fair blooms later.

Etoile de Lyon is a poor Rose with me at the best of times; if anything, it was worse than usual with me this year. My dwindled stock of it will be still further lessened. Madame Willermoz certainly comes but rarely of good shape; but I had one grand bloom, very large and

fine, with a perfect point in the centre. This Rose, and Mrs. Paul, remind me of the little girl in the nursery rhyme—

"Who had a small curl on her forehead :-When she was good she was very very good, But when she was bad she was horrid."

-W. R. RAILLEM.

ROSE ANALYSIS, 1886-1893.

THE friendly criticisms of Mr. Grahame and "Y. B. A. Z." (page 331) are very welcome, as they enable me to offer a few explanations as to the considerations which have guided me in framing the two tables in my last analysis. I must also thank them for the kind words of encouragement they have given me. There is one sentence in my analysis which both my critics appear to have overlooked, and it is a most important one. It is that in which I explain that all the averages "have this year been recalculated on similar lines to those followed in my last Dahlia analysis." I therefore refer them to page 247 of the last half-yearly volume of the Journal of Horticulture, where it is stated, among other things, "that the claims of each variety, whether new or old, have been decided entirely on its merits."

When I first began this kind of work and for some years afterwards, there was nothing left for me to do but to take the number of times the different varieties had been staged in the prize stands, and to calculate from them the averages which govern their respective positions in the tables. But as years went on I began to see that a purely arithmetical process was in many cases very misleading.

1, In the first place I found that certain old favourites were being more or less superseded by better and newer sorts of a similar colour. As to this difficulty the plan now adopted will be found explained, and examples given in the Dahlia analysis just referred to.

2, Exceptional seasons also often play havoc with certain varieties while unduly favouring others. Consequently, when calculating the averages for varieties seriously affected in this way the number of times they were staged under such exceptional conditions has to be omitted. Otherwise, as "Y. B. A. Z." has pointed out, they would stand either higher or lower in the lists than they are entitled to.

3, Then the newer sorts gave me some trouble at first, but a little consideration soon showed that if they were to appear at all in the tables, and they can never for some years hope to compete on anything like equal terms with their more largely grown brethren—the established kinds—they must find places in accordance with their doings at the most recent exhibition alone.

4, Then, again, the varying number of Roses tabulated each year was found to have a more or less disturbing influence. But this difficulty has been easily got over by calculating all the averages as for a show, or rather analysis, of average extent. I say easily got over, but of course all these recalculations each year involve a considerable amount of extra labour.

As suitable corrections for all the above-mentioned inequalities have been most carefully and impartially made throughout the analyses under consideration, I cannot but regard it as the most practical and reliable of the series. However complicated and unreal the system I have adopted and endeavoured to explain may appear on paper, it is in reality simplicity itself, and, after all, only a common-sense way of treating the statistics at my disposal.

In noticing more in detail the apparent flaws and inconsistencies in the analyses mentioned in your last issue, I propose referring my critics

in each case to the foregoing numbered paragraphs.

Mr. Grahame says that I have made a serious error in regard to Gustave Piganeau (1889), also as regards Ernest Metz (1888). If this be so he must be equally wrong in making Ethel Brownlow (1887) spring at once, "literally and truly" as he puts it, into the position at No. 20, because this variety was only staged four times in 1892, and consequently would come out, although the earliest introduction of the three, with an average of 10.5, and therefore only be entitled to a place at No. 26, or not far from the bottom of the table. But in my opinion Mr. Grahame is in this instance, as he says, "literally and truly" right, and if so we must also leave Gustave Piganeau and Ernest Metz where I have placed them in the tables (see paragraph 3). Another year or two will, however, show whether these positions have been as correctly accorded to these youthful aspirants as their performances will allow. In reply to his inquiries I may here state that Gustave Piganeau was shown this year in twelve prize stands by amateurs and in the same number by nurserymen, and Ernest Metz in sixteen by amateurs and in fourteen by nurserymen, Ethel Brownlow seven times by amateurs, and ten by nurserymen.

Mr. Grahame takes exception to A. K. Williams being described in the N.R.S. catalogue as "good in autumn." He says "it is better in the summer than autumn with most people," and so I fancy are most other Roses. If, however, he will refer to page 5 of the catalogue in question he will find the following necessary explanation at the head of the list of Hybrid Perpetuals:—" Where varieties are described as good in autumn' they flower freely a second time." this is more than can be said of many so-called Perpetuals.

As to Mr. Grahame's criticisms on some incidental remarks I made respecting the poor Rose exhibition held by the National Rose Society in 1879, there are undoubtedly, as he says, many more exhibitors now than there were fourteen years ago, and I hope the National Rose Society may justly claim some share in their conversion. But the question is, Had there then existed twice as many Rose exhibitors as at present would there have been a much better show? I am afraid not, for unfortunately no amount of anxious watching on the part of an enthusiastic Rose grower will induce his plants to come into flower if they have not sufficient warmth at the roots to enable them to do so, besides which a very late Rose season generally means late spring frosts and other evils which check the growth of the plants and consequently disfigure the first cut of blooms—the only one available in most districts at anything like an early show, in fact it would have been just like holding our metropolitan show in a backward season during the second week in June. We all know, for instance, what the Drill Hall Show (held June 21st) was like in the late summer of 1891. Therefore, I repeat, sooner or later this must prove our doleful experience at "the National," particularly if an early fixture and a terribly backward season happen to unite their destructive forces in order to ruin it. This is not a matter of opinion at all but of temperature.

Turning now to the friendly remarks of "Y. B. A. Z.," he says, "I have always thought this analysis showed rather the Roses that stood best the test of certain seasons; this has been particularly brought out in the present analysis." Had he made this charge against any of my previous Rose analyses, and it is, I confess, a most natural conclusion to have come to, there might have been some grounds for this statement. He goes on to say, "a season that is inimical to a certain Rose has an effect of a very damaging character on its position for many years." Now this would undoubtedly be the case but for the precautions I have mentioned (paragraph 2). He quotes as an example La France, let me therefore give him the figures from which the average for this popular variety was obtained—35, 27, 33, 38, 38, 48, and 49—average 38·3. Had, however, the values for the full eight years been taken, instead of those for the first seven, its average would have been reduced to 35·3, still allowing it to retain its present position in the table. But Marquise de Castellane, the other Rose he names, if similarly treated, would at once fall from No. 15, the place now accorded to it, to No. 23.

Is not "Y. B. A. Z." in error in classing Ernest Metz as a sport from Catherine Mcrmet? The plants do not seem to me alike in their habit of growth, the former being a much more sturdy grower. I obtained the date of Cleopatra from that handy little book of reference before referred to (the new catalogue of the N.R.S.), and therefore conclude it is correct. Catherine Mermet, Comtesse de Nadaillac, and The Bride were omitted from the select lists at the end of the analysis as not being, in my opinion, sufficiently good growers to recommend for general cultivation.—E. M., Berkhamsted.

In my remarks on this in your last issue (page 331) there is a printer's error. In the cighth line it ought to read, "I cannot fancy that any exhibitor would prefer Ulrich Brunner to Marie Baumann."—Y. B. A. Z.

MESSRS. VEITCH & SONS' LANGLEY NURSERIES.

It is not so many years ago since Messrs. Veitch & Sons established themselves at Langley near Slough, in order to extend their fruit ground and go in extensively for home-grown seeds. They commenced with about 30 acres and now have 70, and judging by the half-worked brickfields all around, the time will come when the land will be worth a great deal more than the astute Chelsea firm paid for it, though it is quite possible that as it is first rate fruit soil and answers its purpose well, the brick speculators will have to do without it when the time comes for them to attempt its acquisition. Land that makes good bricks generally grows good fruit, and one has only to glance over the nursery stock to see that the present case is no exception to the rule.

stock to see that the present case is no exception to the rule.

The Langley Nurseries are easily reached. Fast trains from Paddington run to Slough in a little over half an hour, and the grounds are seen from the line not long before the station is reached. Perhaps they are a mile away on the line side, and about double the distance round by the road. Travellers up and down the Great Western must find much to admire when the broad stretches of trees are in blossom, as well as later on when the herbaceous plants and annuals come into bloom. Probably also they note the handsome and substantial dwellings dotted here and there, and think, which is undoubtedly the case, that the Veitchian nursery is a model one and in every respect worthy of the great firm.

SEED-GROWING AND SEED-CLEANING.

Many acres of the Langley Nurseries are devoted to seed-raising, choice stocks of both vegetables and flowers being grown there. At the present season cleaning is in full swing, and a good many hands were employed in thrashing Peas, cleaning Beet, and picking over flower seeds. The samples are just such as a seedsman would delight in, and the quantities are surprisingly great when it is considered that they are sold retail by the packet and ounce, and not wholesale by the pound and hundred-weight. There are, for instance, about 20 bushels of Crawford's Beet, an excellent sample of seed, and still more of the popular Dell's, which is the most in demand of all. Then there are large quantities of Veitch's Mammoth Runner Bean, and amongst flowers miniature Sunflowers, Tagetes. Marigolds, Tropæolums, and hosts of others. Seed-growing and cleaning has grown to be quite a large business there, and the policy of securing home-grown stocks is found good, not only because of excellent samples being secured, but also in respect to accuracy of nomenclature.

Roses.

The Langley Nurseries are, as hinted, extensive, and the departments are many. The Roses form a great feature. As many as 24,000

Manettis and Briars have been budded this year, and that does not represent all the propagating, for other stocks, notably the De la Grifferaie, are also employed. The last named is found to be better than the Briars for many Teas and Noisettes, and is being used more and more every season. The quarters look wonderfully well considering the dry season, and it may be noted that the nurseries have had to bear the brunt of the drought, the hills and woods not far away splitting many storms that promised to moisten the thirsty soil. There was hardly rain enough to lay the dust from February to the end of September, so that it can be easily understood how trying the season has been, and what great efforts have had to be made to keep the stock "up to the mark." It has been done, as anyone can see who cares to go.

ORCHIDS AND PLANTS.

Here enters Mr. Seden. The fogs got to be too much for his hybrids at Chelsea, and so structures have been put up for him at Langley, together with a commodious residence near by. At home amongst his millions of seedlings he ought to be happy, and if appearances go for anything he is. So are the plants. Of seedling Cattleyas, Lælias, and Cypripediums, together with bi-generic hybrids, there are immense numbers, modest-looking now in the early stages of seedling-hood, but destined to occupy proud positions later on no doubt. One beautiful hybrid, a cross between Cattleya Bowringiana and C. maxima, named Chloris, was in bloom, and has since been certificated by the R.H.S. It was sown in 1886, and flowered last year, promising to be a remarkably free bloomer. The rich magenta carmine lip and the golden veining in the throat are very noteworthy. Another Cattleya named Phiedona, a cross between C. intermedia (pollen parent) and C. maxima, was also flowering, and has since received an award of merit. It is, ivory white veined with pink, the lip narrow and flattened at the base ivory with magenta veins, and the throat tinged with gold. Its pleasing appearance, its period of flowering, and its delicious Honeysuckle-like fragrance, combine to make it a valuable form. An ivory-like Cypripedium named Cleola, a cross between C. Schlimialba and C. reticulatum, is also a gem. It is a near approach to white, and flowers up the stem like the valuable Sedeni candidulum. There are other novelties, which will doubtless be produced anon. Phalænopsis are splendidly grown, and so are Disas.

A word must be said about the new Veronica Purple Queen, which was certificated not long ago. There is a fine stock, and judging by its bushy free-flowering habit it should prove a great acquisition for market work.

STRAWBERRIES.

Exit Mr. Seden, enter Mr. Morle. The chief of the fruit department. who acted as guide from London, lives at Southfields, Fulham, where the great bulk of the trained trees are grown, and he is a master in their management. He has a good lieutenant at Slough, and the stock there bears the same impress of quality and skilful management as the magnificent material in the London nursery, which is the highest praise anyone could bestow. There are some Strawberries left yet, for many buy and plant at bulb-ordering time instead of earlier in the season. Mr. Allan's trio are very highly thought of. Empress of India is a fine grower with British Queen flavour, and ready several days before the royal sort. Lord Suffield and Gunton Park are also good growers of high flavour and force well, besides being firm enough for travelling. These should be tried. Dr. Hogg, another Strawberry much esteemed, is well represented, and so is King of the Earlies, as well as all the older sorts. Waterloo is strongly recommended as a late variety that stands the sun well. It should not be picked when red, but left till it assumes the rich purplish hue which denotes perfect ripeness and rich flavour.

LARGE FRUITS.

There are many acres of Apples, Pears and Plums, all the leading sorts being largely grown, and they are in the best condition. A large quarter of four-year-old standard Plums is very striking, and so are standard Apples on straight, clean, healthy stems, wanting no stakes to support them. These are as fine a collection of trees as any planter need wish to buy, and so are the three-year-old bush Apples, with Frogmore Prolific prominent amongst them. There is a quarter of pyramids budded on the Crab conspicuous for clean and vigorous growth. Two-year-old standards of Bramley's Seedling are excellent material, and another Apple very noteworthy for its clean, healthy growth and good habit is Beauty of Stoke. This is unquestionably a fine variety, and one that ought to be tried. Apart from its qualities as a grower it bears freely and the fruit keeps well. Two-year-old Bismarcks are ahead of almost everything of their age. Lord Grosvenor, a valuable early Codlin, does spendidly at Langley, its growth being as clean as a well managed Croton and its foliage quite leathery. Young pyramid Pears of the principal sorts with a cordon tree planted between each pair form another impressive quarter.

TRAINED TREES.

Trained trees comprise Mr. Morle's great forte. Every grower should go to Southfields, to see the stock there, and then arrange for another day at Langley. Popular Plums like Coe's Golden Drop, Jefferson, Green Gage, Kirke's, and Victoria are represented in hundreds, every tree a model of good management and cleanliness. Then there are Cherries, such as Bigarreau Napoleon, Governor Wood, Elton, Early Rivers, Black Tartarian, and Archduke, almost as numerous and equally good. High quality Pears like Doyenné du Comice and Marie Louise are grown in enormous numbers. There are more of these at South-

fields, and it is there that the great majority of the trained Peaches and Nectarines for which the firm is famous are grown, so that a visit

to both places should always be paid if possible.

I might add, although it hardly comes under the heading of "trained 'a note about Superlative Raspberry. It is very highly thought of, and is unquestionably a splendid sort, producing abundance of large, richly coloured fruit. There was a large quarter of it, canes put out in spring bearing large clusters of fruit.

FLORAL ASPECTS.

There is a very fine herbaceous border running through the centre of the Langley Nurseries at right angles with the railway which well merits mention, for it has been magnificent this year. The Delphiniums in particular have been superb. Michaelmas Daisies in great variety, Pyrethrum uliginosum, Dahlias, Sunflowers, and Sedum spectabile were prominent amongst its autumnal attractions. Near by, and running parallel with the line, was a dazzling bed which, as being at its best in October, was very noteworthy. It was composed of Papaver glaucum, a dwarf sort with flowers much resembling those of umbrosum. They were of a rich and very glowing crimson, with black interior basal blotches, and glistened brilliantly in the autumn sunshine. The seed was sown in May, and in a little over four months has produced one of the most striking beds imaginable. On the walls of one of the houses Cratægus Lelandi, so much superior to Pyracantha from its bearing far more freely in a small state, and Lonicera japonica (brachypoda), a

sand, or charcoal. Wherever the pipe is under ground, and not in a trench, it should be covered with felt or pipe cement, made from hay or hair one part, horse droppings one part, and clay two parts. The hay or hair must be well worked with horse droppings into the clay, and the mixture thus formed should be placed 11 inch thick around the pipes. This cement will keep in the heat, also prevent the pipes from rusting, which they will surely do when simply buried in the earth. A portion of the radiating pipes should be placed in such a position that the air on entering the houses is warmed before it reaches the plants. "Dips in the pipes at any point should be specially avoided, as they often impede free circulation."* "In each house on the highest points of the pipes must be placed air-vents. This is an important point, because air being lighter than water it will certainly rise to the highest point; and as air in the pipes can never be made to pass downwards, no matter how small the extent, the reason for having air-vents at the highest points is at once demonstrated." † (The quantity of 4-inch pipe required for a house is easily ascertained by referring to a method of rapid calculation by F. Dye, the writer of "Hood's work." He bases the figures on the quantity of glass per 1000 cubic feet internal space. The figures, which are approximate only, conditions and positions varying, are intended for lean-to houses, with one side of brickwork. If

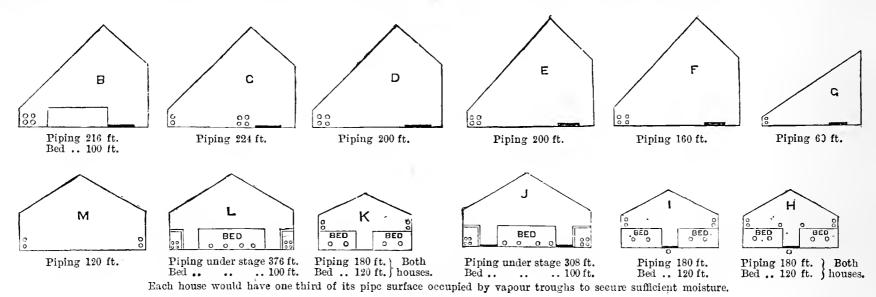


Fig. 53.—SECTIONS.

delicious Honeysuckle blooming nearly all the year, produced welcome fragrance and colour, and served as pleasant reminders of the past glories of this wonderful season.

PAST AND PRESENT WORK.

The fifteen years or thereabouts which have elapsed since the Langley Nurseries were established have seen great changes. Then under the charge of the veteran Newby, who has long since passed away, 30 acres of land were gradually cultivated and filled. Now 40 acres more have been added, and the whole of the ground is closely planted. A fresh piece of 4 acres is being broken up for seed trials, chiefly vegetable, to take the place of the ground at Chiswick, which has now fallen into the builder's hands. Thus the order of events is progress and development. For the general order and cleanliness observable credit must be paid to Mr. Scott, the general manager of the nursery. Probably much of Messrs. Veitch's colossal success is due to their wise and judicious choice of departmental heads, all of whom are courteous, capable, and energetic.—NOMAD.

THE PRINCIPLES OF HEATING:

INCLUDING THE ARRANGEMENT OF HOT-WATER PIPES FOR (a) FRUIT HOUSES: (b) FOROISG HOUSES WITH BOTTOM HEAT; (c) BEST KINDS OF FUEL, WITH THE MANAGEMENT OF FIRES, AND THE REGULATION OF TEMPERATURES.

Silver Medal Essay by MR. HARRY CORLETT, Foreman, Woolton Wood Gardens, Liverpool.

(Concluded from page 329.)

(3), THERMOMETER.

THIS is a necessary instrument in every garden, and it is the only unfailing guide for the gardener in regulating the heat of his houses. The self-registering thermometer is the best, as it gives the maxima and minima temperature of the atmosphere outside, or the temperature inside our houses during a given number of hours. There is also the bed thermometer, which is enclosed in a wooden or metal tube pointed at the bottom, so that it can easily be inserted in the bed to ascertain the heat therein.

(4), PIPES.

The main pipe, which is under ground, should be laid in a brickwork trench, and covered with a non-conductor of heat, such as sawdust, spar-roofed, position not much exposed, add one-fifth to the length of pipe given. Heat of pipe being 180°.) It is always wise to provide for emergencies by having a sufficient quantity of pipes in each house, fitted with valves in the flow and return pipes.

‡ F. DYE'S TABLE. Quantity of pipe to each 1000 cubic feet. Purpose for which the Temperature required. house is intended. 90° Fahr. Forcing houses. Melon pits. 60 ,, 55 ., 50 ,, •••••••• Grapes & Stawberries. 45 ,, 40 ,, 37 ,, •••• •••••• Fruit trees. Outside temperature 10°

(5), BOILER.

The forms of some of the newly patented boilers are so very complicated that they are sometimes not so effective as those of a simpler character. The principal thing in selecting a boiler is to choose one with the greatest surface of exposure to the direct action of the fire, combined with the tested heating capacity, at a given cost. For our purpose a terminal end saddle boiler would suit admirably. In choosing a boiler, no matter what size, the one selected should be about 40 per cent. more powerful than is actually required, as such will last much longer and work better. After the boiler has been put in its position, it should be covered with the best available non-conductor of heat, such as charcoal or sand; a case of brickwork with sand or pulverised charcoal between this and the boiler is to be preferred.

(6), FUEL.

What is the best fuel to use for horticultural purposes? is a question often discussed. Undoubtedly I would recommend anthracite coal because of its many good qualities; failing to procure this I would advise coke before ordinary coal. The reason I claim anthracite to be the best

^{*} Hood on Warming Buildings, 6th edition, page 69. † Hood, 6th edition, page 47. ‡ Hood, 6th edition, page 245. Published by E. & F. N. Spon, 125, Strand, London.

can easily be ascertained by comparing the different qualities of anthracite, coke, and coal. For instance, ordinary coal can only be used extensively where the gardens happen to be in close proximity to a colliery, it being cheaper then than having to send away for coke or anthracite. This is the only really good point in its favour. Now look at its disadvantages. It is almost unequalled for throwing off a dense smoke, highly charged with gases detrimental to vegetation, also producing much soot, which generally drops on the roofs of glass structures, or alighting on the leaves and flowers of plants in the houses as soon as the ventilators are opened, thus giving them an undesirable appearance. Then look at the filthy state of the flues and chimney; notice how often the flues are choked, thus costing considerably more labour, in cleaning than is required by either coke or anthracite.

The next to be considered is coke. As a heat producer I put it on a level with anthracite, but its great disadvantage is the amount of labour entailed in stoking compared with that of anthracite. Coke, moreover, is so very porous that it will absorb a very large quantity of moisture if kept in the open air, and this moisture must first be dried before it can give any chance for the coke to become ignited. Some people have an idea that coke burns much better if watered. This to my mind is a serious mistake, for watering the coke decreases its heating power. If water was put into the ash pit it would not only cause the fire to burn clearer and brighter, but also utilise the heat that is radiated downwards from the firebars. There are also the sulphur fumes, the continual visits to the stokehole, attended by the necessary clinkering and poking, this meaning more waste, viz., clinkers and ashes. Then look at the short time a coke fire will last compared with one of anthracite, thus wasting valuable time.

The points by which anthracite predominates over other fuels for horticultural purposes are greater durability, less labour in stoking, perfectly smokeless, and less sulphur fumes. A fire may be banked up at 6 P.M., and it will not require touching until noon the next day; this proves its durability. There is less of that continual poking required, therefore less labour in stoking. Scientists assert that the heating power of any fuel is approximately proportionate to the percentage by weight of the carbon it contains, therefore anthracite containing 90 per cent. of carbon heads the list. Of course there are disadvantages, but they are not so great as those attending coke or coal. There is the price to be considered; certainly it is dearer than coke or coal, but 2 tons of anthracite are of more value than 3 tons of coke or coal. Then some persons dislike the working of it, but this very often is the fault of the stoker and not the fuel. All that is required in stoking with anthracite is described under stoking.

(7), STOKING.

Having the desired fuel at our command the system of stoking must be considered. How many failures have there been? How much damage has been done? through the total absence of any desire to become a stoker in the true sense of the word. Why this ambition is so seldom met with is to me an unsolved problem. According to my experience only two gardeners out of every twelve have any real heart in this part of their work.

As I advocate the use of anthracite I will give a simple method of stoking with it, which may be brought into daily use. The first thing required is a thorough draught, and therefore the firebars, flues, and chimney must be kept clean. At midday allow the fire to burn very low, and after removing the clinkers thoroughly clean the back of the boiler and firebars, then push the clean fire towards the back of the boiler; put on a little fresh fuel, which should be broken to the size of a teacup, and not placed on the bars in too thick a layer. After opening the ashpit door, and carefully working the damper, allow the fresh fuel to be thoroughly burnt through before any more is added to it, and if by this time the desired heat has not been obtained add more fuel, keeping the poker out of the fire, except it be to remove the dust on the bars. When the required heat has been secured regulate the draught according to the weather. At banking up time push the majority of the fire to the back of the boiler, and fill the front portion with fresh fuel. By pushing the fire to the back the heat is regulated, while the fresh fuel is getting ignited. The fire may then be left with safety until the morning, and if there has been no marked change in the weather it may be checked until afternoon. Of course the discretion of the stoker will allow him to know whether the fire should be started in the morning or not, but the chief point for him to watch is to keep a clean, fire without the continual use of the poker. What little ash there is in the ash-box should be removed every afternoon when the fire is started, and water to the depth of a couple of inches be put in its place, the advantage of this being already pointed out.

(8), STOKERS.

The task of a stoker is truly momentous, and a few remarks on his duties may not be out of place. Let the student observe these rules-(1) Cleanliness, (2) use discretion, (3) study the weather. No stoker should visit his fire without knowing the temperature of the houses; the temperature of outside air; the direction of the wind, noticing of course which houses suffer most; the changes that have taken place in the weather during a certain number of hours; and then calculate what will be most likely to happen next, and work his fire accordingly. He must be careful that the flues and chimney are kept clean, also that the feed cistern always contains clean water. One very important point for him to watch is, he must not have too much fire heat in the houses, as more than sufficient heat is not only waste, but the plants get drawn and dried. He must keep his valves in good working order, so as to be in readiness in case of any unforesecn occurrence. As a general rule the above will prove the qualities of a person wishing to become a stoker, and it is here, in the stokehole, where the character of a man, no matter



FIG. 54.-MR. H. CORLETT.

whether he be young or old, is unconsciously, but truly, displayed, for should he have an untidy stokehole he is bound to be the same at his work; but if, on the other hand, he keeps a clean stokehole, then he will be quite as neat and clean in any other work he has to perform. This latter qualifying point is one of great importance if he be employed in a private garden.

[We have pleasure in publishing a portrait of Mr. H. Corlett, and congratulate him on the general excellence of his essay.]

HARD COLD WATER FOR PLANTS.

I AM afraid my young friend and former pupil Mr. Dunn (page 317) is going to get the worst of the cold water argument, as weighty evidence seems to be forthcoming against him. Soft water, or that which has been exposed to atmospheric influences for some time, not being available in ninety-nine gardens out of every hundred, the best must be made of the cold water at our disposal; but that is no argument of its being better, or even so good, for plants in general, as is water that has been softened and warmed by exposure. Which of the two is best? Which would cultivators prefer if they had the choice?

The use of tap and well water during the hottest months of the year

The use of tap and well water during the hottest months of the year does not, as a rule, show any evil results; but we must draw a line, or the use of cold hard water, recommended as it is being done, may end in the ruin of many plants, Would those who are advocating the use of cold hard water use it direct from taps and wells during the winter and early spring months, when the temperature of the water would be 20° lower, more or less, than the house in which plants or fruits may be growing? If the advocates of hard cold water do this, then I must join with Mr. Dunn and condemn the practice.

I cannot bring my mind to believe that Mr. Molyneux, or the other able cultivator taking part in this discussion, would think of using water direct from taps and wells for Crotons growing from October to

the end of March in a temperature of from 60 to 65°. What would be the result? I am afraid the plants would not long remain satisfactory. Who would be mad enough to supply winter Cucumbers with water 30° lower than the soil? The subject is a wide one, and appears to me to need more thought and consideration than your correspondents are bestowing upon it. Cold water used in a reckless manner would be a barbarous system of treatment that would soon bring about a condition of growth that would be miserable in the extreme.

Force Roses early in the season, and try this cold water business. Mildew will soon appear; continue the practice, and it will spread like

magic.-W. BARDNEY.

I HAVE no wish to pose as an authority upon this subject, yet I claim the right to question any evidence that is brought against my own opinion, and if after a thorough investigation that evidence is strong and convincing, I am ready to submit, withdraw, or retract. In this case the evidence is without any recognised authority, and "J. B. R." quietly surmises that the authorities I quote would not venture to support their own assertions. Does he call this argument?

Whilst in conversation with one of our leading nurserymen a few days ago the question of the past summer's water supply naturally arose, and his experience of "hard cold water" was limited to one word—

" bad."

I fully appreciate the support which your correspondent "T. A." (page 340) accords me in this discussion, yet I cannot altogether agree with him as to "hard water" minus cold being only injurious; it is the chilling effects upon the young hair-like roots which in my opinion causes injury to the plants, and this combined with the salts of lime contained in "hard water" is the more disastrous. Upon the estate where I reside there are three separate supplies from wells situated about a quarter of a mile apart, and the water drawn from each one differs materially in hardness. This is not the only neighbourhood or county in which I have watched carefully the effect of "hard cold water" (drawn direct from springs) upon vegetation. Therefore I claim that it is not in one particular county more than another that "hard cold water" proves injurious, although I admit it may in some districts act more quickly than others; but taking the country throughout vegetation in my opinion cannot flourish (in the true meaning of the word) when constantly watered with spring water in a cold raw state.—F. DUNN.

NEW CARNATIONS AND PICOTEES.

In the Birmingham districts there are several excellent cultivators of the Carnation, and in no other locality can more select collections be found. During the past summer I have had repeated opportunities of seeing some of these collections, notably those of Messrs. Thomson, Sydenham, and Brown, and as a large number of Carnation growers are readers of the Journal I send you notes of the opinion formed of these flowers.

CARNATIONS.

Lovely Mary (Lakin).—Very bright rose flake, pure in the ground colour and well marked. A flower of fine form and first-class quality.

Claudian, s.f. (Thomson).—This has great breadth of petal, clear ground, the colour very bright, and is of the finest form.

John Payne (Chaundy).—Good in form, but the ground colour is not clear, and the marking is not good.

Mrs. Douglas, P.F.—Has broad, regular, rosy purple flakes and pure

ground colour, good petal and fine form.

William Dean (Chaundy).—A very promising scarlet flake, and finer than Guardsman sent out at the same time by the raiser. It is rich in colour, has a fine petal, is perfect in form and is an excellent grower. It was first also in the scarlet flake class at Oxford.

Agricola (Douglas), P.F.—Clear ground colour, with broad bright

purple flakes, and a first-class flower.

Plate (Thomson).—A bright P. and P. bizarre. A full-sized flower in the style of Rifleman, but of a different shade of pink colour. A very fine flower in breadth of petal, form, and substance.

E. G. Wrigley, P. and P.B.—Beautifully marked, pure ground colour,

broad petal, large size, and of fine form.

Guardsman (Chaundy).—This was a fine scarlet flake as shown at Oxford as a seedling, when it received a certificate; but in the midlands has been very disappointing this year, coming too much coloured and rough in form. Occasionally it has been seen good, as in Mr. Edwards's stand at Oxford. It will, however, be grown again.

Mrs. May (Dodwell).—Pale rose flake, pure ground colour, good

petal and form; a free grower, and a fine flower.

Harmony (Douglas), P. and P.B.—A fine flower in the style of Sarah Payne, but paler in colour, also a good grower.

Lord Salisbury.—A seedling raised by Mr. J. P. Sharp, the veteran raiser of Picotees Mrs. Sharp, Campanini, Scarlet Queen, Rosie Sydenham, and others. A very fine crimson bizarre of large size and excellent

quality, very bright in colour.

J. P. Sharp, s.f. (Thomson).—This was exhibited for the first time at the London Exhibition of Carnations and Picotees, and was awarded a first-class certificate. It is a fine flower, but cannot be sent out until

Ellis Crossley (Geggie), P. and P.B.—Bright, clear, and well marked, with fine broad petal of good substance, and a grand all-round flower.

Mrs. Smith (Geggie), P. and P.B.—A light coloured flower of good

quality and size.

Mr. Yeadon (Geggie), S.F.-A large flower with very broad petal, bright in colour, and a most promising new variety.

Tom McCreath (Geggie), S.F.—A flower of good size with medium-sized petal, which is well marked with dark scarlet.

Forhunter (Geggie) .- A very good flower, much like Sports-

man, and a stronger grower. Flamingo (Barlow), S.F.—Of medium size and bright, with a good

white ground.

Billy Henderson (Geggie), P.F.-A large full flower, clear ground

colour, and well marked with deep purple; a decided acquisition.

Mrs. George Cooling (Hooper), R.F.—A grand flower, large, smooth, well-formed petal, and a variety which will be in the foremost rank of rose flakes.

Rosy Morn (Geggie), R.F.-A large flower, very bright in colour, but with an impure ground colour.

Tom Wood (Geggie), R.F.—A superb flower, broad petal, clear white ground colour, and resembling Sybil.

Lady Mary Currie (Douglas), R.F.—A very large and full bloom, not so bright in colour as some, but it is of a very pleasing soft rose shade of colour, and fine in petal and form.

Tom Pinley (Geggie), s.F.—This flower was dull in colour about Birmingham, but as shown at Manchester was very bright and fine, and

excellent in form and petal.

Charles Henwood (Douglas), P.F.-A grand well marked large flower, with smooth broad petal and pure white ground colour.

Virgil (Douglas), C.B.—A richly marked flower, the white ground pure, of fine form and very promising.

Mr. Tom Lord is sending out four new varieties-Duke of York, Bruce Findlay, Thaddeus, and Arline. The latter is a most promising flower, and I give the following opinion by a good judge who has seen them. He says, "I consider Arline (P. and P.B.) the best I have ever seen, broad smooth petals, very clear white and rich in the marking, very much like Sarah Payne at her best, but an improvement on it, which is saying a great deal. Bruce Findlay (C.B.), is one of the largest flowers in cultivation, and has not a small petal in it, very pure in the ground colour and richly coloured marking; a splendid flower. Duke of York (S.B.) is a large well-built flower of fine form and petal, but the colour struck me as too pale for a good scarlet bizarre. Thaddeus (C.B.) is another large flower, very much like Master Fred in colour and style, but as shown at Manchester was rather rough on the edge and somewhat spotted; but Mr. Lord explained that an accident had caused the roughness, and that it came quite smooth, in which case it will be a fine flower." Mr. George Chaundy of Oxford, who is coming well to the front as a raiser, received a certificate at Oxford for Feron (P.F.), a very fine variety of good size, excellent form and well flaked, with dark purple on a white ground.

The opinion I have expressed as to the flowers named is not given in a dictatorial spirit, but more to draw the attention of amateurs to the newer kinds of Carnations. The season of 1893 was, too, a very trying one for this flower, and every grower could give various opinions of older varieties. On turning to Mr. Dodwell's new list just issued I note that he also introduces some new varieties for the first time; but I have unfortunately not seen them all. Mrs. Rowan is an excellent rose

flake, and Othello should be a very fine S.B. from the description.

Mr. Chaundy has also five new Carnations.

Those florists who are verging upon the threescore and ten years cannot but be struck with the large number of new varieties now annually introduced, compared with what raisers did years ago. I recently turned to a volume of "The Florists' Guide" for 1827 to 29, to have a look again at an admirable coloured illustration of Cartwright's Rainbow (C.B.), a flower which had a great popularity for a long number of years, and in the same volume is a well preserved plate of Strong's Princess of Denmark, which many will remember. Our florists of the present day are careful hybridisers, and such desirable crosses are effected that excellent results must follow.—W. D.

(To be continued.)

ONIONS AT READING.

I WAS specially privileged the other day to see the very fine Onion bulbs which Messrs. Sutton & Sons have at Reading, as representing the qualities of their newer stocks. That of late years there has been a remarkable increase in the average size of Onions, due both to superior cultivation and to selection as well as of inter-crossing for the production of fine sorts there can be no doubt, and although there may be differences of opinion as to the value or usefulness of these huge bulbs when obtained, yet there they are and as such they command admiration. Whilst most of the sorts—and some have bulbs of more moderate size, simply because no form of cultivation can make them unduly large—are represented by fine samples, all very clean and handsome, there is about the collection a feature of unusual interest, and one too much kept out of sight by many Onion growers; good examples also of the produce of the varieties as found under what is so well known as ordinary cultivation. It seems to be proper and honest to show the public what sort of bulbs these newer varieties will produce under what may be termed extraordinary cultivation, and also what is the average product of ordinary culture, as then no one is misled.

It is very doubtful whether we should ever have heard of the large

show bulbs of to-day but for the offering of prizes for them. I could not but be struck with the exceeding beauty with moderate size found

in such splendid stocks as Sutton's Globe, one of the firmest, handsomest, and most perfect brownish yellow skinned Onions in commerce, and in the slightly smaller, but if possible, more even and handsomer Crimson Globe. To my mind these seem to be the perfection of show Onions, hard as bullets, keeping for many months without waste, and large enough for anything. A very superior Onion of a broad flatter character, but with a deep base that makes it weighty, is Sutton's A1; and there are of the brown or almost reddish brown Spanish type some seedlings from a famous Hampshire Onion grower that bid fair to make some of the very finest Onions in commerce. Ailsa Craig is here from the original stock sent out years ago by a well known Scotch house, and which growers generally admit to be a remarkably pure and perfect stock. That result, however, is but the product of that close, keen, capable, and incessant supervision which Messrs. Sutton & Sons give to everything they grow, and which only firms of such position can give.

Onions are very erratic, and can be kept true to form only when the stocks are most rigidly selected and rogued. It is because of lacking this supervision that so many complaints have come to my knowledge of stocks sent out to customers at abnormal prices have proved to be so disappointing. Sutton's Exhibition is another very fine broad variety, looking like a vastly improved form of the Reading, for from all the old and once popular Onion stocks we are now a long way ahead. One great gain arising from them, apart from their capacity to win prizes, the which is, after all, but a poor matter, is that under ordinary culture the weight of crop is about 30 per cent. increase over that of the Onions of twenty years since, and when really good stocks are obtained, the ground is good and free from maggot, there can be no doubt but that even at 3s. per bushel Onion crops may be obtained worth from £80 to £100 per acre, and what other crop can excel that in value? There were also in this collection of Onions two that are of especial beauty and quality for summer bulbing—that is, of course, from autumn-sown seed. These are the handsome tapering Lemon Rocca and Sutton's White Globe. Although in this case these have been grown from spring sowings, yet these, as is the case with all the Tripoli or Italian section, are best for autumn sowing. The White Globe, being so much deeper and rounder than the Lisbon or Leviathan, should make

a most attractive variety for summer exhibitions.

I have dwelt thus largely upon these Reading Onions because it is right the public should understand that Onion stocks, and especially those of exceptionally fine quality, are of no one person's or firm's inheritance. Messrs. Sutton & Sons have been labouring to produce the very finest stocks of Onions, as, indeed, all other things, ever since established as a firm, and what is now being done is simply a part of that great work of continuity in selection and improvement to which there has been no break. It is, perhaps, the case that in regard to Onions the firm has been over-modest. In any case, their present splendid stocks show that if modest, there has been no slacking in

enterprise.—ALLIUM.

UNITED HORTICULTURAL BENEFIT AND PROVIDENT SOCIETY.

As a member of the Committee of the above Society I should like to be allowed to express my gratitude to those gentlemen who all spoke in such an admirable manner at the annual dinner last week, a report of which appeared in your last issue, and with your permission I will

make a few remarks.

The Chairman made an excellent speech, clearly demonstrating the advantages to be derived by gardeners joining our Society. I could hardly agree with him when referring to the rules of the Society. He suggested a graduated scale of payment similar to that adopted by other friendly and insurance societies, so that a member joining at an early age would not have to pay so large a contribution as an older one, because under the existing rules if a young man joins at the age of twenty years, and lives until he reaches the age of seventy, he can then draw his money with the accumulated interest, which would amount to considerably more than double the sum due to another member who joins at the age of forty. It is worthy of note that some of our older members are having interest added to their deposit account amounting to more than their annual contributions.

Mr. Sherwood, who has done such noble work in starting and adding capital to the convalescent fund, made a very practical suggestion when he said gardeners should endeavour to get their employers to subscribe to this fund. I consider it would be to their advantage to support it, because should a gardener unfortunately have a serious illness, when getting better again a change of air might benefit him to such an extent that he would be able to resume his duties weeks sooner than

he could without that change.

The work of the officers and the soundness of the Society was highly spoken of by gentlemen competent to speak on those matters, but Mr. Marshall touched on the weakest point when he spoke of the management fund. The Committee does not feel justified in recommending a further tax on members beyond the payment of their annual subscription of 2s. 6d. to that fund; but if we had 5000 members instead of 500 the annual income to the management fund would be £625 derived from the 2s. 6d. payments, we should then be in a position to provide our excellent Secretary with paid assistance, and adopt other methods of making the Society known throughout the country. The work at present is done in a most economical manner, and the Committee have no power to spend a penny more than is received for the management.

Could not the Gardeners' Mutual Improvement Societies do somc-

thing to help by discussing the objects at their meetings? It is for mutual benefit. The editors of the gardening papers do all they possibly can to make the Society known. No doubt every good gardener reads one or more of those papers week by week, and yet some men say they have never heard of the existence of such a Society. When gardeners join in large numbers and contribute voluntary 1s. per year to the convalescent fund there should then be no cause to make any further appeal either for that or the management fund, and we could look at our motto, "Unity is strength," with much more pride. At present we have in round figures 500 members, and a capital of £8000 invested, or an average of £16 per member.—G. W. Cummins, The Grange Gardens, Wallington.

A WALK THROUGH A DUTCH FLOWER GARDEN.

You dreamt of flower-bells sending clouds of incense up into the sky and over the misty dunes to the turquoise blue ocean. And now the cathedral bells drop their music from mid-air down upon you as you enter the old town. The flower bells fade and vanish when spring and summer are gone; the cathedral bells remain, chanting their hymns summer and winter, day and night. As once again you come to the old town of Northern Holland, it is the song of the bells that greets you first. And listening to it you feel at home.

Dear old Haarlem! not sufficiently fashionable to be oppressive in the autumnal tourist days, but brimful of healthy still-life—what a boon it is to come, in one's manifold wanderings, upon this soothing spot! So easy, too, to reach it from the world's highways in England, and, above all, in London. Truly, it is far more troublesome to go from one side of greater London to the other than it is to go from Liverpool Street to Holland.

From your breakfast-room on board your ship into your drawing-room again, in a train, and look, as you glide along, at pictures of the Dutch school. Ancient and modern they are, at the same time; Rembrandt, the Cuyps and Hals themselves could not have given you them in such perfection as you see them through your carriage windows. Presently, almost too soon you think, you are at the Hague, the delightful Hague with its white streets and palaces, its clear waters, its heroic past, and its unique suburb, sweet old-world Schveningen. Next comes Haarlem, the old town whose history was made 300 years ago. You mean to listen to the voices of the past, as told by the very stones of the Groote Kirk, and by the singing of the bells. But first you must go and see the flower gardens in the midst of which the town is planted.

The Hyacinths have been in their graves these five long months;

The Hyacinths have been in their graves these five long months; the vast tracts of flat sandy soil which they, blooming, caused to look as if the sunset sky had fallen upon the earth, know them no more. The Tulips followed, with their tints of fire; the Pæonies have come and gone; the Amaryllis and all its proud relations are of the past, and now the last of the Lilies are in bloom. The end is near. The stork, the guardian of the bulb field, is on the wing; you look upon it all, and scarce suppress a sigh. Clear water in straight, long canals; grey sand beds, and wafts of pure sun-warmed sea air seem all, at first, in this flower garden at Overveen, just outside Haarlem, owned by Messrs. Ant. Roozen & Son, one of the largest firms of bulb growers in the district. The bulbs are housed during the short period of summer when the Hyacinth and Tulip have been unearthed and shelved in a storehouse which, in its way, is a palace. And when the autumn comes, and the burial of the bulb must be undertaken, the graves in which they sleep are in the loveliest gardens of the Dutch bulb district.

A boat is moored on the canal in Messrs. Roozen's gardens. It is filled with large baskets of bulbs, purple and red and white. Not far off on the sandy beds, the sunburnt gardeners are at work. So, after all, the gardens are not dead. The bulbs are being buried; their most active time begins, for they have to prepare, as soon as the soil covers them, for the great resurrection morning in early April, when their blossoms transform the sandy flats into one of earth's loveliest sights.

"There is a special art in bulb planting, Mr. Roozen, will you tell me how to grow Hyacinths successfully?" "Certainly, I will. It is not difficult nor a long process. Get good bulbs, even though they are a little more expensive than inferior ones. It pays best in the end, and twenty first-rate flower spikes on a garden bed make a better show than twice that number of second or third-rate flowers. Plant your bulbs in good ordinary garden soil, dug up with some inches of well-decayed manure. Then put your bulbs 3 inches under ground, leaving a distance of 5 or 6 inches between them. Put a little sand round each bulb, and cover with soil. That is all, and if you cover your Hyacinth bed during the winter with leaves, straw, or pulverised manure, you will find in March that you have Hyacinths which, for beauty and fragrance, are superior to any other spring flowers."

"Are there any special Hyacinths which are better than others for outdoor cultivation?" "No; we put all the different kinds into one parcel of mixed bulbs, and they are all equally good. But of course some of our customers prefer special kinds. There are a few leading varieties. For instance, if you want a bed of blue Hyacinths in various shades, I should suggest the King of the Blues, Czar Peter, Grand Maître, Lord Derby and Prince of Wales. In red and rose colours, Lord Macaulay, Von Schiller, Gertrude, Norma, Fabiola, and General Pelissier, are great favourites; and the best white varieties are La Grandesse, l'Innocence, Madame Van der Hoop, Mont Blanc, and La Candeur. Then there are a few very fine yellow Hyacinths, such as Ida, Obelisque, and King of the Yellows."

"About the Tulips, Mr. Roozen. I hear there is a craze for Tulips." "I don't know about a craze, but sure it is that the Tulip trade is greatly improving. Especially the rarer and newer varieties are much in request, and single bulbs are sold among growers for 2s. and 2s. 6d. I wili write down a few of the names for your guidance, should you care to try Tulips in your garden. The Queen of Holland is of a rose tint, touched with silver, a charming flower; Pottebakker is true scarlet, and the largest Tulip grown. Jenny and Pink Beauty are rich pink, Joost Van der Vondel pure white, and Golden Queen is the largest of the yellow Tulips. Then there are all the early double Tulips in infinite varieties. They are grown in the garden just like Hyacinths, and I need not tell you what the effect is of a fine Tulip bed or a clump of Tulips among shrubberry in April and May. These flowers require no recommendation."

"But you must have Hyacinths indoors, in glasses and pots. You want to watch them day by day as they unfold. It is an interesting process. First, then, about those in glasses. If you want them to flower about Christmas put them in at once; the rest later on. Fill a Hyacinth glass with pure pond or rain water, and put a few grains of salt in each glass to keep the water clear. Let the bulb just touch the water with its lower surface. Put the glasses away in a cool dark place for four or five weeks, by which time the roots have grown strong. Then bring them into the light in a living room, but do not let them stand over the fire or in a dry atmosphere. Add a little water as the first supply evaporates, otherwise don't touch the bulb; and if the water becomes muddy it must be changed. This is all; for the rest the bulb takes care of itself."

takes care of itself."

"To grow Hyacinths, or indeed any other bulbous plants for spring flowers in pots, you want good light soil; loam, with a liberal mixture of old cow manure, a little leaf mould and sand, is best. Provide drainage, and keep worms out. Then fill with soil, putting the bulb in the centre, so as to allow the point to be on a level with the surface. Press the soil firmly down, water well, and cover the pots in an out-of-the-way corner of the garden for a few weeks. Then, when the roots are well advanced, put the plants in a greenhouse or a room in the house where they are to flower. Place them near the light, keep well watered, and by February and March you will have Hyacinths in perfection."—("Westminster Gazette.")



FRUIT FORCING.

Vines.—Late Grapes.—Although the principal winter supply consists of what are termed thick-skinned varieties, no one knowing anything of the quality of Grapes will take to them so long as Black Hamburghs, Madresfield Court, Foster's Seedling, and Muscat of Alexandria are forthcoming. It is difficult, however, to keep these thinskinned Grapes in good condition. Black Hamburgh and Madresfield Court become red when exposed to strong light or sun after being ripe, while Foster's Seedling and Muscat of Alexandria acquire an undesirable brown colour by hanging for a considerable time after they are ripe. This is due to the changes effected in the berries by the atmospheric conditions. The thin-skinned Grapes must be kept in a well ventilated atmosphere to protect them from shrivelling by too little or of damping by too much moisture. They can be kept on the Vines until the new year, or later where the houses are constructed upon sound principles for the insuring of a regular temperature and uniformity of moisture. But where the houses are not drip-proof or the panes of glass have large and bad fitting laps so that the water hangs in them, and is driven in by wind over the bunches of Grapes, causing them to spot and decay, it is evident that the bottling system must be practised if the thin-skinned Grapes are to be kept sound till Christmas or later.

Of late or thick-skinned Grapes Lady Downe's is the best keeper, retaining its colour better than any other, unless it be Alnwick Seedling, which certainly is an excellent vinous Grape, but it is neither so free bearing or of such high quality as Lady Downe's. Mrs. Pince Grape will shrivel in an atmosphere where Lady Downe's keeps plump and the berries turn an undesirable red colour. Its quality is unimpeachable even when red and shrivelled, and both Lady Downe's and Mrs. Pince have quality which no other late Grapes possess in the remotest degree. Alicante is free from the disagreeable earthy taste of such varieties as Gros Maroc and Gros Colman, and invariably sets freely, finishes well, and is an excellent keeper. It, however, has not the quality of West's St. Peter's, which is not so imposing in bunch or berry, but the colour and bloom amply compensates for any lack of size. It is one of the best late Grapes for quality, and keeping up to February. Gros Guillaume is the most imposing in bunch of black Grapes, and the berries are small, inferior in size to those of Gros Colman, while the quality is better. It requires time in ripening, needing to be started early in spring, and must not be overcropped, or the berries will not colour nor even ripen. Gros Colman is the most magnificent in appearance of all black Grapes. In bunches of 4 lbs. weight and berries 4 inches or more in circumference, well finished in every respect, it is

really enough to tempt anyone to purchase it if they can for its superb appearance. Well ripened, and allowed time to mature before cutting, it loses the earthy taste so characteristic of this variety when fresh ripe or coloured. It requires to be started early, so as to finish thoroughly by September.

Of late white Grapes Treboiano is unquestionably the best when well ripened. It is certainly coarse in flesh, yet firm, crisp, sweet, and requires thorough ripening. Syrian also needs plenty of time and heat, artificial fertilisation, well thinning, and ripening up to an amber colour, then its large bunches are very effective, and the flavour not bad. Calabrian Raisin has fine bunches, berries of good size when well thinned, and the Grapes are sweet when well ripened. With the above or other varieties a supply of Grapes may be had from November to May inclusive at a great advantage to the Vines and to the grower from an economic point of view; but it is still necessary to start Vines of the thin-skinned varieties early, in order to meet the demand for such fruit. It is not desirable, however, to start permanently planted-out Vines in the autumn or early winter, as this is a great strain upon them through their having to make their growth and ripen their crops under disadvantageous circumstances, which soon wears them out.

advantageous circumstances, which soon wears them out.

Earliest Vines in Pots.—Where thin-skinned Grapes are required in late March and April, the Vines must now be started, or placed in position so that forcing in earnest may commence with November. Some persons have a prejudice to Vines in pots, but they produce fruit little inferior in size of bunch or berry to that borne by early forced, planted-out Vines, and it is generally better in quality through the conditions of cultivation being more favourable. Especially is this the case where there is the convenience of affording bottom heat. Success is then certain, the canes being sufficiently strong, thoroughly ripened, duly rested, and of suitable varieties. Of sweet Grapes none excel Black Hamburgh and Foster's Seedling, of Musk Grapes Madresfield Court and White Frontignan. The materials for affording bottom heat—that is, tree leaves and stable litter, should be in due course of preparation. To begin with, the heat about the pots should not exceed 65°, augmenting it by bringing up the fermenting materials to the level of the pots, so as to raise it to 70° or 75° when the Vines are in leaf. Only supply enough water to keep the soil moist in the early stages, as excess of water tends to render the soil sodden and sour, hindering root action. Vines in pots not intended for early forcing should be placed under cover, an open shed with a north aspect being suitable, and the pots protected with hay or straw.

Renovating Vine Borders .- Where the Vines are unsatisfactory no time should be lost as soon as the leaves have effected their functions to the extent of perfecting the buds and wood, and whilst they are still upon the Vine, in removing the soil down to the roots and picking it from amongst them, so as to displace as much of it as possible with fresh. Where the border is very unsatisfactory, and the roots few and deep, it will be necessary to remove all the soil and renew the whole border, commencing with the drainage, which should be clear 1 foot thick, having a layer of fine material at the top, nothing answering better than old mortar rubbish, a 3-inch thickness over 9 inches of brickbats or rubble. The drainage must have a 3-inch tile drain under, with proper fall and outlet, to carry off superfluous water. Two feet depth of soil is ample. Turfy loam, containing a good per-centage of small stones and grit, is unquestionably the best. It should be of medium texture, that overlying clay being better than that overlying sand; but red sandstone formations give most lasting results. Strong loam interspersed with flints or calcareous gravel is excellent. To ten cartloads of turi, cut about 3 inches thick, add two cartloads of old mortar rubbish, one each of horse droppings and wood ashes, and 4 cwts. of crushed ½ to 1-inch bones, mixing well together. The roots should be laid out evenly in the top foot, encouraging those from the collar by laying any that proceed therefrom only just beneath the surface. The whole should be made firm, and the compost be moderately dry. the roots are inside and outside, one part may be done one year, and the other the next, without any danger of loss of crop, by preserving all the roots possible, and keeping them as much as practicable from the drying influences of the atmosphere whilst the work is in progress. Mulch the surface with a little short, rather fresh, manure, preferably horse droppings; outside borders may be covered with sufficient leaves and a little litter over them so as to exclude frost. The work should not be delayed beyond change of colour in the foliage of the Vines for falling. Any Grapes then remaining may be cut and bottled.

Melons.—The season as regards manure-heated pits and frames is at an end. Any fruit yet remaining may be cut, they being full grown, and placed on shelves in a warm airy house. The latest plants in houses will require a night temperature of 65° to 70°, and 70° to 75° artificially, advancing to 85° with sun heat. Sprinkle the paths and other available surface about 8 A.M. and 3 P.M. until the fruit is full sized, when a drier atmosphere will be more suitable. Cut out all superfluous growth or laterals, well thinning the old foliage, so that the fruit may have the full benefit of the autumn sun. Do not allow flagging through want of water, but keep the foliage healthy until the fruit is ripe, as the quality is in proportion to the health of the plants. Maintain a rather high, well ventilated and dry atmosphere when the fruit is ripening.

PLANT HOUSES.

Palms.—All these plants should be carefully examine, and if thrips exist upon them they ought to be eradicated at once. If not destroyed now they will spread rapidly and do much damage to the

foliage. Do not allow the atmosphere to become dry, or else these pests will spread rapidly, and apply sufficient water at the roots to keep the soil moist. The temperature for the majority of these plants may be Seedlings that are large enough can be placed singly into These should be kept in brisk heat and the pots plunged about 60°. small pots. where practicable amongst cocoa-nut fibre refuse where they can enjoy gentle bottom heat. This will keep the plants steadily moving and prevent having to water them too frequently.

Begonias.—Those that have been prepared for autumn and winter flowering and have been in a cold frame up to the present time should be placed where they will enjoy a night temperature of 55°. B. Knowsleyana will soon come into flower and be useful for the conservatory, while B. Ingrami will continue to blossom for a long time. Young plants of this variety that are just rooted should be pinched and placed into 2-inch pots. These when repotted early in the spring will be useful for various forms of decoration. The varieties of B. nitida may be placed into larger pots, and if kept steadily moving will flower freely during the early spring months. B. semperflorens and its varieties will, if given a temperature of 50°, come quickly into flower and continue to grow and yield their large useful trusses for several months. Such kinds as Weltoniensis that are past their best should have less water supplied to them, and then be stored away in a cool dry place for the winter

Amaryllis.—Where these are properly grown, and have been fully exposed to the sun, the bulbs should be well ripened. The pots containing the bulbs may now be stored under the stage of any cool airy Plants that are not thoroughly matured should have every ray of sunshine and a free circulation of air. Do not withhold water from them too suddenly, for nothing is gained by unduly hurrying them to rest. They must, if they are to flower well, be properly matured, and given every chance to store up food in their bulbs before they are completely dried.

Epiphyllums.—Where these have been well ripened by exposure to the sun and have enjoyed free ventilation they would soon come into flower if placed in a temperature of 50°. These plants are particularly effective when arranged so as to stand out of a groundwork of Adiantum cuneatum. Less water will be needed at their roots, but by no means keep them dust dry, such treatment will soon ruin them.

Eucharis amazonica.—It is a mistake to allow many plants of this to come into flower at one time, because very frequently some of the blooms are wasted. Those plants that have finished their growth should be removed from the stove to a temperature of 50°. Cold draughts should be avoided, and the plants must receive less water at their roots; but on no account allow them to suffer by an insufficient They will rest under these conditions, and in a short time, if again introduced into brisk heat, will push up their flower spikes freely. A long succession can be maintained by resting a few plants at a time.

Pancratiums.—Give these plants less water at their roots, but do not unduly dry them so that they lose their foliage. If placed in a temperature of 55° they will be safe until it is necessary to start them again into growth during the early months of the year. When kept in again into growth during the early months of the year. When kept in too much heat during the winter the plants are very liable to the attacks of thrips.

Anthurium Schertzerianum.—Plants that have matured their growth and are required to flower early may be removed to a house in which a temperature of 50° is maintained. If cold draughts are avoided and less water given they will rest perfectly under these conditions, and flower profusely when replaced in a higher temperature.



APIARIAN NOTES.

PRACTICAL HINTS FOR BEGINNERS.

(Continued from page 334.)

BEES sometimes complete swarming in little more than a minute from the commencement, and at others are so tardy that ten to fifteen minutes may be occupied, so few bees leaving that a tyro might not suspect they were going to swarm. Sometimes, too, they cluster and settle in five minutes from the time they commenced to leave the hive, while at others they will fly about for hours, often gathering in many small clusters. If the weather is fine, they will in the latter case come all right, but should it rain there is a great risk of most of the bees being destroyed. A few oilcloths at hand to cover the largest clusters (which the queen, if not present, soon joins) often saves a swarm. The beginner must also learn that joins) often saves a swarm. The beginner must also learn that many swarms leave without the queen accompanying them. In that case they sometimes join other hives, or return to the parent one. The appearances of bees on these occasions must be learned by experience. To describe the matter properly on paper is scarcely possible.

When bees gather on a low bough or bush they may be at once shaken into the swarm catcher, or if they are on the ground it may be placed over them, when in a short time they will ascend into it, accelerated by a free use of a carbolised feather tied to the end of a long rod. These carbolised feathers will dislodge bees from thickets, crevices, roofs, and other inaccessible places; in fact, by judicious management they may be almost made to swarm in the very place wanted. Bees sometimes settle on trees at a great height, and on branches that cannot be cut. Wherever the swarm catcher can be applied, from the ground or by the aid of ladders, it ought to be adjusted to the proper height, held over or under the bees as is most suitable. In the latter case they must be shaken into it by a helper or by the aid of a shaker, a hook fastened to a pole or wire. In the former instance the carbolised feather hastens the ascent of the bees, and when all or most of them are in and covered with a cloth the hive may be lowered to the ground. On reaching the ground the hive is at once inverted, and after standing a few seconds to allow the bees time to settle, raised a little to allow the flying bees to enter.

When bees settle in inaccessible places on trees, whether the branches may be cut or not, the hiver may be applied successfully by being provided with cords, a piece of hooping or other material having a hook on one end, and provision at different heights for fastening a pulley, which is suspended so that it comes under or over where the bee-keeper wants it. For example, if a swarm is settled a long way out from our reach, the hook with the pulley and cord is hung directly where it is most convenient, the swarmcatcher is then drawn up right under or over the bees, and is held or placed in proper position by the aid of a forked and pointed hook, when the bees may be either shaken or driven into the swarm catcher. When the branch may be cut with the last-named hook, push the cord forward with it till the loop hangs free. Then take hold of the loop with it, pull it towards you, pass the end of the cord through the loop, and draw tight. Now pass the other end of the cord through the suspended pulley and hang it in position, when the bee-keeper may venture from his safe standing near the bole of the tree to the point where the branch has to be cut, after which, by the aid of the hooks, the bees may be guided to an opening where they can be lowered to the ground with safety. The above plan is a good one, and is far more easily performed than it appears to be on paper.

On page 344 a slight omission occurs in the last paragraph. It should read, "As a substitute for the safety cages those sent from Austria cannot be surpassed," and then follow on as printed.—

A LANARKSHIRE BEE-KEEPER.

(To be continued.)



*All correspondence should be directed either to "THE EDITOR" or to "THE PUBLISHER." Letters addressed to Dr. Hogg or members of the staff often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Bee subjects, and should never send more than two or three questions at once. articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post, and we do not undertake to return rejected communications.

Insects on Vine (G. G. K.).—The insect is a species of Tetrix, closely allied to the grasshopper proper, the section Gryllina, and is an undescribed (if British) species. It no doubt lives on the leaves of the trees it is found on, for it belongs to the same family as the locusts; but it may only be on the Vine now tor the purpose of depositing its eggs in the crevices of the bark. Whether it is injurious to the Vine or not we are unable to say. This, however, can easily be ascertained by careful observation. If you find such to be the case we should be obliged by specimens of the leaves eaten, also fresh ones of the insect

Flowering Plants for Growing Under Beech Trees (J. C.).

—We have had very little success with Winter Aconite, Snowdrops, Daffodils, and similar bulbous plants that do fairly well under trees, for the roots of the Beech trees form as complete a returned and the roots of the Beech trees form as complete a returned and the roots of the Beech trees form as complete a returned and the roots of the Beech trees form as complete a returned and the roots of the Beech trees form as complete a returned and the roots of the Beech trees form as complete a returned and the roots of the Beech trees form as complete a returned and the roots of the r the roots of the Beech trees form so complete a network and run so near the surface, combined with the dense foliage, as to prevent the growth of

plants beneath. It is even very difficult to keep the ground covered with grass, and still more so to find thriving Ivy on the trunks of Beech trees. The Clematis belongs to the Jackmanni type. It is not a species, but a florist's variety, and can only be named by comparison in a large trade collection of the flowers.

Poetry (*Planta*).—We meant exactly what we said in our reply, and if you cannot understand it we cannot help that. We fail to observe your name and address, even in the letter written after our special intimation. We exist to give information on gardening subjects, and not for hunting up books and authors of certain "lines" that are sent to us from time to time anonymously.

Mina lobata (A. F. Grace).—The flower sent is Mina lobata. This plant was originally introduced from Mexico in 1841, but it either died out or for a long period was so exceedingly scarce as to be practically unknown to the majority of cultivators. A few years since, however, it was re-introduced, and has since become generally grown. It is a half-hardy annual plant, and therefore dies on the approach of frost. Propagation is effected by sowing seeds in February or March, placing them in a pot or pan filled with light sandy soil, and put in a warm greenhouse, stove, or frame on a hotbed. When the young seedlings are about 3 inches high transfer them singly to small pots and grow in an ordinary greenhouse until the first week in June, when plant them out against a south wall as you did last spring.

Galls on Oak Twigs (W. H.).—The fresh growths of young Oak trees are frequently tipped with galls (so called) of a gall midge (Cecidomyia querci), the female laying her eggs in the terminal bud of a twig, the larvæ hatch, and the result of their operations is the formation of a gall, which bears a strong resemblance to a cone in its form and in the overlapping of the leaves of which it is composed. Among the leaves of the cone the larvæ of the midge may be found. The galls are usually solitary, though two, or even three, may be found side by side at the tips of the twigs, the terminal buds of which they destroy. There were no larvæ in the cone, therefore we are unable to say positively whether the cone was due to the gall midge or not, but it differs from the Artichoke gall in having a solid centre. The Artichoke gall, formed by Aphilothrix gemmæ, very much resembles a diminutive Globe Artichoke, and is about 1 inch long, formed of scales, with a central chamber like a small acorn. This is a true gall, but we failed to find the chamber mentioned, therefore we name the two forms to enable you to arrive at a satisfactory conclusion by the examination of other specimens.

Exuberant Young Fruit Trees (Inquirer).—The trenching and heavy manuring two years ago is no doubt the cause of the trees growprune the Apple and Pear trees more freely than the Cherry and the Plum. We should not shorten the roots of arms of the cherry and the two-thirds the distance from the stem all round that the branches extend, cutting off some of the thickest roots there, while all may be detached by taking out a trench at the point the branches cover. It is probable that the trees have straight down roots; these must be sought for and severed at 15 to 18 inches beneath the surface. The trees also should have the heads thinned, leaving the main branches near the stem so that a man can get his body between them after they have grown out 3 or 4 feet, and nowhere nearer than a foot apart, cutting any side growths, but not spurs, to about an inch of their base. pruning should precede or immediately follow the root-pruning. be useless, however, doing any of these things unless the ground is kept firm and not more than hoed or pointed over as far as the branches extend, nor ought the ground to be cropped with vegetables to a similar distance.

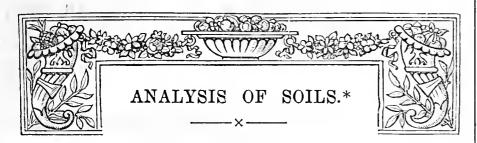
Lycium europæum (P. W.).—This is the name of the plant of which you send a fruiting spray. The hedge, which you say is full of it, must be highly ornamental. The glistening scarlet fruits, three-quarters of an inch long, and three eighths of an inch thick, are produced in pairs almost close together all along the spray. The shrub is a native of the South of Europe, but appears to have become naturalised in some parts of this country. Loudon in his "Encyclopædia of Trees and Shrubs" describes it as "valuable for covering naked walls, as it grows with extreme rapidity, and flowers and fruits freely in almost any soil or situation. Established plants in good soil will make shoots 10 or 12 feet in length in one season, and the plant when trained against a house or high wall will reach the height of 30 or 40 feet, as may be seen in some courts in Paris. Trained to a strong iron rod to the height of 20 or 30 feet, and then allowed to spread over an umbrella head, it would make a splendid bower. Its shoots would hang down to the ground and form a complete screen on every side, ornamented from top to bottom with ripe fruit, which is bright scarlet or yellow, and very showy; with unripe fruit, which is of a lurid purple; or with blossoms, which are purple and white."

Cucumber Plant Diseased (T. L.).—The portion of stem and root is badly infested with root-knot eelworm (Anguillula radicola, or Heterodera radicicola of Müller). It was first discovered by the late Rev. M. J. Berkeley in this country, and was figured by Mr. W. G. Smith in the Journal of Horticulture of July 26th, 1877; but it was known to gardeners as the "sudden collapse" disease many years previously, and was treated of by the late Mr. R. Fish from a practical point of view.

The eelworms in your specimen are mainly confined to the root portion —deformities and nodules, and are quite beyond calculation in number. A few only were found in the stem, and those in the portion which had been buried in the soil. The eelworms are in all stages, from the egg or cyst onwards, and are remarkably fine specimens. They are able to subsist on decaying tissues, and perhaps find enough decomposing matter in the soil to live upon and even multiply in after the destruction of the This is mentioned because the eelworms are said to live host plants. several years in a passive state, and become resuscitated on the crop they thrive upon being again grown on the same ground. We find, however, that the eelworms soon collapse on a dry glass slide, even whilst under microscopic examination, and we cannot accept the dictum that they have the power of resuscitation. Besides the eelworms we found an innumerable host of other bodies in the stem portion. They are bacterial, and in a fully active state; but what part they play in the disease we are unable to say on account of the decayed condition of the tissues of the plant. There is no remedy for either the eelworms or the bacteria known at the present time, though there are many substances which will kill both, but they are fatal to the hosts as well as The only thing we can suggest is to burn every part of the plants, clear out the soil and fermenting material, if any, and commence again with fresh soil and plants. If you use turfy loam char it slightly over a wood fire before use, or in other words, heat the sods so that the outer surface while they are on the fire is hotter than the hand The eelworms have been introduced with the soil, the can bear. manure, or water, generally the two first.

Diseased and Scabbed Potato (J. J.).—The tuber is in a very deformed, diseased condition, a veritable hotbed of disease-producing micro-organisms. The Potato proper is infested by the mycelium of the Potato fungus (Phytopthora infestans), the spiral threads enclosing the resting spores being well pronounced, and also the threads or mycelium of Fusisporium Solani, and is the early condition, Periola tomentosa, from which the Fusisporium at length arises, for there is neither the outgrowths (spores) nor resting spores. The latter fungus F. (Hypomyces) Solani is considered to be the cause of "dry rot" in Potatoes. other parts of the tuber are badly scabbed, and some parts in a state of decay bordering on putrefaction and swarm with Bacterium navicula and Baccillus amylobactor, whilst the exciting cause of the worts is due to the mycelium of the scab fungus (Tubercinia scabies), and the "fruits" are distinctly visible (under the microscope) emerging through the stratum above the mycelium. There is also the spawn of some fungus outside the scabbed portion of the tuber, visible to the naked eye, but we failed to discover with a powerful lens the insects you found with a pocket lens, yet we have no doubt of your having seen them. They are probably Lipeira femetaria. It is very common and may be found in damp earth throughout the year, feeding upon Potatoes, Carrots, or other roots, especially where distorted or scabbed. ceding is not all, for the tuber had been eaten by some grub, and, strange as it may seem, that part had not been molested by any of the microorganisms. The gnawing had manifestly been done by the grubs known as "leather jackets" or larvæ of Tipula oleracea or daddy longlegs. You ask what we recommend to prevent a recurrence of the trouble next year. First of all a change of ground for the Potatoes, or if that is inconvenient dress the land now with fresh gas lime, using 28 lbs. per rod (30 $\frac{1}{4}$ square yards), spread it evenly on the surface and leaving it there for a month or six weeks, then you may manure the ground if necessary, dig and throw it up roughly for the winter. In March, or earlier if the ground is in good working order, level it with a fork, applying a dressing of quicklime at the rate of a peck per rod, and point in lightly. At the time of planting use the following chemical manure: Mineral superphosphate, 2 cwt.; kainit, 1 cwt.; sulphate of iron, ½ cwt.; mixed, sprinkling it all over the ground at the rate of $2\frac{1}{2}$ lbs. per rod, before covering up the sets. If the ground is not manured in autumn, add 1 cwt. of nitrate of soda powdered to the above mixture, and employ $3\frac{1}{4}$ lbs. per rod of the full mixture. A change of seed is imperative.

Chemical Manures (F. J.).—What is the use of our advising you if you do not test the advice, but instead suggest some other formula as better than the good and simple one we recommended of ingredients easily procurable? If you wish to have a mixture adapted with scientific exactitude to your soil you must send a sample of the soil to an agricultural chemist, and ask him for a quantitative analysis. He will then tell you, as we could, the proportions of lacking ingredients to add for rendering the soil fertile. This you will find a costly process, and in our opinion it would be of no practical use in your case; still there are persons who like to indulge in the luxury of scientific investigation, and are willing to pay for it, and in this reference we have no objection to others doing what we should not do ourselves. If you like to use costly potassic nitrate, or in other words nitrate of potash, or, as you request it in "plain English," saltpetre, as a manure, you can substitute it for kainit; but as you seem particular about "plain English," it will save you and ourselves some trouble if you will try and make your questions plain and your object comprehensible. You did not mention the subject of fruit trees cankering in your former letter, but simply asked for a general manure for "crops, fruit trees, &c." How could we know the "&c." meant canker? The convenient symbol may mean anything or nothing, and is far too glibly used. The most careful men and best writers never use it, and you do not often see it in the letterpress of the Journal of Horticulture. It appears you had the canker of fruit trees in your mind when writing, and signified the same by an "&c." We gave an answer to the question that you really



REMEMBER being almost bewildered by a sentence in one of Darwin's books. "Few plants," said he, "grow on the soil or in the locality best suited for their requirements." This seemed for the moment contradictory to his whole hypothesis, but carefully thought out it is only a seeming paradox, not a real one. Its parallel in human sociology is, "Few men live and work under circumstances they are best adapted for." We should all be much better than we are if our environment were better. We can all of us imagine a set of circumstances under which our natural virtues would flourish exceedingly, and our no less natural vices diminish. We, like the plants Darwin spoke of, grow and flourish as we best can, where we are allowed to do so. We are where we have drifted to by the exigencies of the struggle for existence. Plants grow where they can. Heather grows on the moors, not because it could not grow on better soil, but because, on better soil, plants that could not grow on the moors can grow there, and do so, choking the Heather at its starting point. I do not know if Heather is the best illustration I could have given, but it will serve. What do you think Heather would develop into if tended and nursed under the circumstances which, if we knew them, were best fitted to it? Rhododendrons grow in the Himalayan districts into huge trees—lurid masses of blazing glory, as large as the Major Oak at Clumber; and who shall say our humble Heather might not develop into beauty as great? Mignonette, an annual plant, can, by care and culture, be made to grow a bark, and be developed into a tree strong enough to brave an English winter in the open. Nay, of what can be done we know nothing. Our wildest dreams, of necessity, must fall far short of realising the fathomless stores of energy and inherent power of development in organic life. The great chemist Nature had behind her the infinite power of infinite wisdom, and that which these thought fit to start cannot but be worthy of the starter; to say otherwise is to make a statement not logically thinkable. With infinite potentiality, then, in all organic life there is ever-abundant room for greater and still greater amplification of result. Every step upwards points with increasing certitude, to another still higher, the way to which lies through patient study of Nature. All study of Nature is ennobling, lifting our sordid souls from the grovelling selfishness of life as it is to the altitude of life as it should be.

I know nothing of Chrysanthemums. I know that "chrysos" is the Greek word for golden, and "anthemon" is the Greek word for flower, so I presume the original flower was yellow, but I think they are now all the colours of the rainbow, and might very well be rechristened "Irisanthemum." This is all I do know about them, and am not at all sure that I know this much with certainty. The Chinese get Roses as large as a dinner plate by resolutely nipping off every bud but one, and I know the Japanese can get a whole forest of trees in full leaf and form on the same dinner plate by as resolutely pinching off every tendril as fast as it forms, and I do not know any reason why you should not grow a Chrysanthemum as large as an umbrella, or as small as a Forget-me-not if you wish to do so.

But what is soil composed of? This is a question oftener and much easier asked than answered. It is broken down, storm rent,

No. 696.—Vol. XXVII., THIRD SERIES.

rock, and broken up clays, the débris of sandstone and limestone, the sediment of rivers, the forces of flood and fire, earthquake, and thunderstorm, the wear and tear of traffic, meteoric showers, the dust of broken up worlds wandering in space, all contribute their quota to the soil. Newspaper correspondents tried to make merry over the non-arrival of a comet not long ago. It does not strike these would-be humourists that the comet is very largely composed of dust, and if one struck us we should only consider it an unusually dusty day. Whence comes the sand and dust that buries cities such as Carthage, Troy, Babylon, and Nineveh, Palenque, and Copan? Years ago Russia, with her usual honesty, bought territory from the Kirghiz chiefs at a price the Russians fixed, and collected "voluntary" signatures by the playful flourishing of rifle and sword, and allowed the sellers to build Russian forts on the territory so sold, finding the bricks free of cost to the buyers. A bargain you will admit; a trifle one-sided, perhaps, but distinctly sweet to the Russian palate, if not to the Kirghiz taste, and you know it is difficult to please both sides when a good bargain is made. How was it these perspiring Kirghiz brought better bricks than they or the Russians knew how to make? The Russians, very scientific and inquiring people, wanted to know, and the unscientific Kirghiz did not want to tell, but the Russians know several sciences, one of them relating to the conversion of silence into eloquence by the application of stout sticks to the soles of tender feet. By these means they got into conversation with their brickmakers, and discovered that the particularly good bricks had been found in the soil, and were the top of a cupola. Well now cupolas mean cities not very far away, and there are no doubt buried cities in abundance in Siberia. The Kirghiz steppes are full of tombs, evidently tombs of chiefs buried in their war trappings, and their trinkets of gold and silver beside them, and thousands of such tombs mean many cities; they are not on the surface, and are therefore probably beneath it, as the cupola was, and the blowing about of dust from place to place does not quite account for buried cities. There must be continuous showers of meteoric dust, which our earth receives in her rush through space.

We must then consider soil partly, and in large part the ruins of former worlds. Liebig, the father of agricultural science, as he is very rightly named, makes much of humus and humic acid in the soil, but these are but the relics of decaying vegetation, and their fermentations. To the kindly embrace of Mother Earth go back all vegetable and all animal life; and it may be taken as an axiom, that anything that has come out of the soil acts the part of good manure on being put back into it. Cabbage or cow, mast or man, duckweed or dude all alike spring from the soil, and returned thither revivify and renew the face of the earth. Nature is restless, incessant change is the one persistent law of all life. A generation rises, flourishes and decays, and in its decay nourishes the following generation. Herbert Spencer thinks Nature seeks stable equilibrium, and it may be so. It is nothing paradoxical to say she seeks it by non-stability, and if she seeks at all it can only be by non-stability. Rest is brought about by unrest, peace is sought by means of war. It is inevitable that if Nature is seeking aught, it is perfection. As the working power of All Good, can she seek aught else? As the agent of All Wise, can she seek anything? Granting that she seeks perfection, can perfection be reached? Our mental fingers fail to grasp the idea of a time when nothing can be improved. Should that time arrive, it will be the Nirvana of Buddhism. Mental effort must then cease, and a dull consciousness be all and in all to all the sons of men. But we are getting away from the soil to the cloud, let us get back to the earth; but we shall land in the clouds again and again, for all the paths human thought can travel lead thitherwards, and lose themselves and us also in the impenetrable folds of Nescience.

To analyse soil is at present impracticable. We can analyse flowers, tubers, plants and roots, but to do so we must first get rid of the water. Water plays a strangely important rôle in this

^{*} Read by MR. W: PICKARD at Sheffield. (Concluded from page 348.)

planet of ours. An 11 stone man is 8 stones water; a Chrysanthemum is rather more watery still, a Potato is 75 per cent. water, a Turnip is nearer 90 per cent. Is it not surprising what water can do—whether with whiskey or without it? I think it was Dr. Frankland who took the trouble to analyse a jelly fish in an oven. It weighed 6 lbs. to begin with, and when all the water was gone there was just 16 grains of something left. This water is not usually considered a sensient thing, but it gets very near it. That 16 grains of something, phosphorus and sulphur and carbon and some other elements, had managed, somehow, to make more than half a gallon of water sensient for the time being. A tree is from 30 to 40 per cent. water at full growth. When you get a 10 oz. Chrysanthemum you will find nearly 9 ozs. of it water.

When you have reduced your plant to ash you have dispersed its water; some carbonic acid, a little sulphur has perhaps been sublimed, but these are of no importance to the analyst. The future plant can get those items from the atmosphere. What is left is the potash, soda, iron, magnesia, and lime, phosphates, sulphates, and nitrates, and it is these you have to add as manure in the same proportions as you find them in the ash. If the ash contains 9 parts potash to 3 parts soda you gain nothing (but the loss of the soda) by adding more than 3 parts. The coming plant cannot take up more than 3 parts of soda to every 9 parts of potash it can find. If you forget to put the 9 parts of potash in, and there happens to be none in the soil, you cannot get the plant at all, no more than you can build without building materials. It is the same with all the other constituents. They will make a plant in the proportion specified, and no other. If suppose of seven of the constituents you give enough for a thousand blooms, and of the eighth only enough for one, you will only get one. The other constituents are idle, waiting for their absent comrade; they can do nothing without him. It is not at all surprising; it cannot be otherwise.

It would be useless to tell you how to ascertain what amount of each chemical there is in the ash. It would take hours to do that, and it would not interest you. If you wish to learn how to do it obtain some text book on chemistry, and plod away at it till you master the subject. There is no royal road to chemistry. Hard study and long practice is the only way, and you will find disappointment thicker than you ever found Blackberries. The facility with which you can make a mistake is surprising.

On the suitability of a soil for Chrysanthemums I had better not enter. If you do not know more than I do on that subject you will find I should say breaking stones as an industry considerably the better of the two occupations. As a manure for Chrysanthemums I should say phosphate of soda and saltpetre (with a little sulphate of iron in it if you want colour) is as useful as anything, but I am rather inclined to think horse manure is good.

In conclusion let me say this. If the love of flowers and the love of Nature in her beauty be not worthy of man, then flowers were not worthy of creation. If the gratification of the human eye, on which Nature has expended so much ingenuity and furnishes with such complex and marvellous machinery for the detection of beauty be not thought worthy of study, then Nature herself has been and still is working on the wrong lines.

If our sense of the beautiful is not to be gratified why have we such a sense within us? The lover of flowers is usually a kindly man, a man with a good, sound, reasonable sort of a soul in him, he cannot well be wholly base and vile. In his leisure hours his plot of land would not entice him away from plotting evil against his fellows. Amid his flowers, emblems of innocence and purity, he cannot be altogether unmindful and unthoughtful of the lessons and sermons they hourly preach. They must appeal to some cognate, moral beauty of character, concealed somewhere within him. The orderly and symmetrical development of bud and petal must convey some lesson to heart and brain, and in some sense sways his steps through life. Love of Nature argues at least one soft and tender spot in the human heart, the sordid and

mean have not absorbed all its faculties, or closed mental eyes to all that is sweet and pure. His thoughts must, at times, rise above and soar away from the dissonant clash of contending interest, and now and then, at the least, lift him from the contemplation of his flowers to that of the Great Flower Grower, the Original Gardener, the source and fountain of their being, and of ours and our respective places and duties in the drama of life, and to the still greater question, as to whether we fill our part half so well as they fill theirs.

THE TREATMENT OF OVERCROPPED FRUIT TREES.

IF people would follow the commendable practice of pruning every year, be it ever so little, we should not see orchard and garden trees, as we do this year, subjected to the bearing of weights in excess of their strength and crushed under a preposterous mass of fruit, which by its very superabundance loses both in appearance and in quality. The trees thus maltreated cannot fail to exhibit symptoms of it for many a day in their health as well as in the matter of their product. There is, however, an antidote for every ill, a recuperative for all exhaustion. On this occasion, therefore, it becomes us to resolve and act promptly. We accordingly prescribe a combined treatment con-

sisting of pruning, dressing, and feeding.

PRUNING.—In September or October, before the fall of the leaf, administer a severe but judicious pruning to the branches and boughs which have borne an excessive amount of fruit. If the pruning is too short it will have the effect of dangerously mutilating the old wood and depriving the head of the tree of the sap furnished by the last shoots. If, on the contrary, it is too long, it will be inefficacious. The happy medium can be estimated according to the age and vigour of the tree, a young and vigorous tree being able to bear more drastic treatment, though we may remark that it is not common to meet with an excess of production under such circumstances. For the rejuvenating or renewing of the crown it will be sufficient to preserve in the frame-work of the tree its pyramidal, spherical, or diffused aspect following its first direction should this be considered desirable. The main branches should be taken off with the saw, pared smooth, trimmed, and daubed with clay. The pruning-knife or caterpillar-cleaner will do to clear off the flower-bearing shoots, spurs, and other elements of fructification. Here the more crowded ramifications should be relieved with the pruning-knife; elsewhere they should be shortened upon a live bud, while none need be lopped off unless they be completely worthless. It would be a wise precaution also to look over the shoots of the year which might spring up from the midst of the general lassitude, pruning the longer but leaving untouched those shorter ones which are likely to be the first to vegetate.

The Apricot, the Plum, and the Pear are the fruit trees which present the most striking examples of over-production. In the case of the Cherry the traces are not so marked. Its fruit, though plentiful, was not so excessive as to seriously exhaust the tree, and the two or three months of summer remaining sufficed for its recuperation before the winter time. The Apricot easily develops buds on the old wood, but this is no reason for mutilating the large branches too low down, as the new shoots would appear in an irregular manner, and might be killed in their first season by gum

or by heat.

This pruning of the principal organs of the head ought to be done above a certain number of wood or fruit branches. former of these should be shortened on the shoots, and the latter on the living bud. It is almost only in the region of Southern France that we can safely allow a more energetic yield of the Apricot, the Almond, and the Peach, in the open air. We are speaking especially of the out-of-doors tree trained as standard, half-standard, and dwarf. The Plum will keep the most of its fruiting shoots, whether pruned or unpruned; but it should not be forgotten in diminishing and reducing the substance of its framework in length that the latent buds are less numerous upon this sort The Plum presents an advantage which we also find in the Pear and the Apple, namely, the grafting of the main branches which may have been injured by accident. For the Plum we advise cleft grafting in autumn before the stagnation of the sap. will give an opportunity of modifying the variety of the tree by the grafting of a more agreeable sort (of scion). If the graft should fail it can be repeated in spring time either in the cleft or at the crown. The pruning of the original branch work will then be deferred until the rising of the sap, and practised gradually as the grafts develop. Pippin fruits, such as Apples and Pears, should be severely pruned, always in the autumn.

DRESSING.—This consists in cleaning with a brush and washing

the aërial parts of the tree. Furnished with a rough brush or a scraper rub off the moss, lichen, scales, and old bark which impede the regular action of the organs, and serve as a shelter for insects; give also a good cleaning to all cracks, cavities, and canker spots. The stem and branchage being thus refreshed, a general bathing should complete the hygienic process. The whole should then receive a coating of lime mixed with sulphate of iron and a slight

admixture of other and clay.

FEEDING.—In addition to the above we would recommend the following measures: -Clear away the earth around the tree to a distance of about a yard and a half, and excavate the soil to a sufficient depth, so as to expose the chief roots without injuring Fill in the trench with a compost taken from the kitchen garden or field, mixing with it decomposed night soil, river sand, sweepings, leaves, scraps, rags, pond or stable slops, and other animal and vegetable débris well reduced. Lastly, water copiously with liquid manure. This triple operation should be performed at one time—before the end of winter. When the sap has begun to rise in the spring it will be beneficial to work the soil, so as to admit the air, and trim up any little irregularities of growth.-CHARLES BALTET, Troyes.

HELIOPSIS SCABRA MAJOR.

THIS is a beautiful autumn-flowering composite, and one that will doubtless become a favourite in many gardens. Several bunches of blooms of Heliopsis scabra major were exhibited at a meeting of the Royal Horticultural Society on September 26th by Mr. B. Ladhams, High Street, Shirley, near Southampton, and for which the Floral Committee adjudged an award of merit. The deep yellow flowers are from 2 to 3 inches in diameter, and have a slightly conical disc. For the embellishment of gardens this is a most desirable plant, which requires similar treatment to the perennial Sunflower. Fig. 55 represents the flowers.

SUCCESSFUL LEEK CULTURE.

LEEKS are favourite vegetables in many British gardens, but their culture does not generally receive the attention it merits in the South of England, for of all the Onion family a well grown Leek is one of the most wholesome and delicious we can have upon the table. In Scotland Leeks are cultivated with a considerable share of success, in fact their importance is recognised in gardens of all sizes, and either there or in the northern counties of England can this vegetable be seen in perfection. With the counties of Durham and Northumberland we are most concerned in the present article, because in few districts is so much interest taken in Leek culture as there, especially in the Valley of the Tyne and the immediate neighbourhood of Newcastle and Gateshead. During the concluding weeks of September and throughout October scores of shows are held there entirely devoted to displays of this vegetable, where hundreds of growers meet in friendly rivalry to test the respective merits of their products. For a period of several weeks considerable excitement reigns, the successes of wellknown growers form the chief subject of conversation, and the qualities of the winning exhibits are most keenly criticised.

Much interest is imparted to these shows by the fact that the prizes almost invariably consist of articles useful for the homes of the competitors, and as on the day of the show all the prizes are displayed in the room they alone furnish an exhibition of an exceptional character. They comprise elaborately ornamented clocks, tea and dinner services, silver teapots, copper kettles (in great abundance, as this is a favourite prize), blankets, silver spoons and pipes. Sometimes a money prize is offered as the first award, or it may appear in the notices very temptingly but indefinitely as "a purse of money." Every exhibit receives a prize, and sometimes as many as 130 are thus awarded.

It may be imagined that the task of the judges is not exactly a sinecure, when it is stated that the exhibits have all to be arranged in strict order of merit from 1 to 130, the value of the prizes being graduated in proportion. The work must be performed with the greatest possible care, as every one of the competitors is no mean judge of what a good exhibition Leek should be, and requires ocular evidence why No. 99 is placed before No. 100. If the necessary difference cannot be discerned the discussion amongst these hardy north countrymen becomes rather lively, and the judges would find it more convenient to be out of the way. In the south of England judges of great experience frequently complain of the difficulty they find in selecting five or six prizewinners from twenty exhibitors, but what would they say if they had to award 100 prizes in order of merit? The task seems to be almost impossible, and no doubt there are sometimes cases open to question, but these are rare, and as a rule when competent Leek

judges are employed, and they have plenty of time for their work (they sometimes take three or four hours), there is little cause for complaint.

Three Leeks are invariably required from each exhibitor, and the utmost endeavour is made to obtain these exactly alike in appearance, length of blanching, and diameter. It is common to see specimers as much alike as if they had been cast in one mould, pure white, 12 to 15 inches long, and 2 to 3 inches in diameter. The principal show is held in Bensham during October, and for the three days the place is visited by thousands of men, some of whom come a considerable distance, and at night the crowd is so great



FIG. 55.—HELIOPSIS SCABRA MAJOR.

that they have to be let in by batches, the approaches are blocked with visitors, and constables are especially appointed to regulate the traffic.

The majority of men engaged in this work are cottagers, pitmen, mechanics and other workers in the district. The method of culture is especially interesting as showing what can be accomplished by close care and attention by men who had no training in gardening, and who often know little respecting it beyond this matter. They make it a hobby, however, like the Gooseberry growers of Lancashire, and with more useful results, for one of these prize Leeks, or indeed any of them, is an important article of food where good vegetables are never too abundant.

All the principal growers save seed from their best selections, and each therefore has a special strain of his own with which he will not readily part, and which he considers to surpass all others in some characters that he can readily point out.

The seed is sown early in the year, usually at the end of January, during February, or a little later. It is only from the earliest

sowings that the best results are expected. Light soil is employed for filling the pots rather firmly, and the sowing is made in a frame, or where that luxury is possessed, in a small greenhouse. As soon as the seedlings appear, and are large enough for the operation, they are placed singly into small pots and afterwards very carefully transferred into large-sometimes 12-inch-pots, in which they remain until planted out. While under cover they are watered when necessary, and ventilation is freely provided in fine weather, but at the same time every care is taken to avoid any kind of check. It is the same in the shifting or repotting, as the Leek is very sensitive to root injury, as all who are engaged in the ordinary outdoor cultivation know quite well.

Trenches are prepared by taking out the soil $2\frac{1}{2}$ feet deep and wide. The lower part is filled with stable manure, and over this is placed the well-prepared fine rich soil in which the Leeks are planted during May. The sides of the trenches are boarded, and fine soil is added as the plants advance to insure the due lengthening

and blanching of the stems.

Two rows of Leeks are placed in each bed, 1 foot between the plants, and in the centre are inserted several small earthenware drain-pipes reaching to near the base of the soil just above the manure. To a novice the object of these pipes is rather puzzling, but their use soon becomes apparent. When the Leeks are advancing in growth they are encouraged by liberal applications of liquid manure, sheep's manure being preferred when procurable. avoid saturating the soil around the delicate stems, and thus causing discolouration, the liquid is poured into these pipes so as to reach the roots direct.

As the exhibition season approaches the plants are carefully examined, and the most promising receive special attention. The soil is raised round their "necks," and cotton wool is placed in the axils of the lower leaves to prevent moisture accumulating and causing decay. Then when lifting time arrives the stems are well washed and bad leaves removed, but after the cultural period is passed Leeks undergo comparatively little dressing to fit them for the shows, and if it is evident that much manipulation has been practised it tells against them for the better prizes.

The men engaged in this work derive much pleasure from it, and also some advantage, for they all grow many more than are needed for showing, as they are greatly appreciated in their homes, and some gain far more than they expend by the sale of surplus plants.—WANDERER.



A WARNING TO ORCHID HUNTERS.

In consequence of the depredations of Orchid hunters and other collectors, Rajah Brooke of Sarawak has, it is said, decided to prohibit the collecting of natural history specimens within the He has, moreover, taken stringent measures with a view to preserving the fauna and flora of the country, many species of which were in danger of becoming extinct owing to the ruthless manner in which they were being destroyed.

ONCIDIUM SANDERIANUM.

According to the "Garden and Forest" this is an introduction from Venezuela, where it is found growing at a great altitude, and at a very low temperature. It is said to be a free-flowering species, producing thickly branched spikes, which are covered with rosy-red blossoms; in form somewhat reminding one of Odontoglossum Pescatorei. Several plants of this Oncidium have lately been sold at auction. It is in the way of O. zebrinum in habit, but the pseudo-bulbs are more wrinkled and distinctly egg shaped. Apparently it is new to cultivation, and from the collector's description it ought to prove a good garden plant.

CYPRIPEDIUM H. BALLANTINE.

Those persons who have seen this beautiful Cypripedium will agree with me that it is one of the best hybrids in cultivation. It was raised by Messrs. J. Veitch & Sons, and is the result of a cross between C. purpuratum and C. Fairieanum, the latter being the pollen parent. In habit the plant is dwarf, out the flowers are exceptionally noticeable. The dorsal sepal resembles that of C. purpuratum, but also possesses characteristics of the other parent. The petals and lip are very distinct. So far as I have seen this hybrid has not yet found its way into collections generally, but this it will doubtless do in due course.-C.

ORCHIDS AT WOOLTON WOOD.

THERE is at present in flower at Woolton Wood a curiosity amongst the Orchid family, viz., Lissochilus giganteus, a native of the Congo, and one which has been flowered only a few times in England. It is growing in an 8-inch pot, the pseudo-bulb and leaves having a striking resemblance to a half perfected growth of Peristeria elata. From this pseudo-bulb there is a spike which has reached the extraordinary length of 9 feet 3 inches, at the top of which are thirty-six of its peculiarly shaped flowers. Although not beautiful, it is a great curiosity and worthy of being grown on that account. The culture the Lissochilus receives is as follows: It is potted in a mixture of rough peat, decayed cow manure, crocks, harcoal and sand. Whilst growing it is supplied with abundance of water. As soon as the flowering is over it is kept dust dry. plant is growing in a stove temperature.

A choice collection of Cypripediums is also grown, the following being in flower, viz, Ashburtonæ, Œnanthum superbum, Crossianum, Domini, expansum, caudatum, Spicerianum, Niobe, and Morganæ Burfordensis. Other well flowered plants are Cattleyas Bowringiana and Alexandræ, Odontoglossum grande, and a very fine variety of Vanda Sanderiana. Mr. Todd, the head gardener, is to be complimented on so choice and healthy a collection.—

R. P. R.

ARE TOMATO DISEASES CONTROLLABLE?

THE lucid argument contained in the communication from "Hygienist" (page 325) contains much matter for reflection. graphic description of Bacterium Halstedi, by Mr. Abbey (page 350), is preserved most carefully by me in case of future emergencies. Had he desired specimens of Chrysanthemum buds I could have supplied him; his information is most valuable, and his future communications on the diseases of the Tomato will be looked

forward to with great interest.

While I am decidedly of opinion the Cladiosporum and Phytophthora can be to a large extent controlled, I should be sorry to claim, with Mr. Buss, that these diseases can be prevented by the ventilator or watering pot. It is an easy matter for cultivators to "talk big" after such a season of phenomenal weather. I know several cases where Tomatoes have grown naturally from seeds in the soil, and developed three trusses of fruit during the In an ordinary season, unless a cultivator vigorous plants in 5-inch pots, he is unable to secure a crop. till we have another 1888 or 1889, when the crops were practically failures, and see how many persons we can find who will assert they have mastered their enemies with the ventilator and watering pot. At the same time I wish it to be distinctly understood I am precisely of the same opinion as "Hygienist" and Mr. Abbey that the method of culture accorded has much to do with the development or otherwise of plant diseases, and I trust that at some future date Mr. Abbey's investigations may enable him to point out a preventive or remedy for this and other kindred diseases. It appears to me, it is only when we get a combination of the practical and scientific man the investigations are likely to prove valuable to the general body of cultivators.—J. B. R.

PEARS VERSUS PEACHES.

SINCE the publication of my article on this subject (page 259) much useful information has been disseminated by various correspondents, but several of them have failed to grasp the purport of my remarks. Mr. Molyneux, for example, on page 287 appears to have overlooked the fact that I was merely suggesting the culture of Pears on walls in preference to Peaches, where the latter generally failed, and cited a few cases in support of my suggestion. I do not doubt your correspondent's assertion that in his case Peaches are more remunerative than Pears, because I happen to know they are usually so in that locality; but it does not alter the facts mentioned in my notes. There are two sides to the question, and whilst Peaches fail to thrive satisfactorily in certain gardens, it does not necessarily follow that "the trees are not managed in the proper way," or the "judgment misplaced." Much could be said on this point, but space is valuable at Chrysanthemum time, and I will merely say that the trees in the gardens mentioned in my previous article were "properly managed" in every detail, and were not dispensed with until after years of experience, and careful consideration had been given the matter. As before stated, choice Pears have since been planted in their stead and have proved "infinitely bctter.

In corroboration of my remark that "opinions vary according to experience" on this matter, I need but refer to a few instances. Mr. Molyneux on page 287 makes the assertion that "As much as gardeners." think of Maric Louise Pears, there is great difficulty in inducing fruiterers to buy them." Curious to say on the preceding page (285) another correspondent, "B.," in referring to early Pears says, "I have planted several trees of Marie Louise, the most useful of early winter Pears. It

is seidom we have too many of this, as it ripens slowly; and its season is easily extended by a little care in gathering, and by keeping the later fruit cool. Moreover, no Pear sells better, as it holds a high character in the market." The latter sentence is obviously in conflict with Mr. Molyneux's experience, and it would be interesting to have the opinion

of others on this point.

Presumably the same correspondent, "B.," deals with the question at some on page 309, and in the main agrees with my suggestion, as will, I venture to say, many northern gardeners. In the same issue "R. P. R.," writing from the neighbourhood of Liverpool, points out clearly the advantage of Pears over Peaches on walls; and while that is but a single case in point, it will add weight to the discussion. Mr. Molyneux I believe has, like myself, had some gardening experience north of the Trent, and he will perhaps say whether he has grown Peaches, or seen them cultivated, on walls outdoors as well in the northern counties as he can manage to produce them in Hampshire. "Y. B. A. Z." and "W. S.," on page 309, are in favour of Peaches, as will doubtless be other correspondents who reside in such favoured counties as Somerset and Wiltshire, but even these may have found, and doubtless will find, that all seasons are not so conducive to successful open-air Peach culture as has been 1893.

Another case in support of my contention might be mentioned. In the Journal of Horticulture last week (page 353) a paper which Mr. G. Bunyard of Maidstone read before the Horticultural Club is printed. In this Mr. Bunyard refers to certain varieties of Pears as being exceptionally fine this season, and remarks, "The palpable lesson here is that we ought to place all such good but 'difficult-to-grow' sorts on south or south-west walls, where they would in many cases do better than Peaches and Nectarines." When we find such an authority on fruit culture, and a resident in "sunny" Kent, advocating the culture of choice Pears on south walls in preference to Peaches it is not at all surprising that northerners have found it to their advantage to do likewise.—C.

"R. P. R." (page 309), in his closing remark anent the sale of Williams' Bon Chrêtien and Pitmaston Duchess Pears in the leading Liverpool fruiterers' shops, is not quite clear on the point. mean that the fruiterer has been receiving 3d. and 6d. each for thesc Pears? I take it that is what is meant; but how about the grower? The prices quoted do not give any information how that individual fared. He is the person whom the subject of "Pears versus Peaches" most concerns. If the prices quoted are those received by the grower, then there is just reason to say that Pears are more worthy of attention from a market point of view than Peaches. I saw but a few weeks since some fine Duchesse d'Angoulême Pears being sold for 1d. each. This was what the grower received, and from one of the best fruiterers on the south coast. What the latter sold them at is another question. My business is with the grower, and I suspect this individual was solely What the latter sold them at is another question. in the mind of "C." (page 259) when he started this interesting controversy.

I, like "Y. B. A. Z." (page 309), regard Bourre Diel as worthless as a dessert Pear. Even in the most favoured soil for Pear culture it is inferior to such varieties as Doyenné du Comice or Marie Louise, but in soil that is unsuited to its constitution it is not worth the room it

occupies.

In my opinion "blister" on the Peach leaves is caused mainly, if not quite, by east winds. Some two or three years since we had no east winds one season at the critical period, and we experienced little or no "blister." My plan when disbudding trees addicted to "blistering" is to leave an extra number of shoots for a few weeks until the trees have passed that stage. We can then afford to remove entirely the worst of the "blistered" shoots. In cases where the leaves only are affected, these are picked off directly they are injured. Upon the advent of more genial weather the shoots grow out of the "blister." The practice of leaving an extra number of shoots at disbudding time is decidedly advantageous, and one that cultivators troubled with blister would do well to adopt.—E. MOLYNEUX.

PEACH-LEAF BLISTER.

I HAVE pleasure in responding to the invitation of "Y. B. A. Z." (page 309) to give my views on the cause of Peach-leaf blister, prompted, as he evidently is, by a desire to arrive at the truth. "What is Peach blister?" asks Mr. Edward Luckhurst in the Journal of Horticulture of June 22nd, 1876, page 481, then proceeds to answer his own question as follows:—"It is a disease affecting the foliage only when young and tender, appearing in the form of blotches or blisters irregular in form and size, being sometimes as small as a pea, and occasionally spreading over an entire leaf. The affected part, having a pale sickly appearance, becomes much thicker in substance than the healthy part, and rises into a convex form precisely similar to other blisters. It is distinct from all other forms of blight, and cannot be mistaken." Mr. Luckhurst next asks, "What is the cause of Peach blister?" and again answers, "It is caused by the exposure of the expanding foliage to the influence of frost or cold cutting winds." Evidence in proof of this conclusion is then given. 1, Trees on a west wall had "fine foliage, perfectly clear, and quite free from blister or blemish of any kind." 2, Trees against an outer south wall, "along which the cold east wind swept unchecked," had the leaves much blistered. 3, Trees on a south inner wall had the leaves quite sound near the east end, "but further on where the trees were more exposed they were affected precisely in proportion to the extent of such exposure"—that is, to the cold east wind.

Whether "Y. B. A. Z." had Mr. Luckhurst's article in mind at the time of writing on page 309, matters little; but I consider it important that all evidence bearing on the subject be given due consideration. Therefore a few brief notes on Mr. Luckhurst's article may be made with profit. From a cultural point of view there is nothing in the article referred to to which exception can be taken. Mr. Luckhurst tells us to "watch the development of an organ [foliage] upon the condition of which everything depends—the crop, the growth, the very existence of the tree itself, to cherish it by every means in our power, to cleanse it from insects with a prompt and ready hand, and to screen it from frost and cold cutting winds." That is good cultural advice, but all the same Mr. W. G. Smith had proved that fungus was the cause of Peach leaf blister, and exploded the opinion that had prevailed up to that time—namely, "the blistering being caused by spring frosts rupturing the sap vessels and the fungus living upon the extravasated sap." Mr. Smith's explanation and illustration of Peach blister with accompanying fungus (Ascomyces deformans) will be found in the Journal of Horticulture of July 8th, 1875, and he, following De Bary and Berkeley, practically settled the question on a sound basis.

I think it necessary to make the foregoing observations in justice alike to Mr. Smith and Mr. Luckhurst, for it is not right that we should profit by the teachings of others without giving expression of our indebtedness. This gives me an opportunity of saying that the little I know about fungi and the diseases caused by this class of parasites is mainly due to studying the works of the late Rev. M. J. Berkeley, Dr. Cooke, and Mr. W. G. Smith. Information has also been derived from articles appearing from time to time in the Journal of Horticulture and in the Gardeners' Chronicle. Most of the subjects treated by the specialists I have endeavoured to study on the plants the parasites infest, and produce disease on or in, and the result in all cases has been a verification of their teaching, and conclusive proof of the desirability of acquiring

scientific knowledge as well as cultural practice.

Mr. Smith has given decisive proof that all the exposure of the expanding foliage of the Peach to the influence of frost or cold cutting winds was capable of producing a favourable medium for the growth of the fungus. This may seem to confirm Mr. Luckhurst's contention that the fungus was consequential and not initiatory of the disease. But it is at this point where the great gulf exists between cultural conjecture and scientific fact. Who has ever seen the young growths of any tree blistered and distorted without a cause? The east win1 never produces anything beyond a stunted and crippled growth. There is no blister without its cause, the growth of the mycelium of the fungus within the leaf and shoot tissues; no curled leaves and distorted growths without the causing parasites or insect pests. While approving of the cultural advice given by successful Peach growers I have to say that the Peach tree leaf blister is not caused by cold or east winds, but by a fungus. This enemy is not confined to this country, but is found on Peach trees on the continent under the name of Exoascus deformans, and in America under that of Taphrina deformans. The continental trees against walls receive similar protection to that given in this country; in America the trees are grown as low standards, and have no protection whatever. In all regions of the earth where the Peach is grown it is subject to attack by the parasite, because the leaves afford it its peculiar food. Surely that is simple enough to be comprehended. The fungus is a plant, endowed with the power of growth and reproduction. It springs into existence from a spore. There is nothing mythical about it. Truc it belongs to a very lowly group of the Ascomycetes family of fungi, but it has great power in producing distortion or deformities in the leaves of Peaches and other trees. We can see the parasite in all the stages of growth as plainly revealed by the microscope. We cannot see the east wind; it is said that pigs can, but as they cannot tell us what there is in it, we will believe what we see-namely, the fungus growing in the leaves of Peach trees and the blistering that follows.

The Peach leaf blister fungus, Exoascus (Ascomyces, Taphrina) deformans, makes its presence manifest by the red blisters on the leaves. These are due to the previous action of the mycelium within the leaf tissues, enlarging and multiplying the cells, giving rise to the thickening and swollen condition of the leaves. The first indication, however, of an attack by the fungus is an abnormal growth, a thickening and deepening of colour in the leaves. There is no pale sickly hue such as results from exposure to cold or the presence of aphides, for sickly leaves arc of no use to the fungus, as it lives upon the chlorophyll. This the mycelium destroys, and red colouring matter takes its place, as seen in the Ultimately, the mycelium or outgrowths from it burst through the cuticle or skin of the leaf, and appears as a fine pale bloom, visible chiefly on the lower surface. This consists of a stratum of fine threads, from which spring innumerable erect, slender flask-shaped bodies (asci), each supported on a shorter cell. Each ascus contains eight minute oblong spores; these, escaping by an orifice at the apex, go forth to reproduce the fungus. In addition to asci, other necklace-like growths spring from the threads, and consist of simple cells or spores, which are considered by Mr. Smith to be capable of reproducing the fungus. Excellent illustrations of the attack on the leaves and of the fungus will be found in the Journal of Horticulture, vol. xxviii., new scries, page 31, by Mr. W. G. Smith.

The leaves covered or attacked with Exoascus deformans wither and fall off prematurely. The period of attack is confined to the spring or early summer, for when the weather becomes warm and settled the growths start freely and the leaves are not attacked by Exoascus deformans. This has led to the erroncous conclusion that the fungus spores are only able to act on tissues impaired by cold weather. Frost

either kills tender growths, or causes the leaves and fruits to sicken and drop. Cold contracts—stunts shoots and cripples leaves. How the spores of Exoascus deformans can push their germinal tubes through the cuticle of a leaf when it is contracted—drawn tight to resist the cold or enter the leaf tissues by the stomata when these are closed, is more than I am able to understand. But this is wholly outside the subject, for cold weather has nothing whatever to do with the fungus any more than it has with certain species of Crocus flowering in the spring and others in the autumn. Yet there is said to be a predisposing cause. What is it? Who does? But I do know that there is a fungus—a I do not know. plant—named Exoascus deformans by botanists, which is raised from seed (spores), requires a Peach tree to grow in, lives on chlorophyll, and produces its blossoms and fruits during the early summer months. It is a perennial—the mycelium lives in the tissues, and the disease reappears year after year on the same branch or tree.

Now I should like a little information. Whence come the spores? From sunny France? The balmy East? Where does the east wind pick up the spores? It is no use appealing to the wind! What about the trees on walls in this country? Are there not any decrepit—half dead in branch, distorted in shoot, and blistered in leaf? Is it from these that the spores are wafted by the east wind and disease set up in trees situated westward? Why, then, do not west winds convey the seeds of disease eastwards? The spores must come from somewhere, and it is certain they cannot bear the drought of summer nor the cold of winter, for they are naked cells, and must soon do or die. That is one reason the fungus does not raise blisters on the leaves of Peach trees grown against walls in the summer. It is also completely foiled by a glass roof with careful ventilation in the spring, and it can make nothing of leaves with a stout epidermis. Yet it lives from year to year in the same garden on the identical trees first infested.

There is only this preventive and remedy—cut off and burn the blistered leaves before the bloom appears on the red warts, also cut off and destroy the diseased shoots or branches. By one the spores are got rid of, and by the other the perennial mycelium. As for dressings, winter applications can be of no use, and as Peach foliage is very tender in spring it would not be safe to employ a Bordeaux mixture at greater strength than the following: Sulphate of copper, 4 ozs.; quicklime, 4 ozs.; water, 15 gallons, using as a spray.—G. ABBEY.

SUMMER AND WINTER BEGONIAS.

I AM very glad that Mr. Molyneux (page 310) is able to report satisfactorily of his Tuberous Begonias. It is a great deal more than could be done in most gardens out of Hampshire I am afraid. True, the very favourable autumn with its warmth and heavy rains has greatly improved the beds, and like the field Mushrooms Begonias have been having a better chance lately than they have had all the season. Some tubers lifted a few days ago in a garden I was in illustrated in a very remarkable degree the evil influences of the drought. The only growths they had been equal to pushing were 3 to 4 inches long, doing little more, in fact, than getting fairly through the ground, and about as thick as my pencil. Fortunately they were not all like that, otherwise the beds would have been completely bare.

I can only hope that the improved aspect which Begonias have assumed late in the season will do something to redeem the bad impression which many must have formed of them in the full flare of this searching summer. There has by no means been a universal failure. Not far from where I am now writing there is one of the most beautiful front gardens which I have seen attached to a small villa, and its chief occupants are Begonias, and if an exception on a larger scale be required it may be found in Messrs. Cannell & Sons' Nursery at Swanley. have thousands of plants blooming in the beds, presenting both to those on the adjoining railway, and to those in the nursery itself, a very rich and warm glow of colour.

It is to be particularly noted how much better the doubles have done than the singles. Where many of the latter are stunted and ill-clothed with foliage and bloom the former are fully furnished with both leaves and flowers. It is well worth while to give this fact due consideration, for the plants have had the same chance in every way. This would point to the advisability of giving special attention to the doubles for bedding, and also to the necessity for selecting some of the best and most distinct types of them. The Swanley growers have risen to the occasion, as they generally do, and have chosen some varieties of vigorous but even, compact growth and of pronounced free-flowering qualities from the mass of material in the beds with a view to giving them special recommendation for outdoor growth. Their action may be cordially endorsed, for there is no question of the superior effectiveness of beds furnished with floriferous and well balanced plants, bright and decided in colour, to others filled with a heterogeneous mixture (if such a phrase be permitted) of seedlings, some of which are strong growers, others weak, some tall, and some short.

As instances, four new selections, all doubles, to which varietal names have been given may be mentioned. One is Freedom, a salmonpink free-flowering dwarf sort, with a growth as even and level as a Tom Thumb Tropæolum; a second is Attraction, brilliant orange, also dwarf, bushy, and floriferous; a third is Erecta, a rose-coloured form, of taller and more upright growth than the others, but very even and level; and a fourth, Red Shirt, a scarlet semi-double, covering itself with flowers. These are very conspicuous in the beds, being as regular in growth as a number of market Genistas or Pelargoniums, and easily to be picked out in their lines. Messrs. Cannell & Sons are doing good work with these special selections of bedders.

Their collection under glass is also a very extensive one. They have five of their long houses full-or rather had, for the structures are now being rapidly cleared—besides several more at Eynsford, where, the head of the firm tells me, his son has fairly beaten him with the quality of his plants. Paterfamilias seems rather proud of his defeat. Eynsford plants must be good, for those at Swanley, or such as are left of them, are a very beautiful collection. The great majority are grown in 5 and 6-inch pots, no special culture being attempted, but preference given to smaller plants, in order that their true qualities under ordinary cultivation may be estimated. A few of the best of the doubles are R. B. Parsons, bright pink; Miss Cochrane, peach, very large; Lady Osborne, rosy salmon, a very distinct shade; Lord Haddo, bright rose with creamy flakes, one of the Carnation-flowered breaks; Rosebud, pale pink, a familiar variety; Miss E. Wynne, white, crimped flowers, a very beautiful sort of drooping habit, well suited for a basket; Miss Lilian Maud, rosy salmon, very large and full; Lady Alice, light yellow, very free; Hon. Mrs. Goschen, creamy, very large and free; Mrs. Lynch, soft pink, crimped; Rev. Mr. Lascelles, clear yellow; Frank Bibby, rich glowing crimson; Octavie, double white, now thoroughly well known; Mr. G. Paul, cream, very large and full; J. Lyon, glowing crimson, very large, full, and fine; and Safrano, light apricot, semidouble. The best of the singles were over, but Albert George (rich orange, very large, and consistently good) and Fashion (a charming orange-amber sort) were conspicuously beautiful. The plants are all from this year's cuttings, so that their fine appearance represents inherent quality, not special cultivation.

Let no visitor to the Swanley Nurseries leave without inspecting the house of winter-flowering varieties, for it is already a beautiful sight, and will improve as time goes on. This valuable class is growing steadily in popular esteem, and if anything were wanted to prove their usefulness and charm the house referred to will supply it. The collection is one of the best in the country without any doubt. As might be expected Gloire de Sceaux plays a prominent part. Those who have had opportunities of estimating the effectiveness of this grand Begonia naturally look for it wherever they go, forgetful that all gardeners have not had the same chances, but it is only a question of time for it to become a universal favourite. Carrièrei is a totally different type of plant, the foliage being smaller, and the habit more bushy. Plants in 5-inch pots are a foot high and 15 inches across, being, like well-managed Cyclamens, broader than they are high, and, moreover, quite clothed with bloom. It is a very valuable sort. Weltoniensis is too well known to need comment, and so is nit'da; but there are two of the semperflorens type less familiar; one is S. gigantea rosea, which has very large bright green leaves, and abundance of rosy flowers; the other is a sort named Laura, the foliage of which approaches heart-shape, and the flowers are pink. It is a true winter bloomer. These are six of the best, but that there are many others in every respect well worthy of culture a call will at once suffice to prove.—W. P. W.

COLD HARD WATER FOR PLANTS.

MR. DUNN's last communication (page 361) on the subject clearly shows that a little more reflection on the matter may prove of considerable service to him. He has not proved a single idea he set forth, but, on the other hand, it has been conclusively proved that many practical growers, well known and respected in these pages, do cultivate their plants and crops successfully, using water such as he condemned.

Mr. Bardney (page 361), with his usual judgment, now appears on

the scene in a very conciliatory mood, but I should like to remind your able contributor that I have never suggested the use of cold hard water during the winter months. My contention was that it can be, and is, used between the months of March and November successfully. My object in writing was to prove that Mr. Dunn's pet idea had led him

beyond the bounds of prudence and modern practice.

In reply to "T. A." (page 340), I am able to state practically that the water of the New River Company does contain a large per-centage of lime, in fact the river has its origin at the foot of a chalk hill. This water when used in Hertfordshire will leave a white deposit on the leaves of plants, and there can be no doubt it is very hard. The water of the East London Company never sees the light till it is applied to our plants, and is, as I stated in a previous communication, very cold. It is also very hard to the touch, but it does not leave the white limy deposit on the leaves like the New River water .- J. B. R.

ONE of your correspondents mentioned that water impregnated with lime "burned the rootlets of plants." Does lime in water burn the rootlets of plants? I hardly think so, or it would not be recommended as harmless as a "slugicide," doing no injury to plants. Some plants thrive amongst lime, while it kills others, Heaths, for example; instead of lime in water "burning," is it not rather a case of petrification?

I have always been of opnion that in watering artificially the temperature of the water should never be less than that of the soil the roots are in. For syringing, I think the water should be a little warmer than the temperature of the air either inside or outside. I have watered with cold spring water during a drought, but failed to see any good arising. I know of several springs differing in temperature to the extent of 20°. Is "pure" water proper food for plants? Very few waters are pure; they soon contract impurities or foreign matter when formed into rain drops or pass into streams.—T. N. B.



EVENTS OF THE WEEK.—The principal events of horticultural interest during the ensuing week will include several Chrysanthemum shows. The first one, Havant, will be opened on Friday, the 28th inst., and others will follow in quick rotation. A list of some of the most important exhibitions, and those that have been advertised in our columns, is given on page 380 of the present issue.

- THE WEATHER IN LONDON.—The weather has been mild during the greater part of the past week, and much rain has fallen in the metropolis. On Sunday it rained more or less nearly all day, but was fine on Monday. Tuesday proved colder, and Wednesday opened similarly, it heing also dull as we are preparing for press.
- LA SOCIETÉ ROYALE D'AGRICULTURE ET DE BOTANIQUE DE GAND.—At a meeting of this Society, held on the 16th inst., Mr. H. J. Veitch, of the Royal Exotic Nursery, Chelsea, was unanimously elected a *Membre d'Honneur*, in recognition of his services to botany and to horticulture.
- AMARYLLIS BELLADONNA.—Mr. W. H. Divers, Ketton Hall Gardens, Stamford, writes:—"A narrow border of this plant at the Mote Park, near Maidstone, formed a very pretty, as well as an unusual sight, last month when the plants were in flower. Mr. Fielder grows it on a south aspect close to some warm Orchid houses, which no doubt assists it to a certain extent during the cold weather, and also helps to ripen the bulbs in the summer. The plant has one bad point, as it flowers at a time when it has no foliage, but this may be assisted in various ways so as to give full effect to the flowers."
- Mr. James Veitch, of the well-known firm of Messrs. J. Veitch & Sons of Chelsea, who has been travelling in search of plants all over the world for some years, has collected plants from that part of the globe. They were packed in twelve large Wardian cases, weighing over half a ton each. The dimensions of each case are 4 feet by 2 feet 6 inches, and 2 feet 6 inches high. The twelve Wardian cases mentioned were shipped by the "Ruahine," from Lyttelton, for London, by which vessel Mr. Veitch was also a passenger. [We learn with pleasure that Mr. James Veitch has arrived home safely, also the plants, to which a further reference will be made.]
- THE FIRST INTERNATIONAL BOTANICAL CONGRESS ever convened on American soil was held at Madison, Wis., immediately after the adjournment of the American Association for the Advancement of Science, August 23rd and 24th. The foreign representation, however, was so small that the title of the meeting was changed to the "Madison Botanical Congress." The meeting was an outgrowth of that at Genoa last year. Professor E. L. Greene of California was elected President. All the subjects discussed at the meeting referred to terminology, the following being the topics:—1, Plant Diseases; 2, Anatomy and Morphology; 3, Physiology; 4, Horticultural Forms; 5, Bibliography. It is expected, says "Nature," that the next meeting will he held in Europe in 1894, but the precise time and place was not announced.
- The Best Country for Apples.—It is said that California will never get the fame in Apple culture which has followed its experience with other fruits. This is natural; the Apple is a native of cool and comparatively northern regions. It has never been able to adapt itself to warm countries. Even in the Eastern States the Apple is not a particularly successful fruit south of the Potomac river, except in the mountains and cool regions. All along the Allegheny range they thrive admirably, quite as well as in the famous Apple regions of western New York; but when we get into the lower lands, where a long and comparatively high summer temperature prevails, the Apple would never be looked upon as a desirable orchard fruit hy those who were looking to profit from fruit culture. Thus remarks "Meehans' Monthly," and by way of a supplement we might put in a claim that England is at least one of the best countries in the world for Apples. This year they have in most localities been exceptionally fine.

- GARDENING APPOINTMENT.—Mr. William Seal, five years foreman for Earl Stanhope, Chevening Park, Kent, has been appointed head gardener to S. W. Waller, Esq., Baynard's Park, Surrey.
- —— CURIOUS SPELLING OF THE NAMES OF PEARS.— In a fruiterer's shop in a Suffolk town I noticed the following three Pears very well represented—Chaumontel, Beurré Diel, and Bergamotte d'Automne, hut curiously labelled "Sharman's Tell," "Bure's Dale," and "Burgoyne" respectively.—EAST ANGLIA.
- —— GAILLARDIAS AND ANTIRRHINUMS.—These are still in flower and have been so since the spring. They appear to have almost enjoyed the very dry season, and have proved most useful for cutting when nearly everything else was hurnt up. A bed of Yellow Prince dwarf Antirrhinums has been much admired.—EAST ANGLIA.
- —— Self-sown Tomatoes.—Mr. G. F. Ash, The Gardens, Swanhourne House, Winslow, Bucks, informs us that he had self-sown Tomatoes which came up in the open garden, and one plant was simply staked and in no other way protected. This produced 130 very large fruit of the old wrinkled red type, and many of them ripened.
- —— ACCORDING to the "Lancet," the APOTHECARIES' SOCIETY are about to apply to the Courts for powers to sell their Botanical Gardens at Chelsea, the money value of which has been fixed at about £30,000. The removal of this historic garden would be a source of keen regret to the many who have profited by the instruction conveyed by its means.
- Belladonna Lily.—"T. A., Bristol," writes:—A few seeds of this plant have ripened here this season. I should be glad to know if it is unusual, as I do not remember to have seen in previous years any capsules attempting to swell much less to perfect their seeds. These are about the size and form of the small round grained Maize, and when first gathered are of an ivory white colour.
- JOHNSON'S GARDENERS' DICTIONARY.—A copy of part vii. of the new edition of the above work has come to hand, and like its predecessors, it has heen carefully prepared. It opens with the genus Pleandra and finishes with a description of Sesbanias, the intervening genera heing described in alphabetical order. One more instalment, we believe, remains to be published, which completes the edition. As before remarked, Messrs. G. Bell & Sons, Covent Garden, W.C., are the publishers.
- RIPE STRAWBERRIES IN OCTOBER. Mr. C. Bellwood, The Gardens, East Horsley Towers, near Leatherhead, writes: -In answer to Mr. G. Freeman's remarks (page 355) of discovering several clusters of Strawherries showing colour on the 9th inst., I discovered October 19th several clusters of fruit also in looking over a plot. Some are quite ripe, others not so forward, but I think they will ripen. I may add, the Strawherries were produced from plants that have already fruited in the open, and had not been forced. Mr. John Short, Darlington, also observes:-"I gathered some Strawberries on the 6th, and nearly every day since we have had a few ripe fruits, and there are still quite a number ripening. These are from plants that have been planted out two years. There are other persons in the immediate neighbourhood whose experience is similar. This is the first time we have had any ripe in October for fifteen years." Another correspondent from Bristol says, "My two-year-old plants of Vicomtesse Héricart de Thury have ripened several fruits during the present month, and there are still some to he found in various stages of development; they are rather small, however, and not worth protecting. Neither Noble nor any other variety has given a second crop of fruit with me." In addition to the foregoing, other instances of Strawberries fruiting this autumn have come under our notice.
- POTATOES IN LINCOLNSHIRE.—We learn from a northern contemporary that the Potato harvest in the Fen district of Lincolnshire is now completed "Generally speaking, it has heen one of the hest experienced for several years, and those who risked planting a large acreage with the tuber have had no cause to regret having done so. The early varieties especially made some very high prices, and several growers made as much as £20 per acre, exclusive of the cost of digging the crop. The season has been an exceptionally favourable one, and owing to the absence of rain very little disease has been noticed, and consequently less labour has heen required for picking and sorting. Magnum Bonum, which is a variety much grown in the Fen district, has yielded heavily, and there are numerous instances—notably amongst allotment occupiers—where the crops have yielded at the rate of 7 and 8 tons to the acre."

- FLOWERS AT DULWICH PARK.—In this park are to be found numerous remarkable evidences of the abnormal season. The Dahlias are still blooming profusely; Zonal Pelargoniums are almost as bright as ever; Weigela rosea is flowering here and there, as also are the Guelder Roses. The beautiful Gentiana acaulis is blooming in different places on the rockeries; whilst Roses, especially of the Monthly types, are numerous.—W. J. K.
- HORTICULTURE IN GERMANY.—A continental contemporary says that Dr. L. Wittmack has been charged to furnish for the exposition at Chicago statistical instructions upon horticulture in the German empire. His highly remarkable work comprehends all branches of horticulture. Amongst other things, it is stated that Germany contained in 1892, 17,699 horticultural establishments and nurseries, employing about 45,000 employés.
- —— Dahlias from Tottenham.—Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, N., sent us last week a box of Dahlia blooms, comprising those of the decerative, Cactus, and Pompon types. The flowers were exceedingly fresh and beautiful for the late period. Among the Cactus and decorative varieties were Mrs. F. Vince, purplish pink; Mary Picton, lemon yellow; Baron Schröder, bright magenta; St. Catherine, yellow suffused red; Beauty of Arundel, magenta, deep centre; and Mrs. Keith, salmon pink, lemon yellow centre. Of the fine selection of Pompons, Revenge, Eva, Marion, and Little Sweetheart were the best.
- LIGUSTRUM IBOTA.—Our transatlantic contemporary, the "Garden and Forest," has an excellent illustration of this plant in the issue for October 11th, and remarks that the North China and Japanese Ligustrum Ibota is certainly one of the best exotic shrubs introduced into our gardens for many years. The long, slender, arching branches give to it a light and graceful habit in marked contrast with that of the other species of this genus, which are usually stiff and rigid in habit. Late in the month of June, from the end of short lateral branches, the clusters of white flowers hang in great profusion, giving to the plants a charming effect of grace and lightness. The flowers are followed by abundant blue-black berries, which remain on the branches until the beginning of winter, and make the plant interesting during several of the autumn months. It America Ligustrum Ibota promises to grow to a height of 8 or 10 feet, although, as it appears in the mountains of Japan, where it is by no means a common plant, it rarely rises to half that height. Ligustrum Ibota will, perhaps, become as completcly naturalised in some parts as Ligustrum vulgare and Berberis vulgaris have become naturalised in eastern New England, for when they are planted in semi-wild situations numerous seedlings spring up, and are able to hold their own against the encroachments of native plants. This Japanese Ligustrum may be safely used whenever large, hardy, fast-growing shrubs are needed.
- THE RHINE TIMEYARDS.-A German official return relating to the value of the Government vineyards in what was formerly the Duchy of Nassau, now a part of the Prussian district of Wiesbaden, is summarised in a recent report from the United States Consul at Mayence. The total net profit from all the crown vineyards during the last twenty-four years amounted to £94,225, or £3,926 per year in round numbers. These vineyards have an aggregate area of about 192 acres, which would make the average net profit annually per acre about £20. Taking the estimated value of the vineyards to be approximately $\pounds628$ an acre, $3\frac{1}{4}$ per cent. would be the average annual rate of income derived from them. But these vineyards are amongst the very best in the country, and their produce commands commensurately high prices. The expenses connected with the management of them are great, and the capital they represent is considerable, but their wines are of the finest, and are in great demand. These wines bring the highest prices in the market, being sold for the most part directly to the consumer, thus giving the coffers of the crown the benefit that would otherwise accrue to the wine-dealer. The ordinary wine-grower is not so favourably situated as the Government, and cannot as a rule make so much out of his property. His wine is much inferior, and his ability to fix his own prices feeble in comparison. It cannot, therefore, be supposed that he makes as much as $3\frac{1}{4}$ per cent. a year on the average out of his vineyards. The vineyards, in fact, are not paying, as only from 2 to 3 per cent. per annum can be made out of them on the average. Many are worked at a loss, as the yield had been inferior in quality or in quantity for some years. The difficulty is that they have been bought at such high valuations that there is no money in them for their owners. The dealer it is who makes the profit.

- WOOLTON GARDENERS' MUTUAL IMPROVEMENT SOCIETY.— The second meeting of the above Society was held on Thursday last, Mr. R. G. Waterman reading a very able paper on "Soils and Rotation of Crops." As showing the mildness of the season, Mr. Stoney stated that he had that day gathered fine ripe Strawberries outdoors, the variety being Duc de Malakoff. Prizes will be given for essays on various subjects during the ensuing season. The concert recently held in the Parochial Hall, after all expenses—which were heavy—had been paid, left a balance of over £5. A vote of thanks to Chairman and Lecturer closed the meeting.
- AUTUMN RASPBERRIES.—Mr. W. H. Godden, Ledgers, Warlingham, Surrey, writes:—"In last week's issue (page 355) Mr. Freeman gives an instance of gathering ripe Strawberries in the open. I gathered a dish of ripe Raspberries on the 18th inst. weighing 1½ lb., very fine fruit and well coloured, and the flavour was fairly good. I consider this wonderful, considering I am nearly 600 feet above sea level, and clay subsoil." Mr. W. Stanton, The Gardens, Billington Manor, Leighton Buzzard, also writes: "On October 19th I found a large cluster of Raspberries quite ripe, and of fair size. We have had only two slight frosts here. We have had an abundant supply of Runner Beans up till the present."
- LIME SALTS IN PLANTS.—At a meeting of the biological section of the British Association Dr. J. Clark gave the result of investigations on the action of lime on germination in plants, and the existence of lime salts in plant tissue. He had experimented with a number of seeds of Alpine plants with the object of germinating them, and he found that the presence of carbonate of lime in the soil greatly assisted the germination of the seeds of these plants. According to his conclusions upon the question one must in many cases either have a high temperature, to enable the plant to utilise the reserve food supply in the seed, or introduce lime into the soil, which lime helped the transference of food from the seed to the growing parts of the seedling.
- URARIA CRINITA.—This, remarks Mr. G. Nicholson in a recent issue of the "Garden and Forest," is a striking plant with pinnate leaves, not unlike those of the Wistaria, and tall dense racemes of small rose-purple flowers; seeds of this species sown early in the present year have produced stocky, handsome plants with racemes more than a foot in length and about $1\frac{1}{2}$ inch in thickness. The flowers themselves are small and last but a short time, but the very numerous rosy-pink bracts are as attractive, or even more so, before the flowers open, than the latter arc when at their best. The species occurs in a wild state from Ceylon, the Himalaya to China. A figure has been prepared for the "Botanical Magazine." The specific name has been given, owing to the long bristles which clothe the pedicels and sepals. The plant is of easy cultivation in a light, warm house.
- Apples is in accord with that of your correspondent "A." (page 355). Very soon after gathering all my largest specimens, of several varieties, began to decay, the worst being Winter Hawthornden and Nelson's Glory. Some became quite mealy and cracked, others were spotted with dard coloured spots. On the rind being removed these spots were of a brown colour, and penetrated the flesh to a considerable depth. Pears, too, are ripening very rapidly, owing, I suppose, to the warm weather we are having. Marie Louise Pears are all ripe and gone, the quality having been excellent. I have to-day (October 21st) a dish of Huyshe's Prince of Wales quite ripe, which is too early for that variety; and I regret to find Huyshe's Victoria, which usually stands me in good stead about Christmas, much further advanced in ripening than is desirable.—T. S., Bristol.
- Sternbergia lutea is a plant of the season which seems to be much neglected, yet the bulbs are easily secured. They increase rapidly, and a clump in flower is as effective, and not less pleasing, than the Crocus in the spring. The bulbs start into growth in early September, making about 6 inches of leaf growth, the flowers appear in late September. These are something over 2 inches in diameter, are borne on 6-inch scapes, are of a clear deep yellow, and Crocus-like in effect. The leaves are persistent during the winter, and complete their growth in the spring, when the bulbs ripen and become dormant. It is needless to say that bulbs of this kind should be protected from the careless spader. The autumn-flowering hardy bulbs, says a correspondent in an American contemporary, have an unexpectedness in coming into evidence which we are apt to associate with the flowers of spring, and some of them are scarcely less pleasing than those always favourite flowers.

- MICHAELMAS DAISIES .- As with the border devoted entirely to these plants at Chiswiek we planted one here with them last autumn, and undoubtedly this is the correct manner to cultivate and appreciate them at the same time. Owing to the extremely dry weather experienced this summer some of the plants made but moderate progress, especially the larger flowered sorts; these do not appear to be able to withstand drought so well as the small flowering kinds, of which Elegans is an example. Next year we hope for a good display. The roots will by then have become thoroughly established. In addition to those named by "C." (page 349) the following varieties of the A. novæ-belgi type are worthy of a place in any collection—versicolor densus, lilac; formosissimus, deep blue, free and good. Snowflake is especially worthy a place, the pure white blooms are useful in a cut state. Chapmani, pale blue, of loose growth, yet free flowering and good. Elegans, deep lilac, small flowers, wonderfully profuse in its blossoms. Ericoides is one of the best of the late-flowered kinds with pure white flowers, the foliage of this assumes quite a coppery hue, which enhances the beauty of the variety. The best of all, in my opinion, is A. ericoides elegans, pure white and wonderfully free, dwarf in growth. A. alpinus, 1 foot high, is a gem for the rockery. —Е. M.

- PLANT INDUSTRIES IN THE CAUCASUS. - The following interesting particulars respecting the wine industry carried on in the Caucasus are taken from the report of the Statistician of the United States Department of Agriculture for June, 1893 :- Of highest importance for the present and the future of the country is wine growing. The production does not only suffice for home consumption, but supplies to a large extent the wants of Russia, and besides, furnishes a considerable quantity for export. The efforts of Russia for the advancement of this braneh of rural industry are praiseworthy. Under Ottoman rule viticulture could not flourish, as its object was confined to the production of table Grapes, and thus it remained on a level with the culture of other fruits. A changed political situation, introduction of new customs, and the effectual assistance of the Russian Government, have shown the rural population a rich source of income in wine growing. Prince Michael Waronzow, the Governor of Caucasia, procured in the year 1848 120,000 Vines from his own vineyards in the Crimea and from the most celebrated vineyards of Europe, in order to distribute them among the inhabitants of sections adapted to viticulture. Not all of them did well; the varieties have been crossed; but a beginning had been made, an impulse given, and this profitable branch of rural industry has developed gradually to its present flourishing condition. There are still a few drawbacks, otherwise the results of this industry would have been enormous. There is, above all, the Phylloxera, which has made considerable progress during the last few years. The war upon this plague is waged only on the large estates of rich landowners, while the majority of small vineyards is open to the disease. The damage is largest in the governments of Tiflis and Elizabethpol. In Erivan the winter frosts damage the Vines materially. The vineyards of the Caucasus cover an area of 86,000 desatines (232,174 acres), and their annual production is estimated at 13,000,000 vedros (42,237,000 gallons). The average price of Caucasian wine is generally about 25 cents per gallon, and goes up to 30 cents only in years of crop failure. Notwithstanding the faet that a desatine of land adapted to viticulture costs 1000 roubles (182 dollars per acre), this industry proves to be highly profitable, as the net profit averages from 380 to 400 roubles per desatine (70 dollars to 75 dollars per acre).

ROYAL HORTICULTURAL SOCIETY.

OCTOBER 24TH.

THERE was a very fine display at the Drill Hall on this occasion, the building being well filled. Orchids were exceptionally well represented, as were Dahlias and Chrysanthemums. Fruit and vegetables were also exhibited in excellent condition.

FRUIT COMMITTEE.—Present: Philip Crowley, Esq. (in the chair), with Rev. W. Wilks, Dr. Hogg, and Messrs. H. F. Pearson, T. F. Rivers, Arthur W. Sutton, Harrison Weir, G. W. Cummins, J. Cheal, G. Bunyard, G. Woodward, W. Warren, J. Hudson, G. Sage, J. Smith, G. Norman, H. Balderson, A. Dean, J. Wright, and others whose names were not obtained.

Mr. J. Perkins, The Gardens, Thornham Hall, Eye, sent a seedling Melon Thornham Hero, apparently a scarlet-fleshed Hero of Loekinge. The season being too late for judging Melons satisfactorily, the Committee desired that this promising variety be sent in the summer. Mr. Owen Thomas sent a seedling Melon Frogmore Late, white fleshed, sweet, and very juicy. The fruit had passed its best condition, though the rind was firm, and no award was made. Mr. A. G. White, Bow

Hill, near Maidstone, sent a dish of his seedling Apple Bow Hill Pippin, fine fruits, resembling a Blenheim, but with a deep yellow ground, and a little of the character of King of the Pippins; an Apple of promise, and an award of merit was adjudged. Mr. R. Weller, Glenstal Gardens, Murroe, Co. Limerick, sent a very good dish of Ribston Pippin Apples, and a vote of thanks was accorded. Mr. G. Paul sent a seedling Apple Captain Sandars, raised from Dumelow's Seedling, fruits large but soft, ineipient decay having set in with some of them. No award. Mr. W. Crump sent dishes of a local Herefordshire Apple of the Codlin character, with the red flush of Hollandbury, known as "Captain Tom." Though good, it was not considered better than existing varieties.

Mr. G. R. Allis, Old Warden Gardens, Biggleswade, sent small bunches of ripe Gros Colman Grapes, grown against an open wall without protection, also a dish of ripe Tomatoes from self-sown seed, as indicative of the tropical character of the summer (vote of thanks.) Mr. John Basham, Fair Oak Gardens, Bassaleg, Monmouth, sent specimens of large green curled Savoy and a dwarf early Cabbage. Though good samples they were not considered sufficiently distinct to merit an award. Mr. Barron sent from Chiswick splendidly blanched samples of the white Batavian Endive, the true compact form; also samples of Vilmorin's Queen of Winter, taller, but not better, and a cultural commendation was accorded.

Extensive displays of produce, both fruit and vegetables, were arranged on the side tables. A considerable number of Apples were sent by the Government of Nova Scotia, and though some of the fruits were fine, and the whole bright and tender-looking, as if grown under glass, yet many were small and affected with fungus. The samples, as a whole, were not by any means equal to those exhibited by Mr. J. H. Goodacre as grown at Elvaston in Derbyshire—a feather in the good gardener's eap, who has now defeated a government. His collection eomprised about eighty dishes of Apples, some of them very fine indeed, and nearly all highly coloured, several appearing as if polished artificially. There were also about sixty dishes of excellent Pears, and a silver-gilt Banksian medal was recommended. A similar honour was granted for a remarkably fine display of forty-eight bunehes of Alieante and Gros Colman Grapes, and about sixty dishes of Apples and Pears, staged by Mr. S. Mortimer, Rowledge, Farnham, Messrs. T. Rivers and Son exhibited several dishes of magnificent Pears, and very fine Apples of leading varieties, and a silver Banksian medal was unanimously recommended.

An extraordinary display of Onions was made by Mr. H. Deverill, Banbury, in all the leading exhibition varieties that are associated with the name of the exhibitor. There must have been about a ton of bulbs, several of them of gigantic proportions, and weighing 2 lbs. to 3 lbs. each. They afforded striking evidence of what can be accomplished by high culture and well selected stocks. A silver-gilt Knightian medal was recommended for this remarkable collection.

Not less imposing, more varied, and altogether excellent was an exhibit of produce by Messrs. Sutton & Sons, Reading, which extended along one side of the Hall. The collection included an imposing pile of Sutton's Early Gem Carrot, fine well coloured clean roots all of the same size; plants of the Aretie Green and the Aretie Purple Kale, dwarf, sturdy, and hardy looking, and we are told they are as hardy as they look; wonderfully fine Sutton's Autumn Giant Cauliflower, some of immense size, yet several as close and white as could be desired; superb heads of Sutton's Magnum Bonum Cauliflower, not so large as the preceding but of the first quality; thick fleshy green pods of the Prizewinner Runner Bean with slate-coloured dark mottled seeds to show the distinctness of the variety; a pile of Sutton's Snowball Turnips, models of their kind; also a highly meritorious collection of Onions of the varieties so elearly described on page 362 last week. large, elean symmetrical bulbs were shown as grown for exhibition; also not less shapely samples produced under ordinary culture and selected for planting for seed production. For this extensive display a silver-gilt Knightian medal was unanimously recommended.

FLORAL COMMITTEE.—Present: W. Marshall, Esq. (in the chair); the Rev. H. H. D'Ombrain, Messrs. J. Laing, R. Owen, H. Herbst, R. Dean, H. B. May, G. Stevens, R. B. Lowe, C. F. Bause, J. Jennings, C. J. Salter, J. D. Pawle, W. Bain, W. Furze, T. Baines, C. E. Pearson, W. H. Williams, J. Walker, J. T. Bennett Poë, H. Cannell, C. E. Shea and G. Paul.

A grand collection of Chrysanthemums was arranged by Messrs. Jas. Veitch & Sons, Chelsea, amongst the best of which were Col. W. B. Smith, Beauty of Exmouth, Mrs. Falconer Jameson, Bouquet des Dames, Viviand Morel, Louis Boehmer, and Miss Anna Hartzborn (silver Flora medal). Mr. Jennings, gardener to L. de Rothschild, Esq., Ascot, sent a basket of grandly flowered plants of Begonia Gloire de Lorraine (first-class certificate). Mr. C. Holden, 61, Warwick Road, Ealing, showed a large plant of Chrysanthemum Sœur Mélanie, upon which there were said to be 2000 buds and blooms (bronze Banksian medal). A fine collection of Crotons was exhibited by Messrs. B. S. Williams & Son, Upper Holloway, amongst which Warreni, Queen Victoria, Williamsi, mutabilis, and Princess of Wales were noticeable (silver Flora medal). Mr. Bain, gardener to Sir Trevor Lawrence, Bart., Burford Lodge, Dorking, showed blooms of Anthuriums, including Laingi, Leodense, Andreanum sanguineum, Lindeni flora carmine (first-class certificate), Andreanum, and two white seedlings. Pentstemon antirrhoides was also staged by the same exhibitor. Messrs. J. Cheal & Sons, Lowfield

Nursery, Crawley, arranged a fine stand of Dahlias. The Cactus section were finely represented, amongst the best being Professor Baldwin, Crawley Gem, Duchess of York, Amphion, and Sir F. Montefiore (award of merit, see below). Single varieties were also well exhibited, especially Lady Whitchead, The Bride, Florrie Fisher, and Mrs. Parrott (award of merit, see below). The show and fancy section were also shown, some fine blooms being staged (silver-gilt Flora medal). Mr. Wm. Pearce, gardener to G. Loder, Esq., Floore House, Weedon, showed five very beautiful specimens of Davall: a fijiensis plumosus. Messrs. H. Cannell and Sons, Swanley, were well represented by magnificent single Begonias and Chrysanthemums. The latter included Wm. Seward, Mdme. Le Blanc, Mdme. Edouard Rey, International, and Eda Prass amongst others. For Cactus Dahlia Cannell's Brilliant an award of merit was accorded (see below). A bronze medal was recommended for the collection. Messrs. Keynes, Williams & Co., Salisbury, staged blooms of the single Cactus Dahlias. C. E. Shea, Esq., The Elms, Foots Cray, showed a small but highly creditable stand of Chrysanthemums, which included Sylphide, Miss Dulcie Schroeter, The Tribune (award of merit, see below), and Bouquet des Dames.

Messrs. Cutbush & Sons, Highgate, exhibited an attractive collection of Pernettyas, amongst the best of which were rosca, atro-sanguinea, alba, and macrocarpa (silver Banksian medal). Mr. T. S. Ware, Hale Farm Nurseries. Tottenham, N., arranged a charming group of Cactus Dahlias, in which Mrs. Vince, Duke of Clarence, Mrs. Hawkins, Baron Schröder, and Delicata were conspicuous (silver Flora medal). Mr. R. Owen, Maidenhead, showed some grand Chrysanthemums, amongst the most noteworthy of which were Herbert Fowler (award of merit, see below), Rose Wynne, Richard Dean, and Miss M. Simpkins (award of merit, see below). The same exhibitor also staged a collection of small-flowered Chrysanthemums. Mr. Geo. Stevens, St. John's Nurseries, Putncy, S.W., received an award of merit for Chrysanthemum Madame M. Ricaud (see below). Mr. W. Wells, Earlswood Nurseries, Red Hill, staged a creditable group of Chrysanthemums, amongst the best of which were Wm. Scward, Majestic, Sunflower, Avalanche, Puritan, Prince Alfred, and Cæsare Costa. Mcssrs. J. Laing & Son, Forest Hill, S.E., staged a grand group of miscellaneous plants, for which a silver Flora medal was recommended. Begonias, Chrysanthemnms, Palms, Crotons, and a few Orchids were particularly prominent (silver Flora medal). Mr. Anthony Waterer, Knaphill, Woking, had a collection of hardy shrubs (silver Flora medal).

ORCHID COMMITTEE.—Present: Harry J. Veitch, Esq. (in the chair); Messrs. Jas. O'Brien, H. M. Pollett, A. H. Smee, Thos. Statter, Jas. Douglas, Henry Williams, J. Jacques, S. Courtauld, T. B. Haywood, Ed. Hill, C. J. Lucas, and F. Sander.

Messrs. J. Veitch & Sons, Royal Exotic Nursery, Chelsea, sent a large collection, comprising some very choice forms. Cattleyas were conspicuous in this contribution, especially C. labiata, C. Bowringiana, and the beautiful C. Harrisi. Some charming bigeneric hybrids, including Lælio-cattleya Eumæa, L.-c. Cassiope, L.-c. pisandra (first-class certificate) were also shown by Messrs. Veitch & Sons, as were several excellent hybrid Cypripediums, including C. Clonius, for which a firstclass certificate was awarded (silver-gilt Flora medal). Messrs. Hugh Low & Co., Clapton, had a well arranged group of Cattleyas, Odontoglossums, and Cypripediums, which made a fine display (silver Banksian medal). The same may be said of the large collection of Cattleya labiata in variety staged by Messrs. Charlesworth, Shuttleworth & Co., Heaton, Bradford. These plants were large and remarkably well flowcred. The same firm exhibited the new Cypripedium Charlesworthi, which was certificated a few weeks ago (silver-gilt Banksian medal). G. F. Poeton Essa, Bishopsford, Mitchem and the Banksian medal). G. F. Poston, Esq., Bishopsford, Mitcham, sent two Cattleyas; and W. M. Appleton, Esq., Weston-super-Mare, had some fine Cattleyas, Olontoglossums, and Cypripediums. Awards of merit were adjudged for Cattleya labiata and Dendrobium Phalænopsis

Messrs. F. Sander & Co., St Albans, had a bright group of Cattleyas and other Orchids, including a splendid form of Dendrobium Phalænopsis Schröderianum. First-class certificates were awarded for Cattleya labiata var. Sanderiana, and C. Lord Rothschild, magnificent varieties, which are described elsewhere (a silver Flora medal was recommended for the group.) G. D. Owen, Esq., Selwood, Rotherham (gardener, Mr. Mark Watts), secured an award of merit for Cattleya Hardyana, Selwood var. This is described clscwhere. The same exhibitor had Cattleya labiata alba. Messrs. Heath & Sons, Cheltenham, sent some Cypripediums, including a good form named C. insigne albens (award of merit.) W. C. Clarke, Esq., Sefton Park, Liverpool (gardener, Mr. T. Jones), secured an award of merit for Cypripedium insigne Clarkei, a description of which will be found below.

Messrs. Linden, L'Horticulture Internationale, Brussels, sent a number of choice species and varieties, and awards of merit were adjudged for Cattleya Warocqueana Imschootiana and Paphinia grandis var. gigas. Description of these will be found below. Botanical certificates were also awarded for Dendrobium lamellatum and Pholidota convallarioides. Mr. H. Little, The Barons, Twickenham, sent a number of Cypripediums, and Sir Trevor Lawrence, Bart., had Cypripedium conco-Lawre and Cirropetalum amatissimum, for which a first-class certificate was awarded. Messrs. Lewis & Co., Southgate, N., sent a brightly coloured group, composed principally of Cattleyas and Lælias, and for which a silver Banksian medal was recommended. Mr. T. Statter, Stand Hall, Manchester, secured a first-class certificate for Cypripedium Statterianum, which is described elsewhere.

CERTIFICATES AND AWARDS OF MERIT.

Anthurium Lindeni flora carmine (Sir T. Lawrence).—This has very large spathes of a carmine colour (first-class certificate).

Begonia Gloire de Lorraine (L. de Rothschild, Esq.).—A beautiful variety of compact habit, and bearing masses of bright pink flowers (first-class certificate).

Cattleya labiata (W. M. Appleton, Esq.).—A splendid form of this favourite Orchid. The sepals and petals are of a rosy hue, the lip purplish crimson with a well defined white margin (award of merit).

Cattleya labiata var. Sanderiana (F. Sander & Co.).—This is a very fine form, being much darker than C. labiata Sanderæ. The sepals and petals are deep rosy mauve, the lip purplish crimson with a distinct white margin (first-class certificate).

Cattleya Hardyana Selwood var. (G. D. Owen, Esq.) -A fine variety with large flowers of an attractive character. The sepals and petals are rosy mauve veined white, the lip being rich maroon with a yellow blotch on each side of the throat (award of merit).

Cattleya Lord Rothschild (F. Sander & Co.) — This is a magnificent new hybrid. It is a cross between C. Gaskelliana and C. aurea. The sepals and petals are pale rosy mauve, the lip being the most striking feature in the flower. This is large, of a rich purplish crimson, with a crimped white margin, the throat and basal portion being orange yellow

veined white and rosy magenta (first-class certificate).

Cattleya Waroequeana Imschootiana (Linden, Brussels).—A beautiful flower, with large petals and sepals of a bright purplish rose shade. The centre of the lip is rich crimson, the edging being fimbrated,

pale margin (award of merit).

Chrysanthemum Ryecroft Glory (H. Cannell & Sons).—A charming reflexed variety, with medium sized flowers of a rich yellow colour. A useful decorative Chrysanthemum (award of merit).

Chrysanthemum W. H. Fowler (R. Owen).—This is a Japanese with straight yellow coloured petals of perfect form (award of merit).

Chrysanthemum Miss M. Simpkins (R. Owen) .- A pure white incurved Japanese of great substance and superb shape (award of merit).

Chrysanthemum Madame M. Ricaud (G. Stevens).—A melium sized flower of a deep rose pink colour (award of merit).

Chrysanthemum The Tribune (C. E. Shea and H. J. Jones).—A broad petalled, lemon-yellow coloured Japanese variety of grand form (award of merit).

Cirropetalum amatissmum (Sir T. Lawrence).—A curious looking flower of a dull brownish colour, the lip being reddish brown (first-class certificate).

Cypripedium Clonius (J. Veitch & Sons).—This is an exceedingly interesting hybrid of a chaste colour. It is the result of a cross between C. caudatum Lindoni and C. conchiferum. The dorsal sepal is long and pointed, as are the petals, with tail-like appendages; both sepal and petals are white, veined green, the lip also being white, spotted brown (first-class certificate).

Cypripedium Statterianum (T. Statter, Esq.).—This is a richly coloured Cypripedium. It is the result of a cross between C. Spicerianum magnificum and C. vexillarium superbum. The dorsal sepal is rose coloured with a white margin, the petals and lip being brown (first-class certificate).

Cypripedium insigne albens (Heath & Son).—A distinct form with a well defined white tip on the dorsal sepal. The lip and petals resemble those of the type (award of merit).

Cypripedium insigne Clarkei (W. C. Clarke).—This is a good form of the well known type. The dorsal sepal is very distinct, having a broad white margio. The lip and petals are similar to those of C. insigne (award of merit).

Dahlia, Cannell's Brilliant (H. Cannell & Sons).—A rich velvety crimson coloured Cactus variety with a deeper centre (award of merit).

Dahlia Sir F. Montefiore (J. Cheal & Son).—This is a very grandly formed Cactus flower of a rich velvety maroon shade (award of merit).

Dahlia Mrs. Parrott (J. Cheal & Son).—A small single flowered variety having white and red petals (award of merit).

Dendrobium Phalænopsis, Appleton's var. (W. M. Appleton, Esq.).

—The lower part of the sepals and petals are white, the lips being rosy magenta, the lip similarly coloured (award of merit).

Lælio-Cattleya Pisandra (J. Veitch & Sons).—The sepals and petals of this charming begeneric hybrid are pale rosy mauve, the lip being a very rich maroon with yellow in the throat (first-class certificate).

Paphinia grandis var. gigas (Linden, Brussels).—The flower of this is larger than the type. It is tipped and spotted with reddish brown, the centre being white (award of merit).

LECTURE ON ONIONS.

Mr. A. Dean, after tendering to the exhibitors of Onions at the meeting grateful thanks for the effective illustration of the subject of his paper that day, dealt with the various forms or species of Alliums in cultivation, including Onions proper, Leeks, Shallots, Potato Onions, and Tree Onions, and then referred to the Union trial conducted at Chiswick. describing its character, and the reasons for the awards made by the Fruit Committee in connection with the trial, defending the action as against some criticism in the press and else-Then came descriptions of the diverse forms into which Onions are divided, white, yellow, brown, and red of colour, and of flat, round, and globular in shape. Special emphasis was laid on the fact that keeping properties in the Onion seem to be least in the white-skinned section, and best in the red Onions, also that the deep globular forms invariably kept better than did the flat bulbs, and asked what were the causes that led to such results. The present size to which exhibition Onions are grown came in for strong and adverse criticism, the lecturer holding that they served no good purpose, did not keep well, and were not profitable to grow.

The method of growing them was also described, and the names of the chief bulb producers mentioned. Some stress was laid on the profit-

AGLAONEMA ROTUNDUM.

As will be seen by referring to the illustration (fig. 56) this is a charming ornamental foliage plant. It is of a dwarf habit, and is suitable for growing in pots or pans in a stove. The leaves are oblong ovate, from 4 to 5 inches in length, and about 3 inches in breadth. On the upper surface they are rich green blotched with silvery grey, which deepens as the foliage matures. The under surface is pale green. The



FIG. 56.—AGLAONEMA ROTUNDUM.

able nature of the Onion as an ordinary crop, and one instance was given showing that from 600 to 800 bushels of fine bulbs per aere had resulted. Mention was also made as to the nature of the Onion as an edible vegetable, some quotations in respect to best forms of cooking being made from the Messrs. Sutton & Sons' valuable little book, the "Art of Preparing Vegetables for the Table," and it was pointed out that diverse as were the uses of the Onion, under no circumstances were bulbs more valuable as food than when properly boiled or baked.

plant, from a sketch of which the engraving has been prepared, was exhibited at the Drill Hall, Westminster, on Tuesday, September 26th, by Messrs. J. Veitch & Sons, Royal Exotic Nursery, Chelsea, when the Floral Committee of the Royal Horticultural Society awarded a first-class certificate for it. This Aglaonema will form a fitting companion to A. costatum, which was illustrated and described in the Journal of Horticulture for August 18th, 1892.



WE have received numerous intimations of Chrysanthemum shows which are to be held during the next few weeks, but space can only be found for the enumeration of those that have heen advertised in our columns up to date, of which the following is a list:-

Oct. 31st and Nov. 1st and 2nd.—Portsmouth.

Nov. 1st and 2nd.—Kent County (Blackheath).

" 3rd and 4th.—Crystal Palace.

" 7th and 8th.—National Chrysanthemum Society (Royal Aquarium), Kingston, Liverpool, Leeds Paxton, Brighton, Watford. 8th and 9th.—Northampton, Bournemouth.

9th.—Birkenhead and Wirrall.

", 10th and 11th.—Bradford.
", 11th and 12th.—Ascot.
", 14th and 15th.—Twickenham, West of England (Plymouth).
", 15th and 16th.—Birmingham, Hull, Bristol, South Shields, Rugby.

", 15th, 16th, and 17th.—Herefordshire.
", 16th, 17th, and 18th.—Scotland (Edinburgh).

,, 24th and 25th.—Eccles and Patricroft.

INNER TEMPLE GARDENS.

THE annual Exhibition of Chrysanthemums grown in the Temple Gardens is now open and the plants on the whole make a good display. They are arranged in the glass house that was erected last year in the eastern corner of the gardens. Mr. John Newton, who for twenty-four years has filled the post of head gardener to the Benchers of the Inner Temple, has brought together an excellent show, equal in all respects to its predecessors. The plants, which are vigorous and healthy, represent all the best known varieties and include many new acquisitions. Among the latter is noticeable Enfant des Deux Mondes, a white Louis Boehmer, a large and finely developed descendant of this striking specimen of the so-called hairy section. Another charming variety is Charles Davis, a grand yellow flower of Viviand Morel parentage. Miss Minnie Newton is a bloom of beautiful shape, golden bronze colour. Another successful sport is the Mr. Charles E. Shea.

Among the other novelties are Colonel W. B. Smith, an old gold colour, and the Papa Toussaint, a golden red and dark ochre yellow both of which are in early stages yet, but promise to be fine specimens. Cæsare Costa is also well represented, and the Sylphide, a light chrome yellow, is deepening its tint almost to orange. Among the older varieties F. R. Davis, with its long, delicate crimson petals, Sunflower, E. Molyneux, Gloire de Rocher, Louis Boehmer, J. Stanborough Dibbens, and others are showing remarkably well. Comparatively few incurved varieties are as yet expanded, and, therefore, intending visitors who take the most interest in this section, may advantageously defer their visit for a week or ten days, by which time the flowers will be at their best.

The exhibition remains open for six weeks.

BATTERSEA PARK.

THE Show of Chrysanthemums arranged at this Park is in every way a praiseworthy one. The plants are admirably grown, and are palpable evidences of skilful management and unremitting attention. There are upwards of 2000 plants on show, and they make a grand display. Not only is improvement manifested in the column in the column is improvement. play. Not only is improvement manifested in the plants, but likewise in the structure and the arrangement. Last season the house was divided by a partition in the centre, which detracted greatly from the general effect. This partition Mr. Coppin, the Superintendent, has now removed, and the plants are arranged on each side of the house with a path in the Notwithstanding the manifest improvements in the existing house, and that better advantage has been taken of the space at disposal, the accommodation is still inadequate, and we can but surmise what a magnificent display would be provided if Mr. Coppin had such a place as the Albert Palace at his disposal. We can readily imagine what the results would be if the Palace could be added to the Park and put in the charge of the present Superintendent. In connection with the Chrysanthemums the name of Mr. Tilbury must be mentioned, for the Exhibition is to a large extent the result of his industry.

Regarding the individual plants we can find nothing for them but praise, and they are in every way worthy of it, for they are thoroughly grown, and carry grand flowers. It is yet early to form a final idea of what the exhibition will be, as many hundreds of blooms have yet to open. In another ten days the Show will be at its hest. At the present time the finest varieties in flower include Edwin Molyneux, of which there are some superb examples; Florence Davis, Avalanche, Lady Selborne, Gloire du Rocher, William Seward, very fine; Mdlle. Elise Dordan, Charlotte de Montcabrier, Gloire Rayonnante, Stanstead Surprise, Edouard Audiguier, Mons. William Holmes, Sunflower, Mr. Bunn, Golden George Glenny, Jeanne d'Arc, and Georgeous amongst numerous others. We are glad to know that the Show gains yearly in popularity, and have no doubt that during the weeks that it remains open it will be patronised by many thousands of people who take an interest in the

plants under their notice.

DULWICH PARK.

ALTHOUGH Mr. Moorman, the able Superintendent of this beautiful park, had no structure in which to show Chrysanthemums during the autumn months, he has grown upwards of 600 plants; these are now coming into bloom, and they are a credit both to the grower and to the County Council. Mr. Moorman is evidently a man of resource, and as he had no proper house he has succeeded with the aid of pitlights, mats, strong cord, and stout quartering in erecting a makeshift structure. Let us hope that such determination to give the inhabitants of the surrounding district a look at the "Autumn Queen" will not pass unrewarded, and that ere another season the authorities, who are ever ready to cater for the wants of the public, will have erected a good house, and such being done we should expect to find as excellent a display at Dulwich as is now to be found at many of the other metropolitan parks.

That they can be grown as well there is ample evidence by those now coming into bloom. Large flowers have not been the aim, but a goodly number, and the plants are now carrying clean buds and a few blooms on strong healthy plants which have grand foliage, and that almost to the pots. Amongst the varieties now in bloom are Bouquet des Dames, very good; Florence Davis promises well, as do Viviand Morel,

Avalanche, and many others.

Out of doors the summer flowering section is grandly represented, the plants forming bright and beautiful masses of colour. The well known Piercy's Seedling is magnificent, Flora is one of the most conspicuous, Mrs. Hawkins is a pleasing yellow coloured variety, Mdlle. Leoni Lassali is a grand white, and Mignon is a useful bright yellow coloured dwarf variety. These plants are deserving of more attention than is at present accorded to them, and they will doubtless grow in favour as some of the improved kinds become known.

SOUTHWARK PARK.

An improvement since last year is manifest in the structure for the Chrysanthemums at this park, a large wing having been built on to the existing house, and well has Mr. Bailey taken advantage of the additional space placed at his disposal. The plants shown number upwards of 2500, and all are in an excellent condition. stout, deep green in colour, and the blooms substantial and decidedly above the medium size. The arrangement, too, is admirable, the plants being staged in such a manner as to allow the best points of the flowers to he seen at a glance. The colours are well diversified, and great care has evidently been given to placing the plants so that the colours should not clash. The collection is a highly creditable one, and great credit is due to Mr. Bailey for his success in growing such a grand display. Thousands of people are visiting the Show, and many are the expressions of admiration accorded, and very deservedly so, to the beauty of the flowers. In the densely populated district in which this park is situated there are many who delight in such a display of Chrysanthemums, and all praise is due to the County Council for the manner which

they look to the wants and desires of the people of London.

It would be impossible to name all the varieties staged, they are far too numerous, and as all are good the task of making a selection is somewhat difficult, as so much depends on individual taste; however, all will doubtless appreciate the magnificent blooms of Condor and the brightly coloured Gloire du Rocher. Not less beautiful are James Salter, of which there are many exceptionally fine blooms; Refulgens, Jeanne d'Arc, both very fine, as also is the popular H. Shoesmith. Here, as appears to he the case in many collections this season, Edwin Molyneux is grand, the blooms being massive, and the colouration perfect. Amongst the yellows Peter the Great must be accorded a prominent place, closely followed by Gorgeous and Gloria Mundi. The chaste Elaine is admirably represented, many of the blooms being of a high order of merit; and the same may safely be said of Puritan. Hairy petalled varieties are in a minority, Louis Boehmer being the only one noticeable, but this was fine, quality amply filling the place of quantity. Several plants of Lady Selborne are carrying grand examples. Val d'Andorre promises well, as also does Cæsar Costa. The blooms of Charlotte de Montcabrier are very perfect on many of the plants, and Mons. Wm. Holmes must be included amongst the best. Stanstead Surprise, George Gordon, C. Orchard, Mons. Astorg, Leopard amongst numerous others were very fine, and with these we must close our list.

WATERLOW PARK.

THE Chrysanthemums in Waterlow Park, Highgate, are decidedly better than they were last year, and Mr. R. Curle, the Superintendent, may be congratulated on the collection he has brought together. The plants are well grown and the buds are now fast expanding, the earlier Japanese varieties being this week at their best. Most of the plants are arranged in a small conservatory, a circular group occupying the centre, whilst others are placed on each side. Amongst these are some excellent blooms of the choicer sorts, which cannot fail to interest the numerous visitors. Some new varieties are grown, the best of these heing William Seward, J. Shrimpton, and Beauty of Exmouth. last named is developing some magnificent blooms, which will justify all that has been said in favour of this variety. Bouquet des Dames is showing remarkably well, and the same may be said of Viviand Morel. Mons. W. Holmes is in excellent character, the brilliant blooms showing up conspicuously amougst others less brightly coloured. Some grand buds of William Tricker are noticeable, and Stanstead White will be seen in splendid condition shortly. Margot is carrying some fine blooms, and the same applies to Miss A. Hartshorn. Such well-known and useful varieties as Madame de Seven, La Triomphant, Mons. Tarin, and Sunflower arc also well represented and make a conspicuous display. That charming white variety Avalanche is expanding some excellent blooms of great substance, and the striking yellow Japanese Gorgeus is making a fine show.

The incurved varieties are not yet very conspicuous, but some are grown. A few good blooms of Mons. R. Bahuant were noticeable, and some plants of Mrs. G. Rundle were developing fine flowers. In addition to the Chrysanthemums arranged in the conservatory there are others in three vineries, there being about 2000 plants grown. Grapes are hanging on the Vines, and on the front stages flowering and foliaged plants are arranged, these adding further interest to the collection. On the whole the display is a good one, and well worthy of a visit during the next few weeks.

FINSBURY PARK.

For producing a display of Chrysanthemums Finsbury Park has long been famous, but since the crection of a commodious structure for this purpose by the London County Council, a few months ago, it is likely to become even more noted in that respect. At all events this fine building, which is lafty and upwards of 80 fect in length by about 25 feet wide, is a decided improvement on the low house in which the plants were formerly staged. The Chrysanthemums may now be viewed with pleasure, and the thousands of visitors who will pass through the house daily during the next few weeks may do so without any discomfort. The provision of this splendid structure is a commendable act, and, it is hoped, one which will be extended to the other parks.

The house in question is situated near the Manor House entrance to the park. There being plenty of room the plants are not so crowded as are necessary in many instances, and this is an advantage so far as displaying the habit of each plant is concerned. There are, of course, some rather tall plants at Finsbury Park, but the majority of them are comparatively dwarf, which enhances their appearance. All the standard varieties are grown, and are now rapidly developing some fine blooms. Mdlle. Marie Hoste, one of the finest whites in cultivation, is promising well, and the same may be said of Bouquet des Dames. The old Elaine is good and some fine blooms of Viviand Morel and Mons. Tarin are noticeable. Edwin Molyneux shows up conspicuously, as also do Criterion, Mons. Freeman, Cæsar Coste and Mr. C. E. Shea, the last named being very fine. An Anemone flowered variety named Deleware is obviously well grown here, as are some of the Pompon type. The incurved varieties are not yet at their best, but some fine buds of Mons. R. Bahuant, Golden Beverley and Comte de Germiny are developing. These varieties and others will have grand flowers on them a week or ten days hence.

As before remarked the plants are well grown, and the collection as a whole reflects credit upon Mr. Melville, the Superintendent, whose efforts in this direction are much appreciated by the residents of northern suburbs of London.

THE PRIORY, HORNSEY.

In no private garden in the suburbs of the metropolis are Chrysan-anthemums better grown than they are at The Priory, Hornsey. Here Mr. E. Rowbottom, gardener to H. R. Williams, Esq., a gentleman well known in horticultural circles on account of the interest he has displayed in helping forward the fruit-growing industry, has for the past three or four years produced some of the finest blooms that have ever been exhibited, and this year apparently will prove no exception to the rule now established. Skilful culture has left its mark, and it is safe to prognosticate that Mr. Rowbottom will be well represented at the leading exhibitions during the next few weeks. Last year he secured a 10-guinea cup as his own, in addition to silver medals, and it is very probable that this Horcsey grower will this season take a place amongst the first rank of exhibitors.

When a Journal representative made a call last week he found Mr. Rowbottom busily engaged amongst his favourite plants. These are exceedingly well grown, and are now fast developing remarkably fine blooms, especially the Japanese type. All the newer varieties are grown, and many of these are likely to prove charming acquisitions. Mullc. Thérèse Rey, which is, perhaps, one of the finest creamy white varieties now in cultivation, is showing splendidly, and no doubt will be seen on the exhibition boards shortly. A certificate was granted for the variety recently. A new Japanese variety named Edith Rowbottom is likewise very fine, the blooms being large, well built, and of great substance. This is a seedling raised by Mr. Rowbottom, and a certificate was awarded for it at the Royal Aquarium the other week. President Borel, for which Mr. Rowbottom has also gained a certificate this year, is remarkable for its size and striking appearance. It has long purple florets with a golden reverse. Kentish Yellow is grand, being massive in build, and yet of a graceful appearance. Golden Dragon is in prime condition, and the same applies to Primrose League, a pale yellow variety. Eda Prass, an American seedling of the Japanese type, and for which a certificate was granted recently, is also well represented at The Priory, and apparently Mr. Rowbottom will repeat his success of last year with Mdlle. Marie Hoste, inasmuch as some enormous blooms of that charming variety are fast developing. The white Louis Boehmer is excellent, and G. W. Childs will prove good. The favourite Col. W. B. Smith is in grand condition, as also are numerous other choice varieties. Mr. Rowbottom is likewise growing many seedlings of merit, about which something will be heard later on.

The incurved varieties form a feature at The Priory, although another week must elapse before these are seen at their best. The buds,

however, have been well timed, and at the forthcoming exhibitions many grand flowers will be seen. Some splendid flowers of Madame Darrier arc noticeable, and Mrs. Brunlees is very fine. Mrs. Robinson King, Lord Alcester, and John Lambert are likely to develop blooms of extraordinary size and substance, and a good character is given the new Vice-President Jules Barigney. Although rather a tall grower, this is likely to prove a useful incurved variety for exhibition. The flower is large, similar to Lord Wolseley in build, and pale buff in colour. Another new incurved, named Miss Bella Wilson, is splendid, and Mrs. G. Rundle is exceedingly well grown at The Priory Gardens. Other good incurves are Baron Hirch, Violet Tomlin, Mrs. Shipman, and Miss Haggas. Many more varieties are deserving of mention as being particularly fine, but space is limited, and for the present a brief reference must suffice.

CHRYSANTHEMUMS AROUND BOURNEMOUTH.

HAVING spare time, and being much interested in Chrysanthemums, I made a trip to Bournemouth to see how the plants were looking in that locality, and thinking that remarks on our favourite autumn flower will interest your readers, I send you a short account of my excursion.

CRANMOOR LODGE.

I paid my first visit to Cranmoor Lodge, the seat of Mrs. S. Elphinstone, where I was courteously received by Mr. J. W. Taylor, the head gardener. The Chrysanthemums are arranged in sections in the Peach houses and vineries. The plants range from about $4\frac{1}{2}$ fect to 7 fect in height, and carry excellent foliage from the bottom. The more notable blooms now showing are Mons. R. Bahuant, A. Salter, Golden Empress, Mrs. R. King, J. Salter, Mr. Brunlees, J. Lambert, and the Teck family. Most noticeable amongst the Japanese were Beauty of Exmouth (the coming flower of the season), Golden Dragon, Louise Boehmer, Mrs. C. Wheeler, Mrs. F. Jameson, J. S. Dibbins, Mrs. E. D. Adams, W. Seward, the new Golden Viviand Morel (Beauty of Castlehill), which should develop into a magnificent bloom. Mr. Taylor has several new varieties with promising buds. There are about 350 plants for exhibition blooms and the same number of cut-back plants for conservatory decoration. Mr. Taylor won the cup in the cut bloom competition at the Bournemouth Chrysanthemum Show last season, and if the plants go on as they promise he will be a formidable competitor this season. The gardens are admirably managed throughout.

THE NEW ROYAL NURSERIES.

I next called upon Mr. Ratsch at the new Royal Nurseries, where he has erected sixteen houses each 50 feet in length. Some are filled with Chrysanthemums, mostly cut-backs. I noticed Lady Selborne, Source d'Or, Buttercup, Ethel, and Lady Lawrence are extensively grown. There are altogether about 5000 plants in excellent condition. Other houses are filled with Carnations and winter-flowering plants, and there are two houses of the Chemin Rouge Tomato which are showing a fine crop. Both houses and grounds show signs of good attention, and visitors to Bournemouth will do well to call at these nurseries.

PALACE NURSERY.

Messrs. Watts & Sons have now about 7000 Chrysanthemums arranged in their fine conservatory. The plants are grown in 10-inch pots, and include all the leading varieties. Decorative plants are grown in large numbers, in one house there are 1500 Tea Roses. Messrs. Watts have given up growing Chrysanthemums for exhibition. They have been very successful, winning four silver cups in the open class for groups at the Bournemouth Show. The nurseries at Heath Farm and Ensbury cover about 60 acres, and are well stocked. I recommend any gardener or other person interested in horticulture of paying a visit to Bournemouth to avail themselves of the opportunity of calling on the gentlemen named.—A GARDENER.

CHRYSANTHEMUMS AROUND LIVERPOOL.

At The Hollies, Woolton, Mr. Vaughan has this year over 250 plants, the greater portion of them being in excellent condition. In the Japanese Etoile de Lyon, Florence Davis, W. Tricker, Bouquet des Dames, Stanstead White, Mdlle. Marie Hoste, W. H. Lincoln, Mrs. F. Jameson, Mons. Bernard, E. Molyneux, and Col. W. B. Smith are amongst the best. In the incurved the Queens, John Salter, Empress of India, Lord Wolseley, Jeanne d'Arc, Ami Hoste, and Madame Darrier are all good. Mr. Vaughan has lost a great number of buds owing to the plague of caterpillars.

HIGHFIELD, WOOLTON.

Mr. Haigh, gardener to W. H. Tate, Esq., grows about 600 plants, and I never saw them look so promising. His best incurved are Empress of India, Mons. R. Bahuant, Jeanne d'Arc, Madame Darrier, all the Princess family, and new Baron Hirsch. The Japanese are particularly fine, the best Lilian B. Bird, Florence Davis, Gloire du Rocher, Puritan, Mrs. F. Jameson (grand), W. Tricker, A. H. Nevc, Stanstead White, Sunflower, and in the new section Mrs. C. H. Payne, Lord Brooke, J. Shrimpton, W. Seward, Col. W. B. Smith, Mrs. Nisbet, and Chas. Davis, the grand bronzy yellow sport from Viviand Morel.

ALLERTON HOUSE, ALLERTON.

Mr. George Eaton ought this year to be heard of if his collection of plants is a criterion. The Japanese opening very freely include Boule d'Or, Viviand Morrel, Mrs. F. Jameson, W. H. Lincoln, G. C. Schwabe,

W. Tricker, Florence Davis, and of new ones Chas. Blick, Col. Smith, W. Seward, J. Shrimpton, Beauty of Exmouth, Lord Brooke, Mrs. C. H. Payne, and Chas. Davis. The incurved are also most promising, and include Queens, Princess, and sports, Mons. R. Bahuant, Jeanne d'Arc, Madame Darrier, Baron Hirsch, Ami Hoste, and Madame E. Mintrel. F. Mistral.

ALLERTON BEECHES.

There are about 340 plants grown here, and Mr. Edwards will doubtless give a good account of himself this season. The plants are dwarf and healthy. The incurved are likely to produce good flowers, the Princess family, Baron Hirsch (grand), Lucy Kendall, and Vice-President Jules Barigny being very good. The Japanese are splendid, the best being Stanstead White (superb), Mrs. F. Jameson, Mrs. Irving Clarke, E. Molyneux, G. C. Schwabe, the newer ones being Chas. Davis (grand), Lord Brooke, Beauty of Exmouth, Alcazar, Majestic, W. Seward, John Shrimpton, Kentish Yellow, Miss Watson, Mrs. Hubback, Viscountess Hambledon, Col. W. B. Smith, and Primrose League.

DOVE PARK, WOOLTON.

Mr. Carling has 300 or 400 plants, the finest being Viviand Morel, Mrs. F. Jameson, La Verseau, E. Molyneux, W. H. Lincoln, Florence Davis, W. Tricker, Mdlle. Marie Hoste, and Mons. Bernard: and in the newer section Charles Davis, Colonel W. B. Smith, Princess May, Princess Victoria, G. W. Childs, Ruth Cleveland, W. Seward, J. Shrimpton, Lord Brooke, and Beauty of Castlewood. Incurved varieties include Princess and Queen families, also Jardin des Plantes, Lord Wolseley, Baron Hirsch, Alfred Lyne, a useful sport from Novelty; and Madame Frederic

CAMP HILL, WOOLTON.

Mr. Jellicoe has grown about 600 plants. The Japanese are strong, and give great promise of superh flowers. The best are Bouquet des Dames, Mrs. F. Jameson, W. Tricker, Etoile de Lyon, Gloire du Rocher, Viviand Morel, Puritan, Mrs. E. W. Clarke, Florence Davis, W. K. Woodcock; and of the newer ones Robert Owen, Ruth Cleveland, Mrs. C. H. Payne, Princess May, G. C. Schwabe, Lily Measures, Mr. G. Herring, J. Shrimpton, Mrs. E. D. Adams, Beauty of Exmouth, William School and Challes Hubback. Seward, and Charles Hubback. Amongst the incurved thirty plants of Mons. R. Bahuant in different stages are conspicuous. Baron Hirsch is also well grown, the blooms being large and massive. The Queen and Princess types are all with good clean buds. Amie Hoste, Madame Darrier, Jeanne d'Arc, and Madame F. Mistral are fine.

Mr. Jellicoc had pieces of clean white tiffany stretched about 1 foot from the roof over all his best blooms. He fully believes that damping is prevented by doing this, and I can fully bear him out, for there was not a decayed pe'al. Those not covered damp badly.

HILLSIDE, ALLERTON.

Three hundred plants are grown here, and very promising they look but are rather late. Queens and Princess types are fine, particularly the but are rather late. Queens and Frincess types are line, particularly the latter. Hero of Stoke Newington is very good. The best Japanese are W. Tricker, Gloire du Rocher, Puritan, Mrs. F. Jameson, Mdlle. Marie Hoste, Felix Cassogneau, J. T. Kendall, Beauty of Exmouth, and Le Verseau. If Mr. Healey can get his best blooms out he will be hard to beat. I noticed here a fine reflexed variety named Mr. M. Sullivan.

ELM HALL, WAVERTREE.

Mr. J. Bracegirdle grows 350 plants. The best incurved arc Princess of Wales, Mrs. Coleman, Mrs. Heale, and Miss Haggas all rightly timed; Alf. Salter, John Lambert, and Mons. R. Bahuant are certain to turn out well. I fear he will be a little weak in the Japanese as regards numbers, but substantial buds unfolding were Lilian B. Bird, Mrs. F. Jameson, Boule d'Or, Florence Davis, Puritan, G. C. Schwabe (extra), W. Tricker, Etoile de Lyon, Viviand Morel, Mrs. J. Clarke, Mrs. J. S. Dihhen, E. Molyneux, and Col. W. B. Smith. Reflexed were the most likely to pull him up a great deal, being extra

Mossley House, Mossley Hill.

Mr. Heaney here grows 300 plants, most of them being dwarf, and carrying grand massive huds. The Japanese particularly fine are Mrs. F. Jameson, Mrs. E. W. Clarke, Mrs. C. H. Payne (splendid), Miss Anna Hartshorn, Florence Davis, Boule d'Or, W. Tricker, G. C. Schwabe, Viviand Morel, W. Seward, J. Shrimpton, La Verseau, Harry May, Princess May, Chas. Blick, Puritan, Louis Boehmer, Col. W. B. Smith, Chas. Davis, J. Stanborough Dibben (extra good), Silver King, and Robert Owen. The incurved are just as good; Queens and Princess types fine, as also were Madame F. Mistral, Madame Darrier, Mons. R. Bahuant, Jeanne d'Arc, and Baron Hirch.

CALDERSTONES.

Although not an exhibitor now, Mr. Tunnington's work is always worthy of a note. This year he has the finest of plants and not so early as many supposed they would be. He is the same opinion as others, that the early buds of the Queen family will he very coarse, and it will be from terminal buds that the best exhibition flowers will be produced. The older varieties of incurved and Japanesc are looking well. Baron Hirsch is splendid, and praised by all who see it. He thinks it will have to be grown on terminal buds for show purposes, owing to its being inclined to come early. Lucy Kendall is a good yellow sport from Mrs. Heale, but he fears confusion with it and Miss Haggas. In Japanese Eda Prass is proving a good variety. Waban on early buds forms "hen and chicken" flowers; but late buds are opening well, as is also Beauty

of Exmouth, the same remark applying to William Seward. C. B. Withnal is very promising. J. T. Kendall and R. C. Kingston are showing remarkably fine flowers; and Mrs. A. Jacobs, a yellow sport from Madame Baco, promises well. Mr. Tunnington shares exactly the same opinion as Mr. Jellicoe regarding the vexed question of damping, believing that tiffany spread over the opening buds will prevent it, for on a damp morning the tiffany may be seen hanging with beads of damp, which would otherwise fall upon the flowers.—R. P. R.

NOTES ON PRIZE SCHEDULES.

AT the time of writing I have before me a list of ninety Chrysanthemum Exhibitions to be held within the space of exactly four weeks, commencing with Havant, October 27th, and finishing with Eccles November 24th. As some readers have not an opportunity of inspecting the schedules of prizes of the various meetings I purpose making a brief reference to the manner of offering the principal awards at what are termed the leading Shows.

As before remarked, Havant opens the Exhibition season on October 27th. Portsmouth follows next on the 31st, this Exhibition heing held in one of the finest halls in the kingdom. The prizes offered for competition are excellent, and some magnificent blooms are usually seen at Portsmouth. The principal class is that for forty-eight cut blooms, half Japanese and the remainder incurved, eighteen varieties being required in each section. Prizes of £10, £7, £5, and £3 are offered. As much as £5 for first is offered for twenty-four blooms in another class. Chrysanthemums in pots, both trained and in groups,

receive liberal encouragement also.

Kent County Show, held in the Rink at Blackheath on November 1st, is considered one of the best of the London Exhibitions. £10 are offered as first prize for best thirty-six blooms, half incurved and the remainder Japanese. Amateur classes are provided liberally, the prizes being quite adequate in every respect. On the same date the annual Exhibition is held in the Grand Stand at Ascot. In addition to cut blooms section groups of Chrysanthemums are here seen at their best. The cultivators in the neighbourhood make a special study of this system. On Friday, November 3rd, the Crystal Palace Show opens. As it does not clash with any other important meeting in the south it is certain to be well attended by southern exhibitors. As is usual, the prizes are substantial and the classes easily filled.

The succeeding week is a busy one; no less than eleven shows are held on Tuesday, November 7th, and the same number on the following day. Foremost comes the Exhibition of the National Chrysanthemum Society at the Royal Aquarium, Westminster. No less than forty-four classes are provided for cut blooms alone. As first prize the challenge trophy and £10 are offered as usual to horticultural societies for competition, and is certain to induce a spirited contest. The "Holmes" Memorial challenge cups are for incurved and Japanese blooms in separate classes. In addition £7 are added in each case for the premier award. No doubt the finest blooms available will be staged in these classes. Extremely handsome prizes are offered in many other classes. A silver cup and £4 for twenty-four distinct blooms in the Japanese section as first prize should induce a keen competition. The Exhibition at Kingston also opens on the same day. The interest here is increased by the fact of its being the final year for competition of the challenge vase offered in 1890, it having been won by three separate persons during that time. In addition a new vase is offered of the same value, 25 guineas, as the older one, which will provide attraction to visitors and exhibitors alike. For twenty-four varieties of incurved blooms a silver cup, value 5 guineas, along with the cash prize of £3, is offered. The conditions binding the competitors in the challenge vase classes are deserving of note. The whole forty-eight blooms are confined to the incurved and Japanese sections, but they must be distinct. Many societies allow duplicates to be employed in halt-a-dozen instances, but with such a rapidly increasing list of varieties these large classes ought The interest is carried northwards on the 9th to to be distinct. Birkenhead, on the 10th to Bradford and Derby, all of which can boast of successful meetings.

Exeter, on November 10th, deserves a mention. Some of the finest Japanese blooms in the south of England invariably find their way here. Batley, Bacup, and Crewe prefer Saturday exhibitions. In all of these districts Chrysanthemums are really well grown. Plymouth opens its Show for the second season on the 14th, and £33 are offered in one class for forty-eight blooms, £15 going to the first prizewinner. less than fifteen shows are set down for the following day, November 15th, including Bristol, Birmingham, Hull, Reading, York, and Winchester. The first-named place has long been famed for the trained plants. Birmingham is an important meeting. The prizes for incurved blooms are good; £10 is the sum for the premier award in twenty-four distinct varieties. Six prizes are offered in this particular class. The same conditions apply to the Japanese section. In other classes £3 is offered ditions apply to the Japanese section. In other classes £3 is offered for the best eighteen incurved blooms, and the same for Japanese.

At Hull the prizes are of the usual liberal character. For twenty-four incurved blooms £10 and a silver cup as well is offered for first prize (vide Journal of Horticulture, October 12th, page 339). In the premier Japanese class the prizes are the same as in the former. A new class is provided, with a view to introducing a fresh method of arranging Japanese blooms. A table space of 6 feet by 2 feet 6 inches is allowed to each competitor for the twenty-four Japanese blooms stipulated for. Plants have their share of patronage.

The Scottish Exhibition opens at Edinhurgh on November 16th, and handsome prizes are offered in the leading classes. Bolton, Stockport,

and Sheffield hold their meetings on November 17th, and liberal prizes are offered. Dundee and Ayr are set down for November 22nd. At the latter place a silver cup, value £20, is offered in addition to the money prize for eighteen Japanese blooms.—E. MOLYNEUX.

NEW SELF CARNATIONS.

(Continued from page 362.)

THIS section, although recognised by florists as exhibition flowers, having all the good qualities of the "Show" Carnation in exquisite form, size, breadth, and smoothness of petal and evenness of the edge, and are quite unlike to ordinary serrated-edged kinds one so often meets with, is always very much admired, for we have now many charming shades of colour, from pure white to the deepest crimson maroon, almost black. The exquisite shades of rosy pink and salmon, light carmine, rosy purple and deeper purple, and numcrous other charming blending of shades, makes this a most interesting class, and many of them are as richly perfumed as the old Clove Carnation. Rich as we had become in varieties, the season of 1893 added several more gems, and the following are amongst them.

Amor (Benary).—Bright rosy carmine, slightly flaked, a brilliant

handsome flower of fine quality.

Attraction (Chaundy).—Delicate soft pink, a large, bold flower, valuable for its exquisite colour; but it often comes with a split pod.

Albino (Chaundy).—A large white self with broad petals, and the next best to Mrs. Fred, the latter being the finest white self Carnation

Countess of Salisbury (Simonite).—An orange tinted yellow. This flower was reported to beat Germania, but as seen about Birmingham is very inferior to it.

Charmisso (Benary).—A distinct and very fine sort; bright pink,

tinted maroon, with fine broad petal, and of fine form.

Circe (Dodwell).—Blush white, of fine form and quality.

Eunice (Chaundy).—Rosy pink of good form and substance.

Gustave Freitag (Benary).—Much brighter in colour than Mrs. Reynolds Hole, and with a broad petal, good form and excellent pod.

Gillert (Benary).—This is often called Gilbert. Bright carmine

pink colour of large size and fine form.

Hebe (Chaundy).—Blush, tinted with salmon and of excellent form and substance.

John Benary.—Blush pink ground colour striped with carmine and purple. A very distinct fine flower.

Julia Basserman (Benary).—This is of the colour of Souvenir de la Malmaison, but brighter; it is of fine form, with large broad petal and good pod which does not split. A variety which will be very popular for decorative work.

Korner (Benary).—A distinct and novel colour, a pale pink shaded with a brighter tint of colour at the base of each petal and of fine form.

A great acquisition.

Mrs. Joseph Chamberlain (Thomsons).— A charming shade of salmon pink, good form, stout pod, erect habit, and a most desirable variety.

Negress (Thomsons).—Very rich shaded dark crimson maroon, possessing a satiny surface, large smooth petal. A fine flower.

Queen of Crimsons (Dodwell).—An excellent variety. The name indicates the colour.

Santuzza (Benary).—Bright salmon-tinted rose, a grand flower with large petal of great substance and quite distinct.

Topsy (Herbert).—A Negress style of flower, but with a brighter shade of crimson in it. Extra fine in every way, and with a strong Clove perfumc.

Uncle Tom (Dodwell).—This is an almost black, and extra fine

variety.

Vivid (Herbert).—Brilliant deep scarlet. A grand flower with

broad smooth petals and of great substance.

Wieland (Benary).—A distinct and very fine self, bright pink-tinted mauve, broad petal and of the finest form.—W. D.

(To be continued.)

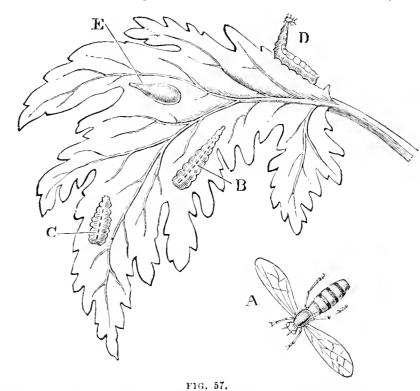
NATURE'S HELPS TO GARDENERS.

WE often hear persons talking about "the balance of power" among nations, and I do not doubt that most nations are anxious that their side of the scales should be the weightiest. Well, we gardening folk in our battles against insect enemies would like to have the balance on our side. Unfortunately, through ignorance, we often throw our weight against ourselves. Once, at a local show, I afterwards took the judges into my garden, and they were by no means ordinary men in their stations, and picking out the larva of one of the Syrphidæ, or smaller that the stations of the syrphidæ in the stations of the syrphidæ, or smaller that the stations of the syrphidæ, or smaller that the stations of the syrphidæ, or smaller that the syrphidæ is the syrphidæ in balance flies, I asked them what they would do with it if they met with it. The verdict was death. They were much surprised when I told them that I had often paid my children so much a dozen for finding them. Where they are often found I will tell later on.

I will allow that to any casual observer this larva, or grub, does not at first sight appear to be different from the many mischievous grubs and small caterpillars that find food and shelter in the leaves, and, alas! often among the blooms of our pets, but a little ordinary care, especially if aided by a pocket lens, ought to save the life of one of the most hardworking helpers that a gardener possesses.

All the ordinary grubs have a perceptible head, generally rounded,

and that looks smoother than the rest of the creature. These larvæ of several kinds of Syrphidæ or balance flies has apparently a pointed head, but if examined by a lens is seen to be made up of three points; still, as it moves, the distinguishing mark is the pointed head; its colour is generally green with some white markings on the back; but if living on the black aphis the green portion is much darker. If at rest it rethe black aphis the green portion is much darker. If at rest it resembles the dogs, whose heads and tails are alike, but if made to move then the pointed head shows itself. They vary in size from the eighth of an inch to perhaps an inch in very fine specimens. In walking there is a much deeper wave of the body than in a caterpillar of the same size. Its legs are rudimentary. It is blind, but when in search of food the pointed half of the body searches all round, and if meeting with an aphis it is seized, held up in the air, speedily sucked, and thrown aside. Their appetite is enormous, and the way in which one of these larvæ will clean a shoot that was covered with aphides is simply incredible to those who have not watched the process. When full grown it fastens itself firmly to a leaf, and, the body contracting, it changes into a smooth body, pointed at one end, rounded at the other, and often looks like a drop of frozen greenish water. In due course it changes into one of the balancing flies with wasp-like markings, the abdomen of which is flat-tened, not round as the wasp. They are beautiful as well as useful, and



A, A* Syrphus fly, the perfect insect. B, One of the larvæ or grubs, natural size and on the move. C, One at rest. D, One holding aloft an aphis, whilst sucking the body. E, The pupa or chrysalis, fixed on the leaf; the head of the fly is now at the thicker end.

could we increase them at will aphides would cease to be the pests they now are to gardeners.

Every observant gardener knows, when the leaves at the tops of his Red Currant shoots are curled and apparently blistered, that the under surface of these leaves is covered with aphides, and that this unhealthy change in the leaves is the handiwork of the aphis. But the instinct of the fly also teaches it that here she may safely deposit one or more eggs. Here my children have, in days gone by, secured dozens for me, which transferred to my Morello trees have helped to save my crop from destruction by the black aphis, or they have been placed on Rose trees or Chrysanthemums.

This year, being very occupied, I did not notice the beginning of mischief on my Morello Cherries, and I was reduced to removing the affected leaves, something like half a bucketful, intending to cover these with boiling water and so rid myself of the pest. But on looking at some of the leaves, literally black with aphides, I noticed some red lines. On taking out my pocket lens, I found these to be very small larvæ of some of the Syrphidæ. I had never seen them so small be ore, and never almost blood red; these were carefully removed with a camel's-hair brush and placed elsewhere, before the blacks were destroyed. Our "helps" are represented on the Chrysanthemum leaf (fig. 57).—Y. B. A. Z.

FLORAL NOMENCLATURE.

WHILE I thoroughly sympathise with "Old Subscriber" (page 356) in his plaint regarding the eccentricity and variability of pronunciation displayed when using the scientific names of plants, I must nevertheless twit him with inconsistency. It is strange that a gentleman who would, if he could, convert every Philistine to the use of the academic and undoubtedly correct "Gladiolus," should contend so strongly for recognition of the contend to the contend nition of the Anglieised plurals of Greek and Latin botanical names. I should have thought that, on such liberal principles, he would have been content with the vulgarly erroneous "Glad-ōlus" or Glad-iolus.

The disorder of pronunciation in floral nomenclature is not an easy

^{*} Several varieties of the Syrphidæ prey on the aphis tribe; most of them belong to the balance fly tribe, that hover over a flower, and often appear almost stationary in

onc to reduce, and though journals have some influence, unanimity in the matter of accent and plurals is never likely to be absolutely established. The more popular horticulture becomes, and the more the knowledge of the ever-increasing number of new plants extends, the greater does the difficulty of agreement grow. The question is, How much use constitutes naturalisation in a language? Botanical names are purely artificial, and constructed for the convenience of international communication between scientific men. Those plants that possess local names have the plural of these names formed according to the usage of the vernacular. But sceing that the scientific names form a kind of lingua franca, ought they to be subjected to distortion according as the person using them in the plural happens to be French, German, English, or Russian? Of course the question is fraught with difficulties, especially when we come to consider those names with the Greek endings (instanced by "Old Subscriber")—viz., is, ma, ops, and opsis. Surely many of us would hesitate, on the score of euphony, before uttering such pluralised forms as Acises, Ganymedeses, Phalænopsises, which suggest the old nursery rhyme, "three ghosteses sitting on three posteses eating bread and cheeseses."

Those who know anything of Greek must regret the substitution of such atrocious sibiliations for the beautifully soft Greek plurals in mata and idés. What havoe the writers of the Restoration wrought with our mother tongue when they took to using "thinks," "walks," "listens," and "freezes" for "thinketh," "walketh," "listeneth," and "freezeth," making it (as Frederick the Great said) like the language in which the serpent tempted Eve! But for this English might be positively agreeable for foreigners to hear. However, it has never been the practice of our race to sacrifice expediency to sentiment, and I am ready to admit that as nine-tenths of the scientific names of plants end with a vowel they suffer little hy heing given the ordinary English plural termination. "Old Subscriber" is right in poking fun at the expression "Narcissi

"Old Subscriber" is right in poking fun at the expression "Narcissi show," hut he misses the mark when he apprehends the advent of "Rosæ shows." The word "rose" is as much English as "violet," and hence it could never be a question of thus pluralising it, as there might be were it still the Latin "rosa." It would be equally absurd to talk of a "Roses shows."—"RIBESES."

Most people will agree with the sentiments of "A Grateful Old Subscriber" (page 356) on this subject. No doubt Glădĭŏiŭs is both right and impossible, therefore we must have an English pronunciation which is classically incorrect. I would strongly support the claims of Glădīŏiŭs rather than Glădĭōiŭs—first, because if the pronunciation is to be English, we should follow the good old rule that "the tendency of the English language is to throw the accent as far hack as possible," and Glādĭŏlŭs is hardly possible; second, because to my ears when I was young there was no other pronunciation, and Glădĭōlŭs is quite modern. But if "A Grateful Old Subscriber" is going to try to induce people to change their pronunciation of even a single word, he has my sympathy, and he will want it before he has done.—W. R. RAILLEM.



HYBRID BRIAR ROSES.

LORD PENZANCE has written me to say that his Hybrid Briars are at present being propagated by a firm of rosarians, and will be ready for distribution hy the autumn of next year. They are beautiful hybrids, between the wild Roses of the woodlands and the Hybrid Perpetuals of our gardens; and partaking as they do of the characteristics of both, will doubtless prove distinct and splendid acquisitions. I think that Briar Roses should be more widely cultivated. Their reign, indeed, is short, but it is exquisite while it lasts. Such brilliant varieties as the Persian Yellow, the Austrian Copper, and the semi-double Rosa Harrisoni should be found in every garden.—David R. Williamson.

HOT SEASON ROSES.

In reply to your correspondent, "W. R. Raillem" (page 358), re the behaviour of dark Roses during the past summer, I am able to state my experience differs somewhat from his own. I never remember having such a number of "burnt" flowers. I do not grow many varieties, but have about fifty dwarfs of Prince Camille de Rohan, and a like number of Abel Carrière, which are grown on a really good Rose soil, hut which requires enriching at the present time. I can safely say I did not cut twelve Roses off them that were up to exhibition form, the majority were very thin in petal, and those burnt badly; in fact I might say scores were never picked for this simple reason. While I am of opinion the hot sun tends to this burning, I think with your correspondent it is not the only cause. Had the bushes been supplied with an adequate quantity of water or liquid manure I feel sure the results would have been different. I am of the opinion that poverty has something to do with burning, in some cases at all events. Général Jacqueminot has never been better with mc; in spite of the thin petals every bloom developed, and their colour left nothing to be desired, at the same time their lasting properties were very brief. It was a case of "here to-day and gone to-morrow." Most of the light-coloured Hybrid Perpetuals were satisfactory,

especially these varieties that object to a wet season. I was surprised to find John Hopper so poor; it was far below the standard in every respect, while the preceding season it was grand. I might add, the majority of my Roses are grown for cutting purposes, and not for the production of exhibition blooms.—ESSEX ROSE GROWER.

MR. MAWLEY'S "ANALYSIS" OF 1893.

I CONFESS to a sense of disappointment on reading Mr. Mawley's explanation (Journal of Horticulture, page 358) of his method of arriving at the various positions the hest exhibition Roses hold each season, more especially in respect to their status at the N.R.S. Metropolitan Show. I have been under the impression while reading his analysis for some years that his figures represented real facts, whereas now I find that he practically uses the figures according to his own fancies. There is no doubt that the analysis must be in any case an arbitrary way of deciding the position of certain varieties, as they are taken only from winning boxes. This year it was of small consequence; but last year, when the competition was so great, as many as twenty-one competing in one class, and many other classes having from eight to thirteen competitors, it would have been a fair criterion of a good exhibition, and very useful and interesting to have obtained the varieties shown by all competitors.

Mr. Mawley says of his method of calculation, "However complicated and unreal the system" (his system) "may appear," it is in reality "a commonsense" way of treating the statistics at his disposal. My view is that when people are dealing with statistics they should deal with the hard facts alone, and not alter such facts to suit any theories they may hold. It is action of this latter kind which gives people the handle to use the saying that figures can prove anything. I prefer a grain of truth and fact to a ton of theory, and I never like to see figures altered. Being a husiness man it may be rather a hard and dry way of looking at the matter; but such is my way of thinking. Mr. Mawley practically arranges what in sporting language is called a handicap, according to his own views of the merits of the various flowers, but without much regard to their previous performances. Of course Gustave Piganeau, Ernest Metz, Ethel Brownlow, and other Roses, may next year be anywhere in an analysis of this kind, and very naturally in future their position will have little interest for me; hut it would be well for the guidance of others that some clear explanation should be given to show that the figures are evolved out of fancy more than fact. In regard to my query as to the number of prize boxes Gustave Pigancau and Ernest Metz were shown in, I used the words "big amateurs," by which I mean those growing at least over 1000 plants of exhibition varieties. I acknowledge that both the above named varieties are indispensable to a hig exhibitor; but from the experience of several leading rosarians, growing many more and oetter Roses than I do, I find t'at other opinions are in agreement with mine.

In regard to seasons in general, and more especially as regards their effects on the Rose Shows of 1893 and of 1879, I may say that, bad as the Crystal Palace Show was this year, it would have been infinitely worse if it had heen held on the 8th July, and no doubt Mr. Mawley will recollect that he and others were very strong advocates for that date, and were very sore at our defeating their motion to alter it.

Mr. Mawley says "We all know what the Drill Hall Show was in June 1891." I merely say we all know what the Drill Hall Rose Show always is—rather a failure? I should be glad to know how many classes there were in the metropolitan schedule of 1879, and how many members the N.R.S. then had. With these figures, which are facts of the past, we could fairly compare 1879 and 1893.—CHARLES J. GRAHAME, Croydon.

WALTHAM CROSS REVISITED.

Many years ago, in the Hollyhock days, when that noble flower gave to gardens a "character" they have never possessed since, I, as one of its votaries, remember well deriving both pleasure and knowledge in reading an entertaining and instructive pamphlet entitled "An Hour with the Hollyhock," little thinking I should ever be privileged to spend an hour with its author, Mr. William Paul of Waltham Cross. Time, however, brings about changes frequently such as are not anticipated, and one of these eventually brought me into contact with one of the most experienced and accomplished horticulturists in the world. That, too. is several years ago, yet subsequent to the dread Puccinia invasion which practically swept the Hollyhock out of the country. True we see the stately flower again in gardens here and there, and occasionally a few blooms exhibited at southern shows, hut they are very poor apologies for the grand varieties of past days when our author spent his "hour" with them. The plants of the present are chiefly raised from seed and treated as biennials, and it would be well if many more were so grown; but anterior to the fungoid scourge they were mainly increased by cuttings or root-grafting and treated as perennials. This is a reminiscence, a passing reference to days on which the minds of many love to dwell, and to which, and the "manners and customs" of the period, many more of a later generation are of necessity strangers.

Since the first visit alluded to, and the last, to be described, all things are not as they once were. For instance, on looking for the path from the platform of the railway station into the nursery, as in the old days, it was not to be found. "Here, porter, I want to go into Mr. Paul's nurseries; there used to be a gate opening to them from here, but I can't find it." "No, sir; there was never no gate from here." "But I once passed through it from the platform into the grounds." "No,

sir, begging your pardon, I think not." "What, then, has Mr. Paul moved his nursery to another place?" "No, sir; it's just exactly where it was, but," with a peculiar look, "we've moved the station." "Ah!" That means a collapse, and acknowledgment that the porter was master of the position. The station is 100 yards or so nearer London now, and instead of walking through it along the pleasant glade to the office at the opposite end, we pass along the side of the nursery, buildings intervening, to the main street of Waltham, turn to the right, and reach the office entrance in practically the same time as before—a steady ten minutes' walk, though there is a side entrance only four or five minutes from the station.

As most persons know, or may learn by a glance at a railway map, Waltham Cross is reached from Liverpool Street station, the city terminus of the Great Eastern Railway—perhaps, at certain times, morning and evening, the busiest station in London, if not in the world. No wonder many a stranger whose life has been spent in the country, the leisurely ways of which have become part of his nature, is not a little bewildered when he finds himself jutted here and there, and hustled about by a mass of humanity rushing for egress or ingress. He may, as many do, as is apparent enough, experience some difficulty in learning where to "take his ticket," and then in finding his train. Let him keep cool and not rush about in a search on the platform, but quietly pass upstairs and book to Waltham. On coming down again he will see right before him a number of clock faces with the hands pointing to the names of stations and number of platforms from which the next outgoing trains start. Amidst all the confusion, the arrangements at these great stations are clear enough, and a person arriving in reasonable time need not miss his train if he does not lose his head, as many do daily.

Not through pleasant suburbs does the train pass on its way to Waltham. We are in the thickly populated busy East. Dwellings, not artistic, are packed together, and "works" of various kinds appear to show their worst sides to the railway. Eventually we come to an opening between the buildings, but much more likely to be occupied with barrels, rubbish, and general lumber than by trees or other forms of vegetation. Yet anon we come to the fields mainly cropped with vegetables, but in no sense representative of the splendid market gardens more distant and westward of the City. Of shaky patched-up greenhouses there is no lack, but they have a depressing rather than an inspiring effect, indeed the whole surroundings are suggestive of a struggle against adverse influences—of marshy soil below and a hazy soot-laden atmosphere above. The outlook improves as we go along, especially as we see the rising ground of Epping Forest in the distance on the right; but it is not until historic Waltham is reached that we feel fairly in the country, and the first really bright and refreshing scene is afforded by the nurseries which skirt the line on the left, but just beyond the station—Rhododendrons in the spring, Roses in the summer, and Dahlias, with the rich tints of various trees during the evening of the year.

Fortunate was Mr. Paul in his purchase of this valuable tract of land between thirty and forty years ago for a nursery. He had it in mind to establish himself nearer the metropolis, but London has spread out since then, carrying with it atmospheric impurities inimical to vegetation, but Waltham Cross is outside the smoke radius and everything is clean. The site is open to all the sun that shines, and the soil is an ideal one for trees ornamental and useful. It is sound loam just above medium in texture, or sufficiently retentive for holding food ingredients, yet free in texture for inducing a fibrous rooting system. It is 3 to 4 feet deep, resting on gravel, and a little below that is the water table. In a wet season superfluous water passes freely away, in a dry one it sustains the trees, as drawn upwards by the sun in the process of capillary attraction. If this were not so, and if fibrous roots were not abundant, specimen shrubs and Conifers transplanted last May could not have lived through the exhausting summer. They have not only "lived" but grown admirably, though of course they had the needful attention as dictated by long experience. Firm, matured wood in fruit and orpamental trees, Roses and various shrubs is the natural growth characteristics of what may be termed the concrete or governing conditions indicated. This is apparent all over the nursery, and such sturdiness above ground can only have its counterpart below—not a few strong fibreless roots which are never produced by such trees, indeed cannot be, but a multiplication of fibres as the necessary collorary of such growth. Excessively rampant growth always did, will, and must mean deep strong root penetration, just as sturdy short-jointed wood ripening to the tips means a free fibrous ramification in the upper stratum of soil. This is so because it cannot be otherwise, and people who are not other than wise attach primary importance to the roots of plants and trees as the precursors of thrifty growth.

To the mere sightseer, who is not a cultivator, the month of October is not the best time for a nursery stroll, though an artist could not fail to admire and long to reproduce the exquisite colour tints assumed by many trees; but the visitor who has some knowledge of the gardener's art, though it may be much less than his more learned guide can teach him, is at no time more interested by an inspection than when Nature is completing the work of the year in the process of maturation. He likes to see fruit trees when the foliage is being scattered at the proper time, the Roses when they are preparing for rest, and trees and shrubs generally when the "leaves are changing yellow and kindling into red," because he can then appreciate the nature and value of the wood better than at any other period of the year. There is plenty to see at Waltham Cross in all those references, much more, in fact, than can be narrated here.

Let us look for a moment at the fruit trees. These we find represented in all kinds and forms, also of various sizes, from thrifty maidens to abundant fruit producers nearly thirty years old, with any number of moveable specimens for immediate bearing, these latter being in demand for furnishing new gardens quickly and filling blanks which are ever occurring in old ones.

Running through the nursery from south to north is an avenue of fruit trees, 400 yards long, in which is planted single trees of nearly 500 different kinds of Apples, Pears, Cherrics and Plums, which are much visited during the fruiting season by connoisseurs of fruits, both amateur and professional. Peaches, Nectarines, Apricots, Figs and Grapes, are grown and fruited under glass. By these means not only are the different soils constantly under the eye for observation and study, but buds, grafts and eyes are, when propagating, taken from fruiting specimens, thus reducing to a minimum the chances of error in nomenclature. Fruit trees, it has been said, are grown in almost every form. There are standards, young and old, short and tall, feathered trees, pyramids and bushes on various stocks, standard and dwarf trained, fan-shaped and horizontal, cordons upright and horizontal in almost unlimited numbers. The fruiting trees, especially Apples and Pears, were the most striking, many being of large size, very symmetrical and thickly studded with fruit buds. Similar trees to those which were removed last winter and bore fruit this summer (1893) large enough to appear at the fruit shows. Of smaller fruits, Strawberries, Raspberries, Gooseberries and Currants abound, the Strawberries being prevented from straying and intermixing by divisional lines of Raspberries, ample space being afforded for both. Many varieties of the different kinds of fruit are grown for meeting garden needs and forming collections. For extensive plantations of a limited number of popular kinds, trees are raised and grown on Mr. Paul's fruit farm in Sussex. The gathered crops of the season were stored in a fruit room recently built on the most approved principles, special features of which are a double roof, double windows and door and thatched sides. It is expected that no heating apparatus will ever be required here. In this nursery the Crab stock is preferred to the Apple, and the Paradise is recommended for private gardens only where the soil is a good medium loam. The Quince stock is used for some sorts of Pears, but the Pear stock is more largely used. The Mahaleb is a favourite stock for Cherries of the Morello kind; an instance of the value of this stock was given. No Cherries could be obtained in a large well cultivated garden until this stock was tried, when the crop proved abundant. Although the summer just past has been more than usually favourable to the spread of various insect pests, the trees here were perfectly clean, and bore no marks of depreciation from these enemies.

The celebrity of this nursery for Roses is well known, and although the flowers were somewhat despoiled by the rain there were several attractive blooms in the masses of Tca-scented and other kinds. The charming Polyanthas were represented by Gloire des Polyantha, Mignonette, Perle d'Or, and the newer and larger Princess Elizabeth Lancellotte. To these may be added the dainty Chinese Little Pet. A fine collection of blooms could be cut of such well proved or promising H.P.'s as Augustine Guinoisseau, Bardou Job, Caroline Testout, Charles Lamb, Climbing Queen of Queens, Clio (a wonderful grower), Danmark, Duchess of Albany, Ella Gordon, Garden Favourite, Gloire de Margottin, Grand Mogul, Gustave Piganeau, Madame Bois, Mme. Isaac Pereiere, Marchioness of Lorne, Mrs. John Laing, Pierre Notting, Pride of Waltham, Silver Queen, Spencer, Star of Waltham, Ulrich Brunner Fils, and Lorna Doone, Kronprinzessin Victoria, and Souvenir Victor Hugo. de la Malmaison were flowering among the Bourbons, and Adelina, Viviand Morel, L'Ideal, Madame Pierre Cochet, and William Allen Richardson were the most floriferous Noisettes. La Soleil was shining among its congeners the Teas and their hybrids, and blooms could be cut of Madame Chauvray, Madame Moreau, Pink Rover, Princess May, Waltham Climber No. 3, all vigorous growers; also of Camoens, Christine de Nouë, Corinna, Ernest Metz, Grace Darling, Gustave Regis, La Boule d'Or, Madame de Watteville, Madame Hoste, Madame Lambard, Madame Pernet, Ducher, Marie Van Houtte, Perle des Jardins, Safrano and its red variety Sunset, The Bride, Waban, and White Lady. This reads like a summer list, and is worth giving as indicating both the mildness of the weather and some of the best autumnal Roses. Plants of appropriate varieties are also extensively and admirably grown in pots for early forcing.

The collection of hardy trees and shrubs it is impossible to pass, as many of them shinc as brightly in their glowing garb of brown, purple, crimson and gold. Among the Acers circinatum, criocarpum, ginnala, Schwedleri, and saccharinum were conspicuous. Berberis Thunbergi (dwarf) was a mass of rich red, as were some of the Cornuses. Two Thorns also compelled notice—Cratægus Carrieri, a nearly evergreen with dark glossy leaves, 3 to 4 inches long, bearing clusters of scarlet fruits, nearly as large as Cherries, and C. prunifolia, leaves dying off scarlet. Euonymus atropurpureus, Gleditschia tricanthos, Kolreuteria paniculata, Liquidamber, various forms of Pyrus, Prunus, and Quercus, with Rhus toxicodendron, Salisburia adiantifolia, Spiræas, and Viburnums glistened in the sunlight.

Clematises in pots, a fine collection, sparkled with flowers, as plunged with other bardy climbing plants for the winter. The Camellia house is one of the features of the nursery. It will be a sight to see in February and March, the plants, young and old, being splendidly "budded;" and the Vines in pots, wherever they may be well grown, will be well worth looking at next year, for more substantial and better ripened canes cannot very well be imagined. The houses generally are

filled with a collection of the most useful spring flowering and other plants most in demand in gardens, and on each side of the long nursery glade are specimens of Hollies and other evergreens, including Osmanthus illicifolius, flowering freely and dispersing Hawthorn-like perfume; also a choice collection of Coniferæ associated with herbaceous plants

Passing through the town we come to an hostelry, Ye Olde Foure Swans, bearing date 1260, and near it the splendid memorial cross, the finest existing of the series commemorative of an historic event in the long past centurics. Not far distant is Mr. Paul's capacious residence, once the home of the late Mr. Anthony Trollope, with well-wooded pleasure grounds and park-like surroundings. Near it is the stately Ailantus tree, with its three main stems, recently alluded to in "The Times," and the alleged unpleasantness of the flowers is regarded by Mr. Arthur W. Paul, the diligent junior member of the firm, as mythical, as the spreading branches are close to the windows of his bedroom, and without causing the slightest inconvenience. The Ailantus glandulosa is a beautiful tree for town or country, and it is a wonder it is not more freely planted.

One is tempted to dwell on Mr. Paul's library, said to contain the finest assortment of horticultural works in possession of any individual except Dr. Hogg. It is a rich collection, ancient and modern, including, of course, the various works of the author, prominent among them being his magnum opus, the "Rose Garden," the most compendious and exhaustive work on the subject on which it treats. An hour with Mr. Paul in his sanctum, as in his nursery, is time well spent, and a man must know a very great deal if he does not learn a little more after spending two hours with the senior bearer of an honourable name, writ large in the annals of horticulture—a privilege the second time enjoyed by—LINDUM.



FRUIT FORCING.

Peaches and Nectarines. - Earliest House. - The trees in this structure have been at rest for some time, the roof lights having been removed when the wood was sufficiently firm and the buds formed, but not over-developed. The house was thoroughly cleansed when the leaves were all down, the trees untied, pruned, dressed with an approved insecticide, re-arranged and tied on the trellis, the border surface dressed, all put in complete order ready for a start at the proper time, and they are now in a promising condition. The roof lights will not be replaced until early in December. Where the roof lights have not been removed strenuously avoid allowing the soil to become dry at the roots of the trees, as this is sufficient to cause the buds to fall. If the trees are weakly and the buds plenteous a supply of liquid manure will be of great benefit. It is also advisable to remove the surface soil down to the roots, removing some of the old from amongst them, and supply fresh loam, not covering the roots near the collar more than 2 or 3 inches. If the loam be of a light nature add a fourth of clay marl, dried and pounded, and a barrowload of wood ashes to every cartload of loam, thoroughly incorporated, making it firm about and over the roots, and giving a good watering. Borders that have a close moist surface, and are rich in humus through heavy dressings of manure, may be dressed with freshly slaked lime, using about a bushel per rod, and mixing it with the soil as deeply as practicable without disturbing the roots to any great extent, omitting the top-dressing before mentioned. If the soil is very close and deficient of grit and ealcareous matter, a dressing of calcareous gravel about an inch thick, mixed with the soil as deeply as the roots allow, would improve its staple and component elements. It should be practised on both the inside and outside borders. Complete the pruning and dressing of the trees, cleansing the house, and admitting all the air possible.

Second Early House.—The trees that were started at the new eary or soon afterwards have been at rest a month, and those started in February are now leafless; they should be pruned, after untying, dressed, and re-arranged on the trellis. This, with a thorough cleansing of the house, makes an end of adult insects and larvæ before they have time to hibernate in the crevices of the bark and chinks of the woodwork and walls. In pruning early forecd trees it is not desirable to cut away too much wood, nor proceed on any hard-and-fast lines, but confine it to removing any useless parts that have escaped removal at thinning after the fruit was gathered, and shortening any long shoots to a double or triple bud, making sure that one of them is a wood bud. This will mainly be necessary to originate growths at the required place for furnishing the trees, for shoots that are well ripened need not be shortened and those of 8 to 12 inches length should be left entire, as they usually have a few wood buds at the base and one at the extremity, those between those points being usually blossom buds. It is, however, a mistake to retain much wood, which weakens the trees in flowering, and there is not space to train in the young growths without crowding. Treat the trees in other respects as advised for the earliest forced, also he house and borders.

Third Succession House.—This being started in February, the trees will now be leafless, or nearly so, and should be subjected to similar treatment to the earlier ones, losing no opportunity of pushing forward the pruning, dressing the trees, and having all needful work done. If the wood is thoroughly ripened, the roof lights may be removed with advantage. Where the roof lights are not moveable do not allow the soil to become too dry, and admit air to the fullest extent, securing as complete rest as possible. Any trees growing too luxuriantly or not setting and stoning the fruit well should be root-pruned or lifted.

Late Houses.—The late varieties are over this season sooner than usual, and the trees are shedding their leaves. It will be advisable to remove the roof lights as soon as the foliage is sufficiently advanced, but where green leaves hang long it is an indication of unripe wood, and the roof lights must not be removed for some time longer. If this condition prevails generally in the trees they should be lifted carefully and be root-pruned. When this is performed judiciously it will not prejudice next year's crop, but it must be done when most of the leaves are down and the wood firm, keeping the house rather close, the trees syringed, and shaded if the weather be bright. Under ordinary circumstances as to the weather these precautions are not necessary. It is only when the trees are gross and the wood unripe that the careful treatment is requisite.

In the case of young trees it will suffice to take out a trench one-third the distance from the stem the trees cover of trellis, and down, so as to cut off all roots to the drainage, leaving the trench open for a fortnight, not allowing the soil in the radius to become so dry as to distress the foliage to a severe degree of fiagging, but not giving any water so long as the leaves maintain their persistence, and then the trench may be filled in, making the soil firm. This will check the tendency to exuberance and late growth, and ripen the wood and plump the buds. Luxuriant trees which may not safely be bodily lifted on account of their long, strong and few roots, may be treated in a similar manner, and a year afterwards they may be lifted.

Unheated Houses or Wall Cases.—With a proper selection of varieties Peaches and Nectarines may be had from these structures from the middle of July to the middle of October. The structures should have south or south-west aspects, but they may have a west aspect in the southern parts of the country. Peaches:—*Alexander, Early Louise, *Hale's Early, Dr. Hogg, Crimson Galande, *Dymond, *Royal George, Grosse Mignonne, Goshawk, Alexandra Noblesse, *Bellegarde, Barrington, Grosse Mignonne, Goshawk, Alexandra Noblesse, Bellegarde, Darrington, Princess of Wales, Gladstone, Sea Eagle, Walburton Admirable, and Golden Eagle. Nectarines:—Early Rivers, Lord Napier, Goldoni, Darwin, Stanwick Elruge, Rivers' Orange, Milton, Pine Apple, Dryden, Newton, Spencer, and Victoria. Those requiring only a few may select those distinguished by a star. The chief thing with trees in unheated houses is to train the shoots thin so as to secure stout short-jointed, thoroughly solidified growth, to allow unobstructed light, and provide efficient ventilation. Proper attention must, of course, be given to efficient ventilation. Proper attention must, of course, be given to cleanliness and due supplies of nourishment, but the most important point of all is retarding the blossom in the spring as far as practicable. This is best effected by removing the roof lights, and allowing them to remain off until the blossoms are swelling and showing colour. has a good effect on the trees by the cleansing influence of rain, also in securing the thorough moistening of the border. Such trees can be kept perfectly under control by occasional lifting and root-pruning as may be considered expedient. Over-luxuriance or a tendency to late growth is overcome by judicious root-pruning and careful lifting, which should be done after the wood becomes firm, and whilst the foliage is still upon the trees. When intelligently practised lifting and laying of the roots near the surface and firming the soil well, is the surest remedy for trees that fail to set and stone full crops of fruit.

Pines.—Liberal ventilation should be afforded to pits or houses containing young plants when the weather is favourable, and avoid too much moisture, as over-damping, keeping the surfaces of the house constantly saturated, is more injurious than otherwise. Water will not now be often required, yet the plants must not be neglected, looking them over every week or ten days, watering such as require it, as too great dryness at the roots causes a stunted growth and it is not easy afterwards made free.

In the fruiting department lose no opportunity of admitting a little air early, closing the house at 85°, keeping the night temperature at 70°, or a few degrees less in cold weather. Remove all gills and superfluous suckers, retaining one only, the best to each plant. Suckers on successional plants that appear before the fruit should be removed, except an increase of stock is urgent, and then the fruit is more or less sacrificed to the nuckers.

At this time of the year it is usual to make new beds of fermenting material and prepare them for the young plants. Tan is the best for the purpose, retaining its heat longer than any other, and subsiding least. In forming beds of it place lightly together. Oak or Beech leaves are a good substitute for tan, which should now be collected, and as dry as possible. The leaves should be firmly pressed so that they may not sink much, and also to regulate the heat and prevent it from becoming too violent and soon spent.

Cucumbers.—The temperature should be maintained at 70° at night, falling 5° when cold, 70° to 75° by day artificially, advancing to 80° or 85° with sun heat. Admit little air at the top of the house whenever the weather is favourable, but it must be done without lowering the temperature, it being better to shut off the top heat for an hour or two when the sun is powerful than to ventilate when the wind is very cold.

Except on very fine days the syringe should be laid aside, using it chiefly for damping the paths, walls, and other surfaces in the morning and afternoon in warm bright weather. Supply water or liquid manure to the roots as required, and always of the same temperature as the house. Cover the roots with warmed soil as they protrude, and sprinkle a little superphosphate over it occasionally as an incentive of root action.

The autumn fruiters being now in full bearing must not be over-cropped, therefore remove the fruit when it attains a useable size, also all deformed fruit. Examine the plants at least once a week for the removal of bad leaves, and for stopping the shoots a joint beyond the show for fruit, and cutting away all superfluous growths. Let the winter fruiters advance well up the trellis before stopping them, training the side growths right and left of the stem, and not too closely, so as to secure well developed growth and foliage. Allow few or no staminate flowers, but remove them with tendrils as they appear, and add fresh warmed soil to the hillock or ridges as the roots show at the sides.

THE KITCHEN GARDEN.

Asparagus.—Not till the tops turn to a yellow colour should these be cut down, and then only to within about 4 inches of the ground, the stumps being left by way of an indication of the whereabouts of the crowns. Seed is very abundant this season, and if strong growths, heavily furnished with berries, are suspended in a cool, dry shed the cleaning will be a very simple matter next spring. The custom of heavily dressing the beds with solid manure, the soil from the alleys being deposited on this, is not recommended. It keeps the beds cold and wet during the winter, and destroys good roots that ought to be preserved. If Asparagus beds must have a surfacing of rich manure, defer applying it till next February or March.

Beet.—Whilst the mild weather lasts the roots will continue to grow, but the first sharp frost will check further progress. If a little soil could be drawn up to the plants so as to quite cover the roots they may remain where they are for some time longer, but if left exposed to a severe frost they might be spoilt. The roots are safe under cover of some kind. All should be forked out of the ground carefully, snapping the thick roots meaning a loss of colour throughout by bleeding, and the tops ought not to be trimmed off too close to the crown. If there is space in a cool shed that is the place to store Beet, all being packed crown outwards in either fine soil or sand. The roots may also be stored in a cone-shaped "clamp," and covered with straw and soil after the manner of Potatoes. The Turnip-rooted forms are the worst to keep, and these ought, therefore, to be used first.

Carrots.—Fully grown roots of these are also best out of the ground before severe frosts can reach them. All should be lightly cleaned, and the tops cut off nearly close to the crown, being then packed in sand or fine soil, much as advised in the case of Beet. Late Carrots should be left undisturbed. They will continue to grow when the weather is mild, and are much more tender and sweeter when pulled just before being wanted for use. Sowing in frames on gentle hotbed should commence now, especially where there is a constant demand for quite small roots. The French Forcing is the best for autumn sowing.

Other Root Crops.—Salsafy and Scorzonera keep the best in the ground, a few roots being lifted and stored for use whenever severe frosts are anticipated. Treat a portion of the crop of Turnips similarly to Carrots. Chicory may either be lifted and stored in cool quarters, the tops not being severely shortened, or the roots can be left in the ground and be lifted according as a few are wanted for placing in a Mushroom house or cellar to produce the requisite supplies of well blanched leaves. Parsnips not only keep better in the ground than they do when lifted and stored in sheds, but the quality also is superior. Jerusalem Artichokes are still growing strongly, and the roots will be of even worse shape than usual, the quality also suffering from this second top and tuber growth. These should not be interfered with at present. Later on, or after frosts have crippled the tops, these may be cut down and a portion of the beds strawed over so as to admit of roots being dug if wanted at any time. Onions keep the longest when hung up in cool dry sheds where they can be lightly protected if need be during the coldest weather. Binding them closely and neatly to stout string or short sticks is good wet weather work for the men, and the sooner the bulk of the roots are hung up the better.

Potatoes.—Much of the work of Potato lifting has been already completed in the majority of private gardens, and during dry days should be persevered with in the open fields also. The sorting over and storing ought to keep pace with the lifting. All the "ware" tubers, or those intended for marketing or home consumption, should be placed in one heap, good medium-sized tubers being selected for planting next season, quite the smallest, and any found slightly diseased, going to the pigs. Large numbers of "ware" Potatoes are best stored in clamps, or conical heaps not more than 4 feet wide at the base and of any length. These should be formed on the top of the ground, a well-drained site being chosen and only covered with straw for the first fortnight. The whole heap should then be turned, beginning at one end and re-forming the heap as the work goes on, this being done with a view to getting rid of all that have thus had a good chance of showing that they are diseased. Re-cover heavily with straw or strawy litter, and then bank over with soil dug from round and about 1 foot away from the heap. Potatoes will keep well undug, always providing the rows were heavily moulded up, and few or no tubers are near the surface.

Seed Potatees.—It is during mild autumns when so many seed or planting tubers are greatly weakened, and in many cases quite spoilt by premature sprouting. When those that have been dug earlier in the season are left in heaps for several weeks sprouting inevitably commences; long weak shoots resulting, unless this is prevented by thinner storing. The Ashleafs ought, particularly, to be set up on ends closely together in shallow trays, these being blocked up one above another in a cool light shed. Thus treated, and duly protected from frosts, they will not lose their first strong sprout, and heavier and earlier crops of Potatoes be had next season accordingly. It is scarcely possible, in most gardens, to treat the tubers of main crop varieties similarly to the Ashleafs, nor is this particularly necessary; but these ought, however, to be stored as thinly as space will permit, and be kept cool. Light is a good preventive of premature sprouting, and should only be excluded whenever it is necessary to afford additional protection from frosts. The best results invariably attend the practice of planting well-kept, medium-sized tubers whole, it being false economy to reserve the small Potatoes for planting purposes.



APIARIAN NOTES.

HINTS FOR BEGINNERS.

(Continued from page 365.)

The swarm-catcher I use is perhaps the first of the kind ever made, and, in my opinion, is still superior to any other. It consists of a light box of wood about one-eighth of an inch thick, or of wire cloth lined with stout calico, but fastened at the bottom edge only, the top being supplied with loops and cords so that it can be held up or lowered when the bees are transferred from it to the permanent hive by simply loosing the cords. The weight of the bees causes the bag to drop to the top of the hive, and the bees on finding the slight pressure retreat to the hive beneath in a few seconds, thus obviating all risks of them or the queen taking a second flight, or of stranger bees joining and killing the queen. The poles generally used are joined by ferrols to any length, and have on the top a swivelled arm on which are fitted the two pulleys, over which the cord works to lower the swarm-catcher. I hope the foregoing may be sufficient to enable the beginner to make one for his own use. It must be borne in mind that the swarm-catcher is made to go inside the super-protector, without which it would be of less value.

Supering.

After hiving comes supering. When should the supers be put on? is a question oftener asked than can be answered satisfactorily. Supering newly hived swarms, and the size of hive to be employed, are matters which no one can say positively what, when or how everything should be done. Experience alone must be the sure guide to beginners, locality and season being potent factors. In order to assist those commencing bee-keeping, however, we shall suppose a prime swarm has issued and is safely hived. When the honey flow is great the hive should not have more than two divisions; in fact in one division having full sheets of foundation, or some wrought out combs with supers added, the bees will take to them at once, and when comb building has been well forward in them, say in two days after, add a second division also full sheeted or combed. If the swarm is before the honey flow give it two or the three divisions according to the time ahead and strength of swarm. Generally speaking, a prime swarm comes to full strength and swarming point again in from five to six weeks after being hived.

If a prime swarm in two divisions at first be deprived of its queen and a young fertilised one introduced, and at the same time a third division added, swarming for some time will be delayed if not altogether stopped. The same treatment applies to stocks unswarmed, but the bee-keeper must determine according to his locality the best time to strengthen hives by superseding old queens, by introducing young ones, or the joining of swarms. These should all be done so that the hives may be in full strength at the time of the greatest honey flow. Thirty days elapse from the time the eggs are laid till the bees work in the field, but inside the hive they act as nurses, and others work shortly after birth.

To catch the flowers at the proper season by full strength hives is of the greatest importance. Sometimes the bee-keeper is greatly taxed how best to accomplish that, and manipulations have occasionally to be resorted to to accomplish that in some localities that are quite unnecessary in others. — A LANARKSHIRE BEE-KEEPER.

(To be continued.)

BEE-KEEPING-TEACHING BEGINNERS.

CAN you tell me of a useful little work on bees, very simple and suited to a beginner? We have about eight hives, and since the sudden death of a brother in the summer no one understands how to manage them. A bee-master took the honey for us about the beginning of August, and reported the swarms strong and healthy; but as he does not come again till the spring, I wished to ask if there is anything to be done in the meantime. We have "Modern Bee-keeping," a handbook for cottagers, but perhaps you can recommend me something better?—W. H. B.

[As there is no royal road to learning, so there is no book which alone can teach beginners sufficiently, and guide them in all matters connected with bees. Nature's book, and with it experience, form the best groundwork for the young apiarist. Neighbour's "Apiary," and the "A. B. C. Book," by A. T. Root, are perhaps as good as any, the latter touching upon many things not otherwise found in bee boooks.

The bee-master who took the honey in August, and reported the swarms strong and healthy, should have told you whether there was sufficient food in the hive to last till late in the spring; it ought then to have been not less than 35 lbs., and at the present date 20 to 30 lbs. He should also have shown you how to feed and protect the hives against the frost and storms of winter.

If the hives are not provided with sufficient food supply it at once until they have at last 20 lbs. each stored. If single-cased (by far the best) wrap several plies of woollen or other material around them, then over that an oilcloth or an archangel mat, covering the top of the frames with a porous quilt of some sort, then over that some dried grass or several inches of soft woollen material

A ventilating floor is the safety valve of every hive. As a makeshift a rim 3 or 4 inches deep covered with perforated zinc, seven holes to the inch laid on the top, not nailed, keeping the original floor beneath all. Be sure the top is defended by a water-proof covering of cloth or iron so placed as to leave a free current of air between it and the covering. The Journal of Horticulture is the best instructor. The articles appearing weekly for the guidance of beginners, if read and thought over, will enable anyone to become proficient in a year. Some of the greatest achievements in modern bee-keeping were learned first from its pages.—A LANARKSHIRE BEE-KEEPER.]

TRADE CATALOGUES RECEIVED.

Little & Ballantyne, Carlisle.—Trees, Roses, Herbaceous, Stove and Greenhouse Plants.

The Surrey Orchard Co., Redhill.—Bulbs.

Charles Turner, Royal Nurseries, Slough.—Roses, Fruit Trees, and Nursery Stock.



*All correspondence should be directed either to "THE EDITOR" or to "THE PUBLISHER." Letters addressed to Dr. Hogg or members of the staff often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Bee subjects, and should never send more than two or three questions at once. All articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post, and we do not undertake to return rejected communications.

Covering Glass Structures in Winter (J. Everaerts).—You act wisely in drawing down your lattice and other blinds over the roofs of your houses in winter to prevent loss of heat by radiation and consequent waste in fuel. We do not understand why the custom is not more general, but we know that in many instances it would be advantageous to use blinds less in summer and more in winter. If growers of Chrysanthemums were to use blinds over the plants on clear cold nights, the damping and premature decay of many blooms would be prevented. The use of good blinds in winter would considerably lessen the onsumption of fuel.

Grubs in Cyclamen Pots (E.).—The grubs are the larvæ of a destructive weevil (Otiorhynchus), a brownish beetle-like creature which feeds chiefly at night on various kinds of plants, and may be found with the aid of a lantern and destroyed. The grubs are difficult to destroy—a decoction of hellebore made by dissolving 2 ozs. of the powder in a gallon of hot water and applied at a temperature of over 100° might be tried. It would not injure the plants.

Marechal Niel Roses (S. S.).—We should not have adopted your practice, though we hope no material harm will result. The roots would no doubt strike downwards and find the moisture you have denied them near the surface. Root-drying does not always mean wood-ripening, as has been over and over again indicated in our columns, but often means wood-starving. We advise you to make the border moist right through in the best way you can, using pure water, then a week afterwards follow with good liquid manure.

Prices of Brick and Concrete Garden Walls (W. M. B.).

—The prices vary with the material, distance of carriage, and labour. A 9-inch thickness will do for a wall of 6 feet height, and with bricks of good quality, cost about 3s. 9d. per superficial yard, including footings and copings. Concrete walls generally "batter" upwards to 9 inches from a base of 15 inches, and equally on both sides. If the materials have to be bought and cement is used the cost is about the same as a brick wall, generally 4s. per superficial yard. Where the materials are handy and the work done by skilled labourers the cost is considerably less.

Dressing the Wounds of Apple Tree (Inquirer).—It was not intended to deprecate the use of pigments for dressing the wounds caused by cutting off large limbs, but we have seen disastrous consequences follow the use of gas tar on fruit trees, and do not advocate its use on any tree with a smooth bark, as Apple trees ought to have to be healthy and fruitful. It is usual to dress the wounds of forest trees with gas tar (or preferably lead-coloured paint), and no injurious results follow, in consequence of the thickness of the bark, whilst the pores of the wood are closed by the pigment. For any cuts such as you allude to we should prefer lead-coloured paint to gas tar, but for the cankered wounds proceed as advised with the sulphate of copper solution, washing them well out, and then apply a plaster of cow manure and clay to encourage the growth of the bark over the wound. The sulphate of copper solution is in nowise a preserver of the wood from wet, but it acts fatally on fungi and their germs.

Transparent Patches in Apple Flesh (R. I. L.).—The hard wax-like patches on the Apple consist of pulp of greater density than the other parts of the fruit, the cell walls having been ruptured, probably on account of their thinness, and the extravasated juices are retained, giving the blotches a firm transparent appearance. There are, of course, no air spaces in this part of the fruit, but there is a certain amount of air, as air bubbles form on the microscopic section, and a few perfect cells exist amid the gelatinous-like flesh forming the blotches. In the other parts of the fruit the cells are unusually large, and the flesh is much softer and lighter. The substance proceeds directly from the internal parts of the fruit, and is intimately connected with the carpel or core. Its extravasation is most pronounced in hot soils and seasons, and is restricted to certain races, such as the Muscovy or White Astrachan (Transparent Apple), which is remarkable for its gelatinous-like blotches in the flesh, and sometimes the whole fruit is transparent, with a texture of flesh resembling a stone fruit, and very crisp, juicy, and richly flavoured. The transparent blotches sometimes occur in Gravenstein and in some of the Calvilles. It is not a disease, but a peculiality of type, transmittible from the parent and inherent in the progeny. The threads pervading the gelatinous-like substance are not fungal, but belong to the cells which have had their juices extravasated.

Making a Vine Border (George).—As there is about $2\frac{1}{2}$ to 3 feet of good soil resting on rather sandy gravel, we should not for marketing purposes indulge in a costly border, for if profits are to be realised in these days of keen competition, it must be by strict economy both as regards capital and labour. If the soil is naturally well drained, water not lodging in the sandy gravel, nor at any time rising to within 4 feet of the surface, but percolating away to lower ground as it falls and passes through the soil, there will not be any necessity for tile drains to carry off the otherwise superfluous water. Rubble for drainage will not be necessary, and all you need do is to chop the turf up rather roughly, mix with it the lime rubbish and a quarter of the fowl manure, place on the border evenly, and mix the whole with the good soil by trenching, so as to form a staple 2½ feet deep, loosening the soil at the bottom, and leaving it there. This border will grow as good Grapes as need be with due attention to surface dressings and supplies of water or liquid manure. Where water lodges in the subsoil, an excavation should be made 3 feet deep down to the sandy gravel, with the bottom sloping to a drain at the front and longitudinally of the proposed house, having the drain about 1 foot below the bottom of the border, with proper fall and outlet, placing rubble on the 4-inch drain level with the bottom of the border. The front wall of the house should be arched so that the roots may pass from the inside to the outside border, 9-inch pillars sufficing, with skew-back arches, the under side of their crowns being level with the proposed level of the border, and about a foot of brickwork above the crown of the arches will be sufficient height of wall in front and at the ends. About 3 feet height of front lights opening the entire length of the house, or every other light at least, will be necessary. Top lights will also be necessary in the sloping roof, about $2\frac{1}{2}$ feet wide, and preferably opening



PERHAPS at no season of the year do the eyes of those who revel in exquisite tints and infinite gradations of colour find so much to admire as during the autumn, when the surface of every woodland, and that of numerous groups or belts of trees, exhibit the unapproachable beauty of Nature's colour blending. The spring, with its tender green leaves and blossoms of pristine beauty; the summer, with its sunny skies, waving crops, gorgeous flowers, and deep green leaves have each a beauty of their own; but to the leaves of autumn must be awarded the palm for the display of the greatest diversity of rich tints, which each year teach us useful lessons in the boundless art of colour blending:

The enjoyment to be obtained from a studied survey of autumn foliage and berries is not confined to the views noticed in the open air, for with such a wealth of materials before us we have learned to utilise them for artistic adornment in many ways. At the harvest festivals in our churches they, in combination with fruit and flowers, are befittingly employed to show the varied bounty of Heaven's gifts, and add a higher touch of beauty to the buildings wrought by human hands. In the embellishment of the homes of the affluent they also play an important part, and those who carry out this kind of work look with pleasure on the autumn season, when, by the aid of the rich materials at their command, artistic arrangements and unique effects are easily produced. Few receptacles are better adapted to displaying branches and shoots of autumn foliage than tall trumpet-shaped glasses. We have recently been filling such with branches of Beech covered with bright brown leaves, long shoots of Dogwood carrying bold crimson foliage, graceful plumes of Asparagus dotted with red berries, Ampelopsis sprays, and drooping Larch shoots arranged so as to hang in thinly disposed festoons of waving lengths over the sides of the glass. Specimen blooms of that fine Chrysanthemum Mons. R. Bahuant, cut with long stems, and arranged with shoots of Dogwood and Berberis aquifolium bearing well coloured leaves, have been greatly admired. White Chrysanthemums, or others having bronze shades of colour, look exceedingly effective when given a background formed of shoots of this Berberis. Indeed, the leaves of this useful shrub, obtained from plants growing in different positions, exhibit such a great variety of colour that they are invaluable for arranging with many flowers of bold type. Leaves on the same shoot sometimes vary from a dull bronze to bright red.

Few things are more striking when employed as tracing for dinner-table decoration than these coloured leaves, as they are bold and distinct in outline as well as beautiful in colour. Shoots of the common Plane tree about the middle of October we find very useful for mingling with other foliage, the pale green in the centre of the leaves, shaded to light yellow at the edges, supply shades of colour which harmonise so well with the richer tints of other leaves. I do not remember to have previously seen autumn foliage so generally good as it has been this year; the recent rains acting on a warm parched soil seem to have had the effect of infusing a glow of colour into leaves which at one time were turning a rusty brown, quite unattractive when compared with their appearance now. A large Horse Chestnut overhanging a lake in the park here has during the last fortnight been a picture of

surpassing beauty. The groundwork of the leaves is of a bright yellow colour. On each side of the ribs streaks of bronzy red show up distinctly; these streaks are gradually shaded and suffused with dull rose and pale pink. The effect produced by this large surface of bright, yet exquisitely shaded colours, rivets the attention of every beholder.

The Deciduous Cypress (Taxodium distichum) also contributes telling autumn foliage, and is well worthy of planting on that account, especially in the vicinity of masses of large specimens of the various kinds of Laurels; the bright brown colour of this Taxodium is then shown up to the best advantage. For arranging with other foliage in a cut state it is also excellent, as its Fern-like branches supply the light feathery material needed for mixing with bolder foliage. Many other trees and shrubs might be enumerated which supply foliage of rich colour to brighten the landscape or adorn the interior of "England's stately homes." There is, however, one member of the vegetable kingdom whose usual place is in the precinct of the kitchen garden, which must be mentioned in connection with this subject. I refer to the shapely Carrot, the coloured tops of which can vie in beauty at the present season with the fronds or leaves of the choicest exotic. The great diversity of colour to be found in Carrot tops renders them especially suitable for mixing with flowers of all shades. We frequently place a groundwork of them in large bowls of low glasses, and then dot among them trusses of Madame Crousse Ivy-leaved Pelargoniums, which combination is both novel and pleasing. The rose-coloured flowers of Anemone japonica, and others of similar shades, as well as all white ones, are also exceedingly effective when loosely arranged with these beautifully coloured Fern-like leaves. I ought previously to have mentioned that shoots of the various varieties of Ghent Azaleas have now some of the most brilliantly coloured leaves to be met with, which render the beds occupied with them almost as showy as when in flower. When shoots are employed for decorative purposes in a cut state I find the leaves adhere to them until quite withered, and last a long time in good condition. Cut only those shoots which have no central flower bud, otherwise the beauty of blossoming time will be much curtailed.

Turning to the many forms of autumn berries we find the various species and varieties of Crategus produce them in abundance. Perhaps the most showy among them are the clusters of bright scarlet ones borne on the branches of C. pyracantha. These are well adapted for arranging with the paler-tinted leaves, judiciously intermixed with others of deep green, a few Grasses afterwards being added to give lightness and finish. The common Hawthorn, C. oxyacantha, is this year loaded with "haws." Large branches may frequently be cut from trees and hedgerows without injury to either. These look particularly well if placed in tall trumpet-shaped glasses. They should be thinly disposed, and allowed to hang well over the sides; the arched branches then exhibit their natural grace, and do not require associating with other materials to display them to the best advantage. The rich purple berries of the common Privet, bright scarlet "hips" of the Dog Rose, large dark coloured clusters of Elder berries, each in turn prove welcome for indoor adornment. Euonymus europæus (the Spindle Tree), with its long elegant branches on which rose-scarlet berries are freely produced, yields the palm to none in its appropriateness for basket and vase decoration. It is deserving of more extended cultivation, for it thrives in dry stony places where many other things do not. In some parts of the country the Spindle Tree grows abundantly in the hedgerows, and is very beautiful.

With the materials already alluded to dwelling rooms may be made bright and attractive without employing a single flower, though when foliage, berries, and flowers are each used the highest artistic effects are produced, but at the present season I always like to arrange one basket or vase in each room entirely with foliage and berries, as they seem to mark the progress of the waning year.—
H. Dunkin, Castle Gardens, Warwick.

TOMATOES IN 1893.

The past season, so far as my recollection goes, has been about the best I have ever known for outdoor Tomatoes. Plants that were turned out of 6-inch pots the end of May and with the first trusses of bloom showing had some ripe fruits before June was out, and throughout July and August fruited abundantly. They were planted against a south wall in vacant places between the fruit trees, and supplied with water about twice a week. These plants were raised from seed sown the end of March, but the general sowing for outdoors I made about the middle of April. The varieties grown here this year were Ham Green Favourite, Conference, Challenger, Ladybird, and also a good local sort, but other kinds, such as Perfection, Sutton's Maincrop, and Sutton's A1, grown in neighbouring gardens, have done remarkably well. The weather was so dry throughout the summer that more water than is usually necessary was required.

Some seedlings of Challenger and Ham Green Favourite that were left in the seed pots, and about 2 inches high, were potted the beginning of June, grown quickly on a shelf in a Cucumber house for a fortnight, then hardened off for a week, and planted against a south border a yard asunder. A strong stake 3 to 4 feet high was thrust in at the same time for each plant to be tied to. were two dozen plants of each of these varieties, and they have given less trouble and produced finer bunches and more weight of fruit than any forty-eight plants against the wall. The ground had been newly dug, and although the weather was so dry in May, the soil was moderately moist, also warm, so the Tomatoes grew quickly, and reached the top of the stakes in a much shorter time than I had ever seen before. When the fourth truss of flower on each plant was seen the point was pinched out and all further growth was suppressed. As they grew, all side laterals were pinched out, and when the fruit was fairly set some of the large robust leaves were reduced one-half. Some of the clusters weighed more than 2 lbs., none less than 11 lb., and the fruits were even

and finely shaped.

I believe, and I have often done it myself, that Tomato seeds to produce plants for the open air are sown much too soon. The plants become root-bound before the weather is such that they can be safely turned outdoors. The middle of April is quite soon enough to sow the seed in heat, and when the plants appear they should, as soon as possible, be moved to a shelf in a sunny greenhouse to keep them sturdy. After potting an intermediate temperature is best for a fortnight, and then another fortnight in a greenhouse or frame, with plenty of air if the weather permits. One point of importance is not to plant in open quarters till the ground gets fairly warm. It may be warm enough under a south wall the end of May, but in the open the middle of June is better. Too much stripping of the leaves I do not believe in, but keeping the ground very clean with a Dutch hoe between the plants is good for them; the frequent stirring and clean surface of the soil acts like a wall in radiating the sun heat about the plants. A yard each way from plant to plant is not too much space. If only four bunches of a pound each be obtained from each plant it will well repay the cultivator, but the past season has given more.—A. Harding, Orton Hall.

SOILS AND CLIMATIC CONDITIONS IN RELA-TION TO HARDY FRUIT CULTURE.

According to the theory of the author of a paper I perused some time since, which treated conjointly on geology and horticultural chemistry, certain of the constituents of good soils required the agency of favourable climatic conditions to liberate them which otherwise would be held in suspension. Such a theory is, of course, endorsed by recognised authorities on the latter of the two sciences referred to, and the writer further indicated that such favourable climatic conditions formed one of the chief reasons why most foreign products were so perfectly developed and matured. On looking back at garden crops in general, and hardy fruits in particular, of the past season, it is seldom indeed that northern cultivators are enabled to record a counterpart in experience approaching so nearly to the standard of perfection set forth in the text just quoted. In the latter department especially Apples in this county (Ayrshire), taking size, quality, and finish into calculation, have been pronounced an unprecedented display at least at one of the two principal county exhibitions. Some of the most conspicuous examples of high culture among culinary sorts included Ecklinville Seedling, Warner's King, Emperor Alexander, Cellini, and Peasgood's Nonesuch. The latter variety heads the list for weight, a first prize stand containing six superb specimens, which were said to average within a fraction of 1 lb. each. These were grown at Trochrague Gardens in the valley of the Girvan River. The mean temperature in that locality is somewhat

higher and the atmosphere more humid than in most other parts of the county, the soil in the gardens being heavy. Mr. Goldie, the gardener, informed me that his stand of Apples was selected from a tree bearing an aggregate number of 200 fruits or thereby.

Referring to Apples from wall trees growing in soil having a tendency to a light texture, I have noted that the fruits of some varieties on a south aspect, although better coloured and flavoured, are not up to the size they attained in wetter seasons, of which may be instanced Early Harvest and Lord Suffield. On the other hand Ribston Pippin and Greenup's Pippin are of full size and well finished, which is unusual for the latter at the middle of September so far north. A few fruits of Grange's Pippin ripened a few days latter on a west aspect. These were also of fair size, and in common with the two last named varieties were from a young tree. tree of Ribston Pippin on a south aspect yielded a gathering of very fine specimens, although taken as a whole they were not so evenly in size as from the younger tree on the same exposure, but decidedly a better crop in every respect than for many years past. A young tree of Cellini, a choice culinary sort, on a west aspect, produced a crop of good size and extra colour. Another useful and handsome looking culinary variety is Saltmarsh's Queen, but the only tree we had was necessarily allocated to an eastern aspect where the solar conditions are less favourable for the full development of most Apples. Here it carried a good crop of medium but evenly sized fruits though lacking in finish. Among a number of old trees in an orchard we have a few of the Gravenstein Pippin These, which for several years past have steadily deteriorated in size and quality, have this season produced abundant crops of greatly improved fruits in the above respects, many of them being extra well Occasional applications of sewage water diluted no doubt contributed considerably to the combined conditions necessary for the swelling of the fruit.

Taken in the aggregate, Pears grown in the same description of soil as Apples have been more uniform, this result being probably due to some extent to the general condition of the trees with regard to vigour. Among carly varieties on south and west aspects Beurré d'Amanlis, Jargonelle, Williams' Bon Chrêtien, and Hessle have been especially good. Louise Bonne of Jersey, occupying a position facing south-west, has ripened much earlier than was expected, even making allowance for the extra warmth that has prevailed, but being an old tree about half of the fruits were only of medium size, but highly coloured. Marie Louise, Beurré Diel, and Durondeau, the two former on a south and the latter on a west aspect, have all attained an unusually uniform and handsome size. Muirfowl's Egg, a sure bearer in all sorts of seasons, although not small in size of fruits, is hardly up to the average of moister seasons. Beurré Capiaumont, on a young tree and also on a south aspect, has borne a rather heavy crop of good and evenly sized fruits. As many of the fruits on standards were blown off during the great gale of the 21st of August, I am unable to give further notes on Pears approaching to

accuracy.

In summing up it is unmistakeably evident that as results of the almost entire absence of frost last spring, together with the higher average temperature of the past summer as compared with most seasons, Apples and Pears on comparatively young trees have been extra large, well coloured, and the flavour excellent, also that the produce of vigorous old trees have shown an appreciable improvement in similar respects. The crops of Plums of most varieties grown in the gardens from which I write and also in the surrounding districts have been above the average in total weight, while the quality marks a high order. Soils, situation, and cultural treatment, however, affect the merits of fruits in a greater or lesser degree, and a series of reports only from different localities and cultivators would convey an approximately correct estimate of the fruit crops throughout the country, and of the cultural and climatic conditions upon which they depend. Such reports would no doubt be welcomed by all interested in pomology, including your correspondent.—D. M., Ayrshire.

INSECTS OF THE FLOWER GARDEN.

(Concluded from page 270.)

It may seem odd that in the cheese-mite group, so called, there should be several species which live in the garden, and are mischievous to flowers; yet such is the case, while others of the group are either of predatory habit or they resort to decaying animal substances. Cheese being an artificial compound it is evident that before man made it even the veritable cheese-mites must have found some other animal or vegetable food. As we know that one section of these mites feed upon bulbs, tubers, or fleshy roots, it is possible these may be the natural food of most, but the possession of a sucker by some species, and not by others, indicates differences of habit amongst them. It does not seem that

the cheese-mites change their diet, however, after the manner of their brethren, the harvest-mites, though some of them differ so much in appearance when they are adult that it has been suggested they may be frequently the victims of a parasitic mite of equal size. A good deal of attention of late years has been drawn to one which has received the name of the Eucharis mite, owing to the frequency of its attacks upon this plant; but it does not confine itself to that bulb, nor indeed to others, for I believe there is proof that though seldom noticed, the mite also visits a variety of roots.

If we examine a specimen of what was at first named Acarus Hyacinthi, now known as Rhizoglyphus echinopus, we see a smooth, whitish mite, having a rounded body; both this and the legs are studded with hairs, but those on the back are simple, and those on the legs bristly. The mandibles or jaws are in shape very much like the claws of a crab, and by these they injure bulbs and roots; the head is small, and in walking the mite lowers it between the fore legs. Living, as this insect does, between the scales of bulbs, it remains undetected, often, till the plant is beyond recovery. Boisduval first observed it on the Hyacinth, but many Liliaceous species have been found to be subject to its attacks, and especially in spring and autumn. Probably specimens, young or mature, sometimes lurk in bulbs that are kept in stock ready for planting, or that are transferred in commerce. A peculiar form of skin irritation, which has affected persons who have had to handle quantities of Hyacinth or other bulbs has been attributed to the Eucharis mite. Its occurrence upon roots of the Vine swarming with the phylloxera led to the supposition that this Rhizoglyphus might be a devourer of its relatives under some circumstances, but recent investigation shows it is really a vegetable feeder. Very recent investigation shows it is really a vegetable feeder. likely it often follows in the track of larger insects, and when living underground seeks out roots which have already been bitten, and so obtains their juices more easily. It has been argued that R. echinopus selects for attack bulbs that are already in a condition of incipient disease, and such alone. There appears to be a doubt about this, but either bulbs or roots that are unsound have little chance of recovery when this mite has once assailed them. A variety of applications have been tried; salt is fatal to the insect, but if the solution is of adequate strength it may injure the plants. Watering with a solution containing an ounce of coal tar soap to a gallon of water has been found serviceable, and, as a dry application to the soil some recommend a mixture of soot, lime, and

In conclusion, I have to refer briefly to a large group of mites which have as yet been imperfectly investigated, the exceedingly minute size of many being a difficulty, also their peculiar methods of concealing themselves. We call them the gall-mites, or Phytopti, and one of them, P. Ribis, has attained notoriety by its extensive attacks upon the Black Currant the last few years, and though so tiny an insect it has greatly diminished the crop of fruit in some places. It seems strange that insects so tiny should be capable of mischief to such an extent, but when some hundreds of them are browsing amid the tender leaflets of a bud the result is that the irritation and exhaustion they cause prove fatal to its life.

Less harm is done by those of the Phytopti that live upon leaves; they produce a great variety of galls and swellings, or what looks like a fungoid growth in other instances; and, indeed, skilled botanists and entomologists have both been perplexed by the appearances of some leaves which have peculiar growths, that might pass as cryptogamic, yet are probably due to the agency of a mite. Even with a good microscope the Phytopti are difficult to detect, since they have, though not very active, a peculiar way of shuffling about; also they are transparent or nearly, and soon dry up. It remains a mystery how they manage to distribute themselves over a tree or pass from one tree to another, nor do we know as yet what becomes of the leaf-eating species during the months when trees are bare of leaves. The mites that live in buds can continue their operations in the winter unfortunately, and are probably the cause of more damage than we have yet ascertained.

In their earliest stage many of the Phytopti appear to possess only two legs; observations on the Black Currant and other species have proved they afterwards own six or even eight. With regard to the mouth, their mandibles have been noticed, minute as they are; but authorities are not agreed whether these mites possess a sucker in addition to the kiting apparatus. A few entomologists think the Phytopti may be the young of mites of a larger sort. There is every probability that the Phytopti or gall mites, now that they are being looked after, will be detected upon some herbaceous or shrubby plants in the flower garden; at present they have been chiefly noticed upon trees and bushes. Against those that live upon leaves the only charge is that they act as disfigurers; they do not seem to occur in sufficient numbers to check growth. They are not always found within the galls and swellings they cause;

sometimes they may be seen wandering about the exterior or absent altogether; very often the deserted gall is filled with It is impossible they should infest buds without killing or seriously damaging them, especially when they have commenced operations in October or November. Réaumur, the great French entomologist, who first observed these gall-mites, records his researches after the tenants of the familiar nail-galls of the Lime. These are green while young, then yellow, next red, and afterwards brown. This species is P. Tiliæ; and another very conspicuous species is P. Aceris, the cause of crimson or purple galls which cluster upon the leaves of the Maple and Sycamore. Upon Willows occur a variety of galls, sometimes globular, sometimes flattened; also we have rollings of the leaf edges, evidently the work of mites. The Turkey Oak (Quercus cerris) is apt to be much disfigured by them, so is the Alder; in the Birch the galls take the form of small white knobs on the leaves and stalks. To another species is attributable the curiously deformed clusters of flowers the Ash not unfrequently exhibits. Upon some papilionaceous plants a very tiny species has been detected; the mites live between the unfolded pinnate leaves. It is satisfactory to know these gall-mites are kept in check by larger mites and other insects, which devour them.—ENTOMOLOGIST.

PEACH GROWING FOR MARKET.

(Continued from page 117.)

THERE are several methods of culture open to market growers, but it is doubtful if any pay better than that of planting in the cheap span-roofed houses already alluded to. A 14 feet wide house would hold two rows of trees, one on each side, these being trained up the roof by means of wires 10 inches apart and strained through galvanised wire eyes screwed into the woodwork, so as to bring the wires not less than 9 inches from the glass. Peaches and Nectarines will not stand being planted thickly with a view to having a full crop in a very short short space of time. In a young state they grow rather vigorously, and if hard pruned or much restricted will continue to grow strongly and fail to set or swell good crops of fruit. The best antidote for this evil is to allow plenty of room, a distance of 15 feet asunder being not too much. Maidens are the cheapest, and these not unfrequently quickly overtake and surpass the much pruned and trained trees that may have been planted at the same time. Order or select those moderately strong and well ripened, paying another 3d. each or rather more if need be, for the privilege. Some of the best trees I have were, when first received, the smallest maidens I ever planted, but they started strong enough the following spring and never became unduly gross.

If the houses can be utilised in other ways the planting might be delayed till just before active growth commences, or even till the buds are bursting, the precaution, however, having been taken of procuring the trees in the autumn and laying them in thinly in good soil; otherwise the planting may be done any time during

the late autumn or winter months.

The position being drained sufficiently to suit ordinary crops, there is no necessity for going to any further expense in the matter. Nor ought a very rich border to be prepared. It should be good enough to start them well and to support Tomatoes for at least one season, further assistance being afforded from the surface and added to the soil in front of the trees according as it is needed. If there is a clear course the whole of the ground inside the house ought to be bastard trenched, only a very little, if any, of the subsoil being brought to the surface, and a fairly liberal dressing of half-decayed stable manure, or any other partly decomposed material, including weeds, vegetable refuse, leaves, and such like be forked into the subsoil. To the surface soil, if this is of a clayey nature, may well be added a dressing of fine mortar rubbish, charred soil and refuse, wood ashes and sand, this being well mixed with it. Very light soils would be rendered more suitable for Peach culture by the addition of clayey loam or marl, this being pulverised by being first thoroughly dried or baked, and watered prior to forking it into the surface. Some loamy soils are naturally very poor, or more so than they appear to be, and to these I would add a good surfacing of native guano-that is to say, dried and pulverised sludge obtained from the nearest sewage works. renching cannot be resorted to then prepare holes for each tree, these being not less than 4 feet from the front to the back. In either case prepare the sites or the border, if possible, some time in advance of the planting, in order that the soil may settle down Before planting examine the roots, cutting away any badly bruised and also broken ends, clean cuts healing the most quickly and surely. Do not open small holes for these, setting them in and covering straight ahead with two or three spits of soil, but set the roots on a smooth level surface, covering

with some of the best soil each tier of roots according as they spring from the stem, keeping them up rather than driving them downwards. The roots are only too ready to strike downwards, whereas it is near to the surface where they are most wanted. Keep the collar of the trees, or that part of the stem from which the top-most roots spring, well above the ordinary level of the border, or otherwise the time will soon come when they will be found considerably below the surface. It is the deep root action that most frequently ends in an attack of "yellows," and prevention is certainly better than cure in this as well as very many other cases. If the soil is dry when the planting is done give a watering at the time, but if fairly moist do not water for a few days. During the first year, and till the trees cover the whole of the roof, Tomatoes may be grown extensively in the same house, but their roots ought not to compete with the Peach roots for all the moisture and food going, or the latter will get the worst of it. Tomatoes succeed admirably in 12-inch pots, and this method of culture should be preferred after the first year at any rate.

Lean-to and three-quarter span-roofed houses are mostly erected for Peach and Nectarine culture in private gardens, the trees being trained over semicircular trellises along the front, and up the back walls. These forms of structures, however, are far too expensive for market gardeners to adopt. Thanks to the introduction of very early ripening varieties, neither very snug houses nor the expenditure of much fire heat is necessary in order to have ripe fruit in April or May; but those who have either lean-to, three quarter span, or span-roofed houses at their disposal may turn these to account for Peach culture. If the fronts are not less than 6 feet high, 7 feet is a better height, one-half say being of brickwork and the rest glazed, the plan of training the trees to cross trellises as well as up the back walls if any, may be adopted with advantage. By no other method of arranging the trellises can so many trees be grown to a large size in one house. These cross trellises should be arranged at right angles with the front of the house, and be from 4 feet to 5 feet apart. The framework may be constructed of gas-piping, to this being fastened coarse wire diamond mesh netting, 4-inch mesh answers well, this being continued over the pathway along the back and fastened to the wall. Supposing the borders are formed of good holding loam and other materials added as suggested, a few hundredweight of ground bones not being wasted, there is no reason why the trees should not be planted two to each trellis and back to back instead of only one to each. In this case the wire netting should also be doubled or disposed on each side of the uprights. Once the trellises and back walls are well covered with trees, or, say, in the course of three or four years, extraordinary numbers of fruit can be had from a house in which this plan of arranging the trees is practised. If it fails it will most probably be because sufficient head room is not given, cross trellises being altogether out of place in comparatively low houses.

Standard Peach and Nectarine trees planted in span-roofed houses will produce enormous crops, but only a small portion of the fruit is sufficiently exposed to the sun to colour properly, and badly coloured fruits, as I have previously pointed out, are not wanted. Pot culture is preferable to growing standards, as trees in pots can be frequently turned and shifted about, the fruit colouring well accordingly. All the same I do not strongly recommend pot culture. That capital crops of showy fruit can be had from trees in pots I do not dispute, but it means far more time and labour than most market growers can afford to devote to them. Trees well established in pots and carrying a heavy crop of fruit require a great quantity of water and liquid manure, two and sometimes three waterings in a day being required during very hot weather. A few hours' neglect spoils the prospect for a whole year. At the same time if a fairly large span-roof or other form of high fronted house is devoted to Peach and Nectarine trees in pots, these latter after the fruit is gathered can be placed and kept outside, while a paying crop of late autumn and early winter Tomatoes is grown. Chrysanthemums also do well in such structures.

If pot culture is decided upon the cheapest way to work up a stock of trees is to buy maidens and place these in pots just large enough to hold the roots comfortably, a fairly rich loamy compost, not forgetting to add an 8-inch potful of bonemeal to every two bushels of soil, being used. Drain the pots lightly and well and pot firmly. Supposing this is done as early in the autumn as the trees can be obtained, they need not be housed, but may be kept in the open, the pots being well protected with strawy litter till next spring. They need not really be grown under glass during the following season, but would be all the better for being forwarded with the assistance of a little artificial heat, and might well, therefore, share a house with Tomatoes.—Market Grower.

(To be continued.)



CYPRIPEDIUM CLONIUS.

A PLANT of this exceedingly interesting hybrid was exhibited by Messrs. James Veitch & Sons, Royal Exotic Nursery, Chelsea, at the Drill Hall, Westminster, on Tuesday, October 24th, when the Orchid Committee of the Royal Horticultural Society awarded a first-class certificate for it. It is the result of a cross between C. caudatum Lindeni and C. conchiferum, and as will be seen by referring to the illustration (fig. 58), is a very fine flower. The dorsal sepal is long and pointed, white veined with pale green, as also are the petals, which have tail-like appendages 9 inches in length. The lip is ivory white faintly spotted with reddish brown, and is of a unique character.

LÆLIO-CATTLEYA PISANDRA.

During the past few years Messrs. J. Veitch & Sons of Chelsea have raised many charming bigeneric Orchids, and when exhibited these have usually attracted more than ordinary attention. The same occurred at the Drill Hall on Tuesday, October 24th, when the above mentioned firm staged a plant of Lælio-Cattleya Pisandra. This is a pretty flower, and worthy of the first-class certificate which was awarded on that occasion. It is the result of a cross between Lælia crispa and Cattleya Eldorado. As depicted in the illustration (fig. 60) on page 407 the bloom is medium in size, but exceedingly beautiful. The sepals and petals are of a pale rosy mauve shade, the front lobe of lip being a very rich maroon; and the golden yellow in the throat is a conspicuous feature in the flower.

CATTLEYA MARGINATA.

Amongst the smaller Cattleyas this species is most conspicuous, and its beauty has rendered it a favourite with Orchid growers generally. It is also one of the few Cattleyas that succeed best on blocks, and in this respect it forms a charming companion for the fragrant C. citrina, C. Walkeriana, and others. These, unlike many other species, do not produce good results when in pots, and the peculiar downward-growing habit of C. citrina especially unfits it for that mode of culture. C. marginata is a Brazilian Orchid, and was introduced many years ago. It is now included in most large collections of Orchids, and fairly good plants can be purchased for half a guinea. One reason why it is a favourite is because it thrives in a cooler temperature than the majority of the Cattleyas, a recommendation of great value where highly heated houses are objected to, as they are in many establishments. The cool end of an ordinary plant stove or an intermediate house will suit it, and if attention be particularly paid to the supplying water frequently little difficulty will be experienced with the plant.

The flowers are of moderate size; the petals much broader than the sepals, but, like them in colour, usually a soft rosy purple, the lip being intensely rich crimson, with a narrow margin of white, and a white throat, which contrasts very markedly with the rich coloured portion. These tints, however, vary considerably in depth, brightness, and clearness, and the value of the plant varies proportionally to its merits in these respects. The flowers are usually borne singly from the top of the small bulbs, but occasionally two may be produced, though this is comparatively rare. In many collections it is now flowering freely, and a quality of inestimable value at this time of year when Orchid flowers are so scarce is the great time they last in beauty. Under favourable conditions flowers will remain upon the plants for six weeks, continuing attractive from September till the middle of November.—Specialist.

NEW PICOTEES.

(Concluded from page 383.)

ALTHOUGH an effort has recently been made to abolish this namefor a section of the Carnations, old growers, and indeed young ones too, have shown very little inclination to do so. The designation "Picotee," as a distinctive name for the edged or margined section, has been in use for a great portion of this century, and so let it remain, for it is thoroughly understood. Of the extreme beauty and refinement of this section there cannot be any doubt, and blooms of some of the very best kinds in cultivation, when the dresser's art is not too heavily pushed, are really beautiful. But it is to write of the newer sorts of Picotees that I have set myself, and to the uninitiated I may say that all in this section have a body of colour of white, ivory white, as pure in colour as possible,

and free from small spots of colour or minute bars or elongated spots and the margin, whether light, medium, or heavy, of one shade only.

NEW VARIETIES.

Boadicea (Thomson).—Heavy purple edge. A very good flower, of medium size, with broad petal, and clear ground colour.

Dr. Huxley (Thomson).—Medium rose edge. A refined flower of appellant forms.

excellent form.

Esther (Geggie).—Light purple edge, good size, broad petal, clear white ground, with bright edging. One of the best of its class.

Heroine (Sharp).—A heavy bright cherry rose edge, very distinct in

colour. A handsome flower, with pure white ground colour.

Lady Alfrida.—A Clara Penson style of flower but finer, with an

excellent petal, pure ground colour, and bright wire edging.

Lady Gordon Catheart (Turner).—A light red edge, pure in the

ground colour, fine broad petals, and of good substance.

Lady Emily Van de Weyer (Turner).—Light rose edge, with very broad smooth petal well continued to the crown, good size and of fine form.

Miriam (Bacon).—Medium, purple edge. A splendid flower, clear white with fine broad petals of good substance.

Miss Lakin (Lakin).-Light purple edge, the white pure, of fine

Mrs. Beal (Beal).-Medium rose edge, a very beautiful flower, excellent petal with clear white ground. An improvement

on Fellowes' Ethel, good grower. Mrs. Burnetts (Chaundy).-Medium, rose edging in-

clining to heavy. A large flower and of fine quality. Mrs. Openshaw (Geggie).—Heavy purple edge, fine broad petal, clear lustrous white ground with bright edging. A flower which gives a promise of a high position in its

Madeline.—Rose edged, very fine broad petal and good

form, but rather thin as seen about Birmingham.

Ne Plus Ultra (Lakin).—Pure white ground colour with a very heavy red edge, fine form, good substance, the darkest heavy red edge. An extra fine flower.

Polly Brazil.—A splendid flower, pure white with bright heavy purple edge. One of the best in class.

Pride of Leyton (Headlands).—Light distinct purple

edge; a flower of good size, broad petal, and lustrous clear white ground colour.

Rosie Sydenham (Sharp).—Pure ground colour, with a superb broad petal of great substance, and a flower of very fine quality; medium light rose edge.

Souvenir de Headland (Headland).—Light rose edge;

a large bloom, clear white ground colour, but a feather edge flower.

Scarlet Queen (Sharp).—This charming flower is best described as a bright scarlet edge Mrs. Sharp, but un-

fortunately the stock is very limited at present.

Mrs. Herbert (Thomson).—This variety has maintained its character for refinement; a beautiful flower, but not

large. Other new sorts which I have not seen are being sent out by Mr. Dodwell, who speaks highly of Mrs. Lovatt especially, by Mr. George Chaundy and others. Information regarding these can be found in their catalogues.

YELLOW GROUND AND FANCY VARIETIES.

What a wonderful improvement in these during the last few years. Mr. James Douglas has introduced many fine varieties of his own raising, and Mr. Dodwell has also contributed a large number, and other English raisers are at work. Then Mr. Benary, and other eminent

German florists, have been devoting much attention to the Carnation, and have introduced varieties of sterling merit and distinctness, and these glorious fancy varieties are becoming very popular. In the "Florists' Guide" for 1827-1829 there is a coloured plate of what in those days must have been a fine yellow-ground fancy variety named Erasmus, and it is described as having been previously imported from Germany by the celebrated old florist, Thomas Hogg of Paddington Green, London. It is referred to as one of the finest varieties on account of It is referred to as one of the finest varieties on account of its rich colours and its broad, Rose-shaped petals, so that the German florists are not novices in the raising of fine yellow-ground varieties. I may say that in fancies Carnations and Picotees are getting very much mixed, as flakes and stripes run down the petals in some kinds, and the distinctive fine edging of the florists' Picotee is so little met with in some varieties, the Continental ones especially.

Brand von Hamburg.—A medium-sized flower, orange ground colour, with bright orange scarlet markings, smooth petal, and an acquisition.

Calypso (Benary).—Of dwarf habit, rich coloured clouded crimson and maroon, with a lighter colour at the base of each petal. A very distinct, rich coloured flower, of good form and substance.

Celsius (Benary).—Old gold colour, flaked with scarlet, fine and

distinct.

Duchess of Portland (Simonite).—A large flower with broad petals, pale yellow ground colour with mauve edge, and a free bloomer.

Eclipse (Simonite).—Large size, good form, and petal, rich creamy yellow ground with bright scarlet edge, and slightly striped with the same colour.

Crayon d'Or.—A distinct flower, primrose, distinctly lined with pale scarlet, and remarkable for its strong clove perfume.

Elmis.—Pale primrose barred with lilac and orange. A very distinct flower of good quality.

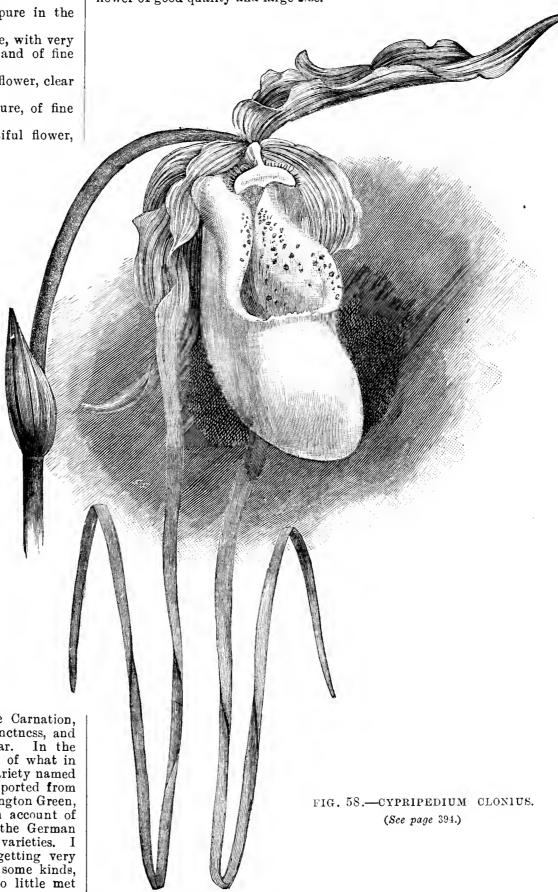
Fri drich Wagner (Benary).—Lemon, barred with light brownish lilac. A distinct fine flower. JIA?

Fanny Trommsdorff.—Blush tinted, white ground, striped half way down the petal with lilac purple. A grand bloom with fine petals.

F. A. Haage (Benary).—A very novel flower, creamy buff ground distinctly flaked with carmine and slate and of good form

Golden Rain (Douglas).—A large full flower of excellent form, buff ground colour suffused with bright red. Very distinct and pleasing.

Lohengrin (Benary).—Primrose, barred with rosy carmine. Affine flower of good quality and large size.



Mrs. Henwood (Douglas).—A beautiful light yellow-ground flower with bright scarlet edge and good broad petal. A decided acquisition.

Moltke (Benary).—Deep yellow with heavy red edge. Quitc an acquisition and distinct.

Miss Gilmore (Simonite).—Pale cream ground with rosy mauve edging.

Mrs. Robert Sydenham (Douglas).—The finest of all the yellow ground varieties. The colour is a rich creamy yellow with bright rose edging, with fine petal and of great substance. A superbly brilliant ground varieties. flower of the finest quality.

Mrs. William Spencer .- A seedling of Mr. Herbert's, best described as a fine companion variety to Mrs. Robert Sydenham. Primrose yellow ground with a Picotee edging of mauve purple, and in every way an extra fine flower.

Parsiful.—A German variety of a rich rose tinted chocolate colour with a lemon base in each petal, of large size and very fine quality; a great acquisition and quite distinct.

Queen Boadicea (Simonite).—Bright light yellow ground with wire

edge of bright scarlet, slightly barred; a pretty flower.

Rosalinde (Benary).—Beautiful deep yellow ground colour with a medium Picotee edging of rosy purple, a very attractive flower, and has been greatly admired.

Undine (Benary).—White ground, barred half way down the petals

with greyish rose; a large and very distinct flower.

Von Benningsen (Benary).—Although not quite new it is as yet very little known; brilliant in colour, orange ground marked with brightest scarlet.

William Dreer.—Very bright rich salmon tinted ground colour with

carmine markings.

It will thus be seen by the list I have given that there is almost a plethora of new varieties, although several of the German varieties of 1893 are passed over. I have seen all those described above, out there are still several other fine kinds being introduced. Mr. Dodwell has some, and Mr. Douglas, Mr. Turner, Mr. Chaundy and others have new kinds which I have not seen. It is quite evident that our English florists are well ahead in hybridising and raising, and that other very fine varieties are forthcoming. Some varieties, both old and new, will have to be thrown out of collections, for not one cultivator in a hundred could give time and room to so many new sorts as I have named, in addition to the best older favourite varieties. In Mr. Turner's stand at Birmingham there was a fine yellow-ground variety named Adelé, pale cream edged with scarlet; and Miss Proctor, creamy buff striped with bright scarlet, both fine.

In selfs Rose Wynne has fine petal and form; Rose Unique, bright light rose, fine broad smooth petal and of very fine form; King of Scarlets is an extra fine bright scarlet; and Justinian, a lively light pink self, is pretty, but is not turning out to be an acquisition.—W. D.



HYBRID BRIAR ROSES.

Is Mr. David K. Williamson as accurate as he usually is in his statement (page 384) that Lord Penzance's hybrids are from "the wild Roses of the woodlands?" I do not know whether the Sweet Briar comes under this poetical description, but I believe Lord Penzance's hybridisation experiments have been mostly, if not entirely, in connection with the scented variety of the Briar. I understand these hybrid Sweet Briars will not be distributed till the autumn of 1894, so it will be some time before rosarians will be in the possession and enjoyment of them. Their names will please the Scotsmen, as they comprise such celebrities as Amy Robsart, Anne of Gierstein, Lucy Ashton, and other well known heroines of the Wizard of the North.—Charles J. Grahame, Croydon.

AUTUMNAL ROSES,

EVERY Hybrid Perpetual Rose should bloom well in the autumn to be worthy of its name. Nevertheless it cannot be denied that there are many admirable varieties, supposed to be perpetual, which, during the months of September and October, produce an insignificant number of remarkably small-sized blooms. In the summer they are exceedingly prolific; probably at that period, inspired by the strong sunlight, they attempt too much; in the autumn they have the aspect of having been utterly exhausted by their previous exertions. Charles Lefebvre, for example, which produced in July a succession of truly magnificent Roses, bloomed during the autumn with manifest difficulty; his Lilliputian productions could only be regarded as lamentable miscarriages by those who had witnessed his earlier achievements. The cool season, so eminently favourable to the preservation of his complexion, deprives him of half his normal strength. On the other hand, such varieties as the Pride of Waltham, Crown Prince, Ella Gordon, Magna Charta, which is, like its namesake, a "perpetual" possession; Prince Arthur, and his venerable parent Général Jacqueminot, Mr. Cranston's Crimson Bedder, likewise La France, Victor Hugo, and Augustine Guinoisseau, have been of late in my own garden remarkably fine.

have been of late in my own garden remarkably fine.

The largest individual Rose I have seen this year I found blooming yesterday (October 20th) on Baroness Rothschild. Had it only been fragrant I would have attached more importance to its splendour of colouring and marvellous dimensions; but the imperial Rose in question is scentless. The same applies to the White Baroness and the stately Merveille de Lyon. Magna Charta, described by the Dean of Rochester as almost a summer variety, is, nevertheless, according to my own experience, a splendid autumn Rose, and as much may be asserted of that veritable Queen of the Hybrid Perpetuals, Mrs. John Laing. But from this special point of view by far the most valuable Roses are the Teas, particularly such specimens as Ernest Metz, Comtesse de Nadaillac, Hon. Edith Gifford, Marie Van Houtte, Etoile de Lyon, Perle des Jardins, and Belle Lyonaisse. In power of productiveness

even the most prolific of the Hybrid Perpetuals must suffer considerably when compared with these. How beautiful, beyond all artistic delineation, are their infinitely varied, yet marvellously harmonising hues! In them the evanescent colours of the rainbow, of the sunrise and the sunset, are gloriously combined.—DAVID R. WILLIAMSON.

Rose Analysis, 1886-1893.

MR. GRAHAME says that he is a "business man." But surely it is a very unbusinesslike proceeding for one man to condemn the work of another in such a high-handed and reckless fashion as he has mine (page 384) without adducing a single particle of evidence in support of the theory he has advanced against it. Mr. Grahame asserts that the crude figures should rule the analysis throughout. But this only shows how little knowledge he has of even the elementary principles which should guide anyone dealing with facts such as those I had at my disposal for the purposes of my last Rose analysis. For instance, I take up the first work of reference that comes to hand, "Chambers' Encyclopædia," and at the end of a short article on "Statistics" I find the following appropriate words of caution, "The frequent connection of statistics with political theories renders it important to guard against premature statistical conclusions, of which two very fertile sources are calculations from an insufficient number of data, and neglect to make allowance for disturbing causes."

Had Mr. Grahame been specially trained, as years of meteorological work have trained me, for this particular kind of investigation, he would know that there is a very great difference indeed between making due and proper allowances for such disturbing causes, and altering facts to suit preconceived theories as Mr. Grahame clearly infers I have done. It is, I conclude, owing to his inability to appreciate the wide distinction between these two methods that he fails to understand the serious nature of the charge he has made against me.

The fact is, what is wanted above everything else in all investigations of this character, is not so much the actual figures themselves as that the results given should be made as comparable as circumstances will allow. Now I have no theories whatever of my own which I wish to thrust upon the readers of the Journal of Horticulture in framing these analyses, my only object being to make the materials at my disposal tell their own tale. This they would fail to tell truly in many cases owing to the disturbing causes mentioned on page 358, but fair and impartial allowances having been made for them, the averages when calculated are considered ready for insertion in the printed analysis. If I were to give in every case the crude results I should not be guiding, but on the contrary be often misleading your readers.

Mr. Grahame considers that had I more data each year to go upon the results would come out differently. Possibly this might be the case to a certain extent, but so consistent are the records from year to year that I cannot think the relative positions of the different varieties in the tables would be in any way seriously affected. Moreover, there are several grave objections to adopting such a course now. In the first place the data would not be obtained entirely from the same unexceptional sources—only prize stand blooms being now admissible. Then, again, the records would not be strictly comparable with those secured under the system adopted during the past eight years. Besides which I am afraid I should have to give up the work altogether through want of adequate leisure to carry it on satisfactorily. Looking as impartially as it is possible for a compiler to do upon one of his own bantlings, I must say I cannot help feeling proud of this last Rose analysis of mine. 1, The sources from which the data are obtained are beyond question, being the unconscious contributions of all our leading rosarians throughout the country. 2, Now that I have comparable results for eight years before me I begin to see how the figures obtained each year support and confirm one another. This, indeed, is my greatest source of satisfaction, for had my method of analysis been unsound this could not possibly have been the case, considering the different dates at which our National Show is held, and the varying nature of Rose seasons.—E. M., Berkhamsted.

[Mr. Mawley's records, on which the results as representing the actual relative differences in value of the varieties enumerated, have been submitted to us, and we are able to say that the conclusions arrived at are not founded on individual fancy, but on actual figures, these figures representing accomplished facts; the final issue, therefore, though it may appear arbitrary, is mathematically correct as deduced from the compilations over a series of years. One of the leading statisticians in London has also examined the records, and he finds the deductions from them are true according to the elaborate and, we must add, laborious system adopted in their preparation. We have no hesitation in expressing our appreciation of the painstaking manner which Mr. Mawley adopts in the preparation of his valuable analyses as applied to Roses, Chrysanthemums, and Dahlias.]

ROSES AND OYSTERS.

It may seem a far cry from Roses to oysters—from the choicest gems of earth to the most valued treasures of the ocean. Certainly some Roses are said to have shell petals, and both Roses and oysters require a well regulated supply of water, although neither may care to drink the special beverage of the other one, otherwise they would appear to have no resemblance or tastes in common. However, when attending the Mayor's oyster feast which was held with all due pomp and ceremony in the Corn Exchange, Colchester, I had an opportunity of judging how under certain favourable circumstances it was possible for

them to become almost inseparably connected, for on that occasion the guests were said to have consumed about 10,000 oysters, while the tables had been most tastefully decorated by the ladies of the district with no fewer than 4000 Roses. As the President of the National Rose Society, the Dean of Rochester, remarked in the course of a most entertaining after-luncheon speech, "He supposed there never was an occasion in which there was such a combination of things pleasant to the eye and good for food as there was that day—a combination of Roscs and oysters." He said, "Well might the early Britons turn their backs on their acorns and flock to Colchester. Well might the judicious Roman bring his camp and plant it by the side of the Colne. Well might the Saxon, the Dane, and the Norman come and settle down at Colchester. Kings and great generals had fought battles for Colchester.

Why, then, the world's mine oyster, Which I with sword will open.'

"Well, too, might those great ecclesiastics, the Abbot of St. John's and the Prior of St. Botolph, alleviate their days of abstinence as they alleviated them that day."

I only arrived at eleven o'clock in the morning, and the feast was fixed for two o'clock in the afternoon, but I determined to make the best use of the three hours at my disposal, for I thought I could not well come to Colchester without giving myself the treat of visiting the nurseries of the two Cants. As these are both about a mile from the station, and more than two miles apart by road, and also about two miles distant from the Corn Exchange, I had little time to spare for either nursery. However, I did manage to see and learn something, and had the still greater pleasure of a chat about Roses with representatives of each firm.

The plants I saw, both dwarfs and standards, notwithstanding the dry summer, had made excellent growth; but it was piteous to behold the gaps in the rows of the latter, so many stocks having been killed during the trying winter of 1892-1893, owing to the frost setting in so early in the season, and the dry spring which followed. There were no flowers to be seen, as every bloom worth looking at had been cut off and carried away hours before to decorate the Corn Exchange. But there were the plants by thousands with splendidly ripened shoots looking as

if ready for removal to their new homes at a moment's notice.

I was always under the impression that all the soil round Colchester was of a heavy retentive nature, but much that I saw in these nurseries was a comparatively light loam with a certain amount of sandstone grit It is in such soils that fibrous roots are encouraged, and I was told that the plants become more quickly established in these quarters than where the soil is heavier. I happened recently to find this out in my own garden at Berkhamsted, where the soil is composed of yellow clay and flints, and where Rose plants take a long time to get hold of the ground, but when once established make great growth. Last autumn I had occasion to move about a hundred dwarf H.P.'s, and thought I would try the plan of using when replanting them some gritty soilturfy edgings cut from the roadsides—to place about their roots. This plan has answered so well that the plants in question have already in less than a twelvemonth become as strong as I could wish to see them. When amateurs receive plants which have not extra strong shoots from the nurseries, they are, I find, invariably disappointed. This is, however, a great mistake, for it is the plants of moderate growth, I do not mean "starvelings," which have well ripened shoots and fibrous roots, like those I saw the other day at Colchester, which will become established most readily, and therefore thrive best in their gardens the following season. On receipt of such plants do not expose their roots to the drying action of the atmosphere a moment longer than is absolutely necessary. This is an oft-repeated injunction, but how seldom in practice is it followed! Place some light fibrous soil, if obtainable, above and below their roots, and plant firmly. By using such soil as I have recommended they may be put in the ground satisfactorily, even when the rest of the bed is too wet for the operation. Afterwards secure the shoots to a firm stake, so that they may not be shaken by high winds. How often do I hear Rose nurserymen blamed for sending out bad plants when after all the fault rests entirely with the bad planting of the purchaser.

Another thing I learnt at Colchester was that the demand for what the N.R.S. catalogue calls "garden Roses" is on the increase. The individual flowers may not be so perfect as those of the exhibition varieties, but their colours are often most enchanting, and many of them are extremely free-flowering. I asked why standards were always in such request for suburban and other small gardens when dwarf plants were so much cheaper and more lasting? I was told that the owners of these gardens invariably replied that when they had a few standard Rose trees there was something to look at when they come into flower, but as to the dwarfs they become hidden away among other plants in the summer, and so were never seen. These suburban and other gardeners should learn once for all that the queen of flowers will brook no rival, and that, therefore, it becomes imperative to provide a special bed however small for these bush Roses. Both nurseries are situated on rising ground, and this accounts for their comparative freedom from spring frosts. Coming from a colder and harsher climate I was particularly struck with the even blankless rows of dwarf Teas the result of last year's budding. There were two Teas, however, which I noticed had suffered considerably at all events on the standards, and these were Perle des Jardins and that charming sport from it Sunset, the latter a most delightful variety, as I well know under glass.

I had not time to see the Roses in pots at Mr. Benjamin Cant's nursery, but I did manage to glance through the new Rose house at Braiswick.

I can only say that better plants I have never seen. Mr. Frank Cant was able to set up such charming boxes of cut blooms at the Drill Hall, Westminster, last spring. I noticed that on these occasions the visitors, more especially the ladies, invariably deserted the beautiful Orchids and other exhibits in order to crowd round these Rose boxes. After all there is no flower like the Rose. I do hope Dr. Wallace, the champion of the Lily, whose acquaintance I had the pleasure of making at Colchester, will not notice this last hackneyed remark of mine. Should he happen to do so, perhaps he will be good enough to understand that I only meant that there was no other flower precisely similar to the Rose. The two most vivid impressions left on my mind by my hasty scramble over the Colchester hills were the fine pot Roses at Braiswick and a quarter of grand standard Teas at the nursery of that veteran Rose grower Mr. Benjamin Cant. The Colchester people are justly proud of their oysters, but after all the real "natives" of the district are to my mind the Roses. Nowhere else, of the district arc to my mind the Roses. Nowherc else, considering how limited is the area covered by the three leading Colchester nurseries (for that of Messrs. Prior & Sons, which I should much like also to have visited, must of course be included) are Roses so largely grown. The only wonder is that there are not more amateur exhibitors in this fertile district. I only know of one (Mr. O. G. Orpen of West Bergholt), who from his small garden shows Tea Roses so brilliantly as to excite the envy and jealousy of all competing against him, including the writer of this somewhat rambling contribution.—

VEGETABLE CULTURE IN ADVERSE SEASONS.

(Concluded from page 263.) CELERY.

This vegetable must not be neglected when in the seed bed by allowing the soil to become too dry, or the plants will late in the season have hollow stalks, or seed prematurely. Sow the seeds in shallow boxes, with decayed manure placed upon the drainage. Raisc the seedlings without bottom heat if possible, and when the plants have produced a second rough leaf, prick them in good soil in boxes or frames with drainage similar to that provided for the seed boxes. Never allow the plants to flag, but grow them steadily without undue forcing. Have the trenches ready long before the plants are to occupy them. Previously to planting in their permanent quarters another transplanting must take place. Select a position with a hard bottom, put manure in first, then 3 inches of rich soil, make it firm and plant therein. They will remove from this position to the trenches with good balls of soil adher-

ing to the roots and the growth will not be checked.

Trenches in the ordinary sense I do not believe in, for such often means starvation to the plants during the remainder of the season. How can the plants be expected to flourish when all the best soil is taken out, and they are put into the cold subsoil? The trenches ought not to be more than 6 or 9 inches deep, and if the soil be not of a good general depth I prefer to plant on the surface. Some decayed manure should be dug into the trench and well mixed with the ground, a little loose soil afterwards placed over it. When it is dry tread all down firmly. The trenches may be made wide enough to hold two rows of plants if so needed, but one row is preferable. Attention to watering is necessary, and a light mulching may be given them. Those who have not yet tried the plan of growing Celery on the level ground would do well to test it. I have done so for several seasons, and always in the same place. The ground was made very firm, then planted, and the plants watered regularly, liquid manure being applied every week, and a mulching of manure placed on early in the season, the plants soon required staking, but the growth was solid. For exhibition purposes a few plants treated in this way will give pleasure to the cultivator.

Earthing up is often begun when the plants are 9 inches or 1 foot high, and from that time they suffer through want of water, because it cannot get at the roots. Earthing does not make the plants grow. It is done to blanch the stalks, and from six to eight weeks before they are required for use is soon enough for the first earthing to be done, previously giving a copious supply of water. Some growers use paper, but slugs get under this and eat the stems, making them unsightly. A few ashes and sand mixed placed next to the plants, following with the ordinary soil, is all that is required. All suckers and split leaves must be taken off. Sutton's White Gem and Sandringham White for early use, with Sulham Prize Pink, Major Clarke's Red, and Standard Bearcr for late use, are the best varieties in my opinion, and I can strongly recommend them.

DWARF AND RUNNER BEANS.

Runner Beans require much the same treatment as do Peas, but avoid sowing too soon. The seeds should be sown in an irregular line in the drill quite 9 inches asunder. This is not too far apart, as the plants fill out very quickly when well grown. Dwarf varieties ought to have the same space allowed them, crowding of the plants being not conducive to a full crop. An amateur once saw some I had planted after the manner described, and wondered at the waste of ground, but when he afterwards saw the crop he was more surprised, and said he should not in future sow so thickly as he had done. If the ground is rich, and the plants grow freely, it is advisable to place a few short branching sticks to Dwarf Bean plants, as by so doing straight even pods are produced. which could not be if the plants were lying on the ground. No doubt some of the newer varieties of Runner Beans are acquisitions, and decided improvements upon most of the old kinds during some seasons; but such sorts as Neal's Ne Plus Ultra and Scarlet Champion are to be depended upon. Of Dwarf varieties few are better than Canadian Wonder and Ne Plus Ultra.

LEEKS.

March is the best month in which to sow seeds to produce Leeks for ordinary uses, but for exhibition the first week in February is the most suitable time. Sow the seed in boxes, and treat the plants similarly to Celery. In light soil it is advisable to plant in well manured trenches, but on very stiff soil plant on the level ground. Treat this crop generously, give copious waterings of liquid manure during the summer. Plant deeply, earth up to blanch like Celery, giving a good drenching of water first. Sutton's Prizetaker is a good variety, mild in flavour, but, according to my experience, sometimes liable to soft growth; perhaps the fault lies in the soil only. The Lyon is not surpassed.

VEGETABLE MARROWS.

These have certainly been very plentiful this year. Our plants have been grown in mounds of soil surrounded with plenty of old leaves upon which the shoots have lain. They were poor plants when first put out, but by shading from the sun for a short time they soon began to fruit, and a constant supply has been forthcoming. The seeds should be sown in April, plants duly potted as required, and planted out the end of May or beginning of June on beds which contain plenty of rich soil. During dull weather it is advisable to fertilise the flowers. Moore's Vegetable Cream is the best Marrow that I have grown.

Before concluding, I would like to say a few words about these vegetables for preparing and exhibition and staging them. Good produce may be almost spoilt by slovenly staging. Selection of the different varieties is the first consideration, and mere size is not always to be relied upon. If possible, everything should be had when at its best. Do not forget to use the fork when lifting roots. Do not scrub them with a hard brush, but soak them in water, and use the sponge only to remove the dirt. Select Cauliflowers before their heads open, or they will be partially spoilt. Cucumbers and Vegetable Marrows should be as even in size and as faultless as possible. Carrots ought to be a good colour, and Turnips not too old or stringy inside. Peas must be young and tender, and Potatoes even in size, as nearly eyeless as possible, and clear in the skin. Use plenty of Parsley in staging. Stage in such a way as will show up each dish separately, and to the very best advantage. This applies in the case of a collection being arranged. There is some art to be displayed in arranging a fine collection of vegetables. Separate dishes call for the same care and attention. I should like to take this opportunity of advocating that space be liberally given, as is generally done by societies, on the bare tables, and the entire abolition of trays in the case of collections of vegetables.—Geo. Garner.

PRACTICAL DINNER TABLE DECORATIONS.

[By Mr. H. Dunkin. Read at a meeting of the Ealing Gardeners' Improvement Society.]

I HAVE prefixed the title of this paper by the word "practical," because many styles of dinner table decorations in vogue at the present time, such as one sees at exhibitions, are not practicable as far as the majority of gardeners are concerned. This statement I feel sure will not easily pass unchallenged unless I am able to advance sound reasons to justify so emphatic an assertion. I will therefore attempt to do so

before proceeding further.

The reason why we see so great a disparity between the styles and arrangement of dinner table embellishments at public exhibitions and those carried out in the homes of the wealthy, is to a great extent due to the fact that those who carry out the former select with great care the glasses and stands employed for arranging the flowers in, and in some instances have them specially made for the purpose, while gardeners in the majority of private places have to adapt their floral arrangements to the incongruous and generally far too massive epergnes, stands, bowls, and baskets which are provided. These are in many instances ancient and costly ornaments of gold and silver, works of high art in themselves, but not well fitted to enable the decorator to show his ability in devising and carrying out artistic arrangements which are in accord with the advanced and refined taste of present times. These elaborate ornaments are frequently heirlooms which have been handed down through many successive generations, and are in consequence highly prized by those ancient families who still retain them, and who are as proud on befitting occasions to display them before their guests as they are to show the floral gems of their garden or the artistic ability of their gardeners, who, in reality, only reflect the good taste of their employers. I maintain, therefore, that real ability in this kind of work is best shown by choosing the most suitable materials at command for each individual set of ornaments, and arranging them so as to obtain a good effect without paying too much regard to conventional style, always making a point to have some special feature in each attempt, some feature which will strike at once each beholder, and by it be afterwards remembered. It is, I think, scarcely necessary for me to add the prominent feature should be one which does not offend eyes well trained to a due balance between accurately proportioned forms and well blended colours.

The old method of using a considerable variety of colour at each attempt is now almost extinct, and in many of the best decorations now carried out only one colour is used in addition to that supplied by

the greenery. Speaking generally, white may with advantage be added to almost any combination. When, however, a series of dinner parties are held which necessitate extensive decorations, it is policy, on several occasions, to keep to one colour only, without even the addition of white. A more varied effect may in this way be produced with a given amount of materials than can be secured by any other means which I am aware of.

In selecting flowers for the purpose care should be taken to use only those which look well when seen under the influence of artificial light, unless, as is rarely the case, dinner is partaken of by daylight. The various shades of pink, rose, and scarlet are, I think, more telling under artificial light than any other colours or shades of colour; certain it is that when well executed designs in which either of these colours—especially the two first-named are employed, they command universal and, in some instances, enthusiastic admiration. Dark blue and purple flowers should invariably be avoided, but pale blue ones often look exceedingly pretty when arranged with soft yellow flowers or foliage, or when yellow coloured silk is laid upon the cloth. I have frequently heard and read that yellow flowers are not effective when seen under artificial light. Some shades may not be, but I can scarcely imagine how we could well dispense with the fine clear yellow and bronzy yellow shades of Chrysanthemums, which have a peculiar and delightful beauty of their own, and are, moreover, especially adapted for dinner-table embellishments. Simple rules as to which colours harmonise with each other are useful to beginners; but those who have a correct eye for colour should rely solely on that gift to guide them in the art of colour-blending. They will then be able to work out many exquisite combinations of colour, which those who rely principally upon a dogmatic code of rules can never imitate without running great risk of offending the more correct and sensitive optical organs of those with a good eye for colour. When there is any doubt as to the appearance the colours intended for more there is any doubt as to the appearance the colours intended for use will present under artificial light, the point may easily be settled by taking the various flowers into a darkened room to examine by the light gas or lamp.

Every gardener who has had a fair amount of experience in the arrangement of flowers for whatever purpose, is aware that a light feathery outline must be obtained to produce a good effect. It is therefore essential that crowding should at all times be avoided. Some fail in securing this lightness of arrangement, because they experience considerable difficulty in fixing the flowers in the exact positions they require them to occupy. This is, however, easily accomplished by inserting pieces of box a few inches in length between the stems, so as to keep each flower held firmly in position. When each glass or stand is filled I like to look it carefully over, and should there be any appearance of overcrowding remove a few flowers by cutting the stems asunder at the water level; this is far better than pulling them out, as there is no danger of loosening and disarranging the others. Simple though this matter may appear it is well worthy of attention. In almost all arrangements it is important to have a good proportion of small light flowers cut with long stems, such as Spiræas, Oncidium flexuosum, Masdevallias, Epacrises, Cornflowers, Gypsophila paniculata, and a host of others possessing similar characteristics. When only medium sized glasses are used flowers of a heavy nature are quite out of place except in the case of those which have a dish-like base. Where, however, massive stands or epergnes are used, flowers of a bold type, so long as they are thinly arranged, should be used.

STYLES OF ARRANGEMENT.

Fashion in this, as in all other kinds of decorative work, is continually changing; but whatever the prevailing method of the day may be various other styles also must be frequently brought into use whenever a series of dinner parties take place, otherwise monotony is painfully apparent. I have sometimes noticed on such occasions that a method of arrangement practised twenty years ago will, if worked out in the lightness and finish which commends itself to modern taste, and secure enthusiastic admiration. Tracing, for instance, is not nearly so much in vogue as it was ten years ago, yet if well done it is extremely effective; but then we use things which I consider are far better adapted for the purpose now, which may have much to do with its continued popularity. Coleus leaves laid so as to overlap each other were at one time freely employed, but to my mind they are much too flat and formal looking. Sprays of Honeysuckle, Weigela rosea, or small pieces of the feathery Retinosporas, represent after more effective type of material.

At this season of the year, when there is plenty of coloured foliage to be had, a simple but unique arrangement may be made by covering the whole space available on the cloth with autumn foliage of several tints. Berberis aquifolium answers the purpose well. The points of shoots as well as single leaves should be used, because they will take off the flatness. A glass or epergne dressed with flowers and Fern should then be placed in the centre, and two smaller ones on each side if the size of the table requires them. White flowers arranged in little irregular groups wherever room can be found for them, with a Fern frond added here and there complete the arrangement, and if the work has been well carried out the effect produced is strikingly effective. Tins made 1 inch deep, 1½ inch wide, and fitted in a continuous design round the table, if filled with sand and arranged with Maidenhair Fern, small trusses of Pelargoniums, Chrysanthemums, or other flowers, look very pretty. The effect is still better if sockets are made in the tin at intervals of 2 or 3 feet, so that small glass trumpets may be fitted into

the sockets and arranged with flowers. A dressed stand in the centre with a Cocos Weddelliana on each side, will render the whole light and quite imposing.

Very pretty plated glass ornaments set in silver are now made in the form of baskets. Some of these have glass pendants, and glass chains to connect one basket with another. Some of the most beautiful dinner tables I have ever seen have been made so by using these baskets. A table to seat about fifteen is a suitable size to secure good balance. The largest basket dressed with flowers should be placed in the centre, having a few long pieces of Smilax (Myrsiphyllum asparagoides) trailing over the sides and along the table. Next will come two candelabra, then two smaller baskets filled with flowers; eight still smaller ones are then placed around the sides of the table, the four corner ones being arranged with small Ferns of various sorts knocked out of 60-sized pots; the other four having a small Cocos Weddelliana in the centre, with flowers and Fern fronds arranged at their base.

Various other methods of arrangement might be given, but I think enough has been adduced to serve as a foundation, upon which an infinite variety of combinations may be worked out by those of an ingenious turn of mind. I will therefore conclude by giving the outline of a design which is especially adapted for use during the Chrysanthemum season. In this case no stands, glasses, or epergnes of any description will be required. First cover the centre of the table with thick brown paper, then cut the outer edges of it into a series of serpentine sweeps, so as to avoid formality in outline. In the centre, on an inverted pot, place a plant of Pandanus Veitchi or one of Phœnix Next will come two candelabra, these to be followed by two graceful plants of Cocos Weddelliana, and two smaller plants of Pandanus will be suitable for the two ends. Now cover the whole of the brown paper with fresh green moss, and raised mounds of it to cover the pots used. If the table is a rather wide one very small Palms of more graceful kind may be dotted about here and there in each case, making a tiny mound to cover each pot. Next trace round the outer edge of the moss with some kind of coloured foliage, and the most troublesome part of the work is completed. The remainder consists in dotting Chrysanthemums, both large and small, at irregular intervals all over the moss, of course avoiding anything approaching crowding. Some of the Japanese kinds which have drooping petals should stand well above the moss, so as to display their fantastic beauty to the best advantage; this can easily be done if the stems are sharpened and thrust into the moss, an extra depth of which may be given at such points. Fronds of Maidenhair and Pteris Ferns and a few small whorls of Cyperus alternifolius inserted here and there give a finishing touch to the whole. Anyone who has the opportunity to carry out this arrangement will, I am sure, be delighted with it, and the guests when seated round the table will find their eyes resting upon a scene which, for a moment, might take them in flights of fancy to the realms of fairyland.

FLORAL NOMENCLATURE.

OBSERVING a remark on page 384, about the much-discussed pronunciation of the word Gladiolus, may I briefly sum up all that ever has been or can be said about it? It is a general law of pronunciation that you cannot speak a word in which three short syllables occur together without accenting one of them. Hence a word of six short syllables must have two of them accented, as Měsopotamia; but a word of five short syllables only requires one to be accented, provided it is in the middle, as Măcedonia. In words of four short syllables such a pronunciation is, as "W. R. Raillem" (page 384) says, practically impossible. A classical scholar from Oxford or Cambridge would naturally say Glădiolus, modiolus, following the ordinary habit of pronouncing the words in Latin. There has been, however, an attempt in English to turn these words into trisyllabic words, by pronouncing "i" as "j," and saying Glādjölüs and mödjölüs; this, however, is a modern conceit, which I hope will not prevail.—C. Wolley Dod, Edge Hall, Malpas.

P.S.—The suggested compromise between "i" and "j" leaves us a host of words, like měděola, mědícia, and polygala, which cannot be dealt with in the same way.

CURIOUS SPELLING OF THE NAMES OF FRUITS AND FLOWERS AT SHOWS.

THE note by "East Anglia" (page 375) reminds me that I too have some memoranda on the above-named subject, and now that the autumn shows are coming on perhaps a few friendly remarks will not be out of place, and may help towards an improvement in the spelling of the names of fruits, plants, and flowers. That it does not receive the attention it deserves is only too evident, as anyone may easily learn if he will take the trouble to look along the tables at a flower show. I have often been surprised that some exhibitors arc so careless on this point. It seems to me a pity that a meritorious exhibit should be marred by a mis-spelt name. "Ah!" says someone, "I hav'n't had much schooling, and my memory isn't good either." Well I do not blame him on these accounts, but what I do blame him for is that he did not obtain and consult a reliable catalogue, and so insure the correct spelling of names. A good catalogue may usually be begged or borrowed, or, if not,

can be bought for a trifle any day; therefore there is no excuse.

Here are a few specimens copied at one of the principal shows in the West of England. I have more, but these are enough to show that there

is room for improvement. "Admiral Warburton" and "Wallburton Admirial" for Walburton Admirable Peach; "Fontail" for Fonthill Plum; "Mcrella" for Morello Cherry; "Adiantium capilis," "Gaacllium,' and "Cresseliam" for gracillimum; "Nephrelepsis" for Nephrolepis; "Elligants" for elegans.

I would ask those whom it may concern if it is not worth while to

give the matter a little more attention? It is not pleasant to stand by and hear young ladies and schoolboys making fun of gardeners' spelling. Nor is there any reason why they should have the opportunity. -WEST ANGLIA.

[A reform in the direction indicated is urgently needed at many if not most exhibitions.]

ROYAL HORTICULTURAL SOCIETY.

OCTOBER 124TH.

SCIENTIFIC COMMITTEE -Present: Dr. Russell (in the chair), Mr. Blandford, Rev. W. Wilks, Prof. Farmer, and Rev. G. Henslow, Hon. Sec.

Galls on Oak.—With reference to the galls exhibited at the last meeting and recognised as those of Cynips calycis, Mr. Blandford observed that they are used for tannic acid on the continent, as well as the more common form, on Quercus infectoria, which contain 50 per cent.

Daffodils and Mice.—Rev. W. Wilks exhibited several bulbs which

had been attacked by Merodon; but subsequently mice had eaten into the bulbs, apparently in order to extract the grub, as no perfect bulb was ever touched. Mr. Wilks intends, and suggests as a means of selection, to spread out bulbs supposed to be affected where mice can have access to them, as the sound bulbs will be left untouched.

Daffodil Decaying .- He also showed a bulb which had decayed up the middle, while the base of the stem was detached together with the

roots. It was referred to Kew for examination.

Onions Diseased.—Some large flattish Onions were exhibited, which had become completely rotten in the middle at the base of the stem. Two-thirds of a crop were said to have been lost. They were also referred to Kew.

Injured Timber, Photograph.—Prof. Farmer showed photographs of sections of an ancient Elm, lately cut down at Oxford. They showed a separation, for three parts of a circle, deeply seated within the stem. As the subsequent annual rings were at first discontinuous over the middle point, but gradually closed over it, the interpretation seemed to be that the tree had been partially decorticated, the wound being subsequently completely concealed.

Proliferous Fern. — Mr. Veitch forwarded a plant of Adiantum (which appeared among A. Capillus-Veneris, but had broader pinnules), having minute fronds starting from the situation of the sori, apparently being aposporous, and developing new fronds in the place of sporangia. Mr. Veitch remarks that this is the first time that he had seen this

occurrence on an Adiantum.

Diseased Pears.—With reference to the Pears sent to the last meeting, Mr. Massee reports that "the fungus is Gloosporium fructigerum, Berk. There is no possibility of arresting the disease in the mature state of the fruit, but this can be done by using the proper remedy during the development of the fruit." The remedy suggested for the same fungus in Peaches was "two or three sprayings of potassic sulphide (one-half ounce to a gallon of water)."

OCTOBER RASPBERRIES AND STRAWBERRIES.

I HAVE picked several small dishes of Raspberries this month, finer and quite as good flavoured as they were in the summer and very highly coloured. I also gathered some on October 27th.—JAS. WICKETTS, Whiteroft, Pershore, Woreestershire.

On the 18th ult. I gathered a good dish of ripc Raspberries, left others some just colouring, but whether they will ripen is a question. The fruit is from the summer fruiting varieties, but the crop was a very light one, the hot dry season having a great effect upon this particular fruit.—G. R. Hemmings, Hollingbourne House, near Maidstone.

MESSRS. S. CHIVERS & SONS, Cambridge, writing under date October 24th to the daily press, say:—"As an illustration of the very exceptional character of the season we have taken the liberty to forward you some fresh gathered Strawberries, being now busy picking and preserving our second crop this year. We have already, during October, gathered 1 ton 5 cwt., and as the plants have still a large quantity of blossom an 1 green fruit we expect to be able to pick double the weight if this mild weather continues.'

REFERRING to Mr. G. Freeman's note (page 355) regarding ripe Strawberries, I may mention during the last week in September and up to the present time I have gathered about four and half dozen of ripe Strawberries from plants grown outdoors. I have only noticed two sorts fruiting—viz., Black Prince and Vicomtesse Héricart de Thury, although one plant of Latest of All bore two or three fruit. Some of the fruit were quite equal in flavour and size to those of the summer. To-day (October 25th) I find there are about one and half dozen of good sized fruits, but many have decayed during the wet weather.—G. WALLIS, The Gardens, Brockley Hall, Brockley.



EVENTS OF THE WEEK.—During the ensuing week many Chrysanthemum Shows will be held, but as a list of those which have been advertised in our columns is given on page 402 further reference is unnecessary. Attention may be called to Messrs. Harrison & Sons' vegetable and root show, which will be held at Leicester on November 8th and 9th. Particulars of this will be found in the advertisement pages.

- THE WEATHER IN LONDON.—A change in the weather has taken place since publishing our last issue. For the first time this season frost was apparent on Monday night, 1° having been registered in Hyde Park. A frost also occurred on Tuesday night, destroying Dahlias in many gardens. The barometer has risen, and at the time of going to press the weather remains cold.
- WEATHER IN THE NORTH.—A great deal of rain has fallen during the month in this district, the really fine days were few. We have now every appearance of an early winter. Snow appeared on the higher hills as early as the 23rd September, and they have since been white to their bases more than once. They are again covered, and frosts of 8° and 9° have been recorded on the last two mornings. Trees have generally lost their foliage, and flowers are virtually over.—B. D., S. Perthshire.
- —— CHRYSANTHEMUMS AND GARDENERS' ORPHANS.—By kind permission of Mr. and Mrs. Hopwood the gardens and hothouses at Ketton Hall Gardens, near Stamford, will be opened to the public on Thursdays, November 9th and 16th, from 2 to 5 P.M. in aid of the Royal Gardeners' Orphan Fund. The fine collection of Chrysanthemums is now in flower, and contains over 1000 large blooms in various stages. Admission 6d. each. Gardener, Mr. W. H. Divers.
- METROPOLITAN PUBLIC GARDENS ASSOCIATION.—We learn that the Prince of Wales has been pleased to signify to the Earl of Meath that it will afford him much pleasure to accord his patronage to the Metropolitan Public Gardens Association, and at the same time to send a contribution of 10 guineas to its funds.
- CORRECTED NOMENCLATURE.—Aglacuema pumilum, not A. "rotundum," is the name of the plant that was figured on page 379 last week, the wrong name having been inadvertently given to the plant when first exhibited. Through a mis-transcription the name of Cirrhopetalum ornatissimum (the proper name) was printed C. "amatissimum" on page 378.
- MAGNUM BONUM POTATO.—Mr. A. Harding, Orton Hall Gardens, Peterborough, writes:—"On October 26th I lifted one of the best crops of Magnum Potatoes I ever saw. The Potatoes were planted the beginning of June, after Ashleafs and Hebrons were earthed up. The tubers are clean, large and fine shaped; being planted late they made no second growth like those planted earlier—a peculiarity of season, I suppose."
- A NEW THAMES EMBANKMENT.—It is reported that a new Thames Embankment is to be formed at Battersea. It is decided now to claim the foreshore by the side of the Thames near Old Battersea Church, and by building a concrete embankment enclose an open space of 2800 square yards. This space when railed in and planted with shrubs and trees will make an open and delightful promenade with a river frontage. The cost is estimated to be £2400, towards which the Metropolitan Public Gardens Association will contribute £1000.
- Wakefield Paxton Society.—At a meeting of this Society last week, Mr. J. Haigh, of Sheffield, read a very interesting paper on "Plants in Dwelling Houses." Nothing, he said, could be more beautiful than floral or foliage embellishments in a house; pictures, statuary, or other ornaments were inanimate, and could not compare with them in effectiveness. It was difficult to choose suitable plants for the varied conditions of heat and cold, light and darkness, dampness and dryness of different rooms in a house, but with care and observation the many difficulties in keeping plants in a state of health and beauty could be overcome.

- —— GARDENING APPOINTMENT.—Mr. Maurice Jones, late gardener to Miss C. Denton, Flemingate House, Beverley, East Yorks, has been appointed gardener to C. C. Arkcoll, Esq., Lime Park, Hurstmonceux, Sussex.
- DAHLIA BRILLIANT.—At the meeting of the Floral Committee of the National Chrysanthemum Society held on the 25th ult., a first-class certificate was awarded to Messrs. H. Cannell & Sons for Dahlia Brilliant, a rich deep crimson flower of the true Cactus type.
- PRESTON AND FULWOOD HORTICULTURAL SOCIETY. Mr. Charles Parker, 11, Cannon Street, Preston, has been appointed Secretary of the above Society in place of Mr. John Atherton, who resigned. The spring show of the Society is fixed for March 14th and 15th, 1894.
- THE DEVON AND EXETER GARDENERS' MUTUAL IMPROVE-MENT ASSOCIATION.—At the meeting of the above Association, held on the 25th ult., in the Guildhall, Exeter, Mr. Andrew Hope, of Messrs. R. Veitch & Son, read an able and interesting paper on "Plant Names and Their Association." The chair was occupied by Mr. G. B. Langsdale, and there was a large attendance of members.
- Mr. C. Orchard, we learn, has given up the management of the Bembridge Hotel, I.W., and taken over the Gardens on the reclaimed land from the Brading Harbour Co., with a view of developing a florist's business, as well as supplying the hotels belonging to the Company with cut flowers, vegetables, and other produce. Mr. Orchard's present address is 2, Harbour Mount, Bembridge, Isle of Wight.
- Gustavia Pterocarpa.—In a recent issue of the "Garden and Forest," Mr. G. Nicholson remarks that this plant has been flowering in the Palm house at Kew; all the species of the genus are handsome plants, well worth growing. The present species has large flowers—about 4 inches or more across—somewhat like those of a Magnolia in shape; the petals are white inside and rose-tinted externally. The inflorescence consists of about ten flowers; the stalked, leathery leaves measure from 12 to 20 inches in length and from 4 to 6 inches in width.
- LARGE VEGETABLES.—We learn from a Cumberland contemporary that there was a unique collection of fine vegetables filling the front windows of Messrs. Little & Ballantyne's establishment on Saturday last. The specimens were all sent to the firm from growers in the neighbourhood of Carlislc. There were white Cabbages 20 lbs. weight, Red Cabbages 16 or 17 lbs.; Brussels Sprouts nearly 3 feet high, "buttoned" to the very top; pink and white Celery, which had displaced a depth of $2\frac{1}{2}$ feet of soil; Leeks, of the Musselburgh variety, 8 or 9 inches in circumference; large round Onions from 1 lb. to $1\frac{1}{2}$ lb. in weight; Marrows of extraordinary dimensions, and a Gourd weighing 30 lbs.
- —— Pot Marigolds.—These plants are the hardiest of annuals and give a fine show of flowers during the summer. If sown, however, in May a display of bloom is seen all the autumn, and that is very important. Amongst the very latest to flower outdoors is Orangc King, one of the most effective of all, because the rich hue is particularly striking at this dull season. The old form of pot Marigold, a poor and uncertain flower, is quite elbowed out by such beautiful varieties as those named; Prince of Orange partially flaked with white; Meteor, the petals striped white and yellow. Some varieties are self, lemon, or occasionally tinted with a dark hue on the tops of the petals. All these are excellent in gardens, all are beautiful, bloom freely, and endure longer than other hardy annuals.—A.
- COLOURING FRUIT. Have you ever noticed what a fine colour most of the fruit offered for sale in the street generally possesses? It is all a question of dyes, remarks a "Society" journal. Ordinary Oranges are dyed a deep red, which enables them to be passed off as fine Blood Oranges at an enhanced price, especially when they have been made half as large again by boiling. Pine Apples are also tinted to make them look more attractive, and hard, unripe Strawberries are dyed so as to look a deep, luscious red. Melons are coloured a deep orange, and essence of Melon is injected to increase their flavour The latest development of the business of colouring fruit in France is in connection with Pears, which are dyed blue for a third of their size and red below, so that they present the national tricolour when peeled They are said to be in great demand for dessert fruit on account of their novelty, just as the green Carnations were over here with certain persons.

THE ROYAL GARDENERS' ORPHAN FUND.—What was most fitly termed a grand concert was given at the Surbiton Assembly Rooms on Wednesday evening of last week. The programme furnished by Mr. W. Furze of Teddington, was a first-class one, the company large and fashionable, and the entire programme, every item of which was capitally rendered, gave the highest satisfaction. We learn that H.R.H. the Duchess of Albany kindly sent a donation of 20s. to the Concert Fund through Mr. A. Dean, the Secretary. Also through him Messrs. J. Laing & Sons, the well-known Begonia growers of Forest Hill, sent a very handsome bouquet for presentation to the Mayoress of Kingston, in recognition of the Mayor and Mayoress's patronage. The Committee met on Saturday evening last to balance accounts, everything being conducted with great economy, Mr. Furze and Mr. Dean even finding all refreshments for the artistes. The result is a balance of 21 guineas, which will be duly forwarded to Mr. A. F. Barron.

— ÆCHMEA MARIÆ REGINÆ.—A writer in the "American Florist" thinks that this plant is the handsomest Bromeliad ever introduced. It is strong in habit, having large leaves 12 to 18 inches in length, armed at the edges with sharp spines. The flower scape is erect and covered about half its length with large boat-shaped bracts of a rich magenta shaded with rose, which remains a long time in perfection; the upper portion is thickly covered with flowers, which are tipped dark blue, changing with age to rose. It blooms during June and July. It is one of the most gorgeous and striking plants in cultivation, and never fails to attract attention.

- CARYOPTERIS MASTACANTHUS.—Regarding this plant a writer in the "Garden and Forest" says: "Although long since it was first introduced into cultivation this is rarely found in gardens. It is a smooth, branchy little shrub, having much the habit of a Ceanothus or Callicarpa, to which latter family it is allied. C. Mastacanthus does not appear to be truly hardy in some parts of America, although it has not been fairly tested out of doors with a proper winter covering. But it blossoms so late and so profusely, and is altogether so attractive, that it is well worth the trouble to lift it in autumn and place it in a pit or cold frame and to replant it again in the spring. There are dry, sunny, sheltered spots even about Boston where it might possibly live and thrive without removal in winter. The flowers, which are individually small, are borne in close corymb or umbel-like clusters in the axils of the opposite leaves and on all the branches. Blossoming begins in September, and as the twigs continue to grow new flower buds are produced with each new pair of leaves until further growth is checked by cold weather and frosts. The blooms are of a rich violet or lavenderblue colour, and have a slight aromatic fragrance. The foliage, green above, is soft, downy and hoary white beneath, and when bruised it gives out a very powerful, pungent, aromatic odour strongly suggestive of some plants of the Mint family, although this plant is generally classed in the Verbena family. It may be readily propagated by cuttings."

- SURREY APPLES. - Talking the other day about Apples and Pears at Cranleigh, I was greatly pleased to find a couple of local growers (Mr. Knight, an old Chiswick man, and gardener to Mr. Cassilla, Cranleigh; and Mr. Donkin, who has embarked in fruit culture in a small way for market) could bring and exhibit such excellent samples of fruit, especially the former. His Apples were gathered from young standard trees in an orchard, and were most clean and handsome. His Quinces were some of the finest fruits I ever saw. Blenheim Pippins large and richly coloured; Hereford Queening, a fine late variety; King of the Pippins and Wyken Pippin, all perfect samples. Mr. Knight stated that on the sand in that district Blenheim trees began to fruit much earlier than is the case on stiff soils. The exhibit showed what could be done with hardy fruit in that part of the county of Surrcy, and indeed it is a grand fruit-growing district, with few exceptions unhappily devoid of fruit. When it is known that for its area, its superb aspects, varied soils, and many suitable surroundings Surrey is credited in the returns of the Board of Agriculture with having only 3000 acres under market fruit culture, such evidence as was afforded at Cranleigh of the capacity of the district to produce fine hardy fruits should have good effect. Mr. Knight had exhibited his samples at the local agricultural show there the previous day, and it is hoped that all classes, especially landowners and farmers, took note of them. It is so very obvious that what can be done by Mr. Casilla, who has planted largely, could be done by many others, and it is hoped that very soon the reproach to Surrey of being such a poor fruit-growing county may be removed.—A. D.

— BIRMINGHAM AMATEUR GARDENERS' ASSOCIATION. — Mr. Arthur Roe read an interesting and instructive paper on "Our Herbaceous Border" before the members of the Amateur Gardeners' Association, at the Temperance Institute, last week. He contended that herbaceous plants were rightly taking a foremost place among the popular plants of the day. Beds of Pelargoniums, Lobelia, Asters, and Stocks produced an admirable display of colour, but there was always a certain sameness about such plants. A well-selected collection of herbaceous plants could be grown easily in a town garden, and would provide us with flowers from the early dawn of spring till the closing days of autumn. Amateurs, he said, had overlooked the beauty and variety of these plants in the past, and had neglected their cultivation.

WINTER RADISHES.—I have a vivid recollection of the ancient black Spanish Radish, at one time commonly grown in gardens for winter salading. It was sometimes round and oval and long, but always had a nearly rough black coat, the flesh white, rather hard and exceedingly hot. We have better winter Radishes now, and very mild pleasant ones too in flavour, like the fleshy young fresh Turnip Radishes. I saw a couple of these winter varieties in the seed farm at Reading the other day, one a long white, large, but very soft pleasant flesh, exceedingly agreeable, from Japan, and a pretty long tapering-rooted variety called Chinese Rose. These Radishes if pulled just when at their best and preserved as other tap roots are for the winter, then when used are washed, peeled and sliced, are most valuable additions to mixed salads during the winter.—A.

THE GREAT YORKSHIRE GALA, YORK. — The balance-sheet for the current year has just been issued, and is a most satisfactory statement, with a reserve fund of £2000, and other assets amounting to £256. During this year £250 was given to the York charities, £614 12s. in prizes and judges' fees, £115 12s. for music, £340 for tents and other fittings, and over £300 in other amusements incidental to the annual Gala. The receipts at the gates on the three days amounted to £1850, and from other sources to £524 10s. Whilst offering our congratulations to the energetic Committee and Secretary, we venture to suggest that in the coming year the claims of the Gardeners' Royal Benevolent Institution and the Royal Gardeners' Orphan Fund may have favourable consideration, for both urgently need help, and horticultural societies may do so much—if they will—in helping both institutions.

- NATIONAL CARNATION AND PICOTEE SOCIETY (SOUTHERN SECTION).—The annual general meeting of the above Society was held at the Hotel Windsor, in the rooms of the Horticultural Club, by kind permission of the members, on Saturday, October 28th. Martin R. Smith, Esq., President of the Society, presided over the meeting. The President, Vice-Presidents, Committee, and office bearers were re-elected. It was decided to hold the Exhibition for 1894 under the auspices of the Royal Horticultural Society on July 24th. The following alterations were made in the schedule :- Two new classes were added of twelve blooms and six blooms respectively, with a growth of the plant to each bloom, and without dressing. It was also proposed and unanimously adopted that the class for yellow ground Picotees be judged on the same principle as the white ground varieties—that is, a pure yellow with a margin the same as the white ground class; fancies not to be admitted. A distribution of seed has been made to the members, saved from choice fertilised flowers, grown in the garden, of the best seedlings raised from the seed so distributed on a previous occasion. The statement by the Treasurer showed that the Society was very prosperous as regards finance. The subscriptions, as per list, amounted to £154 9s. 6d.; amount for special prizes, £18 17s. 6d.; prize money distributed, £99 15s. 6d. The balance from last year was £65 10s. 5d., and the balance in hand is £118 5s. 4d.—J. Douglas, Hon. Sec.

THE ANNUAL MEETING OF THE AURICULA AND PRIMULA SOCIETY was held at the same time and place. Mr. Henry Cannell of Swanley presided. The President, Vice-Presidents, Committee, and office bearers were re-elected, the name of Mr. J. T. Bennett-Poë being added to list of Vice-Presidents. The Exhibition for 1894 is to be held under the auspices of the Royal Horticultural Society as usual, and it was decided to offer the same prizes as last year. The subscriptions as per list amounted to £63, prizes paid £60 16s., other expenses brought the expenditure up to £74 1s. 6d., leaving a deficit on this and last year's working of £8 16s. 6d. due to the Treasurer. If all the members would pay up their subscriptions, this amount would be materially reduced, and with a very little effort on the part of the members the deficiency might be made a handsome surplus.

- THE WEATHER IN WEST YORKSHIRE.-Round this district (Bingley) the weather during October up to the 25th has been exceptionally mild. Since then we have had cold north-west winds, accompanied on the 26th and 28th by heavy showers of rain. This morning, the 30th ult., we registered 7° of frost, which has put an end to the Dahlias and other flowers.—T. H. BOLTON.

- AMARYLLIS BELLADONNA.—Mr. Divers (page 375) is correct in stating that the warm wall of a heated house has a beneficial effect on the bulbs of this plant. I have had ample proof that they are assisted by the extra heat to a very great extent. Some years since I frequently visited a garden in which was a range of glass divided into two houses—a stove and a greenhouse. Between the front wall and the path outside was a narrow bed of Belladonna Lilies the whole length of the range. When the plants were growing the difference in their appearance was remarkable, and even more so when in flower. Those near the wall of the stove grew taller, and produced a much larger number of finer scapes than did the remaining portion of the bed by the cooler wall of the greenhouse, this being the case year after year. Had the bulbs been lifted no doubt as great a difference in their sizes would have been apparent.—T. S., Bristol.

- EARWIGS. - During the summer and autumn the earwig was particularly abundant - i.e., the familiar Forficula auriculare, the smaller dermopterous species of the genus Lebia, did not appear to be more numerous than usual. It would be of interest if gardeners who had observed any facts concerning this insect in the past season would kindly report them. For instance, it would be very desirable to know what plants or shrubs it chiefly infested. Here, in Gravesend, I have been told the species was caught repeatedly in the act of biting the young shoots of Chrysanthemums. Also it is important to have further evidence as to its flying, and whether it uses the forceps at the tail to inflict a pinch should it be assailed. some doubt amongst entomologists as to its habits, and its early history is still very obscure. I imagine the eggs are laid in or on the ground during the autumn, and the young brood lead a subterranean life, or almost so. Many of the mature earwigs seem to survive till the next spring, however, hiding in nooks and under bark.—J. R. S. CLIFFORD.



CHRYSANTHEMUM SHOWS.

WE have received numerous intimations of Chrysanthemum shows which are to be held during the current month, but space can only be found for the enumeration of those that have been advertised in our columns up to date, of which the following is a list:-

- Nov. 3rd and 4th.—Crystal Palace. ,, 7th and 8th.—National Chrysanthemum Society (Royal Aquarium), Kingston, Liverpool, Leeds Paxton, Brighton, Watford. 8th and 9th.—Northampton, Bournemouth.
 - 9th.—Birkenhead and Wirral,

 - " 10th and 11th.—Bradford, " 14th and 15th.—Twickenham, West of England (Plymouth). " 15th and 16th.—Birmingham, Hull, Bristol, South Shields, Rugby. " 15th, 16th, and 17th.—Herefordshire. " 16th, 17th, and 18th.—Edinburgh, York.

 - "17th and 18th.—Bolton.
 - ,, 24th and 25th.—Eccles and Patricroft,

SHOUTING OF THE SHOWMEN.

IF the National Chrysanthemum Show must be held at the Aquarium could not a two-shilling door be arranged for the admission of ladies and others before pipes are lighted and the shouting of the showmen begin?—SMALL GARDEN OWNER.

CHRYSANTHEMUMS AT CALDERSTONE—A CORRECTION.

In my report on Chrysanthemums at Calderstone in last week's issue (page 382), I stated that Lucy Kendall was a good yellow sport from Mrs. Heale, but that Mr. Tunnington feared confusion with it and Miss Haggas. For Lucy Kendall it should read Richard Parker .-R. P. R.

OUT OF DATE CHRYSANTHEMUMS.

It has often occurred to many that it would be a good plan to publish a list of the Japanese varieties which are superseded. As a trade grower I am frequently asked to send the "very best, regardless f cost," and only this spring such varieties as the following were asked

for, all of which, as exhibition flowers, I have discarded from my collection:—Madame C. Audiguier, Peter the Great, Meg Merrilies, and others. Of those of more recent introduction I have discarded as being superseded are Mr. Beckett, Mrs. Beckett, Sarah Owen, Jeanne Delaux, Mons. Freeman, W. W. Cole, Coronet, Pelican, Louis Boehmer, Alberic Lunden, Mr. H. Cannell, and Mrs. C. W. Clark.—PROGRESS.

THE WHITE VIVIAND MOREL.

Would some correspondent of the Journal of Horticulture kindly inform me if Viviand Morel, the true variety, and Viviand Morel on an early bud, coming pure white, and named Mr. W. Wells, would be disqualified under the rules of the National Chrysanthemum Society if they were both shown in one stand of twelve distinct Japanese varieties? As a beginner, I fail to see how a judge could disqualify them if one was a true pink, the other a pure white, although I do not think the latter has been certificated.—A Young Beginner.

NATIONAL CHRYSANTHEMUM SOCIETY.

A MEETING of the General Committee of this Society was held on Monday last at Anderton's Hotel, Fleet Street, when Mr. R. Ballantyne occupied the chair. Most of the business was of a purely formal or routine nature consequent upon the approaching exhibition. The Secretary stated that prize money amounting to £37 10s. had been awarded at the Society's Show last month independent of the cost of medals and special prizes, £6 11s. for vegetables, which amount was given by Messrs. Sutton & Sons of Reading. The Committee then confirmed the award of medals made by the Arbitration Committee at the October Show. The financial statement up to date being submitted showed that the sum of £235 11s. 4d. had already been received by the Secretary, of which amount £113 19s. 6d. was for subscriptions and £36 14s. 6d. for fecs-from affiliated Societics. The annual dinner, at which the President, Sir Edwin Saunders, is expected to preside, will take place at Anderton's Hotel on Thursday the 30th November. The Sub-Committee for the 1894 schedule was then appointed, its members consisting of Messrs. G. S. Addison, Boyce, Davey, G. Gordon, G. Stevens, Bevan, Crane, C. Gibson, H. J. Jones, B. Wynne, and W. H. Fowler, with the officers as ex-officion members. New members numbering altogether twenty-eight. were elected, and the Beckenham Horticultural Society admitted in affiliation.

Mr. D. B. Crane called attention to the inconvenience experienced after the last Floral Committee meeting, when exhibits were cleared away almost immediately after the sitting was over, giving members no opportunity of seeing the awards made. It was explained that this was a contravention of the rules on the part of exhibitors, and that in future the exhibits would remain on view until 4 P.M. as usual.

A vote of thanks to the Chairman brought the meeting to a close at an early hour.

NEW CHRYSANTHEMUMS.

AT the meeting of the Floral Committee, held at the Royal Aquarium on the 25th ult., there was an excellent display of novelties, the principal of which were Mr. Charles Cox, a crimson sport from M. Bernard, which the Committee desired to see again; Duchess of Devonshire, a Japanese medium-sized flat flower of deep rosy colour with golden reverse; Belle Jaune, a very attractive deep yellow Japanese, which was commended; Richard Dean, a large crimson Japanese with golden reverse; W. H. Fowler, a finely formed Japanese with deep spreading florets, colour bright yellow; Miss M. Simpkins, a large globular incurving Japanese with sharp-pointed florets, colour creamy white. In Anemones, Ada Strickland, a self-coloured bloom of deep cinnamon yellow, was effective, but the disk was not fully up. Madame M. Ricaud, a deep rosy blush-coloured Japanese with golden centre, was commended. G. W. Childs, a Japanese of rich velvety bright crimson, was staged in good condition, as also was Snow, a large white Japanese with long petals which the Committee wished to see

First-class certificates were granted to-

Thus. Witkins (Mr. R. Owen) .- A bright chrome yellow Japanese;

petals flat and spreading.

Mrs. P. Blair (Mr. R. Owen).—A large bloom of the incurved Japanese type, pale purple with silvery reverse.

Violetta (Mr. E. Beckett).—A deeply built flower, colour soft rosy

violet; an excellent Japanese seedling, raised in England.

Malle. Nathalie Brun (Mr. Rowbottom).—A large Anemone variety, centre pale yellow and high up, ray florets white and quilly.

Tribune (Mr. H. J. Jones).—A first-class Japanese of pale yellow lemon, rather deper towards the centre; a bold globular bloom; This

variety is figured on page 403.

Yellow Lady Selborne (Messrs. Rochford & Son).—A yellow sport from a well-known useful old favourite.

Madame Cambon (Mr. C. Gibson).—An unusually massive incurved Japanese; colour pale straw, petals long, curly, and intermingling.

How to Prevent Damping in Chrysanthemum Flowers.

FEW things are more calculated to suppress the enthusiasm which Chrysanthemum growers usually exhibit at the present time of the year than to notice their finest and choicest blooms being gradually ruined through damp before their beauty has fully developed. Yet this, alas! is the annual experience of many throughout the country. Even this year, though the weather has apparently been favourable for ensuring rapid and perfect development of the flowers, we hear many complaints of heavy losses through damp. Few growers perhaps altogether escape its damaging effect upon some of their flowers, but wholesale damping, such as we sometimes hear of, may, in my opinion, he prevented if sound judgment as well as assiduous attention are bestowed upon the management of both the plants and the houses in

interests of all to be thoroughly thrashed; out, seeing how many grand blooms are each year lost through the inroads of this dread enemy Observation has taught me that there are three distinct kinds of

Observation has taught me that there are three distinct kinds of damping; the most common form is for the lower florets of the flowers to become discoloured at the points, and if not removed premptly to decay the entire length, and prohably convey the germs of decay to the



FIG. 59.—CHRYSANTHEMUM THE TRIBUNE. (See page 406.)

which they are arranged. Although I have no wish to pose as an egotist I feel some satisfaction in the fact that during the ten years in which I have grown Chrysanthemums on the "large bloom" principle very few losses have been experienced through damping. If the causes and prevention of it, which I am about to advance, do not agree with the teachings of the giants in Chrysanthemum culture, they will be doing both me and many other readers of the Journal good service by setting us right in the matter, for I consider it a subject which lought in [the

centre of the flower. This is frequently brought about by great fluctuations in the condition and the soil in regard to moisture. Plants which do not retain their foliage well till the opening of the flowers is well advanced are invariably extremely sluggish in their root action; under such circumstances, if water is given before the soil is dry enough to admit of the pots ringing sharply when rapped, damping inevitably follows sooner or later. It may be noticed the following day if damp or foggy weather prevails. Sometimes strong healthy plants carrying

the finest buds are incautiously given an overdose of stimulants, which causes many of the surface roots to be destroyed, and a corresponding loss of foliage. The florets then for a time expand so slowly that with the best of attention it is seldom possible for the flower to become fully developed before the lower petals begin to decay through age, consequent upon impeded root action having prevented the flower from opening in its usual time. In such instances it is a good plan to remove as much of the centre of the flower as is thought will not expand while the lower petals keep fresh; although this kind of damping is usually caused through over-watering, combined with a damp and stagnant atmosphere, it is sometimes brought about by the opposite extreme. Knowing the evils which arise from over-watering, some cultivators nervously avoid the medium course, and allow the plants to become too dry at the roots, especially during bright weather. When in this condition, if the flowers are examined before water is given, the florets will be found to have temporarily lost their crispness, and feel soft and flabby to the touch. The application of water renders the stem crisp and firm again, but the following day a slight discolouration of the lower florets may be noticed, the whites and yellows frequently become tinted with pale pink, which most of us know is a sure indication that their freshness is on the wane.

Perhaps the most destructive form of damping is that which shows itself in spots or blotches over the whole or only certain parts of a flower. Almost every flower in a house is sometimes more or less affected in this way. This wholesale damping, which is indeed calamitous, may, I believe, be almost entirely prevented if no mistakes are made in the management of ventilation and artificial heat, and a little chade is indiciously given. The condensation of maintane upon the shade is judiciously given. The condensation of moisture upon the flowers is the cause of this damping. If the moisture is allowed to remain upon them for any length of time they become much discoloured. On the other hand, should evaporation take place very quickly many of the flore's shrivel as if they had been sealded, and indeed the disaster is brought about in much the same way as that which induces scalding Our remedy, therefore, is to prevent the condensation of moisture upon the flowers. This may undoubtedly be accomplished by keeping a little heat in the hot-water pipes whenever the weather is dull or damp, and at all times leaving the top ventilators slightly open wherever they are so arranged as to prevent rain entering the house. So long as the heat remains in the pipes I have never found any harmful effects from leaving air on at all times, and it proves as if even the safety valve through which superfluous moisture is dispelled. If on entering the house early in the morning moisture is seen hanging in drops upon the glass and sashbars, it may be taken for granted that the heat has not been kept regular. Should the hot-water pipes be found quite cold the first thing in the morning it is a mistake to push the fire on sharply and get them very hot. This should be done gradually, otherwise a great amount of drip will take place.

Those who have houses with iron sashbars will find the greatest difficulty in preventing the condensation of moisture on the roof, and consequent drip, but with continual ventilation and steady heat it may in all instances be reduced to a minimum if the more air is admitted in the morning before the temperature begins to rise. This is important, as I find many are inclined to delay the admission of more air till too late. Whenever the day promises to be bright it is advisable to have the pipes cool by the time the sun strikes the house, otherwise the rapid evaporation caused by the action of sun, air, and fire heat combined will assuredly cause the florets to scald, and although shading plays an important part in preventing this it will not do so entirely. There is one other form of damping which is happily not very frequent. Sometimes a flower may open in a satisfactory way up to a certain stage, when it ceases to make further progress, but to all appearance is quite sound; closer inspection will, however, reveal the fact the centre at the base of each floret is quite decayed, and the flower useless. Drip falling into the centre of the flower would, I have no doubt, produce a similar effect, but I think it is seldom caused in that way, because I have never noticed this happen in the case of a plant which was quite healthy and vigorous up to the time of the occurrence. Its advent is usually marked by the soil not drying so quickly as formerly. This I think is eaused by overfeeding to the extent of bringing about a complete breakdown in the constitution of the plant, or by persistent over-watering, which in time kills many of the young roots.

At all times the plants should be arranged as thinly as the space at command will allow. Packing them closely together, so that after watering the soil is so long in getting dry again renders the work of preventing damping all the more difficult. I am firmly convinced that if many cultivators would grow fewer plants, and thus avoid crowding when the time arrives for housing, they would produce a proportionately greater number of really good flowers.—D. H.

CHRYSANTHEMUM PROSPECTS AROUND BOLTON.

ONCE again has the season come round to record the prospects of the Chrysanthemums, and from a visit that has been made to the many excellent collections grown in the neighbourhood of Bolton, it is gratifying to note that there is no abatement in the enthusiasm in the cultivation of the "Autumn Queen." The plants are the finest ever grown in the locality, showing that whatever may have been the effect of the excessively hot summer in other parts, it has been conducive to the well-being of Chrysanthemums in this rather uncongenial climate.

It is not my intention to enumerate what I found in each collection separately, further than saying on all sides, both where they are grown for home decoration as well as where cultivated for exhibition,

very fine displays are anticipated. Foremost amongst the Japanese are Viviand Morel, Mdlle. Marie Hoste, W. H. Lincoln, Mrs. F. Jameson, W. Tricker, Florence Davis, Stanstead White, W. W. Coles, Puritan, Gloire du Rocher, Edward Molyneux, Avalanche, and J. Stanborough Dibben. Of the new kinds the most promising are William Seward, John Shrimpton, Lord Brooke, Col. W. B. Smith, G. W. Childs, and Mrs. E. D. Adams.

Amongst the incurved those of the Queen family are remarkably fine, so also are the Princess of Wales and all its sports. The same applies to John Salter, Lord Wolseley, and Jeanne d'Arc. Of the new kinds Mrs. Robinson King, Madame Darrier, Mrs. Clibran, Ami Hoste are the most promising, and Mons. R. Bahuant is grand.

In many cases I fear the bloom will be too early for our forthcoming

Show, November 17th and 18th, for which a very comprehensive schedule has been prepared and liberal prizes are offered. The great event to Bolton people is the President's (R. K. Cross, Esq.) prize, a handsome silver cup for twelve incurved and twelve Japanese cut blooms. This class is confined to growers residing within eight miles of Bolton. leading class in the open section is for twelve incurved and twelve Japanese cut blooms, and the prizes are £5, £3, £2. For a similar class of twenty-four cut blooms, miscellaneous, the prizes are £3, £2, £1. We hope the Show this year will be the best we have ever had, for in addition to our ordinary prizes we are giving two medals of the Royal Horticultural Society, and every endeavour is being made to make it a success by the Committee and its Secretary, Mr. Hicks, Markland Hill, Bolton. VISITOR.

CHRYSANTHEMUMS IN THE SOUTH.

Now that the exhibition season is close at hand a few notes on the prospects of the leading growers and exhibitors from any neighbourhood are interesting, and being lately in the Portsmouth district I had a glance over a few collections of plants.

ROOKSBURY PARK.

This, the seat of J. Carpenter Garnier, Esq., produced the winning blooms at the exhibition held at Portsmouth last year. Mr. N. Molyneux has some promising plants, not too robust in growth, but with wood fully matured and likely to give blooms of high quality, it not of exceptional size. The Japanese varieties are more advanced than their compeersthe incurved—and include all the novelties of last year as well as some promising kinds for this season. Such varieties as G. Savage, Princess May, L'Ami Eticnne, G. C. Schwabe, Mrs. C. H. Payne, W. K. Woodcock, Princess Victoria, John Shrimpton, W. Seward, President Borel, Le Verseau, Lord Brooke, Le Prince du Bois and Charles Davis are worthily represented. The incurved section are later. All the time available will be needed to develop the blooms fully by the early shows. The second week in November should see here a fine display.

LEIGH PARK.

This, the country residence of Sir F. Fitzwygram, is a few miles from Portsmouth and close to Havant, another centre of Chrysanthemum interest. Mr. Penford has for some years past been a leading exhibitor at the shows in the district, as well as at Brighton and Southampton. He has excellent plants this year—in number about 500. The Japanese section promised to afford some grand blooms. Florence Davis was remarkably fine; the same remark applies to Edwin Molyneux which was especially rich in colour, Excelsior, Anna Hartshorn, Marquise de Paris, Mrs. C. H. Payne of huge size, Stanstead White, Beauty of Castle Hill, W. Seward, and Sunflower. The leading kinds in the incurved section were naturally later but most promising in appearance. Nowhere in the south have I seen the Anemone sections better shown than from here. This year bids fair to be no exception to the rule from the present appearance of the plants.

HAVANT.

Mr. Agate's Chrysanthemum nursery is well known, not only for the quality of the blooms produced, but for the number of new sorts yearly on trial. Prominent amongst these carrying good blooms were Charles Davis, the new sport from that now universal favourite Viviand Morel, Madame Octavie Mirbeau, Duke of York, Golden Wedding, Miss Watson, Lord Brooke, G. Savage, The Tribune, W. H. Atkinson, G. W. Childs, Robert Owen, Mrs. Hubbuck, and Beauty of Exmouth. The incurved section were later, but promised well. Several new sorts are on trial, of which more may be heard later.

STANSTEAD PARK.

Mr. Hoskins, the gardener here, although not an exhibitor, grows not less than 700 plants, producing blooms of show quality. The Queen family are very late, many of them being run on to terminal buds. Prince Alfred, Jeanne d'Arc, Nil Desperandum, Refulgens, and Novelty are very good. Bouquet des Dames is here a great favourite in the Japanese section, and so are Avalanche, Sunflower, Viviand Morel, and Edwin Molyneux. It seems a pity that with such fine plants Mr. Hoskins does not exhibit the produce at some of the neighbouring

SWANMORE PARK.

Although not at the present time an exhibitor, Mr. Molyneux cultivates quite as many plants as when he tried to win prizes. The majority of the new sorts are grown with a view of testing their capabilities. Owing to structural alterations the plants are later than usual, but judging from the moderately strong yet firm wood and stout leaves good blooms may be expected later on. Amongst the newer varieties the following were promising, beside a number of seedlings under trial:—C. Davis, C. Blick, W. Seward, Princess May, Comte de Paris, G. W. Childs, Excelsior, L'Enfant des Deux Mondes, Mrs. C. H. Payne, Le Verseau, Madame Octavie Mirbeau, Mrs. W. H. Fowler, and Potter Palmer. All the old and tried favourites are here grown, as well as the best of the incurved varicties. Several plants of all sections are grown without any disbudding or thinning of the shoots after being once topped when a few inches high. This is for testing their floriferousness, and an interesting display may be expected from these plants.—VISITOR.

CORNSTILES.

This is the residence of W. F. Flight, Esq., who is well known as a patron of the Chrysanthemum. His gardener, Mr. Neville, has a collection of dwarf well ripened plants that should produce fine exhibition blooms. Most noticeable amongst the incurved are the Princess family, which are well timed. The Japanese varieties are grand, comprising many new novelties. I noticed that J. Shrimpton and Beauté de Toulousaine were specially good. Mr. Neville, I think, will take some beating this year.

MESSRS. W. & G. DROVER, FAREHAM.

The blooms staged at the Centenary Exhibition by these growers brought their name to the front. They are now growing about 400 plants for producing exhibition blooms. These are arranged in two long lean-to houses, one for Japanese, one for incurved varieties. The plants are taller this season, but are fine in stems, and the foliage is stout and green. The wood is also well ripened. I noticed Baron Hirsch, Brockley Gem, and the Queen family are showing good colour and depth. The varieties of the Princess family will not be up to their usual form this year. The Japanese are most promising, especially W. Seward, Colonel W. B. Smith, Lord Brooke, G. C. Schwabe, Golden Wedding, Charles Davis, Mrs. C. H. Payne, Mrs. Alpheus Hardy, and a few good promising seedlings.

THE VICTORIA PARK, PORTSMOUTH.

The plants grown by Mr. Hatch for exhibition blooms number about 250, and about 150 plants are cultivated for groups. These are showing well. Pompons and singles are also well grown. Mr. Hatch has taken many prizes for cut blooms, also for groups.—A GARDENER.

CHRYSANTHEMUMS IN THE ISLE OF WIGHT-NEW VARIETIES.

In spite of the extra amount of heat and sunshine during the past summer, Chrysanthemums in the south are a little late on the whole. Nevertheless, by the time the exhibitions come on I shall indeed be surprised if the season does not prove to be one of the best of the past decade as regards the improvement in the varieties of the Japanese section. New life has been irstilled into the cultivation of the flower by the interest taken in the hybridising and raising of English seedlings, the character of which can be fairly well proven the first season.

There is no doubt but that the fine hit made by Mr. J. Shrimpton, gardener to W. Seward, Esq., by the raising of the brilliant varieties named after the raisers and introduced last season will be in evidence this year at most of the exhibitions, and there are others to follow that will leave their mark. How the name of Shrimpton revives old memories of the past, in the minds of some of the old Stoke Newington school, and others of more recent date, when the Kingston and Wimbledon gardeners used to flock in scores across Wimbledon Common to visit our old friend of that name that lived at Roehampton, and grew such flowers as no one else could at that time, twenty to twenty-five The sight of his flowers gave the fever to many young gardeners that have since made their mark in the Chrysanthemum world, and by the zeal displayed in the neighbourhood resulted in the establishment of the Kingston and other neighbouring Chrysanthemum Societies. In the history of the Chrysanthemum I am glad to lay my tribute to our late friend, and many of my Kingston and Wimbledon associates can, I am sure, bear testimony to the wonderful influence "Shrimpton's" Chrysanthemums had on the gardeners and others at that time. This season will prove that history repeats itself, although the bearer of the honoured name, the raiser of the new varieties under notice, told the writer of this personally last season he could not elaim any relationship to our old friend of Roehampton.

The above thoughts suggested themselves on a visit to the unique gardens at Yarborough House, Brading, the residence of J. Darley, Esq, whose gardener, Mr. George Burt, has "taken on" wonderfully, and grows the Chrysanthemums, as he does anything else he takes in hand, with very great success. Favoured by a delightful sheltered situation, and a maximum amount of sunlight, the colours are highly developed, the collection consisting of nearly all new varieties. Last season Mr. Burt crossed a late bloom of Mrs. E. Beckett with J. Stanborough Dibben, and have now about thirty plants showing colour in different stages and of different characters, one of which, not yet named, is a beautiful distinct reflexed Japanese about 2 feet 6 inches high, carrying three fine flowers about 6 inches across, of a deep primrose, with shades of bronze and red in the centre of the flower; a variety of great promise. The following are some of the best, all of which are good, produced on plants carrying clean fully developed flowers fit for any exhibition. The high coloured varieties are very telling. Wm. Šeward, deep crimson, with long florets, is prominent on the three or four plants; all are fine, one carrying eleven flowers of good substance; like all dark coloured varieties, they require to be shaded from the hot sun to prevent burning. J. Shrimpton is a grand crimson with a golden turnover on the tips of the reflexed florets; both these varieties show unmistakeably the blood of Cullingfordi in the wood and foliage. C. Shrimpton is another high coloured variety, but the flowers are not so promising as the preceding, having come single on the terminals. Alice Seward is a very pretty variety with incurved florets, purple rose splashed with white, with a silvery turnover, reminding one of Don Quixote, but very much better. Charles Davis, the bronze yellow Viviand Morel, is represented by three plants, each carrying finely developed blooms of a beautiful tint, reminding one of Criterion, but much larger. L'isere is a splendid variety with large spreading stout florets, white, with a cream shade, turning up at the points like Stanstead White or Mdlle. B. Pigny, of which it is a much improved variety, both in the flower and the habit of the plant. I predict a good run on this variety.

Louise is a very fine incurved Japanese of extraordinary substance, like a huge Queen of England, a soft peach colour. Lord Brooke is a grand acquisition in colour; the flower here is of great substance, and the plant very showy. White Louis Boehmer, a small plant carrying three fine blooms, pure white, and very hairy; better than Mrs. Alpheus Hardy. Madame Appin, light rose, reminding one of a pale Viviand Morel; a fine exhibition flower. Col. W. B. Smith on all plants is very good, one plant carrying fourteen blooms; this is a great acquisition. Hubbuck, deep purple amaranth, very full flower with drooping florets. Excelsior, showing a good colour, deep rose, with silvery turnover. Waban, large, not yet fully developed. Chas. Blick, deep yellow, is very good. Elma de Smith, deep chestnut red, is very promising. Miss Dorothy Shea, large flower, with drooping florets of a dull brick red, reminds one of Margaret Marrouch, but as coming here, not quite so full; when good it would cover the board. Princess May has long drooping white narrow florets, and Le Prince du Bois is a very pretty flower, soft yellow drooping florets like Sunflower. Mrs. C. Harman Payne, rose, is a very strong variety carrying twelve fine blooms. Others very good are John Farwell, deep crimson red; L'Ami Etienne, full round incurved Japanese, colour of Madame C. Audiguier, but broader florets; and President Borel, deep rose, drooping florets. Queen of the Hirsutes is chestnut red, and F. W. Flight is rather late, but coming good.

Some older varieties, such as Mdlle. Marie Hoste, M. E. Carrière, Louis Boehmer, Edwin Molyneux, and Felix Cassagneau are grown, but Mr. Burt is very severe in his selection, a collection of which any man might well be proud.—C. ORCHARD, Bembridge, I.W.

MESSRS. J. VEITCH & SONS, CHELSEA.

THE nursery of Messrs. Jas. Veitch & Sons at Chelsea is, as everyone connected with horticulture well knows, always worth a visit, and now. when the Chrysanthemums are in bloom, perhaps more so than ever. The house in which the plants are shown is a large span-roofed one, the same as was utilised last season; the arrangement being also similar, a central bank, with narrow borders on each side. Most, if not the whole, of last season's novelties are to be seen, every endeavour having been made to keep the collection well abreast of the times. It is the general opinion of those who have seen the flowers that they surpass those of last season. This will doubtless be considered high praise by those who saw the magnificent examples last year, and who have not yet paid a visit this season; but, neverthcless, it is well merited, as all must acknowledge when they see the flowers. The plants are models of good management, and much credit is due both to the firm and the able grower, Mr. Weeks. The Japanese varieties are in full bloom, the incurved being a few days later. Careful attention has been devoted in placing the plants so that the colours would blend harmoniously, and the effect from the door of the structure is eonsequently striking, which attracts the attention of those who are passing down the walk through the nursery.

Immediately on entering the house a flower of Colonel W. B. Smith is prominent, measuring, with the florets hanging down, 22 inches in circumference. Not so large but equally as striking are blooms of Miss Anna Hartshorn and the dark coloured Wm. Seward, one of the latest introductions, and decidedly an acquisition amongst the very deep crimson varieties. Bouquet des Dames is seen in superb form, the blooms being exceptionally deep and handsome. Edwin Molyneux here, as at many other places this season, is good, as also is Earon Hirsch, a bronzy yellow incurved. There are several plants of Viviand Morel, almost all of which are earrying large shapely flowers. Mons. R. Bahuant is admirably represented, the same remark being applicable to Mrs. C. E. Shea and L'Automne. Amongst the hairy petalled varieties Louise Boehmer and W. A. Manda are carrying by far the best blooms, this being more especially the case with the former. The now popular Beauty of Exmouth is to be seen in grand shape and fine substance, and is certainly one of the best whites extant.

A superb deep rosy pink is found in Mrs. C. Harman Payne, additional beauty being given to the plant by the white-tipped florets. One of the newest introductions is J. Shrimpton, Japanese, which, besides having fine deep velvety crimson petals, is of a dwarf habit, which will doubtless be a great recommendation to some growers. An ivory white variety of a high order of merit is Mdlle. Thérèse Rey, the blooms of which are of almost perfect shape. G. C. Schwabe carries highly ereditable flowers of a pleasing rosy carmine colour. Miss Dorothy Shea will not readily be superseded amongst the charming terra cotta shades, as the substance is all that could be wished, and the shape practically faultless. Chas. Davis is a fine bronze yellow variety of the true Viviand Morel type. The blooms of the grand yellow W. H.

Lincoln are magnificent, as also are those of Florence Davis and Mons. W. Holmes. Amongst the many varieties which promise to be of exceptional merit are J. Stanborough Dibben, the superb Lord Brooke, Mdlle. Marie Hoste, and Robt. Owen, a very fine incurved Japanese of a deep bronzy yellow shade. With these the list must be closed, but it should be borne in mind that only a few out of the many excellent varieties have been mentioned, and those persons who will come to London to see the various Chrysanthemum shows cannot do better than devote an hour amongst the Chelsea plants; it will, as everyone who goes will afterwards say, be an hour well spent, and well worth any little inconvenience or trouble it may cause.

MESSRS. CANNELL & SONS.

The great Swanley growers have a very fine display this year, their large house, which is 150 feet long and 25 wide, presenting a very beautiful appearance. The plants form a broad central and two narrower side banks, and the principal one is broken up by handsome Musas and other foliage plants which throw the colours into bold relief. The Chrysanthemums are admirably grown, good culture setting its mark on them, as well as on everything else at the Home for Flowers, and all the most noteworthy of the newer varieties are represented,

together with a large number of seedlings.

The increasingly popular incurved Japanese section is materially strengthened by Duke of York, a large deep flower showing a pink reverse. The white Japanese, Beauty of Exmouth, is chaste and pleasing, and only lacks depth to make a grand sort. Wm. Seward is one of the features of the collection, this grand Japanese being in splendid condition. The difference between flowers on the crown and terminal buds is very marked, those on the latter being deeper in colour and with more slender florets than the others. Without question it is a great acquisition. A very large Japanese named M. Fernard Bertin, tinted with rosy lilac, is highly promising. The beautiful bronzy Japanese, Colonel Smith, is too well known now to need description. Messrs. Cannell have grafted it on Chrysanthemum Halleri maximum, as suggested by the accomplished Belgian horticulturist, Mr. Everaerts, in the Journal last spring. Good bushes have been secured by grafting in March, and it is noteworthy that the flowers on the grafted plants do not damp like many of the others, owing perhaps to the smaller amount of water required by the stock. There are several excellent decorative varieties, such as Miss Watson, a yellow Japanese; the old, but still useful Elsie, Eynsford White, Gold Mine, and Golden Ball.

International, a rosy lilac Jap fading to creamy white, is noteworthy for its great size; Madame Edouard Rey, a soft pink with very broad florets, incurving on the second bud, is a very promising Jap; and so is Eda Prass, soft blush, very large and full. A good incurved does not turn up so frequently as a good Jap, but there is one in Globe d'Or, a bronzy yellow with very broad petals, and another in the bronze Baron Hirsch. A white of this section named Madame Chataing, raised by Calvat, is very promising. A new white Japanese seedling named Amy Chantler, which has extremely long florets, may fill up into a good flower. Commandant Blasset has done so already, being full, well formed, and fine, colour rosy crimson; Lord Brooke, the incurved Jap which aroused so much attention last year, is coming well, and with very deep colour, showing deep reddish bronze; Primrose League, a light yellow Jap, is extremely good; and so is G. W. Childs, its colour being very rich. Such old favourites as W. Tricker and Viviand Morel, for such they now are, hardly need mention, for their qualities are familiar. The yellow Viviand, Chas. Davis, is represented, and is varying curiously in colour, some flowers being clear yellow, others fawn, and others again suffused with lilac. But what promises to be a still greater acquisition is Mdlle. Thérèse Rey, a Japanese with florets as broad and substantial as those of Marie Hoste; it is white, save for a yellow shading in the centre. Another grand novelty is J. Shrimpton, a Japanese with wonderfully rich crimson flowers, and a thoroughly good grower; Striped Odorata, a sport from La Triomphante, lilac striped, is pleasing; and last may be mentioned a Jap named Vice-President Calvat, a bronzy very deep flower, and carrying splendid foliage.

It is noteworthy that the collection is much dwarfer this year, a

It is noteworthy that the collection is much dwarfer this year, a result brought about no doubt by the effects of the weather, combined with the multiplication of dwarfer sorts than those which used to rule. It is a very gratifying fact. A visit to Swanley is well repaid just now, for in addition to this grand display of Chrysanthemums, the Zonal Pelargoniums and winter Begonias are in splendid bloom.

MESSRS. J. LAING & SONS, FOREST HILL.

Chrysanthemums are well represented at the nurseries of Messrs. J. Laing & Sons this year, and the firm justly maintains the good reputation they have long had in this respect. Whilst many of the better varieties are staged in a large span-roofed structure at the Stanstead Road Nurseries, it must not be supposed that these constitute the whole of the stock. At the Vineyards, Catford, there are several long houses filled with Chrysanthemums in excellent condition. All the best varieties are grown, and these now make a grand display. The plants are noticeable for their robust appearance, and the flowers are obviously of no ordinary character. Whilst keeping abreast of the times, the principal point in view here is to grow only the best of the numerous varieties that are now in existence, and to do these well. That this object has been attained no one who pays a visit to Messrs. Laing's nurseries can doubt.

When a call was made last week many of the Japanese varieties were expanding some splendid blooms, and by the present time they will

be in prime condition. The pretty salmon pink reflexed Japanese variety Eda Prass is exceptionally good, and so is Charles Davis, the new sport from Viviand Morel. Some splendid examples of Col. W. B. Smith are grown, and the white Louis Boehmer, known also as Enfant des Deux Mondes, is a worthy representative of the hirsute family. Golden Wedding is seen in fine order here. This is a splendid Japanese variety with large blooms of a rich golden yellow. Miss Dorothy Shea (J) is a flower of good form and colour, and Miss Muriel Scott may be described as a really good light yellow, similar in build to Etoile de Lyon. Primrose League is very fine with its large creamy white graceful flowers, and Princess May, a Japanese variety of merit, is well grown. William Seward is in excellent condition with its magnificent richly coloured blooms, and the exquisite form of Vicomtesse Hambledon is noticeable. The last named is an incurved Japanese of a large size and silvery pink colour. Rose Laing still retains a prominent position on account of its usefulness, and F. W. Flight is deserving of notice. The last named is a reflexed Japanese variety, crimson florets and a golden reverse. Eugène Farez is another of the same type with crimson red flowers, and Duke of York is an incurved Jap of a deep pink shade. This is a dwarf grower but possesses a strong constitution. The popular Stanstead White still retains a first position, and amongst others such as W. H. Lincoln, W. H. Atkinson, Middleton Clarke, and Miss Maggie Newton are conspicuous.

Although less extensively grown, perhaps, than the Japanese the best of the incurved varieties command attention, and fine blooms of these will be now developing. Mons. R. Bahuant we noted as being particularly fine, and the same applies to Baron Hirsch, considered by some to be the finest incurved in cultivation. Mrs. J. Mitchell, a sport from Empress Eugénie, is a splendid variety of a golden amber tint. Mrs. Robinson King is likewise good, the same applying to other standard

varieties.

MR. H. J. JONES, RYECROFT NURSERY, LEWISHAM.

ALTHOUGH but three or four years have elapsed since Mr. H. J. Jones established himself at Ryecroft Nursery, Hithergreen, Lewisham, he has by characteristic perseverance built up a business that, so far as Chrysanthemums are concerned, is practically unsurpassed. This enviable position in the Chrysanthemum world is due solely to the exceptional capacities displayed by Mr. Jones, his extensive knowledge of the "Autumn Queen," and the unceasing manner in which he has striven. From early morning till late at night this enthusiastic grower, aided by his estimable partner in life and assistants, may be seen busily engaged amongst his plants, and thus a Journal representative found him last week. The result of this continuous labour, as before hinted, is a magnificent collection of the best varieties, including the latest novelties and numerous new seedlings of merit not yet in commerce.

The plants make an imposing display, even at this early period, and by the middle of November the spectacle will be well nigh beyond description. It is not an easy matter, however, for anyone to form an adequate idea as to the magnitude of the Ryecroft collection without paying a visit, but a few facts will show that it is of no ordinary dimensions. Nearly 10,000 Chrysanthemums for providing large blooms are grown, and in addition to these there are 18,000 plants in 6-inch pots. Then we find 2000 plants of the early howering varieties, of which a speciality is made. These, however, were not sufficient, and ever on the alert for making further progress, Mr. Jones last week purchased by private contract the whole of Messrs. Pitcher and Manda's European stock of Chrysanthemums, comprising some 3000 plants, including many choice American seedlings. These have been removed from Swanley to Ryecroft Nursery at a cost of £40, and the two collections make a display of a unique character. The principal show house is 104 feet long by 24 feet wide, a splendid span-roof structure, lofty, and well ventilated. In this no less than 4000 well grown plants are most admirably arranged. Instead of the customary straight path and formal crowded masses of blooms, the plants are placed so that a winding walk is made through the centre of the structure, the Chrysanthemums on each side forming a charming undulating surface of varied colouration. Apart from the house mentioned there is another huge structure of similar dimensions filled to the utmost with well grown plants of choice varieties. Thousands of homeraised and foreign seedlings are on trial in pits and frames, and it is obvious that from these some magnificent varieties will be forthcoming.

Regarded individually the blooms on the plants in the exhibition houses are remarkable for their size and colour, comprising all the latest novelties. The Japanese forms are especially good, and the incurved varieties are showing wonderfully well. Space will not permit us to enumerate other than some of the new varieties, but whilst these are so much in evidence it may be taken for granted that the standard choice kinds are similarly well grown. Amongst the novelties of this year The Tribune takes a prominent place. Mr. Jones has already secured two certificates for this charming Japanese variety, and from a bloom grown by him the illustration (fig. 59) on page 403 has been prepared. The flower is very large, of good build, with broad and long florets of a soft primrose colour. For exhibition purposes this is likely to prove a useful variety, the plant being also dwarf in growth. Pearl Beauty is a beautiful incurved Jap, with long pearly white florets, and Primrose League is destined to take a foremost position. The last named is very large and of graceful appearance. Charles Blick, which was raised at Lewisham, is grand golden yellow Japanese, and another of Mr. Jones' seedling, W. H. Atkinson, is in splendid condition. G. W. Childs is the best scarlet crimson of the year, and a decided improve-

ment on J. Shrimpton. President Borel, which has been certificated this season, is a handsome Japanese variety, striking purple colour and golden reverse. C. Shrimpton, as seen at Lewisham, is a magnificent bloom of E. Molyneux type, and one that is sure to find favour, and the same applies to Madame Charles Molin. The last named will prove better than the so-called white Viviand Morel. Beauty of Exmouth is splendidly grown, and so is Ryecroft Glory, a rich yellow reflexed variety, useful for decorative purposes. Mrs. Dreer is an American seedling of the old Bouquet Fait type, but much better, and J. H. Taylor is a heautiful bloom of large size role with a white section. beautiful bloom of large size, pale pink with a white centre. President W. R. Smith is one of the best Japanese varieties of the season, being massive in build and of a fine pink colour. It is thought that this variety will, for exhibition purposes, displace many other pink kinds which are now grown. Numerous others are strongly represented, especially such popular varieties as Charles Davis, Mrs. Harman Payne, Madame E. Rey, Miss Dorothy Shea, Baron Hirsch, Lord Brooke, and Colonel W. B. Smith.

As before mentioned, Mr. Jones is exceptionally strong in seedlings, and is in the possession of many grand varieties, about which something will be heard later on. Mrs. Charles Collins, he considers, is a variety of the future. This is an incurved Japanese of a large size, full flower, long florets, colour flesh passing to white and slightly tinted pink. Seedling 242 is a very fine Japanese, and so is H. H. Spencer. Seedling 401 is a splendid incurved Jap, white with a pale yellow centre, and amongst the one thousand seedlings raised by Mr. Jones are many others that deserve more than a passing reference. The hirsute-petalled types are now plentiful, there being several new varieties. One named

Hairy Wonder, a curious flower of a bionzy yellow shade, is very striking, and the same may be said of "Sautel 1893," an incurved Japanese, florets very hairy, colour rosy amaranth with silvery pink reverse. Mr. Wm.

Trealease is a decided improvement of Louis Boehmer. Mrs. Dr. Ward is perhaps one of the finest hairy petalled varieties now in the finest hairy-petalled varieties now in cultivation. This is a full and deep flower of bronze yellow shade, tips and outer florets shaded rcd. Other hirsute varieties include W. A. Manda and the white Louis Boehmer. All the latest novelties of merit in the other sections are likewise grown, and it may be of interest to add that plants of some of the New Zealand varieties that were exhibited in ice at the Royal Aquarium last year, may now be seen carrying blooms at Ryecroft Nursery.

CHRYSANTHEMUMS AT EXMOUTH.

THE headquarters for Chrysanthemums in the West of England is the Claremont Nursery. Japanese varieties have most attention, and some hundreds of novelties are on trial. As the birthplace of the celebrated Beauty of Exmouth, this variety is naturally very much in evidence, being represented by about a hundred well-grown plants carrying handsome blooms. The largest bloom in the whole collection is Prim-

rose League. This variety is of good habit and produces large blooms of a delicate straw colour. Duchess of Devonshire varies in tint of colour the same as Viviand Morel and other of this class; many blooms are almost white and others of a rosy magenta. Col. Smith is represented by some handsome blooms. Eda Prass, for which Mr. Godfrey was recently awarded a first-class certificate, is of delicate salmon pink, the blooms being very deep and solid. The immense blooms of Mrs. Harman Payne are very striking in colour, which is rosy magenta with a light reverse. Incendie is a fine addition to the Japanese incurves; the blooms are light red with a rich golden reverse, very deep in build. Robert Owen is a very good bronzy yellow, but apparently would expand in better form with a little more heat. Charles Blick is a decided advance on Boule d'Or and others of this class. Chas. Davis, the "yellow" sport from Viviand Morel, is represented by rich bronze bloom. Miss Dorothy Shea is a very fine drooping flower of a deep mahogany colour. Golden Wedding will also find a place among the first twenty-four. The blooms are of large size, good in form, of a rich buttery yellow.

Wm. Seward, the dark blooms of which contrast well with the light varieties, is here well grown. G. W. Child is giving good solid blooms a shade or two lighter than Wm. Seward, but with a buff reverse. The white Louis Boehmer is similar to its parent, except the colour, which is of a milky white. Lord Brooke is not of the first size, but the bronzy incurved blooms are very striking. Miss Libbie Allen is almost identical in shape, but is a clear lemon yellow, and of more sturdy growth. Robert Flowerday is very distinct, the blooms are of a rich purplish lake with a silvery reverse; habit of plant robust and sturdy. The foregoing list does not by any means exhaust all the good varieties to be found in the Claremont Nursery, but, whilst bearing in mind the great advance that has recently been made in Japanesc, yet

those mentioned are likely to come to the front as sterling varieties.

Among the curious or novel kinds is Novelty, deep rosy purple, in form very similar to an Endive; also Délaux Pilars, in colour a rich brown; in fact, the tint now so very fashionable. This is one of the hirsute section, and is certainly the most hairy up to date.

Several seedlings raised in the nursery are being tested by Mr.

Godfrey. The most promising is a very large and handsome pink named Devoniensis. This in form is very striking, the florets are long and drooping, gracefully recurving at the tips. Another is Exmouth White, something after Beauty of Exmouth in form, but of the purest white.—A N.C.S. MAN.

CHRYSANTHEMUM SHOWS.

HAVANT.—OCTOBER 27TH AND 28TH.

THE tenth annual Exhibition was held in the Town Hall on the dates named. Cut bloom classes occupied the most important ipart of the schedule, the principal class being that for thirty-six distinct varieties, half Japanese and the remainder incurved. Mr. Penford, gardener to Sir F. Fitzwygram, Bart., M.P., Leigh Park, Havant, managed to win

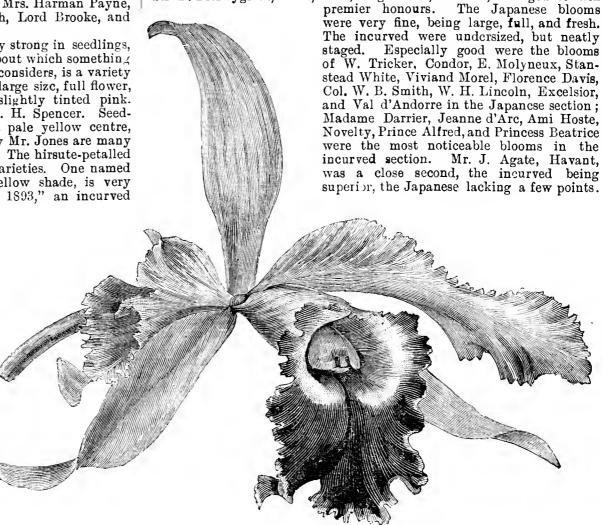


FIG. 60.—LÆLIO-CATTLEYA PISANDRA. (See page 391.)

Charles Davis, Madame Octavie Mirbeau, Col. W. B. Smith, Amos Perry, and George Savage, with Mrs. Heale, Mons. R. Bahuant, and Prince Alfred were the best blooms.

For eighteen blooms, distinct, nine to be Japanese and the remainder incurved, there was a spirited competition. Mr. C. J. Steptoe, gardener to G. A. Gale, Esq., Horndean, was an easy first. E. W. Clark, to G. A. Gale, Esq., Horndean, was an easy first. E. W. Clark, Marquise de Paris, Excelsior, Viviand Morel, Lord Wolseley, Miss M. A. Haggas, and Mons. R. Bahuant were the best blooms. Mr. J. Suter, gardener to J. Lascelles, Esq., Havant, was second. Mr. Penford was first for twelve Japanese with large, richly coloured examples of the leading kinds; Excelsior, Marquise de Paris, Col. W. B. Smith deserve a special mention. Mr. Agate was a good second. Mr. A. W. Howard, gardener to E. G. Boucher, Esq, Sennicotts, Havant, was third. Mr. Penford was again successful, this time in the class for twelve incurved, with medium-sized, neat blooms. Mr. Agate was second.

Three splendid stands of twenty-four Anemone blooms were staged, Mr. Penford gaining premier award with an even, fully developed collection, Sœur Dorothée Souille, M. C. Lebocqz, Jeanne Marty, Sabine, and Duchess of Westminster were especially well represented. Mr. Agate was a close second, and Mr. Steptoe third. Mr. Penford was again successful for twelve blooms of reflexed varieties, staging large and solid examples of leading kinds, Felicity, Phidias, King of Crimsons, Emperor of China, and Chevalier Domage were especially noteworthy.

Messrs. Steptoe and Agate followed in the order named.

Pompons made a bright display. For twelve sprays Mr. Agate was an easy first, staging well-developed blooms of leading varieties. Mr. H. Brown, gardener to J. Taplin, Esq., Havant, was second. Single-flowered varieties are always well shown at Havant, and this year they were better than usual. For twelve the last-named exhibitor won with fully developed blooms of telling sorts most excellently arranged. Mr. Agate was a good second. In this stand a new variety named Pattie Penford was staged; the florets are deeply reflexed, pure white, with a pale green disc. Mr. Penford secured the prizes for premier blooms—incurved and Japanese—Madame Darrier and Col. W. B. Smith. In the class confined to amateurs and single-handed gardeners Mr. Holmes,

Gosport, won first prize for twelve Japanese with a splendid stand of blooms, almost equal to the best in the Show. Groups of Chrysanthemums were not numerous, but that from Mr. J. Agate contained finc blooms, lightly arranged, and the premier prize was awarded. Mr. J. Suter was second.

Primulas, Solanums, and table plants were well shown, and fruit and vegetables were of commendable quality. Table decorations by ladies only was a distinct feature of the Show, the prizes falling to Miss Newman, Mrs. A. Stubbs, and Mrs. Conway in the order named, all having effective arrangements.

LOUGHBOROUGH.—OCTOBER 28TH.

THE nineteenth annual Chrysanthemum Show was held in the Town Hall on October 23th. The Exhibition was up to the standard of former years in everything but the incurved blooms.

poorly represented, being very rough. Japanese blooms were well shown.

Messrs. Biddles & Co. took first prize in the group of Chrysanthemums, most of the plants having flowers fit for staging in the cut bloom section. The same firm took first prize for a group of foliage and flowering plants; but all the groups were too formally arranged. Primulas and dinner table plants were in good condition. Grapes were well shown, as also were Apples and Pears. Collections of vegetables shown by cottagers were excellent, and finer Celery has scarcely ever been seen.

There was a very good collection of vegetables not for competition,

also a display of Orchids, both of which received certificates.

There were also prizes given for the best specimens of writing, freehand drawing, and needlework, open to the scholars of the Loughborough school.—J. L. B.

PORTSMOUTH.—OCTOBER 31st, NOVEMBER 1st AND 2ND.

This great southern exhibition was one of the best yet held. The Drill Hall in which the show took place affords ample space for the exhibits and for the numerous company which attend this Exhibition. The arrangements, as usual, were perfect in the hands of an efficient Committee, guided by the Hon. Secretary, Mr. F. Power, and his assistant, Mr. B. Miller.

Cut blooms formed the most attractive part of the Exhibition. The principal class was that for forty-eight blooms, half to be Japanese and the remainder incurved, in not less than eighteen varieties of each section, and not more than two of one variety. No less than seven competed, making a very fine display. Messrs. W. & G. Drover, The Nurseries, Fareham, won the premier position with large, well developed Japanese, well staged. The incurved were of medium size, but neatly finished. The names were—Japanese: Col.W. B. Smith (2), Charles Davis, W. Seward (2), Stanstead White, Mrs. F. A. Spaulding (2), Gloire de Rocher, Viviand Morel (2), E. Molyneux (2), Sunflower (2), Mrs. C. Wheeler, W. H. Lincoln, G. C. Schwabe, Excelsior, Amos Perry, Puritan, Alberic Lunden, W. Tricker, and Lord Brooke. Incurved: Empress of India, Madame Darrier (2), Queen of England (2), Baron Hirsch, Lord Alcester, Lord Wolselcy (2), Jeanne d'Arc (2), M. Jules Barigney, Prince Alfred, Alfred Lyne, Alfred Salter, Princess Beatrice, Lady Hardinge (2), Nil Desperandum, John Doughty, Novelty, Refulgens, Brookleigh Gem, and a seedling. Mr. N. Molyneux, gardener to J. C. Garnier, Esq., Rooksbury Park, Wickham, was a good second. The incurved were more regular in size, but the Japanese were a trifle smaller. Especially good were G. C. Schwabe, Mdlle. Marie Hoste, Charles Davis, Sunflower and Mrs. C. H. Payne, while Princess Beatrice, Violet Tomlin, Ami Hoste, Golden Empress, and Lord Alcester were noticeable in the incurved section. Mr. G. Inglefield, gardener to Sir J. Kelk, Bart., Tedworth, Marlborough, third; and Mr. Penford, gardener to Sir F. Fitzwygram, Leigh Park, Havant, fourth.

The next important class was that for twenty-four, distinct, half the next important class was that for twenty-four, distinct, half incurved and the remainder Japanese. Mr. Inglefield here secured the premier award with a very fine stand. The incurved blooms were perhaps the best in the Show. The names were Lord Wolseley, Golden Empress, Madame Darrier, Emily Dale, Jeanne d'Arc, Baron Hirsch, Princess of Wales, Empress of India, Prince Alfred, Lord Alcester, Lucy Kendall, and Miss M. A. Haggis. The Japanese were Mrs. C. H. Payne, W. H. Lincoln, Viviand Morel, Col. W. B. Smith, E. Molyneux, Sunflower, W. Seward, Gloire dc Rocher, Mrs. Falconer Jameson, W. Tricker, and F. Davis. Mr. H. J. Parrott, gardener to Mrs. Kincaid, Smith, Wood W. Seward, Gloire de Rocher, Mrs. Falconer Jameson, W. Tricker, and F. Davis. Mr. H. J. Parrott, gardener to Mrs. Kincaid Smith, Wood End, Chichester, was a good second; and Mr. N. Molyneux third. Six competed in the class for twelve Japanese, distinct, and Mr. C. H. Holloway, gardener to F. W. C. Read, Esq., The Wakes, Selborne, won the premier award with a stand of heavy blooms. Mr. H. Parrott was second, and Mr. Penford third, both staging creditably. Four competed in the class for twelve distinct incurved. Mr. Penford won with medium-sized examples of leading varieties. Mr. J. Hughes, gardener to W. Baring, Esq., Norman Court, Salisbury, second; and Mr. C. J. Steptoe, gardener to G. Gale, Esq., Horndean, third.

The class for reflexed in twelve blooms, not less than eight varieties, showed a falling off as compared to past years, six only competing. The best blooms came from Mr. Penford, who had well-developed flowers of King of Crimsons, Phidias, and Felicity. Mr. Steptoe was second, and Mr. S. Dee, gardener to Mrs. Mills, Kingston, third. The Anemone section produced a keen competition, the flowers being good in all the six stands of twelve blooms. Messrs. Agate and Hatch, the latter gardener to the Victoria Park's Committee, Portsmouth, won first and second honours; and Mr. Penford was third.

Pompons made a bright and varied display. Mr. H. Lee, Moreland's

Road, Gosport, won with twelve bunches. Mr. Hatch second, and Mr. Agate third. A class was provided for the fimbriated section, in bunches of three blooms to a bunch, and they made a fine display, cut with from 9 to 12 inches of stem and leaves. Mr. Hatch was a distinct first prize winner, Chardoneret, Crœsus, Scapin, and Massange were really fine. Mr. Adams, gardener to T. S. Edgecombe, Esq., Hinton House, Southsea, was second. Single flowered kinds were also well staged in bunches of three blooms each. Of six exhibits that from Mr. Brown, gardener to J. Taplin, Esq., Havant, was first; Mr. Agate second, and Mr. H. Lee third.

For six Japanese, any one variety, Mr. C. Holloway staged Edwin Molyneux, very fine, and easily won the first prize amongst seven competitors; Mr. Hughes with Avalanche coming next, while Sunflower from Mr. T. Wilkins, gardener to Lady Theodora Guest, Inwood House, Blandford, secured a third place. In a similar class for incurved Mr. Inglefield staged Jeanne d'Arc in fine condition, and won the premier award. Mr. Hughes was second with Lord Wolseley, and Mr. Agate

third with Madame Darrier.

Messrs. Perkins & Sons, Coventry, with one of their usual arrangements, won first prize for a bouquet of Chrysanthemums and Ferns; Mrs. F. Mills, 13, Florence Road, Southsea, was second. For the best dressed glass stand with Chrysanthemums and other flowers there was a brisk competition, no less than ten competing. Mrs. Conway, Havant, won the premier award with a light arrangement of suitable flowers. Miss Kate Golding, 24, Winchester Road, Southampton, was second. An arrangement of autumn foliage and berries in an epergne brought out five competitions. Mrs. Conway was again successful; Miss C. Winch, Gosport, second. On a table space of 3 feet each way prizes were offered for the best arrangement of Chrysanthemums with any kind of foliage. Here Mrs. Conway again asserted her superior taste by winning first place with a charming arrangement. Miss Kate Golding second.

Plants made a good display down the centre of the Hall and across one end. For six trained specimens, Mr. Penford won; Mr. G. Lambert, Bognor Road, Chichester, was second. For twelve plants in 9-inch pots Mr. Lambert won, as also he did for a single specimen of any variety, staging Mr. G. Rundle fully 4 feet in diameter and freely flowered. Mr. Penford followed with Elsie. Mr. Lambert also had the best Pompons in eight varieties, freely flowered examples of popular kinds.

Groups of Chrysanthemums only and those interspersed with foliage plants made a bright display across one end of the hall. In the former class Mr. Hatch won, showing well grown examples, not too formally arranged. Mr. Lambert was second. In the latter class Mr. W. Rooke, gardener to Messrs. Brickwood & Co., Southsea, was first. Mr. E. R. Harvey, Portsea, was second.

Table plants made a fine display. Mr. A. Payne, gardener to Mrs. Ewald Smith, The Oaks, Emsworth, won with twelve plants. Primulas and Solanums were well exhibited.

and Solanums were well exhibited.

Fruit was surprisingly well shown. For three bunches of Black Grapes Mr. Hall, gardener to S. Montagu, Esq., South Stoneham, won first prize, staging Alicante, good in every respect. Mr. J. Knight, gardener to H. Harding, Esq., The Retreat, Southsea, was second, and Mr. Warden, gardener to Sir F. Bathurst, Clarendon Park, Salisbury, The last named won for three bunches of any white variety with Muscat of Alexandria. Mr. J. Parrott, with Alicante in prime condition, won with two bunches any black Grape, Mr. Agate second. The class for thirty dishes of Apples, distinct varieties, produced a fine display. Mr. J. Watkin, Pomona Farm Nursery, Withington, Hereford, was placed first with a splendid collection. Mr. G. Goldsmith, gardener to Sir E. G. Loder, Bart., Horsham, was second, and Mr. J. Scott third. Mr. Watkin followed up his previous success in the class for twenty dishes of Pears with fine fruit. Mr. Goldsmith was second, and Mr. Goodacre, gardener to the Earl of Harrington, Elvaston, Derby, third. Mr. Goldsmith won with sixteen dishes of Apples and eight dishes of Pears with splendid fruit. Many other excellent dishes were staged; but limited space forbids a mention of them individually. Vegetables also made a great display.

Mr. H. J. Jones, Ryecroft Nursery, London, had eleven dozen cut blooms of Japanese Chrysanthemums "not for competition," including the many choice novelties he now has; this stand attracted the attention of many visitors. Messrs. Edwards & Son, Sherwood, Nottingham, had a display of their vases, stands, baskets and epergnes

filled with Ferns.

KENT COUNTY .- NOVEMBER 1ST AND 2ND.

THE sixth annual Exhibition of the Kent County Chrysanthemum Society was held in the Rink, Blackheath, on the above dates. as a whole, the Show compared favourably with those held on previous

occasions, the cut blooms being particularly good.

For eighteen Japanese and the same number of incurved blooms, distinct, Mr. H. Shoesmith, gardener to M. Hodgson, Esq., Shirley, Croydon, was first. The Japanese varieties staged were fresh and clean, and were as follows-Mdlle. Therese Rey, W. Seward, Anna Hartshorn, W. H. Lincoln, G. C. Schwabe, W. Tricker, E. Molyneux, Florence Davis, J. Shrimpton, Mdlle. Marie Hoste, President Borel, Mrs. F. Jameson, Viviand Morel (grand), Eda Prass, Sunflower, Mrs. G. W. Adams, Col. W. B. Smith, and Avalanche. The incurves comprised Queen of England, Vice-President Jules Barigney, Hero of Stoke Newington, Madame Darrier, M. Martegnac, Refulgens, Empress of India, Princess of Wales, Mrs. Heale, Prince Alfred, Baron Hirsch, Novelty, Mons. R. Bahuant, Lord Alcester, Madame F. Mistral, Lord Wolseley, Jeanne d'Arc, and Violet Tomlin. Mr. Leadbetter, gardener to A. G. Hubbuck, Esq., Elmstead Lodge, Chislehurst, was second, and Mr. P. Waterer, Fawkham, Kent, third, both exhibitors staging well-

grown blooms.

Mr. Wheadon, gardener to R. S. Collier, Esq., Hawthorns, Bickley, secured the leading prize for twenty-four Japanese varieties, staging well finished blooms. The best of these were W. H. Lincoln, Beauty of Exmouth, Viviand Morel, J. Shrimpton, F. W. Flight, Mdlle. Marie Hoste, and W. Tricker. Mr. A. Tomalin, gardener to S. Whyte, Esq., Crayford, was second, and Mr. Leadbetter followed. There were four competitors in this class, and the competition was keen. Mr. Wheadon repeated his success in the class for twelve Japanese varieties with a stand of fine blooms, comprising the leading varieties. Mr. Thos. Osman, The Gardens, Ottershaw Park, Chertsey, was second, the third prize going to Mr. A. Tomalin. There was only one competitor in the class for twelve incurved blooms, this being Mr. J. Lyne, gardener to F. Tiarks, Esq., Foxbury, Chislehurst, to whom the first prize was awarded. Mr. Leadbetter secured the leading award for twelve reflexed blooms, staging fine examples; Mr. T. Couldrey, gardener to J. Levy, Esq., The Shrubbery, Grove Park, being second. Anemone-flowered Chrysanthemums were best shown by Messrs. Leadbetter and Lyne, and A. Tomalin, to whom the prizes were awarded as their names are given. Messrs. A. Tomalin and J. Lyne also won the prizes for twelve bunches of Pompons. Mr. Osman gained the first prize for six Japanese, one variety only, with grand blooms of Sunflower. Mr. P. Waterer was second with E. Molyneux, and Mr. Rhoden, Blackheath Park, third with Stanstead Surprise. Mr. W. Ames, South Ashford, was first with six incurved blooms, showing small but neat examples of Mrs. G. Rundle.

Amateur growers were well represented, and the same may be said of gardeners who resided within a radius of three miles of the Rink. Mr. J. Rhoden in the latter instance was placed first for six incurved blooms, which were neat in appearance. Mr. T. Couldrey was second, and Mr. Wainwright, Lee, third. The prizes for six Japanese went to Messrs. J. Rhoden, T. Couldrey, and C. Bayer, Forest Hill. Dr. Walker, Wimbledon, was placed first in the amateurs' section for twelve incurved blooms, showing neat examples of Violet Tomlin, Princess of Wales, and Madame Darrier amongst others. Mr. A. J. Parker, 172, New Kent Road, was second. Dr. Walker was also successful in gaining the first prize for twelve Japanese, showing a stand of fine blooms of the leading varieties. Mr. A. J. Parker was second, and Mr. W. Ames third. For six Japanese blooms Messrs. Rose, G. Saunders, and A. J. Parker won; and for the same number of incurves Dr. Walker, A. J. Parker, and W. Ames secured the prizes in order given. Mr. Saunders had the best six blooms of one Japanese variety, Mrs. F. Jameson, and Mr. W. Ames was second with Avalanche. Mr. Bertenshaw, East Dulwich, was first for twelve Japanese blooms in this section, the second prize going to Mr. H. W. Percy, Fairmont, Brockley. In other amateur classes blooms were well shown.

For the President's special prize for eight Japanese and eight incurved blooms there were three competitors, these being Mr. A. Tomalin, C. Payne, and Leadbetter, to whom the prizes were awarded as their names appear. The competition was keen, fine blooms being staged in each class. Mr. T. Osman had the best six blooms of Avalanche, the second going to Mr. J. Lyne, who also secured the first award for six blooms of Mdlle. Lacroix family. Mr. Percy won with six blooms of the Rundle family, and Mr. A. Tomalin had the best twelve flowers of the same section. Mr. Filkins, Oakbank, Chislehurst, staged the best single bloom of W. Seward, a fine specimen.

The premier Japanese bloom in the Show was a splendid flower of E. Molyneux, shown by Mr. H. Shoesmith. Mr. Leadbetter had the best incurved variety, this being a beautiful bloom of Prince Alfred.

Groups of plants formed a feature in the Exhibition. For one

Groups of plants formed a feature in the Exhibition. For one composed principally of Chrysanthemums, Mr. Rhoden, The Gardens, Blackheath Park, was placed first; Mr. F. Fox, gardener to Mrs. Penn, The Cedars, Lee, was second; and Mr. J. Williams, College Park, Lewisham, third. There were twenty-four competitors in this class.

Miscellaneous exhibits were plentiful. Messrs. B. S. Williams and Son, Upper Holloway, arranged a group of foliage plants and Orchids, and Messrs. E. D. Shuttleworth & Co., Peckham Rye, sent a collection of Ferns, Crotons, Palms, and Heaths. Mr. W. Wells, Earlswood, had some Chrysanthemum blooms, as likewise did Mr. R. Owen, Maidenhead. Messrs. J. Laing & Sons, Forest Hill, S.E., contributed a splendid group of stove and greenhouse plants. Messrs. A. Tomalin, J. Lyme, and Filkin, had groups of flowering and foliage plants in the competitive classes. Primulas and table plants were well shown. Baskets and bouquets of Chrysanthemums were exhibited by ladies.

Fruit formed an interesting feature in the show. Messrs. G. Bunyard & Co., Maidstone, sent a very fine collection of Apples and Pears in splendid condition. Grapes, Apples, and Pears were exhibited in the competitive classes provided for fruit, but pressure on our spaces

prevents further reference.

ASCOT .- NOVEMBER 1ST AND 2ND.

THE annual autumn Show in connection with the Ascot and District Horticultural Society was opened on Wednesday last, when a grand display of plants, flowers, and fruit was staged. Groups of Chrysanthemums and also of miscellaneous plants were of exceptional merit, the eompetition in the various classes being kecn. The incurved blooms were not, perhaps, quite up to the usual high standard, the Japanese on the other hand being better than is customary. The exhibits of vegetables and fruit were numerous and fine, but space will not permit of our referring to them at length. The same may be said of plants, of which Primulas, Bouvardias, and Violets were prominent. We append

a list of the prizewinners in the principal classes devoted to Chrysanthemums.

In the class for forty-eight, to include not less than eighteen Japanese and eighteen incurved blooms, Mr. Thorne, gardener to Major Joicey, Sunningdale Park, was a good first. The flowers staged were grand, especially the Japanese. The exhibit comprised W. Tricker, E. Molyneux, W. H. Lincoln, G. C. Schwabe, Viviand Morel, Colonel W. B. Smith, Lord Wolseley, Queen of England, Prince Alfred, Mrs. Heale, Camille Flammarion, Queen of England, Madame F. Mistral, and Lord Wolseley, back row; Mrs. Heale, Madame Darrier, Miss M. A. Haggis, Jeanne d'Arc, Violet Tomlin, Madame Darrier, Madame Mistral, John Lambert, J. Shrimpton, Majestic, Viviand Morel, Mons. E. A. Carrier, Excelsior, Mrs. G. Herring, Count F. Lurani, and Mdlle. Marie Hoste, middle row; Colonel W. B. Smith, Stanstead Surprise, Avalanche, Sunflower, Gloire du Rocher, G. W. Childs, Mdlle. Laeroix, Boule d'Or, Ami Hoste, Mr. Bunn, Brookleigh Gem, Robert Cannell, Willie, Barbara, Princess Beatrice, and Princess Teck, front row. The second prize was awarded to Mr. Maxim, gardencr to the Hon. Miss Shaw Lefevre, Winchfield, who staged a highly creditable exhibit. Mr. W. Lane, gardener to Miss J. Durning Smith, Aseot, third, and Mr.

J. Tomlin, gardener to Mrs. Goldenham, Chertsey, fourth.

Mr. Lane was a good first for thirty-six blooms, distinct, eighteen Japanese and eighteen incurved. Mr. G. Barker, gardener to H. P. Lesehallas, Esq., Windlesham, was a very close second; and Mr. P. Harpley, gardener to F. Morrison, Esq., Sunninghill, a creditable third. Mr. Cole, gardener to E. W. Hamilton, Esq., Charters, Sunningdale, was a good first for twelve incurved blooms, distinct. This stand was composed of Mons. R. Bahuant, Jeanne d'Arc, Lord Wolseley, Princess of Wales; back row: Madame Darrier, Princess Teck, Prince Alfred, Mrs. S. Coleman; middle row: Alfred Lyon, Violet Tomlin, Beauty, and an unnamed pale pink variety. The second prize went to Mr. and an unnamed pale pink variety. The second prize went to Mr. F. Heereman, gardener to the Hon. Lady Isabella Keane, Rose Mount, Sunningdale; and the third to Mr. Joy, gardener to Mrs. Entwhistle, The Oaks, Sunninghill. Mr. H. Popple, gardener to the Hon. Lady Cowell Stepney, Wood End, Sunninghill, was an excellent first for six distinct incurved blooms, showing Princess of Wales, Violet Tomlin, Princess Teck, Prince Alfred, Jeanne d'Arc and Madame Darrier. Mr. R. Bird, gardener to C. J. Barnett, Esq., Kings Beeches, Sunninghill, second, and Mr. A. Hawthorn, The Gardens, St. George's School, Ascot, a fair third. For twelve distinct Japanese, Mr. A. Sturt, gardener to N. L. Cohen, Esq., Englefield Green, was a capital first, staging magnificent blooms; Mr. Heereman was a good second, and Mr. J. Cole third. For six Japanese, distinct, Mr. H. Popple was first. The second prize went to Mr. Joy, and the third to Mr. R. Bird. Mr. J. Woodhouse, gardener to Miss Belcher, Spring Grove, Sunningdale, was awarded the first prize and the silver cup for twelve reflexed flowers. Mr. J. Cole, was a close second and Mr. Thorne third. Mr. H. Popple was first for was a close second and Mr. Thorne third. Mr. H. Popple was first for six reflexed. Mr. Wm. Neate, gardener to Miss Thacker, Queen's Hill, Ascot, was second; and Mr. E. Smee, gardener to Captain Hanbury, Holmwood Lodge, Ascot, third. Mr. Joy, the only competitor, was placed first in the class for six incurved blooms of the Queen family with superb examples of Empress of India. Mr. G. Barker was first for six incurved, Queen type excluded, with large clean blooms of Mons. R. Bahuant; Mr. J. Cole being second with Violet Tomlin, and Mr. Hawthorn third with Prince Alfred.

In the class for six white Japanese one variety Mr. H. Bornle was

In the class for six white Japanese, one variety, Mr. H. Popple was first with magnificent flowers of Avalanche. Messrs. G. Barker and R. Bird being seeond and third in the order named with the same variety. For six coloured Japanese, one variety, Mr. Thorne was an easy first with Wm. Tricker, Mr. Barker seeond with the same variety, and Mr. Joy third with E. Molyneux. Mr. A. Sturt was a good first for six Anemone flowered varieties, Mr. Hawthorn being second.

for six Anemone flowered varieties, Mr. Hawthorn being second.

Mr. J. Cowie, gardener to V. L. Oliver, Esq., Whitmore Lodge, Sunningdale, took the first prize for a large group of Chrysanthemums. The arrangement was admirable, and the plants dwarf and well grown. Mr. Attfield was second, and Mr. W. Lane third. Mr. F. Heereman was first for a smaller group, Mr. White being second, and Mr. J. Edge third.

For four trained specimens, exclusive of standards, the first prize was deservedly accorded to Mr. White, gardener to the Dowager Marchioness of Conyngham, The Mount, Ascot; the third prize going to Mr. W. Lane. Mr. W. Neate was first for six specimen plants with a good exhibit, Mr. White being second, and Mr. Attfield, gardener to Sir W. Farmer, third. Mr. Neate was first for four Pompons in pots with well flowered plants, Mr. B. Harpley second, and Mr. Hawthorn third.

Mr. Thorne was first for a splendid group of miscellaneous plants, taste in arrangement and excellent culture being striking features of the exhibit. The Crotons were elean and splendidly coloured, as also were the Palms and Ferns. Orchids, which were represented by Oncidium tigrinum, Cattleya labiata, superb varieties; Cypripedium insigne and two grand seedlings were magnificent examples. Mr. J. Edge, gardener to Lord Harlech, Tetworth, was second; Mr. E. Smee third; and Mr. Hawthorn fourth.

The National Chrysanthemum Society's certificate for the best incurved bloom was awarded to Mr. Lane for a grand Baron Hirsch, and for the best Japanese to Mr. Popple for a superb example of Sun-

flower.

Miscellaneous exhibits, not for competition, were not numerous, that of Messrs. Sutton & Son, comprised of Potatoes of their own introduction, being prominent. Messrs. J. Standish & Co., Royal Nurseries, Ascot, arranged a fine group of plants, including Ferns, Palms, and Chrysanthemums.



HARDY FRUIT GARDEN.

Planting Fruit Trees.—Early in November is a good time for carrying out this important work. Advantage can thus be taken of the activity of the roots, which it is well known are disposed to freely produce fibres at this season, and to quickly repair any damage done to them in the process of lifting. Under favourable circumstances trees planted carly become well established before the winter, with the result that they start freely into growth the following year.

The Best Soil.—Good loam of a holding character, rich enough to encourage a firm vigorous growth without inducing grossness, constitutes a typical fruit soil generally. It should be clean, not tainted from the effects of powerful manures, friable to work, and well drained, either naturally or artificially. Stone fruits like calcareous soil best. If deficient in this matter add pulverised mortar rubbish or fresh lime.

Depth of Soil.—An average depth of 2 feet will usually meet the needs of most fruit trees. In light and dry soils an additional depth of 6 to 12 inches will be of advantage. In wet soils a rather less depth than 2 feet will be beneficial in keeping the roots in a warmer medium; indeed, in some cases it may be desirable to plant in mounds raised above the surface, so that warmth and comparative dryness of the soil may be secured, fruit trees never thriving with stagnation at the roots.

Manure.—In preparing soil just previous to planting fruit trees it is not desirable to add manure unless the ground is very poor. The best time to give it is in the spring or winter previously, heavily if necessary then, working the ground deeply, and taking off a crop of Potatoes or something which will sweeten the soil by abstracting from it some of the stimulating elements which cause rank gross growth in fruit trees.

Obtaining Trees.—Order fruit trees from nurserymen as early as possible, first comers being the best served. Personal selection is preferable, though those who cannot do this may depend on good firms doing that business for them as well or better than themselves if supplied with particulars as to soil, position, form of trees desired, and varieties required. In the case of Apples, Pears, Plums, and Cherries, it must be stated whether the varieties are wanted for cooking or dessert purposes. It should also be noted when ordering whether they are desired to be productive at an early period, or develop into large trees before heavy crops are expected. Trees of the former class will be on dwarfing stocks, which cause early productiveness, and such examples may be planted closer together. The latter are on free stocks, consequently ought to be planted at maximum distances.

The Best Trees.—Trees adapted for ready removal and furnished with abundance of healthy, fibrous roots are usually on hand in nurseries. They have been brought to this desirable condition with a view to being quickly moved without feeling the effects to an injurious extent, and when packed round with moist material to keep the roots from drying, then forwarded promptly to their destination, they are sure to do well if properly planted. The shoots should be clean and vigorous, medium in length and thickness. Avoid strong trees with very gross shoots, which will have correspondingly thick roots, lifting badly, and failing under the best circumstances to become established quickly. Another important point is to choose medium sized or small trees. It is better to plant small trees than to depend on large specimens if they come from a distance. Moving larger trees from one part of a garden to another, however, can be effected readily without suffering if they have been previously prepared for the process.

Root Treatment.—Having already pointed out how important a good supply of fibrous roots are to the speedy re-establishment of newly planted trees, it is equally important that roots, whatever their character, be kept moist from the time they are lifted until spread out in fresh soil. Cut smoothly all wounded, jagged and broken ends. Mutilated roots do not readily push fibres forth, indeed they often fail to do so at all, but gradually decay and die back. Any rambling roots may be shortened back within reasonable bounds, the whole being left so disposed that they can be spread evenly throughout the soil when planting.

wide enough so that the roots can be laid out horizontally from the stem outwards without being turned upwards at the ends. No great depth is necessary; it will suffice if the upper layers of roots are within 3 or 4 inches of the surface when planting is finished. See that the stems are not sunk lower than they previously were. This is an infallible guide in forming the proper depth of the holes and in disposing the roots. To plant below the earth mark causes the roots to be placed deeper than needful, with the result that trees do not thrive properly. Arrange the roots in layers, stretching them out to their full extent and having fine loamy soil in readiness mixed with a little burnt refuse, sprinkle the mixture upon them from the stem outwards. By this means the fibres are fixed in position and in the right direction. Treat each layer the same, making the soil firm by gentle pressure, not roughly treading, which often ruthlessly breaks the roots near their origin with the stem. After the fibres of each layer have been fixed and covered less

care will be necessary in throwing on the soil for forming a base for the next layer, but the roots should be evenly covered.

Staking.—All trees must be securely staked to prevent movement by the wind, and consequent dislocation of the roots out of their proper position. Standards may have a strong support down each side of the stem, round which some soft material should be wound to prevent the ligatures employed injuring the bark. The best tying materials are soft yielding copper wire and stout flexible cord.

Watering.—As dry weather is the best period for planting, it may occur that the ground is more than ordinarily free from moisture. Under such conditions water immediately after planting may be applied. It will fill up the interstices between the soil and roots, and help to consolidate the soil about them.

Mulching.—The last detail in connection with planting consists in mulching the surface over the roots with short strawy manure 3 inches thick. The mulch prevents frost entering the soil and injuring the roots, retards the escape of moisture, and serves to retain the natural heat in the soil longer than would otherwise be the case.

FRUIT FORCING.

Vines.—Early-forced.—The Vines for affording ripe Grapes in April must now be started, whether they be in pots or planted out. Those in pots are much the best, especially where bottom heat is provided, which, however, is in either case indispensable, yet in early forcing operations it is desirable. Place, therefore, fermenting materials in the pits in which those in pots are stood on pedestals formed with bricks. Do not allow the heat about the pots to exceed 70° to 75°—say, that at the base of the pots, and 65° higher up at the commencement. Suspend the canes in a horizontal position over the fermenting materials to insure a regular break. Syringe three times a day in bright weather, and when dull omit the late syringing, keeping every part of the house moist by sprinkling as the surfaces become dry. A temperature of 50° to 55° at night, and 60° to 65° by day will not be too much to begin with, as Vines started at this season require a higher temperature to excite the buds than those started later. Apply water judiciously in the early stages of growth, only keeping the soil moderately moist until the buds break, and afterwards increase the supply, corresponding with the advancing growth, but avoid making the soil too wet or the roots will decay.

Planted-out Vines should have the inside border brought into a moist condition by supplying water at a temperature of about 75°, or if the border is of an open nature, well drained, and the area comparatively small to the extent of rod, liquid manure may be advantageously supplied in a tepid state. The border or floor of the house may, if convenient, be covered with leaves and stable litter in a state of fermentation about 18 inches to 2 feet deep, turning the material over occasionally to prevent over-heating and liberate the ammonia, which is beneficial to the Vines and inimical to insects. The outside border also must be attended to; if fermenting materials are not obtainable cover with a good thickness of leaves, with a little litter over to prevent their blowing about. If the border slopes, and the litter is put on similar to thatch, much of the rain falling will pass off.

Vines for Starting in December.—Prepare the Vines and house for another start without delay, as early pruning contributes much to complete rest. In pruning two eyes suffice for affording useful bunches; but if large bunches are required the Vines should be pruned less closely, as it is necessary to have plump buds on stout, well-ripened wood if fine bunches are expected to follow. Longer pruning is also necessary when the buds at the base of the shoots are very small and pointed, instead of round and plump. But compact bunches are much the best for general purposes, as the berries swell to a good size, colour, and finish well. Large loose bunches are usually defective, especially in the case of early forced Vines. After pruning the Vine should be stripped of the loose bark only and be washed with softsoap and warm water. A solution of 4 ozs. to the gallon of water is strong enough, and if there is not any mealy bug or scale it will be all that is necessary. If, however, there has been any scale or mealy bug a dressing of some insecticide must follow, and it should be repeated before the Vines are started. Thoroughly cleanse the woodwork of the house, and limewash the walls. The surface soil should be removed down to the roots, and fresh lumpy loam supplied. Keep the house cool, admitting air freely when frost prevails.

Houses of Ripe Grapes.—Remove dead foliage where Grapes are hanging, and look over the bunches frequently for the removal of decayed berries. Maintain a temperature of about 50°, losing no opportunity of admitting air when the days are fine, turning on the heat so as to cause a gentle warmth in the pipes, and so insure a circulation of air and the expelling of damp, turning off the heat at midday or soon after, so as to allow the pipes to cool, and the temperature not kept above 50° at night, and 5° or even 10° less on cold nights, except for Muscats or where the foliage has not matured. In dull weather it will be necessary to keep a little warmth in the pipes, but the house closed, and in that case the moisture will be condensed on the glass instead of the Grapes.

Ripening the Wood.—Any Vines not yet hard and brown in the wood should be kept closely stopped, fire heat being still applied with free ventilation. The laterals should be brought down by degrees to the principal buds, which will have a tendency to cause rest, especially if air is freely admitted at night (but the temperature must not fall to freezing point) the house being kept rather warm, yet not close, by day, as that would have a tendency to induce growth. If the basal buds

are small, the shoots may be cut back to two or three leaves above the pruning buds, and this tends to plump them and induce rest in the 7 ines.

Figs.—Early Forced Trees in Pots.—If these have been placed in the open air they should be taken under cover to protect them from the cold autumn rains. Trees that are forced for affording fruit at the close of April or early in May will now need to have the wood brushed over, using softsoap, 4 ozs. to a gallon of water, brought to the consistency of cream by adding flowers of sulphur; but when using the mixture do not rub off the young fruit. Very little pruning will be necessary, the trees having been regularly stopped during the growing season, but if the growths are too crowded or irregular they must be thinned to render the trees open and symmetrical. Wash the woodwork and walls with hot water, and the walls afterwards with quicklime and sulphur formed into a rather thin wash, reaching well into every crevice. A mild bottom heat is essential to a successful swelling and perfecting of the earliest crops; the pots therefore must be raised on loose bricks in pedestal fashion to the position they are to occupy, and the pit be filled with Oak or Beech leaves firmly pressed. If the pit be not more than 3 feet deep a third of stable litter may be added. Avoid overheating, not allowing the heat about the pots to exceed 65° until growth takes The house should be kept close and moist by sprinkling twice a day in bright weather, employing fire heat to maintain a temperature of 50° at night, 55° by day, and with sun 60° to 65°. If the soil in the pots be dry, a thorough soaking of water must be given. Forcing operations need not begin until the middle of the month. St. John's, Early Violet, White Marseilles, and Brown Turkey are excellent varieties, and come in successionally; but the two first have small, and the two last large fruit.

Early Forced Planted-out Trees.—Trees in borders intended for early forcing should now be untied from the trellis and pruned. Those with the roots restricted to small borders, as Fig trees should be, will require little more pruning than thinning out the shoots where too crowded, but those not having the roots restricted will require a hard pruning at the upper part of the trellis, so as to allow for the growth of the branches, yet leaving a sufficient number of successional shoots for bearing. Fork the surface of the border lightly, remove the loose material, and apply a surface dressing of fresh loam not more than 2 inches thick. The roots will ramify through this, and they can be fed to any extent by mulchings, top-dressings, or liquid manure when the trees are swelling their crops. Ventilate fully at all times, except when frost prevails, and at such times heat should be used to exclude it or nearly so.

Succession Houses.—Prune the trees, cleanse the house, and put everything into thorough order. Dress the trees with a warm soapy solution, using a brush, which will do much to dislodge scale and render more potent the insecticide, which should be applied after the trees become dry after washing with the soapy solution. Complete any root-pruning and lifting. Any unfruitful trees must be severely root-pruned, and the roots restricted to moderate sized borders, depending more upon active feeders near the surface encouraged by mulching than a large extension of roots. Make the soil firm, employing one-sixth of old mortar rubbish and a similar proportion of road scrapings where the soil is deficient of calcareous matter and grit. To succeed with planted-out Fig trees it is necessary to restrict the roots to a limited area, and keep the growths well exposed to light.

Late Houses.—The trees in these showing a tendency to over luxuriance should be lifted and root-pruned, providing good calcareou gritty loam over thorough drainage and firming the soil well. This is an excellent remedy for trees casting their fruit in an unaccountable manner. Too rich soil and too large borders cause the trees to become exuberant and cast their first and only crop Figs, except in seasons like the present, when the second crop fruit ripened in many cases, and has not done any harm to next year's first crop where the second crop was only allowed on the bases of the current year's wood. When the leaves fall the trees must be unloosed from the trellis, and the branches being tied together in convenient bundles they should be made secure with some dry straw or fern amongst and over them or matting. The collar of the trees and for a little distance from the stem should also be protected with dry litter. This is only necessary in unheated houses, but frost must be excluded in heated houses or nearly so, otherwise the trees may suffer from severe frost, they sometimes being killed to the ground against walls when unprotected.

THE FLOWER GARDEN.

Clearing Beds and Borders.—If possible all the beds should now be cleared, the work of refilling being best done before cold wet weather sets in. When there are no attempts made to fill the beds with either spring flowering plants, bulbs, nor any ornamental shrubs and Conifers put out, the beds or borders ought to be simply cleared of plants and rubbish now, digging being completed after all the leaves from deciduous trees near at hand have fallen. In many cases it is scarcely necessary to dig the beds prior to refilling with a variety of bulbs and plants, moderately firm ground suiting these better in every way.

Refilling the Beds. — Those who have prepared abundance of Wallflowers, Polyanthuses, Primroses, Daisies, Silenes, Saponaria, Forgetme-nots, Limnanthes, and similar plants, and can therefore afford to plant these rather thickly in masses with suitable edgings, will most probably be rewarded with a fine display next spring. The strains of Polyanthus are now particularly fine, and if strong plants can be given

the benefit of a little fresh loamy soil their effect will be considerably enhanced. See that the plants are in a moist state when lifted, and move with a moderately large ball of soil about the roots. Violas suffered greatly from the drought, and young plants are scarce. These latter may, however, be supplemented by the old ones duly shortened back and replanted. Old plants of Golden Pyrethrum that have not been allowed to flower can be worked in again effectively, Stachys lanata being also quite hardy, and may be pulled to pieces and replanted now. Euonymus edgings can likewise be retained.

Small neat plants of Retinosporas, Cupressuses, Thujas, Yew, Junipers, and other Conifers are very suitable for flower garden decoration, these being planted in panels or masses according to their height and shades of colour, while taller well formed specimens are particularly well adapted for central and dot plants. With the Conifers may be associated neat plants of Hollies, Box, Euonymuses, Berberises, Ivies, Osmanthuses, Aucubas, Laurels, and berried plants of Pernettyas, Skimmia japonica, and Cotoneasters. Dwarf Rhododendrons well set with buds move readily, and would flower grandly next April or May. Single pieces of Yuccas are very effective as dot plants, a groundwork of Saxifraga crassifolia being very suitable. Nor should the value of Iris fætidissima variegata be overlooked, large clumps of this dividing readily. Neat branches of evergreens, notably Mahonias, Aucubas, Tree Ivy, Hollies, and Box thrust firmly into the soil in masses will keep fresh for several months, and are fairly good substitutes for plants.

Spring-flowering Bulbs.—Early in November is a good time to plant Hyacinths, Tulips, Narcissi, Daffodils, Leucojums, Crocuses, Scillas, and Snowdrops, a moderate outlay on new bulbs being all that is necessary to insure a charming display next spring. They may either supplement the other plants and shrubs already alluded to, or be chiefly depended upon to brighten up the beds in the spring. Indiscriminate mixtures should be avoided, Hyacinths, Tulips, and Narcissi being most effective when separately occupying the centres of the beds; while Crocuses, Scillas, and Snowdrops are most suitable for edging. Mixtures of one kind, or say of Hyacinths, are attractive enough, and so are masses of one colour. The bulbs of most of these may be planted 9 inches asunder each way, the miniature varieties being disposed somewhat closer, and should be covered by 4 inches of soil, a little sand under and about each bulb being used where the ground is of a heavy nature. Narcissi should be in every way treated similarly to Hyacinths, Daffodils being best planted in borders where they can remain undisturbed, while the neat growing Van Thol Tulips may well be planted 4 inches asunder each way and 3 inches deep, stronger varieties being disposed 6 inches apart. Snowdrops, Crocuses, Winter Aconite, and Scillas may either quite fill very small beds or be planted near the margin of the larger beds. Single lines look lost, and these small kinds should be planted in double lines or circles 3 inches apart and 4 inches deep.

Storing Summer Bedding Plants.—The best results attend the practice of putting out strong spring-rooted Dahlias, but in order to be certain of plenty of strong cuttings a good proportion of the old roots should be stored where either drip or frosts cannot reach them. Cut down the old stems to within 9 inches of the ground, fork out the roots so as to preserve most of the tubers, leaving a little soil, lay them on their sides for water or sap to run out from the stems, and dry before storing. They keep well in a dry cool shed, the roots being surrounded with sand or fine dry soil, and protected when severe frosts are anticipated. Gladioli also should be cut down after the tops are either ripened or damaged by frosts, and after the corms have been dug up, and well dried all, large and small alike, should be surrounded by sand in shallow boxes. Cannas should have rather more soil left on them than is necessary in the case of Dahlias, and after being dried somewhat should be stored in a warm dry cellar or greenhouse where drip will not reach them. Salvia patens is tuberous-rooted, and should be treated very similarly to Dahlias, while a few boxes may well be filled with the long fleshy roots of Verbena venosa. When frosts have blackened the tops of Tuberous Begonias lift the roots, leaving a little soil about the bulbs, and dry thoroughly in a vinery or other structure. When the stalks are quite dccayed remove them cleanly from the bulbs, and store the latter closely together on boards or in boxes in a dry cellar or shed where frosts cannot reach them.

Acacia lophantha, Grevilleas, Abutilons, Cyperus natalensis, and Marguerites can usually be lifted and placed in pots. If it is intended to store many of the old Zonal and variegated Pelargoniums pick off most of the leaves and shorten the roots, this admitting of their being packed closely together in either large or small pots. Given the benefit of a little dry heat they will not shrivel or damp off badly, and yield good cuttings in the spring. If Fuchsias are still green gradually dry them off with a view to hardening the wood prior to storing.

GARDENERS' CHARITABLE AND PROVIDENT INSTITUTIONS.

THE GARDENERS' ROYAL BENEVOLENT INSTITUTION.—Secretary, Mr. G. J. Ingram, 50, Parliament Street, London, W.C.

UNITED HORTICULTURAL BENEFIT AND PROVIDENT SOCIETY.— Secretary, Mr. W. Collins, 9, Martindale Road, Balham, London, S.W.

ROYAL GARDENERS' ORPHAN FUND.—Secretary, Mr. A. F. Barron, Royal Horticultural Society's Gardens, Chiswick, London, W.



APIARIAN NOTES.

HIVE MAKING.

In answer to a question on the subject, I know of no bee book that gives "instructions in frame hive building on the latest and best principles." The standard hive is not now what it was when introduced with one-sized frames, but has two sizes, deep and shallow ones—an undesirable arrangement—and is, in fact, a combination of different kinds of hives.

The Lanarkshire storifying hive is undoubtedly the most suitable for bee-keeping in all its phases, no other being equally adapted for moving from one place to another, or wintering with equal safety to the bees. Instructions were given in the Journal of Horticulture some years since for making these hives, but as the numbers are not obtainable now I will, in the serial articles for beginners, repeat the instructions at an early date, from which any amateur can readily make his own hives.

HIVES AND HONEY.

There are few newspapers or other periodicals that do not contain some paragraph on the extraordinary fine season and large honey yield of a superior quality rarely experienced by the oldest bee-keeper living. The facts are, while the season has been a good one, it has been by no means more productive than many past ones that yielded double the quantities in half the time. Within the past few weeks I have examined many tons of honeycomb. The difference between that built in the so-called standard hives and those on the Lanarkshire and Stewarton principle is so great that the wonder is why bee-keepers persist in using hives like the former, that produce such inferior honeycomb to what the latter does. It may seem like boasting, but it is a fact, I have not seen a fine example of Heather supers from any hive but from the two lastnamed ones, and this is granted by all who have examined it.

HONEY AND HEATHER.

Lately there has been going the rounds of the press an article giving a description of the "honey harvest" in the south of Scotland, but it is so meagre that no one reading it can discover the slightest evidence of what the yield has been there, the writer appearing more anxious to take in other localities, and to depreciate the county of Lanark as a honey yielding district, save in the upper reaches of the Clyde; but in almost one breath he contradicts the statement, descanting upon the Leadhills district. He terms it an arid place, and that the aridness destroyed the Heather. Such is the statement we read.

As a fact I can say Heather was never known to be finer; much of it had yearling growths upwards of a foot long, with many lateral shoots, which formed deuse spikes of flowers instead of sprays, the dry and hot season being the sole cause, rain at all times being inimical to its growth.

RAIN IN THE NORTH.

It is singular that for many years the rain began to fall in Lanarkshire on the 7th of July. This year has been no exception, and from that date till the 13th of August there were only two days without rain, and after that for a considerable time the sky was overcast, so that for upwards of five weeks the sun was not seen for more than eighteen hours, the hay crop being dried with wind, and not sunshine.

BRIMSTONING BEES.

Many hives have been brimstoned by the owners who had no use for them, this too despite all the sensational talk that has been raised against the practice. I am against it, but what are beekeepers to do with surplus bees when they are of no use? This I have partly answered before, and will endeavour to do so again, at least to some extent.

HIVE EXPERIMENTS.

I have been an eye witness to several manipulations lately. At one place there were various kinds of hives from the Stewarton to Abbott's "Combination" hive. The former had beautiful supers, and no difficulty was experienced in removing them, while the operator was not much exposed to infuriated bees, the crown of the hive being as it ought nearly all closed. There were supers on the combination hives placed close up to the outer casing which is raised some 5 or 6 inches above the crown. The supers were fixed combs built from the top of the bars to the top of supers, they could not be separated by cutting, but had to be forced off.

Result:—One half of the combs were left adhering to the top of hive, and the other in the super. A blackened mass of combs and a great contrast to the supers from Stewarton hives, while the exposure of the whole of the hive subjected the operator to the fury of the enraged insects, which with properly constructed frames, and entrances to the supers at the sides only, would have been avoided. Nor was that the least of it, the enormity of their size precludes the possibility of them being profitably and expeditiously moved about, while so much exposed surface makes them expensive hives to keep up.



*All correspondence should be directed either to "THE EDITOR" or to "THE PUBLISHER." Letters addressed to Dr. Hogg or members of the staff often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Bee subjects, and should never send more than two or three questions at once. All articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post, and we do not undertake to return rejected communications.

Reflexed Chrysanthemums (Reader).—You ask for twelve varieties, but as a rule not more than six or eight are asked for in stands of twelve blooms, and they can be chosen from the following varieties. Cullingfordi, Cloth of Gold, King of Crimsons, Pink Christine, Golden Christine, White Christine, Peach Christine, Chevalier Domage, Dr. Sharpe, Phidias, Putney George, and Annie Salter.

House for Tomatoes and Cucumbers (R. S.).—For summer work the ends of a span-roof house are best running north and south, and for winter a three-quarter span-roof house facing south is much the best. A span-roof with the ends facing the east and west is better for winter work than one with the ends north and south, but the plants do much better on the south than on the north side of the house.

Regrafting Apple Tree (R. S.).—For an espalier it would be much best to regraft the tree in the stem at A B in your sketch, putting in four grafts if this can be done without parting the bark from the woodall round, as there must be unraised bark between the grafts. You can take two growths up to form the branches you show us, C D, and reserve two for forming the lower limbs A B, or the two upper branches can be originated from two grafts inserted at the lower point, taking the strongest growths to form the limbs A B, and the weaker lower ones on the grafts to form the branches C D.

Clay for Cricket Field (Clay).—Perhaps the "Professional Player" thinks the ground is not firm enough, and he would like the turf removed and some clay mixed with the soil under it, the whole made firm and the turf relaid. If he thinks clay spread on the surface would do good, and your employer accepts his opinion, the best way of adding the clay would be in the form of small particles after drying and crushing. Burnt or charred clay would be the best. Without knowledge on the nature and texture of the soil we cannot advise on the matter, but simply answer your question. If clay is mixed with the soil under the turf, it should be in pulverised form, not raw lumps.

Marechal Niel Perplexities (S. S.).—The advice you quote is very good, and we have no doubt if the writer had a case brought before him of starved Roses in summer he would add to his advice, "Give liquid assistance without delay, no matter what the season of the year, if the soil is in a proper condition to receive it." The conditions of growth must always be considered in connection with the question of stimulants of any kind for any plants at any time. Your plants continue growing though you have given no water since the third week in August because the roots have found their way into moist soil, dry as the border may be near the surface. They often grow more freely but less substantially than when a mass of fibrous roots are imbibing better food from near the surface of the soil. Growths supported by such roots are usually short-jointed, and we have never known them fail to ripen under proper cultural conditions—full exposure to sun and air with freedom from insects. If your Rose border was mulched it may not have been very dry after all, but we do not like driving the roots of Roses, Vines, or anything else deep down into the earth by withholding them the needful moisture in the upper stratum of more fertile soil.

Grafting Medlar Tree (Constant Reader).— We have no experience of grafting a Medlar tree with another kind of fruit, which we presume is what you desire to do, as you say you "could put eight or nine grafts upon it if anything would do upon it." As the Medlar succeeds when grafted on Whitethorn (Hawthorn), seedling Pear, and Quince stocks, upon which also the Pear succeeds, you can regraft the Medlar, which you find is grafted on the Hawthorn, with some hardy variety of Pear, as the Hessle, Comte de Lamy, or Althorp Crasanne, with a probability of success. By this procedure you may secure a profitable tree in two or three years, and it is likely the fruit would be fine. If the Pear grafts do not take on the Medlar, graft with Hawthorn and then insert buds or grafts in the Hawthorn of some approved Pear.

Soils at Waltham Cross (Reader).—You do not know what is meant by the "different 'soils' being constantly under observation," as stated on page 385 last week. We do not wonder at this. The word "soils" was written sorts, in reference to the antecedent fruits, but was altered by the compositor, and his little error ought to have been corrected, but escaped notice by the proof reader. Compositors often have peculiar caligraphy to decipher, and but for lynx-eyed correctors some curious renderings would appear in the press. The other day we observed a reference to "the well-known firm of Messrs. Eatten and Sons," and another to "seneseniadeans." Only a moment's reflection was needed to transform the "Eatten" into "Sutton," and the other problem was eventually solved as meaning Jeanie Deans Potato. Printers like the names of persons and varieties to be made as clear as possible by correspondents, however hurriedly the general "copy" may be written.

Forcing Lilies of the Valley (H. B.).—Any particular kind of soil is not material in the early forcing of these flowers, thousands of them being raised by packing the crowns or clumps in pots or boxes of cocoa-nut fibre refuse, and forced in pits having bottom heat of 85° to 90°, and top heat ranging from 70° to 80°. The crowns are either covered 2 or 3 inches deep with fibre, or otherwise kept dark and constantly moist. When forced into flower early or before Christmas the crowns are of little or no further use. For spring flowering the crowns or clumps may be firmly potted now in a mixture of loam, leaf mould, and sand, the former preponderating, and buried in fibre or ashes in a frame like Hyacinths. The requisite number of pots can then be withdrawn at intervals and placed in a warm house so as to maintain a prolonged supply of flowers. If the pots can be plunged in a warm bed growth will be accelerated, and it is well to cover the crowns an inch or two deep with fibre or leaves. They will grow very well in a temperature ranging between 55° and 70°, or even less, but the lower the temperature the slower is the growth, and usually the sturdier the plants. If good foliage is developed, and this is well supported and matured under the full influence of light and air, late-forced plants will flower again another year.

Cratægus azarolus (H. P.)—As you wish to know whether the above Cratægus "is worth planting" we cannot do better, in answering your question, than to publish the following remarks of a competent gardener:—"Unquestionably this is one of the most beautiful Thorns we have, and it richly deserves the attention of those whose time and minds will be occupied during the next two or three months in planting and replanting various kinds of evergreens and deciduous trees and shrubs. At this time of the year it certainly has a very attractive and charming appearance, and cannot fail to elicit admiration from many who are not habitually close observers of the beauties of Nature, but whose innate love of bold and striking objects compels them, unconsciously as it were, to notice anything above mediocrity. For planting on lawns or in parks as single specimens it is admirably adapted, and where it does not already exist a few trees would add much to the scenery, and greatly improve the surroundings of any country or suburban residence. Its blossoms are probably less showy than any of the scarlet or common white. There but the have which the the scarlet or common white Thorns, but the haws which the trees are still bearing are exceedingly pretty, being of a beautiful bright orange-scarlet in colour, almost as large as Cherries, and borne in clusters of from three to ten, render it very conspicuous from a considerable distance. Although the character of the tree is seen to the best advantage when growing singly, we do not doubt but that clumps or rows along the outskirts of woods and plantations would be equally effective. If it were desired to heighten the effect a few clumps of Pampas Grass planted in front would form a very pleasing and striking contrast.

Names of Fruits.—Notice.—We have pleasure in naming good typical fruits (when the names are discoverable) for the convenience of regular subscribers, who are the growers of such fruit, and not collectors of specimens from non-subscribers. This latter procedure is wholly irregular, and we trust that none of our readers will allow themselves to be made the mediums in infringing our rules. Special attention is directed to the following decision, the object of which is to discourage the growth of inferior and promote the culture of superior varieties. In consequence of the large number of worthless Apples and Pears sent to this office to be named, it has been decided to name only specimens and varieties of approved merit, and to reject the inferior, which are not worth sending or growing. The names and addresses of senders of fruit to be named must in all cases be enclosed with the specimens, whether letters referring to the fruit are sent by post or not. The names are not necessarily required for publication, initials sufficing for that. Only six specimens can be named at once, and any

beyond that number cannot be preserved. They should be sent on the first indication of change towards ripening. Dessert Pears cannot be named in a hard green state. (D. Watt).—1, Golden Pearmain; 2, Ribston Pippin; 3, Yorkshire Greening. (R. Barfoot).—1, Beurré Diel; 2, Bergamotte Esperen; 3, Duchesse d'Angoulême; 4, Beurré d'Amanlis; 7, Van Mons Leon Leclerc; 8, Perhaps Glou Morçeau, good fruit and well packed. (C.).—1, Beurré Diel (from the Quince stock probably, the fruit sent last week being from a Pear stock); 2, Worthless, graft the tree; 3, Susette de Bavay; 4, Minchull Crab; 6, Adam's Pearmain (fine). (W. J. B.).—1, Gloria Mundi; 2, Reinette de Canade; 3, Reinette de Caux; 4, Mabbott's Pearmain; 5, Royal Russet; 6, Franklin's Golden Pippin. (J. M.).—We think the names we gave are correct, but if you have a doubt and will send more than one specimen of each variety we will go into the matter again. (J. Ramskill).—Marie Louise. (II. O. S.).—3, Waltham Abbey Sædling; 4, Mère de Ménage, we have no other Apples from you. (P. K.).—New Bess Pool. (W. A. Jenkins).—1, American Mother; 2, Cellini; 3, Not known, worthless; 4, Dumelow's Sædling. (J. M. F.).—1, Large Cockpit; 2, Queen Carolinc; 3, Dumelow's Sædling; 5, Winter Colman; 6, Maltster; 7, London Pippin. (A.).—We are very sorry to say that owing to defective packing there was not one whole berry on the bunch of black Grapes, and the white berries were little better—a bruised broken mass, rendering the naming of the varieties impossible. If you send again you must pack more firmly, and we should also like to know whether the Grapes were ripened with the aid of fire heat or not. (J. D.).—2, Red Doyenné; 36, Maric Louise; 38, Cobham.

Names of Plants.—We only undertake to name species of plants, not varietics that have originated from seed and termed florists' flowers.

Names of Plants.—We only undertake to name species of plants, not varietics that have originated from seed and termed florists' flowers. Flowering specimens are necessary of flowering plants, and Fern fronds should bear spores. Specimens should arrive in a fresh state in firm boxes. Slightly damp moss, soft green grass or leaves form the best packing, dry wool the worst. Not more than six specimens can be named at once, and the numbers should be visible without untying the ligatures, it being often difficult to separate them when the paper is damp. (L. M.).—Pothos argenteus. (H. D. P.).—1, Thunbergia affinis; 2, Hibiscus pedunculatus. (A. B.).—Dracæna australis. (Amateur).—Lapageria rosea. (M. P.).—Solanum corymbosum, the Corymbose Nightshade.

COVENT GARDEN MARKET .- NOVEMBER 1ST.

MARKET steady, supplies being regular with no alteration in values.

FRUIT.

Grapes per lb	. 2	$\begin{array}{cc} 0 & 30 \\ 6 & 2 \end{array}$	6 0 0	Peaches, per doz	0	0 to	0	
		$\nabla \mathbf{E}$	GET	ABLES.				
Beans, Kidney, per lb. Beet, Red, dozen Carrots, bunch Cauliflowers, dozen Colery, bundle Coleworts, dozen bunches Cucumbers, dozen Endive, dozeu Herbs, bunch Leeks, bunch Lettuee, dozen Mushrooms, punnet	0 1 0 2 1 2 1 1 0 0	3 to 0 0 0 4 0 0 3 0 1 0 4 0 2	0 6 0 3 0 0 6 0	Mustard and Cress, punnet Onions, bunch Parsley, dozen bunches Parsnips, dozen Potatoes, per ewt. Salsafy, buudle Scorzouera, bundle Shallots, per lb. Spinach, bushel Tomatoes, per lb. Turuips, buuch	0 0 2 1 2 1 1 0 8	2 to 3 0 0 0 0 6 3 0 3	0 3 0 4 1 0 0 0	d. 0 0 0 6 6 5 0 0 7 6

AVERAGE WHOLESALE PRICES.—OUT FLOWERS.

Orehid Blooms in variety. Chrysanthemum blooms very plentiful this season, hence the price is very low.

the price is very low.									
	s.	d.	s.	\mathbf{d}	1	s.	d.	s.	d.
Arum Lilies, 12 blooms	3	0 to	5	0	Mignonette, 12 bunelies				0
Azalea, dozen sprays			1	6	Orehids, per dozen blcoms	3	0	12	0
Bouvardias, bunch			1	0	Pelargoniums, 12 bunches			9	0
	1	0	3	0	Pelargoniums, searlet, doz.				
Carnations, 12 blooms	0	6	2	0	bunches	4	0	6	
Chrysanthemums, dozen					Primula (double), dozeu				
bunches	3	0	6	0	sprays	0	6	1	0
Chrysanthemums, doz. bls.		6	3	0	Pyrethrum, dozen bunehes	2	0	4	0
Daisies, Michaelmas, dozen	-	•	-	•	Roses (indoor), dozen			1	6
bunches	3	0	6	0	,, Red, doz. bunches		0	12	0
Eucharis, dozen			6	ō	, Tea, white, dozen	1	0	2	0
Gardenias, per dozen		ŏ	4	Õ	, Yellow, dozen	2	0	4	0
Lilae (French) per bunch		-	6	0	Tuberoses, 12 blooms	-		0	6
Lilium lancifolium, dozen	U	0	•	•	Violets, Parme (French),		_	_	-
	1	0	3	0	per buneh.		6	3	0
blooms		0	9	ŏ	Violets, Czar (French), per	_	•	-	•
Lilium longiflorum, perdoz.	U	U	J	U	bunch	2	0	9	6
Maidenhair Fern, dozen		0	e	Λ	Violets (English), dozen		•	~	•
bunehes				0		1	6	9	0
Marguerites, 12 bunehes	2	0	4	0	bunehes	7	U	۵	U

PLANTS IN POTS.

R.	d.	S.	d.	1	S.	d.	s.	d.
Arbor Vitæ (golden) dozen 6	0 to			Ferns. in variety, dozen	4	0 1	to 18	0
Aspidistra, per dozen 18	0	36	0	Ferns (small) per hundred	4	0	6	0
Aspidistra, specimen plant 5	ŏ	10	6	Fieus elastica, each	1	0	7	6
Asters, dozen pots 3	Õ	6	ō	Foliage plants, var., each	2	0	10	0
Chrysanthemums, per doz. 4			ŏ	Lilium Harrissi, per dozen	12	0	24	0
, large plants, each 1	ň	-	ŏ	Lycopodiums, per dozen		0	4	0
Coleus, per dozen 4	ň	_	Õ	Marguerite Daisy, dozen		0	12	0
	v	U	U	Mignonette, per doz		0	6	0
Draeæna terminalis, per	Λ	42	Λ	Myrtles, dozen		Ò	9	0
_ dozen	ň	24		Palms, in var., each	_	Õ	15	0
	0	-		,, (specimens)	ก๋า	ň	63	-
	0	18		(specimens)	41	0		
Euonymus, var., dozen 6	0	18	0	Pelargoniums, scarlet, doz.		U	_	0
Evergreens, in var., dozen 6	0	24	0	Solanums, per dozen	9	0	12	0
Evergreens, in turn, donor	•			7.				



FARM PROFITS.

APPLICATIONS from eight farmers for a small dairy farm which becomes vacant next Lady Day, and the hire of that farm by one of them at a rent of £2 an acre (others were willing to give as much), show that farmers do not despair even after such a disastrous summer as that which is just ended has proved to so many of them. It tends also to show that while many a corn farmer is unable to pay a penny of his Michaelmas rent others continue to meet their engagements, and at any rate to make a "living profit" out of the land. Or, in other words, they are, by judicious practice, able to obtain sufficient interest upon capital invested to pay rent, rates, and household expenses. Taxes under Schedule A are the landlord's affair; if a tenant's income continues sufficiently good to render him liable under Schedule B it is surely matter for congratulation rather than complaint; only let the tenant see in his own interest that he is really liable for income tax. Surveyors of taxes are wont to make fanciful demands, which show powers of imagination, of which farmers are frequently the victims. Those very important collectors of Imperial revenue simply make their demand; it rests with the farmer to prove them in the wrong.

What we desire to see in the farmer is more business aptitude in the conduct of his affairs. Practice that is tentative, flexible, influenced by demands which are sound and sufficiently stable to justify change and concessions on his part. To enable him so to act that his landlord must deal fairly by him in removing all restrictions from covenants of agreement that are at all calculated to hinder him. For example, a matter under discussion in the Agricultural Gazette just now is the profit still possible upon an acre of Wheat. The cost of production is stated to be £6 7s., the value of produce:—

							£	S.	d.
34 bushels of	Wheat at	3s.	9d., or	30s. per	quarter		6	7	6
1 ton straw	•••	•••	•••	•••	•••	•••	4	0	0
							10	7	6
	Cost	•••	•••	•••	•••	•••	6	7	0
	Profit				•••		4	0	6

By this statement it is obvious that a restriction in the sale of straw would render a living profit impossible. Under high culture in good deep rich mixed soil, it is possible to bring the Wheat yield up to at least 40 bushels an acre with a proportionate increase in bulk of straw. Plenty of such corn land has come down in rent to 15s. an acre, and in these cases a really competent man is still prosperous. We refrain from giving details of cost, because such statements are always open to question, and it could serve no useful purpose to argue whether any item of expenditure should be less or more. The main question is all that is really important, and that appears to be clear enough.

It has come to this in farming, that a fermer must cultivate the right produce, and do it in the right way. The old easygoing times have departed never to return. The large farmer must now be his own steward or bailiff, sticking closely to business, giving his personal superintendence to every detail of crop or stock, working in point of fact in downright earnest, just like any other man of business. Why not, indeed? Where is the hardship? We know a gentleman in trade, who five days out of six is off to business by 8.30 a.m., only returning of an evening in time for his dinner at seven. He has thousands of artizans in his employment, and probably works harder than any of them. Very different to this was the life of the large farmer of twenty years ago. One of them well known to us used to hunt three days a week. An off-hand farm of some 400 acres in charge of a competent bailiff was visited by the farmer for an hour or two once a week or so. Yet profits poured into his hands from it in such abundance as now seems like a fairy tale. To such a man the loss of hunting, the having to devote the whole of his time and strength to actual business, is undoubtedly hard, but under stress of progress and competition the change was bound to come. He is a wise man who resolves to make the best of it, who is up and doing, resolutely setting himself to combat and overcome difficulties to which a weaker man succumbs, if necessary holding the plough himself, and thus command the respect which all good men and true accord to earnest effort and moral courage.

WORK ON THE HOME FARM.

Custom tells even in the matter of sowing our layers of mixed seeds. In some localities they are never sown with winter corn, but always, without exception, with spring corn. No good reason that we have ever heard of has been advanced for this custom, and from the extensive failure of plant in spring-sown layers this year, it would appear that there is considerable risk of failure when a spring drought sets in-not necessarily a long drought. April showers fail us quite often enough to render the matter worthy of serious attention, and it will be well if more of such layers are sown upon winter corn fields than has been done in the past. Mention is made of this now while so much winter corn is in precisely the best possible condition for such sowings to be done—that is to say, the corn plant is nicely visible above ground, and the seeds may be sown at once.

Acorns abound this year. They well repay one for collection. By

doing so all risk of injury to cows or cattle from eating them is avoided, and they can be stored for use both for pigs and sheep, for both of which they are really invaluable. Sheep fatten upon them quite as fast as they do upon Oats, and we have never heard any complaints of the flavour or quality of the mutton being hurtfully affected in any way. In a season of scarcity of food they are a great boon, as indeed they are

in any season. Look now carefully to all drain outlets, to the ends of water furrows in corn fields, so as to get water from drain and furrow quickly. Any stoppage of the drains soon tells upon the corn plant, checking its growth and causing it to lose colour. Land much infested with insect larvæ may now advantageously be dressed with salt. We may mention how highly beneficial salt has proved as a manure for all the Cabbage tribe in the Essex experiments. The amount used was 3 cwt. of salt and 2 cwt, nitrate of soda. The addition of the salt dressing to the nitrate added greatly to bulk of crop.

METEOROLOGICAL OBSERVATIONS.

CAMDEN SQUARE, LONDON.

Lat. 51° 32′ 40" N.; Long. 0° 8/0" W.; Altitude, 111 feet.

DATE.			9 A.M	•	IN THE DAY.				Rain,	
1893.				Temp. of soil	Shade Tem- perature.		Radia Tempe			
October.	Barc at 32 Sea	Dry.	Wet.	Wind.	at 1 foot.	Max.	Min.	In Sun.	On Grass.	
Sunday 22 Monday 23 Tuesday 24 Wednesday 25 Thursday 26 Friday 27 Saturday 28	Inchs. 30·218 30·450 30·440 30·107 29·852 29·986 29·966	deg. 53.5 44.1 48.6 52.1 48.3 42.2 52.5	deg. 52.9 43.3 44.7 48.0 45.3 39.7 49.6	S.W. S.W. S.W. S. W. S. W.	deg. 53·1 51·8 50·9 50·3 50·8 49·1 48·1	deg. 55.6 57.1 54.7 56.0 54.6 54.3 57.8	deg. 52·5 37·7 43·6 46·9 44·9 37·3 40·6	deg. 59.2 89.9 75.1 61.5 96.9 91.6 72.3	deg. 51.0 35.4 41.1 42.6 41.6 34.6 36.3	Inchs. 0·138 — 0·053 —
	30.146	48.8	46.2	-	50.6	55.7	43.4	78.1	40.4	0.191

REMARKS.

22nd.—Almost continuous rain from 6 A.M. to 2 P.M.; overcast till about 7 P.M.; and cloudless from 8 P.M.

23rd.-Misty early, with sunshine; brilliant from 9.30 to noon; overcast after 1 P.M.

24th.—Overcast almost throughout, but one gleam of sun at 4 P.M.; fine night.

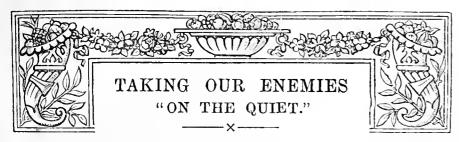
25th.-Overcast all day; rain from 10 P.M. to midnight.

26th.-Almost cloudless morning, and the sun only occasionally obscured in afternoon.

27th.—Almost cloudless morning, cloudy at times in afternoon, bright night.

28th.—A little sun early; overcast with occasional drizzle from 9 A.M.; fair afternoon and evening.

A fine autumnal week .- G. J. SYMONS.



GREAT deal has been written for and against—chiefly against -Shakespeare's assertion that the sufferings of a crushed beetle may be equal to the pangs of an expiring giant. Recent investigations in insect anatomy tend to prove that insects possess a nervous system, and that allowing for their size and the general structure of their bodies, they must have much more sensibility to pleasure or pain than the majority of naturalists have hitherto supposed. However that may be, I think all gardeners will agree that the destruction of their insect enemies, which has from time to time to be effected, ought to be managed so as to give no needless pain. Our fruit trees are attacked by a variety of species in different orders, but some of our very troublesome foes are the caterpillars of moths which damage the buds, the leaves, and even the flowers or immature fruit. Catering for their own benefit, they fulfil their name by "pilling" or peeling whatever they attack, and some of the smaller species do most harm by their numbers and persistency. It is to be regretted, I may note, that certain authors, either for the sake of swelling the list, or from ignorance, have given a bad name to species that are comparatively harmless.

That handsome moth, known as the Eyed Hawk (Smerinthus ocellatus) is mentioned as an enemy of the Apple, and it is true that its striped and horned caterpillar may be found on that tree, but it prefers Willow or Poplar, and is never abundant enough to do serious damage. An accusation has also been lodged against the green and gold caterpillar of the Emperor (Saturnia Carpini), but it is very soldom indeed discovered upon the Apple, as it prefers Heath and the Thorns. With all deductions, there remain far too many caterpillars against which precautions must be taken to check their increase, and it is desirable to kill our enemies while they are in a state of quiescence, whether as torpid, hybernating caterpillars, or as unconscious chrysalids, or in the earliest or egg stage. Hence the closing months of the year affords good opportunity for efforts that will be rewarded next season by a healthy, satisfactory growth of shoots, leaves, and fruit. The eggs of some species may be washed off trees by the simple application of warm water, others are removed by the operation of pruning. The use of the wash, which has been often recommended, made from petroleum and softsoap, will dispose of some hybernating caterpillars from the trunks and branches, also chrysalids which may be lodged in angles or in crannies.

Where we have reason to suspect that buds may contain larvæ of insects, it is advantageous to dredge them with soot and lime mixed in equal proportions. It is probable a strong solution of Gishurst compound will prove not only fatal to insects, but will destroy the vitality of eggs it touches. At various periods during the autumn numerous caterpillars descend from the trees and bushes to undergo pupation in or upon the earth, and the winter should not be allowed to slip away without some measures being taken to kill such chrysalids as can be reached. Many are on the surface of the soil, or just beneath it, and they can be extirpated by the removal and burning of an inch or two of the soil round trees, with any growth of grass or weeds that may be upon it. This is one means of checking the troublesome winter moth caterpillar, Cheimatobia brumata. Those that lie deeper in the earth may be reached by forking, and then applying quicklime or gas lime which has been

spread out and exposed for a month to the air, and will not then injure the roots of the trees or the underground stems. Quassia tea, made strong, is said to kill most chrysalids; I am not sure of this; a soapy solution might also, by obstructing the pores through which they obtain air, even underground.

Considerable attention has been called of late to the species just mentioned, and especially to the fact that the plan of placing a ring of some sticky substance round the trunks of the trees, to impede the ascent of the female moths, is not the effectual remedy once supposed, because some of them, though themselves wingless, are carried upwards to the stems and branches by their male companions. Still, many may be stopped by this preventive measure, and I think Miss Ormerod is right in her opinion that a better method than daubing the tree itself is to place a hayband or rope, well saturated with Stockholm tar mixed with grease, all round it, quite close, but not touching. Owing to the warmth and long continuance of the summer the winter moths were unusually forward this year, emerging at the end of October and early in November. It would be advisable, therefore, besides other precautions, to shake the boughs, as the moths fall readily, and their eggs should be looked for in crevices of the bark and angles amongst the branches. They have been detected on buds also. As each female can deposit about two hundred, it is not surprising that the caterpillars are abundant, and they do not seem to have any notable parasitic foe. But some birds seek them out, the starling especially. In Germany and France the caterpillar of the mottled umber (Hybernia defoliaria) is apt to defoliate the Apple. It is, however, solitary, though the eggs are laid in patches by the wingless females towards the end of the year; it is very common with us some seasons on Whitethorn and various trees, but is seldom seen on the Apple. It would have to be dealt with in the same way as the winter moth caterpillar should it visit the Apple

Upon these I have sometimes found caterpillars of the figureof-eight moth (Diloba cæruleo-cephala), but it is more frequent on Whitethorn. Abroad they complain of the species as an early enemy of the Apricot and Peach, for it is rather a hearty eater. The eggs are laid at the base of lateral shoots by the end of September usually, four or six together. Vigorous spraying would probably remove them. No washes, however, will operate upon those of the lackey moth (Bombyx neustria), which are not uncommon upon the twigs of the Apple every season, and are placed in rings, protected by a sort of varnish. The caterpillars being exceptionally abundant during last May and June, it is likely there was a larger deposit of eggs than usual subsequently, hence the spirals of eggs should be sought and removed. The newly hatched broods of caterpillars are often overlooked by the English grower of fruit. In France the proprietor of an orchard is very careful to inspect the twigs early in the season, and cut away the webs enclosing the young colonies.

With regard to those caterpillars that live through the winter socially, there is no excuse for the fruit grower if he neglects to hunt up their nests; fortunately for us the brown tail moth, so injurious abroad, and the black-veined white butterfly have at present ceased to trouble us. Last spring the small ermine (Hyponomeuta padella) had numerous broods on the Apple, but owing to the drought some of these perished; still it is advisable to examine the twigs for any of the new brood that may be waiting for next spring. The eggs are laid during the autumn under a patch of brownish green, which is much the colour of the tree, and the young caterpillars remain under this without eating from October to April. Amongst the chrysalids that may be destroyed now are those of the codling moth (Carpocapse pomonana), for in our country the greater number of these Apple pests quit the fruit when it falls as soon as possible, and ascend the tree nearest at hand, where they spin a little cocoon under the loose bark. -ENTOMOLOGIST.

FEEDING PLANTS AND ENRICHING THE SOIL IN THE AUTUMN.

CONTINUING my remarks on this subject from page 350 I will in the present article deal principally with that portion of it which treats of the feeding of plants growing in pots or tubs. I think few will deny that much of the success achieved in the growth of such depends to a great extent upon the manner iu which this phase of culture is conducted. Given equal conditions in other respect, the gardener who feeds his plants the most liberally and regularly on rational principles produces the best results. I say rational principles advisedly, because it is quite possible—nay, easy to do irreparable mischief by applying liquid manures before the soil is sufficiently permeated with roots to be benefited by them; or to give the liquid in too strong a state, and thus destroy the medium through which nourishment is principally supplied to plant life. When, however, roots are plentiful and active they revel in a constant supply of fertilising food, under the influence of which health and vigour is increased and maintained; but should the matter be neglected between the stages of growth which intervene between the time when feeding begins and the crop of flowers or fruit approach maturity a corresponding degree of vigour is lost. Observant cultivators know well that the higher the level of culture aimed at the more clearly is the slightest neglect apparent.

The rapid strides towards perfection which have in recent years been made in the growth of plants in pots renders it necessary for all who wish to maintain a position among the front rank of cultivators to pay especial attention to feeding more or less throughout the year. So long as the plants are not in a state of comparative rest, do not show signs of excessive growth, or have been recently repotted, few mistakes can be made by giving weak applications of liquid manure. It is scarcely possible to say too much in favour of the best chemical manures now freely advertised, containing as they do the most important elements of plant food. Thousands of grand plants are annually grown in small pots, which, without the aid of such manures, I believe, it would be impossible to produce in the same bulk of soil. Then there are other instances in which large plants have to be kept in pots or tubs for years without repotting; with the help of these patent manures, and occasional waterings with soot water or natural liquid manures, they may be kept in excellent condition. I will now endeavour to show how these general principles may be put

into practice in the growth of various plants. Camellias and Azıleas do not, in my opinion, receive so much assistance from chemical manures as they should do. The practice of feeding well during the time growth is being made, and then giving only clear water through the rest of the year, is even now practised by many, and the result is that to keep the plants so treated in a thriving condition much larger pots than are really necessary have to be employed. Bud-dropping in Camellias, and weak, thrip-infested growths on Azaleas, are often brought about by starvation pure and simple, especially when the plants are grown entirely in peat, in which they have a tendency to grow strongly and rapidly exhaust the soil; then, unless regular feeding is given, slowly but surely they drift into an unsatisfactory state. manures here come to the rescue. If given once a fortnight during the summer, and once a month during the winter, the best results follow, even when the roots are much confined. Provided the drainage is good, and the soil porous and sweet, these plants do not require repotting nearly so often as they receive it if instead they are fed regularly in the way indicated. Anyone who is sceptical on this point can easily prove it for themselves by setting apart two plants in an equally healthy condition, both having also plenty of active roots. Let one be given a monthly application of chemical manure, and an occasional dose of soot water, while the other receives clear water only, or perhaps a few waterings with liquid manure given at irregular times. If they will follow this course from the time growth is completed till the flowering period I am convinced they will entertain no doubt as to which is the better plan to follow.

Again, note the difference between the massive trusses and vivid colour of the flowers of Zonal Pelargoniums when chemical manures are given and when they are not applied. Under some circumstances, to give such manure in the autumn and winter would result in strong growth and but little flower. When, however, the plants have been properly prepared for winter work the results speak for themselves. Given plants with short-jointed growths, growing in small pots crammed with roots, place them in light houses close to the glass, give abundance of air, and keep a little heat in the hot-water pipes constantly, then even in winter the plants may be kept well laden with bloom colour.

Bouvardias, Cyclamen, Primulas, Carnations, Euphorbias must be well fed even at the dark season of the year if strong plants and

flowers are wanted. The amount of growth made will always be, to a great extent, regulated by the heat, light, and water which vegetation receives; but the full benefit of such essentials can only be obtained by plants which have within their reach the chemical constituents needed to build up their growth. In dull weather fewer applications of water are required. This shows that the amount of nourishment drawn from the soil is small indeed compared with that taken up during the prevalence of sunshine, and seems to be Nature's mode of balancing the amount of growth made with that which the light and air are capable of solidifying. Bearing these facts in mind, it is easy to see that our cultural practices often err in the direction of neglecting to feed plants during the dull season of the year for fear of inducing sappy unripened growths. In bygone days, with old and dark houses, and primitive methods of heating them, there may have been good reasons for adopting what I term the starvation system; but with plants thinly disposed near the glass in the light airy structures which fortunately are now the rule, a more liberal system of winter-feeding is attended by vastly improved results. -H. Dunkin. (To be continued.)

VINE CULTURE—A RETROSPECT.

LOOKING back to the days of Meredith of Garston, Hill of Keele, and Henderson of Trentham, a trio of growers who doubtless did a great deal in the matter of Grape culture, it seems to me that with all the extended appliances we ought to have a better knowledge of Vine growing. Those readers who can remember even a quarter of a century back, and look now at the advantages for Grape culture of the present day, must admit that we make bad use of them if we do not have a more intimate knowledge of the subject in question, and produce results in proportion. young men of former days never had an opportunity of seeing Vines grown so extensively as they now are. I do not say that the practice is much improved in private gardens, though even here vineries have increased, the produce being sometimes sold to meet expenses. But it is the extensive market growing establishments that should send forth a number of expert hands

I have to credit the northern growers with producing the largest berries in Grapes; but I think southerners excel in weight of crop, and possibly finish. If we could, as growers, increase the size of individual berries at the same rate as we do the crop, what a sight we should present to the public! But it is not so, the fact being no matter how correct are the conditions of the Vines from which we obtain extra large berries, even when we crop lightly, the results to the enthusiastic grower are disappointing. True a perfect finish combined with full sized berries is a pleasing sight, yet on estimating the weight of crop we still think we ought to have better. I take it that in cropping we have made rapid strides, and yet the Vines are kept in good bearing condition. Probably the market man is always more or less disappointed at the selling price of his best Grapes, the price not being in proportion to the quality, inferior though still good fruit paying far better. seems to be a limit for shop trade as regard prices, thus at anything under 2s. per lb, say 1s. 9d., I can sell cwts. of fruit, whereas I do not sell pounds above; this is in bulk say up to end of November. Then Muscats are always wanted when not above 2s. 6d. per lb.; but as one of my largest customers says, he fears now I have put up to 2s. 9d and 3s. per lb. it will be too much for him. High prices are tempting, but though I treble the prices I have quoted before the end of spring, it is in limited amounts, and the real trade is in good Grapes at medium prices. Inferior, faulty Grapes are more than ever a drug in the market, shops of any pretension not caring to have them. With a more extended cultivation of the Vine and an increased practical knowledge we can do what we should have been afraid of in our early days.

I have refrained from dealing with the large bunches, as they are of no practical use for the market man. Accidentally such bunches do come, and I have them now hanging, Gros Colman up to 6 lbs., but I have not grown these specially, the Vine having its full complement of bunches. To devote a Vine to special bunch growing is always a failure. Take a good Vine, reduce to a few, say three, four, or six bunches, and the weight in them would not equal the ordinary number of bunches had they been left. Though such bunches do finish well the money is wanting when they come to be sold. I shall always credit the growing trade with raising the standard of finish in shop Grapes, and those who have any common goods have only to send to a market and the salesman will quickly give him a very low price, and even then he does not care for them. The aim of all Grape growers, be they large or small, should be first to study the Vine itself, both root and rod, and crop according as it will bear it. Varieties, of course, differ, and these have to be noted. One season's experience will not do all

this, it is a question of years.—Stephen Castle, F.R.H.S.



CYPRIPEDIUM STATTERIANUM.

This is a richly coloured and very distinct Cypripedium. It is the result of a cross between C. Spicerianum magnificum and C. vexillarium superbum, and when exhibited at the Drill Hall on Tuesday, October 24th, the Orchid Committee of the Royal Horticultural Society awarded a first-class certificate for it. From a sketch of the one flower which the plant bore the illustration (fig. 61) has been engraved. The dorsal sepal is principally rosy purple and has a distinct white tip and margin, the petals and hip being greenish brown.

CATTLEYA LORD ROTHSCHILD.

Much interest was centred on a plant of Cattleya Lord Rothschild which was exhibited at the Drill Hall, Westminster, on Tuesday, October 4th, by Messrs. F. Sander & Co., St. Albans. The plant in question bore magnificent flowers, and from one of these the illustration (fig. 62, see page 425) has been prepared. This Cattleya is a new hybrid, being the result of a cross between C. Gaskelliana and C. aurea. The sepals and petals are large and of a faint rosy mauve shade, but the lip is the most striking feature in the flower. This is very large, of a rich purplish crimson shade, with a crimped white margin, the throat and basal portion being orange yellow veined white and magenta crimson. The flower is sweet scented.

Odontoglossums.

Many plants that have made strong well-ripened growths will be producing flower spikes. A watch must be kept for slugs at the present time, for if they are allowed to exist a large number of spikes may be ruined in a night. A little cotton wool placed round the spike is an admirable plan, but the safest is to suspend the plants from the roof until the spikes are firm and thus safe from the ravages of these most troublesome pests. Keep a sharp look out for aphides, and eradicate them at once, for when they are allowed to establish themselves upon the flower spikes they soon injure and deform the blooms. I am no advocate for fumigating these plants, but remove these insects by means of a soft brush and a little weak tobacco water. Shading is often practised late in the autumn by many growers, but ours was removed early this year for the purpose of allowing those growths to become thoroughly matured. The plants must not be allowed to suffer by the want of water either at the roots or in the atmosphere. Keep them close to the glass and admit air freely when favourable, and the flower spikes will be stout and compact instead of weak and slender.—Specialist.

WINTER CUCUMBERS.

In some gardens it is found to be a difficult matter to produce a regular supply of good Cucumbers during the winter, and especially if the necessary heat is not to be obtained from hot-water pipes. Where all requirements are at hand, however, partial failure sometimes results. There are several causes of failure—namely, sowing the seeds too late, or rooting cuttings late if they are preferred, after treatment as regards

the growth of the plants, and attention to their roots.

If the plants are raised from seeds or cuttings they should be strong and in good condition for planting by the middle of October at the latest. If possible they ought to be grown in a house which affords plenty of light. The soil must consist of one-half leaf mould and one-half good sound loam well mixed together. Whether pipes be placed under the bed or not, a hotbed composed of strawy litter and leaves ought to be made up if room will permit. The soil when placed upon the bed need only be so thick as to cover the manure, but where the plants are to be planted mounds of soil must be formed, allowing one barrowload to each plant. Avoid planting too closely, 5 or 6 feet asunder will answer better than 3 feet. The plants should not be unduly excited in the autumn. A sturdy short-jointed growth must be the aim of the cultivator.

In dealing with the training of the shoots of Cucumber plants during the summer I always like to pinch the side shoots at every joint, but in the winter I prefer to leave three joints before pinching. The advantage of planting a good distance as under will be here apparent. The shoots ought to be allowed plenty of room to grow in, affording light, and giving solidity to them. Constant attention must be given to pinching and tying the young growths. The prunings should be no more than may be carried out in the attendant's apron each week from a large-sized house. If crowding of shoots occur, and wholesale thinning follows, three weeks or a month's dearth of Cucumbers results. Only a few

fruits may be left on the plants at one time; each fruit as it becomes fit must be cut off forthwith.

Additions of soil mixed the same as that recommended for planting in may be placed, after being warmed, on each mound once a fortnight as a top-dressing, and pressed down firmly. If this practice be regularly carried out no feeding with liquid manure will be necessary till after Christmas. The temperature of the house must be regulated according to the state of the weather outside. A genial temperature should be maintained, not too much moisture, especially in frosty weather, but sufficient to keep the plants in good health and free from red spider. Syringe the foliage well on fine days, not later than 2 P.M. Model and Telegraph are good varietics for winter culture.—GEO. GARNER.

WINTER TREATMENT OF VIOLETS.

HERE the culture of Violets in the winter is made a speciality, two pits, each 64 feet long, facing due south, and adjoining the outside borders of the principal range of vineries, and three three-light frames

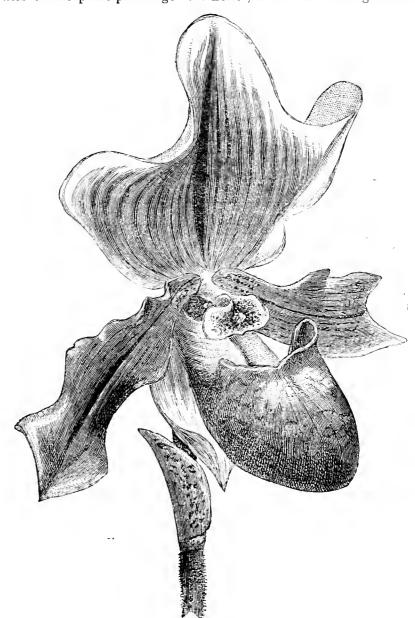


FIG. 61.—CYPRIPEDIUM STATTERIANUM.

being devoted to their culture. In addition to these two or three hundred plants are grown in 6-inch pots for standing on the side stages in the conservatory and for intermixing with decorative plants in the Castle. For some weeks after planting out our plants (single crowns) early in May, in rows from 12 to 15 inches asunder, and the same distance apart in the row, they made very little, if any, growth, notwithstanding the fact that they were watered every afternoon, and the soil between the rows stirred from time to time with the Dutch hoe. By continuing the above operations energetically, however, and keeping the runners well pinched after free growth commenced, we have been rewarded with fine "many-crowned" plants, every one of which have been transferred to their winter quarters.

Prior to planting additional leaves were put into the pits and well trodden, following with a coating of short manure to the thickness of about 2 inches, and over this about 9 inches of a mixture consisting of five parts fairly good soil and one of short manure, the whole having been passed through a half-inch sieve before being placed in the pits and frames. The plants were taken up with good sized balls, the straggling roots being cut back to the soil through which they pushed, and then planted in rows about 1 foot asunder and at the same distance in the rows. The plants in each succeeding row were set triangular, which manner of planting affords more room for light and air to play amongst them than if they were planted squarely—opposite each other—the soil being pressed firmly about the individual plants in planting. The plants must not be put any deeper in the soil than they were before, and keep them close to the glass without touching it. After planting we

afforded sufficient water to settle the soil, shading the plants for a few days from sunshine, and damping them at closing time in the afternoon during the same period. Then the shading was dispensed with as well as the syringing, and the sashes drawn off during favourable weather and replaced at night, tilting them up a little in the absence of frost.

The after treatment will consist in giving plenty of air on every favourable opportunity that presents itself, guarding against excessive damp, as the greatest evil which the cultivator of the Violet in unheated pits has to contend with during the winter months, keeping the runners persistently pinched, bad and damped off leaves being removed at the same time, the soil scratched over with a pointed stick, and giving tepid water at the roots when the condition of the soil renders its application necessary. An occasional top-dressing of Thomson's Vine and plant manure before giving water will prove beneficial during the next five months, being careful not to let it come in contact with the leaves in strewing it lightly over the soil between the plants. As a means of protecting the plants from injury by frost we cover the sashes at night with Eddy's "dressed canvas," to which cords are attached for securing them in position, and small staples driven into the wall-posts at intervals of about 5 feet. When severe frost is expected a few inches thick of dry bracken are laid on between the glass and the canvas covers.

The varieties we grow are Marie Louise, Patria, blue (very much like the former, but of a deeper colour); Dc Parme, pale lavender colour; Comte de Brazza, large double white flowers; Victoria Regina, deep blue double flowers; the two last mentioned being for spring flowering. We also grow a few plants of The Czar, large blue flowers. In a fortnight we have gathered 200 large bunches of Marie Louise and Patria, which varieties we find the best for autumn and winter flowering.—H. W. WARD, Longford Castle.

PELARGONIUMS AT WINDSOR.

IT would be a difficult matter to find a class of plants so universally popular, or more deservedly so, than are Zonal Pelargoniums. amateur with his little greenhouse, and may be a frame, can have them in oloom all the year round by a judicious insertion of cuttings and assiduous attention to other details of their culture. But it is to Zonal Pclargoniums under the guise of winter blooming plants as grown by Mr. Thomas in the Royal Gardens, Windsor, to which these notes are intended to call particular attention. The plants are now, when beautiful flowers to brighten our homes are all too scarce, commencing to bloom. In floriferousness, brightness, and general utility they are unrivalled, the "Autumn Queen" being unable to cope with the brilliant hues of these flowers. The collection at Windsor is an extensive one, and includes many, if not all, the finest varieties in cultivation. The plants are flowered in 6-inch pots, and form at the present time a dazzling display. One is liable when so much is heard of Cannell's Pelargoniums to think that it is at Swanley alone that they may be seen to perfection. Such, however, is not the case, for the plants grown by Mr. Thomas are equally healthy, and carry as many flowers as those of the justly celebrated grower above mentioned. This will certainly be acknowledged by all who are privileged to see those now under notice. It will doubtless be interesting to many readers of the *Journal* to know what varieties are the best in this collection, both for habit and

The selection cannot be opened with a better or more useful kind than Miss Gordon, which is purplish red in colour with a clearly defined white eye. The pips are large and of perfect shape. A free blooming semi-double scarlet is found in La Bruant, the habit of which is very fine. Only one single white variety appears to be grown, and by the way this is blooming none other is required. Queen of the Whites justifies its name, for the colour is of the purest, the shape of the best, and the trusses amongst the largest. The habit, too, is excellent, dwarf and sturdy, and carrying its chaste flowers just clear of the healthy green leafage. A very beautiful deep rose is Kate Turner, and Freiza may be considered one of the very best of the scarlets. The pips are of exceedingly rich colour, and contour of the truss leaves nothing to be desired. Gloire Lyonnaise is a very beautiful deep rose-coloured flower, and for a pure salmon nothing more beautiful or more useful could be desired than Mrs. F. G. Hill. The truss is exceptionally large and perfect in form. Eiffel Tower is a double rose-hued variety of much merit. La Cygne is a splendid double white, and Madame Thibaut a grand double pink. One of the very best in the collection is A. Grisau. The pips, which are rather over the medium size, are deep pink in the centre, and have a broad white margin, which, whilst greatly enhancing its beauty, renders it remarkably showy and attractive. A delicate rose-tinted variety of great beauty is Luther de Medluc, and John Fellowes is a grand scarlet.

Lady Russell is a variety which attracts universal opinion, the colour being of a beautiful rose with a prominent white eyc. Another pink of a high order of merit is Heather Bell. The pips are rather small in size but of perfect shape, as also is the truss. In colour it is a shade deeper than Lady Russell, and is totally distinct in habit. Both are worthy a place in any collection. Lady Reed is one of the most charming. The petals are white at the upper parts whilst the lower is a clear rose, which produces a striking effect. The truss is of medium size but perfect in contour. The dwarf habit of Louisa Penith is a great recommendation to an already good variety. The rosy red coloured trusses

stand sturdily out from the foliage of the plants, which are of exceptional dwarfness. F. V. Raspail stands unrivalled amongst the doubles. The pips are large, and the colour of the most vivid scarlet. A good double rose is found in Dr. Thousent, the flowers of which are of medium size and the trusses large. The silver variegated foliage of Chelsea Gem is very striking amongst the other varieties, the flowers, too, being attractive. Amongst the dwarfest is Heroine, a double scarlet, and, as a good companion for the two previous named, Madame Thibaut might be named. The growth of the plants is singularly alike, and the trio is unquestionably a good one. The list cannot be closed without reference being made to a very handsome flesh-coloured seedling, of which Mr. Thomas is wisely taking much care, for it will undoubtedly be an acquisition in a class of plants which is already rich in grand varieties and superb colours.—H. J.



MR. MAWLEY'S ANALYSIS OF 1893.

In support of my statement (page 384) that the analysis cannot be said throughout to be mathematically correct, I should like to give two typical instances. Viewing the fact that the analysis is said to be deduced from the experience of several years, they are fair instances in support of my argument. In the few remarks I add I have the agreement of others, who are fully as experienced as either Mr. Mawley or myself.

Madame Hoste is a beautiful Rose, which has been well known to all of us for some years. It is in Mr. Mawley's analysis of 1890. It is there given as No. 25, and placed in analysis as exhibited an average of seven times. Last year it was shown eight times, and Mr. Mawley has it still low down, No. 26 and 7.9, working on its actual exhibits. This year, although the Rose has been in the analysis since 1890, all these previous facts and figures are ignored, and the figure of twenty-one exhibits in 1893 is taken as the correct average for a series of years. Can this be called mathematically correct? I have not one word to say against the Rose, but I take exception to this fresh start and unreal position given to it, as 1893 was not a typical year for it. The Rose being one with light petals, the heat of this year was not really favourable to it. How it only appeared in eight winning boxes last year is surprising, as 1892 was eminently favourable to its growth. That it happened to be shown in twenty-one winning boxes in 1893 I look on simply as mere chance.

In the same way Ernest Metz has been exhibited in winning boxes for some years; it has been in the N.R.S. schedule in a special class since 1891. I cannot tell how long previous to this Mr. Mawley has had his eye on it, but the Rose is not in his analysis of 1890. Last year it was placed in the analysis as an average of 12 (on previous performances, I suppose), but this year previous performances are ignored, and 30 is given as its "average," but apparently solely on the exhibits of 1893. Is this mathematically correct? It is well here to recall the fact that Mr. Mawley has altered his system of working his analysis I think more than once; that which he now thinks infallible he may hereafter find a flaw in. It is also worth mentioning that an analysis which may work satisfactorily in regard to Dahlias and Chrysanthemums, of which apparently hundreds of new varieties are produced annually, need not necessarily be of equal value in regard to Roses, of which very few new varieties are thought worthy of attention. Finally, although Mr. Mawley may think "crude figures" to be matters of trifling importance, we in the City have a theory which hitherto has been found to work out mathematically correct, and it is that we like to have our accounts and analysis worked by crude figures in preference to having them changed in any way.—Charles J. Grahame, Croydon.

[We stated that in our opinion the results as given by Mr. Mawley were mathematically correct as deduced from the elaborate and painstaking system adopted in their preparation, and we were confirmed in this opinion by a gentleman of world-wide fame, whose life has been spent in elaborating deductions as true as he can represent them from ponderous masses of crude figures. Mr. Mawley can have no objection to a fair examination of his work, but he very properly objects to being charged with "cooking," a rough city method of expression in this reference that is not merited, and which does not meet with general approbation.]

LORD PENZANCE'S HYBRID BRIARS.

I HAVE to acknowledge Mr. Charles J. Grahame's allusion to a previous paragraph of mine on page 396. If he reads attentively Sir Walter Scott's "Lady of the Lake" he will find that the Eglantine is a native of the Trossachs Woods, which I recently saw in all the glory of their autumnal hues. It also grows wild in the woods of Galloway, as I can testify from personal observation. I have a vigorous specimen of the Sweet Briar Rose growing in front of my manse which, during the months of July and August, is a mass of pink blossoms, and is at present perfectly covered with its beautiful berries. It was, many years ago, trausplanted from a wood in the parish, which overhangs the sea,

and where wild Roses and Honeysuckle grow most luxuriantly, the latter climbing up the trees to a height of 20 feet.

I am much obliged to Mr. Grahame for the additional information he gives me regarding the Hybrid Briar Roses of Lord Penzance. It is interesting to learn that the names of those Roses have been taken for the most part, as Mr. Grahame indicates, from the immortal romances of the "Wizard of the North." I recently had the pleasure of meeting with a venerable daughter of his much-loved amanuensis, Mrs. Laidlaw, and talking to her in Edinburgh on horticultural subjects, in which she is much interested. She had come all the way from Inverness to the Scottish capital in order to be present (at the age of eighty-four) at the Patti concert. My kind hostess on that occasion was a daughter of the late Rev. Dr. Nathaniel Paterson, of Glasgow, author of "The Manse Garden," an interesting and instructive work of the last age, written by an intimate friend and associate of Sir Walter Scott.

The names which Lord Penzance has selected for his Roses are complimentary to Scotland, and indicate his reverence for the genius of our greatest novelist, who was, like all men of poetic tendency and artistic

nature, a great lover of flowers.—DAVID R. WILLIAMSON.

PLANTS IN SEASON.

SALVIA GRAHAMI.

AMONG the many beautiful varieties of Salvias that flower at this period of the year, I think none are more worthy of recognition than S. Grahami. Though not so showy as the brilliant scarlet of S. splendens, or the soft rose of S. Bethelli, it is nevertheless one of the most useful Being very dwarf and compact in habit, it is of the whole genus. admirably adapted for arranging amongst various other greenhouse plants. It has an extraordinarily free-flowering character, producing its long racemes of flowers all through the autumn and winter. Abundance of manure water should be supplied whilst it is flowering.

RUELLIA MACRANTHA.

Although one of the best and most beautiful winter flowering plants in cultivation, this Ruellia has unfortunately been so very much neglected as to be scarcely ever met with. In habit and character it is very similar to Thrysacanthus rutilans and Centropogon Lucyanus. The beautiful trumpet-shaped flowers, which are produced in great profusion from the axils of the leaf, are of a rosy purple colour, and last a long time in perfection. Propagation may be effected by cuttings, which should be inserted in sandy soil, and placed under a hand-glass. When should be inserted in sandy soil, and placed under a hand-glass. well rooted they should be placed in small pots, using a mixture of good turfy loam and leaf soil in equal proportions, with a small amount of fibry peat and sharp sand. The plants ought then be grown in a stove, and potted as occasion requires. I trust these few timely remarks may be the means of reinstating this most needly and shown Problem may be the means of reinstating this most useful and showy Ruellia into every establishment where winter flowering plants are in demand, as no collection can be considered complete without it.

BEGONIA JOHN HEAL.

This charming plant possesses sufficient attractions to warrant its admission into every garden. For arranging with the various occupants of the intermediate house at this season I know of nothing to compete with it, owing to its dwarf habit and floriferous character. To grow these plants successfully the tubers should not be started too early. This is a very important point to bear in mind. The best plan is to let them grow gradually and without much forcing. After they are fairly started the plants should be placed into small pots and put in an intermediate temperature. Apply water judiciously till after the roots have taken full possession of the soil, when it may be supplied with greater freedom.

Good peaty loam, leaf soil, and sharp sand will form an excellent compost for the plants. Green fly and mealy bug are particularly troublesome, more especially the latter, consequently a sharp watch should be kept, and immediately the least signs of it are detected means must be taken to exterminate it, for if it is once allowed to become fairly established it is useless to expect satisfactory results. The best method of destroying mealy bug is to pick it off with a fine pointed The best stick, as the plants are very impatient of any insecticide being used on them. I feel sure where once this Begonia has a fair trial it will not fail to give satisfaction.—G. PARRANT, Ashby Lodge Gardens, Rugby.

PARTICULARS ABOUT PEARS.

Would Mr. Molyneux, Mr. Luckhurst, or others of your correspondents, kindly state their experience of the following Pears—Doyenné du Comice, Fondante d'Automne, Beurré Superfin, Madame Treyve, Durondeau—as regards the particulars given below, the locality of cultivation being fairly favourable for their growth?

- 1, Are they of good hardy constitution?
- 2, Are they good, fertile, and tolerably reliable as bearers?
 3, Do they succeed well in the "bush" form?

As regards flavour and high quality I do not think either of them has been surpassed. For richness of flavour and honied juiciness I have always regarded the Gratiola Pear as being unequalled; but this, of course, is a matter of individual taste.—W. M. B.



EVENTS OF THE WEEK .- As mentioned below, the Committees of the Royal Horticultural Society will meet at the Drill Hall, Westminster, on Tuesday, November 14th. Numerous Chrysanthemum Shows will also be held during the ensuing week, and a list of some of these will be found on another page.

- THE WEATHER IN LONDON.—The weather in the metropolis continues cold but dry. Frosts have occurred on several nights recently, although not very severe. At the time of going to press it is rather cold, the wind being in a north-easterly direction.
- Hailstorms, but of short duration, were prevalent on Tuesday in the South of England, and we hear of considerable damage being done at Dover.
- THE WEATHER IN THE NORTH. The weather during the past week has been very changeable, dry and wet days alternating Friday was very especially wet and cold throughout. Frosts of from 2° to 8° have been recorded every morning, and there seem indications of a spell of cold weather.—B. D., S. Perthshire.
- TESTIMONIAL TO MR. MANNING. After consulting Mr. Manning's wishes it has been decided that the presentation shall take the form of an illuminated address and a dining-room suite with clock and ornaments to match. The presentation waits Mr. Manning's convenience for a few weeks, he being at present away from London.
- ROYAL HORTICULTURAL SOCIETY.—The next meeting of the Committees will be held in the Drill Hall, James Street, Victoria Street, Westminster, on Tuesday, November 14th, when special prizes for Chrysanthemums will be offered. At three o'clock Mr. R. Parker, F.R.H.S., will deliver a lecture on Chrysanthemums.
- PRIZES AT THE GARDENING AND FORESTRY EXHIBITION.-Many gardeners will be glad if, through your medium, a request may be made that the prizes won by the successful exhibitors be paid without delay. Many gardeners were put to a considerable expense in getting fruit and flowers to London to help to make up the Exhibition. In the schedule it states "that all prize money will be paid within a month of the exhibitions," and now that the officials have had their banquets I think it time that the prizewinners were paid what is due to them .-EXHIBITOR.
- —— GARDENING APPOINTMENTS. Mr. S. Clarke, for the last three years head gardener at Airfield, Dundrum, Co. Dublin, has been appointed head gardener to T. R. Bolitho, Esq., Trengwainton, Penzance, Cornwall. We understand Mr. Arthur Pope succeeds Mr. G. Bartle as head gardener at Allington Hall, Grantham, Lincolnshire, the seat of J. E. Welby, Esq.
- BROWALLIA MACRANTHA.—Mr. Elsey, gardener to Mrs. Carlisle, showed in a group of plants at Ewell last week several specimens of this Browallia. They were from 15 to 16 inches in height, well foliaged and flowcred. The blooms are large, open, five-lobed, and very much the colour of the bracts of Bougainvillea spectabile. It is easily raised from cuttings put in during the spring, and makes an excellent autumn and winter house plant.—A.
- PRIMULA CHELSEA ROSE.—Mr. Buss, gardener to A. W. Aston, Esq., also showed at Ewell a dozen plants of a four-leaf single and lovely flesh pink Primula under the above name. The plants were well done, the flowers large and well fringed, the foliage of the pale green colour, and in all presents a very beautiful variety.—A.
- THE SCILLY ISLES DAFFODILS .-- A Western contemporary says that the exceptionally dry and fine weather at the Isles of Scilly threatens to seriously disarrange the coming flower season. The weather is still so fine and mild that the crops in the open are coming on rapidly, and unless cold weather sets in to check them the flowers will be in the market considerably before those from the forcing houses are usually ready. The first small consignment of yellow Narcissus (Soleil d'Or) from the open field was forwarded last week, while very few of the bulbs intended for forcing are yet put in the houses.

- BULLFINCHES AND BUDS.—Mr. J. Hiam writes:—"It may be as well to remind fruit growers, in districts where these birds are numerous, that for about six weeks they are very easily taken in trap cages or with birdlime, and turned to account as pets for cage birds or in aviaries, instead of shooting them in the spring."
- EUCHARIS AMAZONICA.—Lovers of this beautiful flower will be pleased to know that the Eucharis is admirably grown by Mr. George Ward, London Road, Bishop's Stortford. In looking over his houses of Eucharis the other day I was amazed to find the plants in such health and carrying large numbers of flowers, which it would be useless for me to describe.—EUCHARIS.
- PROPERTY IN MUSHROOMS.—At the instance of the Westmoreland County Council, all the County Councils in England are having brought before them a resolution in favour of the law being so altered that persons who trespass upon land in search of Mushrooms and other spontaneous growths will be liable to conviction, as in the case of stealing cultivated roots. Great annoyance and indirect damage to farmers is caused by such trespasses at present, and there is nothing in the criminal law to prevent it.
- THE INTERNATIONAL HORTICULTURAL SOCIETY which was founded at the recent Congress of horticulturists held at Chicago has made further progress. The chief object of the Society is to facilitate the exchange of plants, seeds, and books. The following officers have been nominated:—President, Mr. P. J. Berchmans; Vice-President, Mr. Henry L. de Vilmorin; Secretary and Treasurer, Mr. George Nicholson, the Curator of Kew Gardens. We learn, however, that Mr. Nicholson is unable to undertake the work that this office would impose upon him.
- A New Rose-coloured Calla. A correspondent sends us the following extract, written by a Dutch bulb firm, referring to the new Calla with rose-coloured spathes which appears to be now attracting attention:—"This Calla, received from Africa, represents an entirely new type of Richardias, the leaves being lanceolate instead of sagittate, as in all species hitherto known. The spathe is of a very elegant shape, and the colour is white tinted with rose, especially well marked on the outside. The bud shows a rose colour, which afterwards changes into white with a rose tint." The provisional name of De Waal's Richardia has been adopted until botanists decide its Latin designation.
- SUMMARY OF METEOROLOGICAL OBSERVATIONS AT HODSOCK PRIORY, WORKSOP, NOTTS, OCTOBER.—Mean temperature of month, 50.2°. Maximum on the 16th, 67.0°; minimum on the 30th, 27.2°. Maximum in the sun on the 1st. 120 5°; minimum on the grass on the 31st, 19.2°. Mean temperature of air at 9 A.M., 50.5°; mean temperature of soil 1 foot deep, 50.6°. Nights below 32°, in shade two, on grass sixteen. Total duration of sunshine in the month, 120 hours, or 37 per cent. of possible duration. We had three sunless days. Total rainfall, 1.69 inch. Rain fell on thirteen days. Average velocity of wind, 8.1 miles per hour. Velocity exceeded 400 miles on one day, and fell short of 100 miles on seven days. Approximate averages for October: Mean temperature, $48\cdot1^{\circ}$; sunshine, eighty-three hours; rainfall, 2.73 inches. Another warm, bright, and dry month. None of the last twelve Octobers had as much sunshine, and only two out of the last seventeen had a higher mean temperature, and none of them had as high a mean daily maximum.—J. MALLENDER.
- TECHNICAL EDUCATION IN HORTICULTURE.—The Council of the Scottish Horticultural Association having been again allocated a portion of the residue grant by the Town Council of the City of Edinburgh has arranged a course of lectures on the "Vegetable Garden," to be delivered during the ensuing winter and spring. The scientific and practical aspects of the subjects chosen will be treated of by eminent authorities, and the lectures will be free to all interested in the advancement of horticulture. The introductory lecture will be given by Mr. M. Dunn, Dalkeith. "The Chemistry of the Vegetable Garden" will be treated in six lectures by Mr. W. Ivison Macadam, F.R.S.E., F.I.C., F.C.S. "Physics as Applied to the Vegetable Garden," in three lectures, by Mr. A. N. Macalpine, consulting botanist to the Highland and Agricultural Society. "The Chemistry of the Soils: The old and new Doctrines," in two lectures, by Dr. Hunter, Minto House. Mr.A. H. Scott, The Gardens, Cambusdoon, Ayr; Mr. Williamson, Tarvit, Cupar-Fife; Mr. Loncy, Marchmont, Duns; Mr. P. W. Fairgrave, Dunkeld, and Mr. Temple, Carron House, Falkirk, will lecture on the practical cultivation of different crops. Mr. Robert Laird, 17, South Frederick Street, Edinburgh, is the Honorary Secretary.

- LARGE GOURDS.—Messrs. Sutton & Sons write:—"We note in a paragraph appearing on page 400 of the Journal of Horticulture reference is made to a Gourd weighing 30 lbs. It may interest your readers to know that we have one grown by a customer of ours (Lieut.-Col. E. Morrell, Mistley Hall, Manningtree) weighing 142 lbs., and from the same plant others were cut weighing 112 lbs., 100 lbs., 85 lbs., besides others of smaller weight. The variety is our Mammoth Gourd."
- Weather in Scotland.—The total rainfall for October was 4 239 inches, which fell on twenty-eight days; greatest fall on any one day 0 887 inches, on the 24th. Drains were first observed running for the season on the 25th. Frost was registered on two nights—the 30th, 24.8°; and the 31st, 22.6°. The warmest day was the 15th, when 63° were registered; and the 16th was the warmest night, with 54.9°. Mean maximum, 55.6°; mean minimum, 39.3°.—G. McDougall, Stirling.
- The Floral Sketch Book.—The Council of the Royal Horticultural Society have granted special permission to Mr. John Weathers, Assistant-Secretary, to publish his plant sketches. Mr. Weathers informs us that he proposes to publish under the above title five large drawings each month of as many new, rare, or interesting plants. Each plant figured will be fully described, and historical and cultural notes will also be given. The first number will be ready by January 6th, 1894, and the price will be 1s.
- —— ROYAL METEOROLOGICAL SOCIETY.—The meetings of the Society, which will be held by kind permission of the Council of the Institute of Civil Engineers, at 25, Great George Street, Westminster, will for the future commence at 8 p.m. At the ordinary meeting on Wednesday, the 15th inst., the following papers will be read:—"The Great Drought of 1893, and Its Attendant Meteorological Phenomena," by Frederick J. Brodie, F.R.Met.Soc. "Thunder and Hail Storms over England and the South of Scotland, July 8th, 1893," by William Marriott, F.R.Met.Soc.
- Dalkeith Agricultural Society has, so we learn from an agricultural contemporary, carried out some interesting experiments by means of prizes offered to growers to ascertain the heaviest cropping sorts of Potatoes, and what manures are best to be employed to obtain largest results. The first prize was awarded to a crop of 12 tons 7 cwts. 3 qrs. of sound Bruce to the acre, grown with 20 tons of manure, 4 cwts. kainite, 4 cwts. supers in drill, $1\frac{1}{2}$ cwt. nitre when through, and $1\frac{1}{2}$ cwt. when earthed up. The second prize went to an acre of Regents weighing 12 tons 6 cwts. 3 qrs., of which 10 tons 7 cwts. were good, 1 ton 12 cwts. 1 qr. small, and 7 cwts. diseased. This crop received 24 tons of farmyard mature to the acre, besides 1 cwt. of dissolved bones and 1 cwt. of nitre in the drill.
- A FEW PRETTY PLANTS.—At the little Show at Ewell last week I noted some plants of more than usual interest at this season of the year. Mr. Whiteman had Salvia splendens Bruanti in fine form, large bushes $3\frac{1}{2}$ feet through, beautifully flowered, and in 9-inch pots. Then he also had several plants of Salvia Pitcheri, each carrying good spikes at about 3 feet in height of intensely rich blue flowers. It is a most effective plant at this time of the year. The roots are tuberous, and require the same treatment as does Salvia patens. Aralia Chabrieri is a Croton-like plant. This was represented by a specimen 3 feet in height, very handsome indeed, and because of its long narrow pendant leafage it makes a peculiarly charming table plant. The same grower had Giant Red Capsicum in fine form, plants some 2 feet in height and heavily fruited. It is for exhibition or for sideboards a most effective variety.—A. D.
- —— CAREX JAPONICA.—This beautiful perennial Rush-like plant is one which should be grown extensively by all who have to carry out dinner-table decorations. Its slender variegated leaves, which attain a length of from 1 to 2 feet, are extremely light and graceful in appearance; in fact I know of no cultivated plant to equal it in this respect, which renders it an ideal plant for the above purpose, and thus enables the decorator to produce a light wavy surface without impeding the view across the table. The cultural requirements of this Carex are extremely simple, as it thrives well in almost any soil, succeeds in either a cool or warm structure, and requires but little root room, excellent examples being produced in 3-inch pots. Propagation is easily effected by root division, by which means a good stock may quickly be worked up. Those who are unacquainted with this plant should lose no time in obtaining it, and I feel sure they will consider I have not over-estimated its intrinsic merit.—H. D.

- THE ROYAL GARDENERS' ORPHAN FUND .- At the recent meeting of the Committee of the Royal Gardeners' Orphan Fund, W. Marshall, Esq., in the chair, the following special receipts were announced :- Mr. W. Elphinstone, The Gardens, Shepley Hall, Derby, opening the gardens during the summer, £11 1s. 6d.; Mr. J. H. Vallance, local Secretary, Bristol, legacy, £3 3s.; Mrs. Bowerman, Hackwood Park, sale of flowers, £1 6s.; Mr. J. Plowman, Woodstock Gardens, Long Sutton, box, 10s.; Mr. G. Tubb, Minley Manor, Farnborough, box. £1 2s. 2d.; Miss Barron, Chiswick, box, £1 11s.; Mr. F. A. Burbury, Highbury, Birmingham, box, £1 16s.; Mr. J. B. Stevenson, Chine Cottage, Bournemouth, box, 6s. 5d.; and Mr. C. Sutton, The Gardens, Chevening Park, Sevenoaks, 6s. 5d. The Secretary reported the receipt of £100 from Mr. N. Sherwood (Messrs. Hurst & Sons) as a jubilee celebration gift, and a hearty vote of thanks was passed to this generous supporter of the fund. The death of Mr. Hugh Low of Clapton, a member of the Committee, was alluded to, and a resolution of condolence with Mrs. Low on the great loss she and the Committee has sustained, was passed.

— Gardening and Forestry Exhibition. — Among the awards made at the recent Gardening and Forestry Exhibition, Earl's Court, for permanent exhibits, we noted the following names:—Gardening section.—Gold medal: Messrs. J. M. Bennett & Sons, Ardwick, Manchester. Silver-gilt medals: Mcssrs. Sutton & Sons, Reading; Messrs. J. Cheal & Sons, Crawley, Sussex; Messrs. Ransomes, Sims, and Jefferies (Limited), Orwell Works, Ipswich; Messrs. Joseph Owen and Sons, 67, St. Anne Street, Liverpool; Messrs. Conway G. Warne (Limited), Weston-super-Mare; Messrs. F. Rosher & Co., King's Road, Chelsea; Mr. G. W. Riley, 81, Dnlwich Road, Herne Hill, S.E.; Miss Sarah Sprules, Wallington, Surrey; and Messrs. Chaffey Bros. (Limited) 35, Queen Victoria Strect, E.C. The forestry section included—silver medals: His Royal Highness Prince Christian, K.G.; Mr. John Mickie, Her Majesty's Forester; and Colonel Beddome, F.R.H.S.

- THE WINTER MOTH.—Mr. J. Hiam, The Wren's Nest, Astwood Bank, near Redditch, observes, "This pest is making its appearance in strong force, as was to be expected after such an exceptionally favourable season for developing, and if grease-banding is to be resorted to instead of Paris green spraying in the spring no time should be lost. It may be well to call to memory that it was after the dry season of 1887, that 1888 and 1889 were so disastrous from the ravages of these caterpillars, and the orchards and plantations were stripped of truit and foliage. We have obtained much intimate knowledge since then of the habits of our common enemy, and we know that the female moths may be stopped if grease-banding is properly done. Egg-laying is chiefly carried out from the middle to the end of November, and if this month and December are mild a great increase in numbers next year will inevitably follow. We read in the summer that in Devonshire much damage was done from caterpillars, and it would be interesting to know if they were Cheimatobias or what kind?"

OPEN SPACES.—At the monthly meeting of the Metropolitan Public Gardens Association, 83, Lancaster Gate, W., the Earl of Meath, the Chairman, presiding, it was announced by him, as reported in the Journal of Horticulture last week, page 400, that the Prince of Wales had consented to become the patron of the Association and had contributed ten guineas to its funds. The Secretary also mentioned that a donation of £50 had been received from a member for the erection of a handsome drinking fountain in St. Thomas's Square Garden, Hackney; that the necessary consents had been obtained for the daily opening to the public of the Tower Wharf, instead of twice a week; that the Battersea Vestry had agreed to form a riverside recreation ground at a cost of over £2000, towards which the Association had offered to subscribe £1000: and that the laying out of Victoria Park Cemetery and the Pem Road Triangle was being satisfactorily carried on. It was agreed to offer to lay out the churchyards of St. Matthew and St. James's, Bethnal Green and Ion Square, Hackney Road, if their maintenance were secured, and if money for the payment of wages to those in want of work were forthcoming, the Association providing the balance, about one-half, of the total cost. It was also decided to offer to lay out Albion Square, Dalston, Bessborough Gardens, S.W., and Guy's Hospital disused burial ground, S.E., if transferred to the local authorities for maintenance; to offer trees for the Albert Embankment and other thoroughfares; to once more endeavour to prevent the Physic Garden, Chelsea, from being sold for building purposes; to promote the acquisition of five acres of land once forming part of Wandsworth Common; and to offer to bear the expenses of opening to the public a playground in Clerkenwell, when not used by the scholars.

—— RASPBERRIES IN OCTOBER.—Mr. W. Gabbitas, Harrogate, writes:—"I noticed several correspondents in the Journal of Horticulture (page 399) mention gathering Raspberries and Strawberries in the south, but I have not heard of anyone securing a second crop so far north as Harrogate. It might, therefore, be of interest to some readers to know that I have to-day (November 4th) gathered several ripe Raspberries and more are about half matured. They are on the new canes of this summer's growth. We have also been gathering Scarlet Runner Beans until a week since."

THE TOTAL RAINFALL FOR OCTOBER AT ABBOTS LEIGH, HAYWARDS HEATH, SUSSEX, was 4.26 inches, being 0.31 inch above the average. The heaviest fall was 1.45 inch, on the 11th. Rain fell on nineteen days. The maximum temperature was 64°, on the 21st; the minimum 27°, on the 31st. Mean maximum in the shade, 57.29°; mean minimum, 42.26°; mean temperature, 49.74°, about 4° above the average. The frost on the morning of the 31st is the first we have had to injure tender plants, and up till then Runner Beans and Dahlia blooms have been as fine as they have been this year. Some good Roses were gathered that morning, and Chrysanthemums on south front of house are still uninjured, showing their usefulness.—R. I.

— The Weather Last Month.—Mr. W. H. Divers, Ketton Hall Gardens, Stamford, remarks:—"October was changeable, but chiefly fine after the 7th with a fair amount of sunshine. We had seventeen bright days, two of which were clear. The wind was in a westerly direction twenty-nine days. Total rainfall was 2.48 inches, which fell on fifteen days, the greatest daily fall being 0.69 inch on the 7th; the total is 0.46 inch below the average for the month. Barometer—highest, 30.45 at 9 p.m. on 23rd; lowest, 29.16 at 1 p.m. on 4th. Temperature milder than usual—highest in shade, 67° on 16th and 21st; lowest, 29° on 31st; lowest on grass, 21° on 31st. Mean daily maximum, 58.54°; mean daily minimum, 42.54°; mean temperature of the month, 50.58°. Tender flowers, such as Dahlias and Heliotrope were not killed by frost until the 31st. It has been a very fine autumn for Wheat sowing. The garden spring ran $8\frac{1}{2}$ gallons per minute on 31st."

THE WEATHER IN HERTFORDSHIRE.—Mr. E. Wallis, The Gardens, Hamels Park, Buntingford, Herts, writes:—"The weather during the past month has been all that the horticulturist could possibly desire. There has been an abundance of rain, which has not in the least been a hindrance to outdoor work. The weather has also been of a very mild and open character. Taking the month all through, it has doubtless been one of the best Octobers ever known, and not until the morning of 31st was there sufficient frost to destroy such tender plants as Coleus and Iresine, when 7° were registered. Taking the year up to the present doubtless few gardeners have had such good all-round crops during any other season. Rainfall on fourteen days during the past month.—Maximum in any twenty-four hours was 1.06 on the 8th; minimum, 0.02 on the 22nd. Total during the month, 3 06, against 3.90 of 1892."

PEARS VERSUS PEACHES.

In answer to Mr. Molyneux on page 373, the figures previously quoted were those affixed to the fruit in the shop windows, and I considered that the grower could not be so badly treated when such a price was asked by the fruiterer. I could mention several instances around me where small growers have realised handsome prices for Pears, owing to their taking their produce round to the villa residences and so doing away with the middleman. Was it altogether a question of money which "C." had in his mind when he wrote the article on page 259? If so, I did not quite look at it in that light alone, but thought he referred to those persons who have private establishments.

Even if the market grower only was to be studied, I maintain that a wall covered with cordon Pears, well selected, and liberally fed with manure water during the summer, the result being magnificent fruits, would eventually prove far more profitable than Peaches in many parts of Lancashire. It is useless to expect to realise the best prices for unthinned fruit. There can be no doubt that where Peaches are known not to succeed that they might wisely be done away with, planting Pears in their stead. "C.'s" article is so carefully worded, persuasive, and so full of sound reasoning, that very little exception can be taken to it. Referring to Marie Louise Pear, I may say that it does splendidly here, and we have no Pear which gives us such a succession of fruit. Beurré Diel crops well also. From a wall we get large fruit and by no means badly flavoured. The worst flavoured fruit comes from the pyramids, at least so we find it here.—R. P. R.

PEACH LEAF BLISTER.

I TAKE this opportunity of thanking Mr. Abbey (page 373) for giving us the benefit of his scientific studies of the diseases of plants. He has brought to light many things which have been hidden from our

view, and I have no doubt he will further enlighten us on many more

diseases of which we are ignorant of at the present time.

About ten years ago we bought a dozen Peach trees, and planted them against a south wall. In the following spring one of them, about in the middle, had several blistered leaves, but none of the others had any on them. The next spring the same tree was worse affected, and a few odd leaves were blistered on the tree nearest to it. understand how cold winds could cause blister to come in such a peculiar way, and as I thought it might be either an insect or fungus, I gave the tree which was first (and the worst) affected a thorough syringing with softsoap, 2 ozs. to the gallon of water, which I repeated after a week's interval. The following spring the tree which was washed had very little blister, but it had considerably increased on all (or nearly all) the other trees. I then gave all the trees two good washings with the same admixture, which I follow up every spring, with the result that only slight traces of blister were visible this spring.—B. L. J.



CHRYSANTHEMUM SHOWS.

WE have received numerous intimations of Chrysanthemum shows which are to be held during the current month, but space can only be found for the enumeration of those that have been advertised in our columns up to date, of which the following is a list:-

Nov. 10th and 11th.—Bradford.

- 14th and 15th.—Twickenham, West of England (Plymouth).
 15th and 16th.—Birmingham, Hull, Bristol, South Shields, Rugby.
- 15th, 16th, and 17th.—Herefordshire. 16th, 17th, and 18th.—Edinburgh, York.
- 17th and 18th.—Bolton, Sheffield. 24th and 25th.—Eccles and Patricroft.

MR. SMEE'S CHRYSANTHEMUMS.

WE are informed that Mr. Smee's Chrysanthemums at The Grange, Hackbridge, Carshalton, Surrey, are open to public inspection every afternoon this week, also on Sunday next. The display is described as an excellent one, and no doubt numbers of persons will avail themselves of the privilege kindly afforded and opinion the foundation of the found of the privilege kindly afforded, and enjoy the floral treat provided by the skill of Mr. Cummins, Mr. Smee's most competent gardener.

CHRYSANTHEMUM LUCY KENDALL.

PERHAPS a note on this variety may not be inopportune now that it has been named in the Journal of Horticulture, and may, if it were necessary, set aside any doubt as to the distinctness of this variety. Lucy Kendall is a direct sport from Violet Tomlin, possessing all the characteristics of Princess of Wales. In colour it is pleasing, the middle part of each petal is deep purple violet, shading to a lighter tint near the edge. When unfolding the tip of each petal is gold colour, which passes away with age.—E. M.

A LARGE VIVIAND MOREL.

I HAVE a Viviand Morel Chrysanthemum that I think is an extraordinary size. I put a piece of string round the bloom and it measured 24 inches, and if raised and the petals spread out over 36 inches. Placing a piece of string over it extending to the bottom of the petals, it was $16\frac{1}{4}$ inches. What do your readers think about it? It is perfect as regards the colour.—F. J., Olton.

WHITE VIVIAND MOREL.

ALTHOUGH there may be a pure white variety in existence as a sport from Viviand Morel, it would be wise for "A Young Beginner" (page 402) not to exhibit what is apparently a new variety until the white is produced direct from cuttings in a general way, and especially developed from terminal buds, or, what is better still, grow a plant of it as a bush. If the whole of the blooms retained their purity of colour then, there could possibly be no doubt about the genuineness of Viviand Morel is so fond of sporting in the various stages of development, that it is hard to say what colour we shall obtain next from this grand Japanese variety.—E. MOLYNEUX.

I FEAR your correspondent, "A Young Beginner" (page 402), would not be allowed to show a white flower on the same board with Viviand Morel as a distinct variety. I had one, as I thought, thoroughly fixed last year, and sent it out as Mrs. W. R. Wells. I am sorry to say it has reverted to the parent variety. This I much regret, as I felt so confident of its constancy. If your correspondent had these plants through me I shall only be too pleased to substitute any other varieties as I guaranteed when I sent out plants of Mrs. W. R. Wells last spring.— W. Wells, Earlswood Nurseries, Redhill, Surrey.

[We suspect that any exhibitor is fully justified in staging a pure white form of Viviand Morel in the same stand with its deep pink prototype, as the two blooms, *pure* white and deep pink, would be

absolutely distinct. The two forms were staged in a prize stand at the Crystal Palace Show, and we suspect the judges did not entertain a thought of disqualification, nor are we aware that a protest was made by any exhibitor. The judges at the Crystal Palace were Messrs. T. Bevan, W. Coomber, R. Dean, J. Douglas, W. Earley, G. Gordon, J. Hudson, J. Laing, J. Willard, J. Wright, B. Wynne, and G. Wythes.]

CHRYSANTHEMUMS AT JESMOND TOWERS.

I AM glad to see you are making a striking feature of Chrysanthemums in your Journal. On Friday last I went to see one of our best growers in the north, Mr. T. J. Wheeler, gardener to C. Mitchell, Esq., Jesmond Towers, Newcastle, who cultivates nearly 500 plants, which are in excellent health and are carrying grand flowers. The best flowers of older varieties are Viviand Morel, Bonle d'Or, Florence Davis, W. Tricker, W. H. Lincoln, Bouquet des Dames, Etoile de Lyon, Coronet, Stanstead Surprise, Gloire du Rocher, La Triomphant, Cleopatra, Sunflower, Edwin Molyneux, Avalanche, Stanstead White, and Mdlle. Marie Hoste. The best new ones include Mrs. C. H. Payne (grand), Mdme. Edouard Rey, Elma D. Smith, G. W. Childs, Le Verseau, Miss Dorothy Shea, William Seward, John Shrimpton, Princess Victoria, Mrs. Neville, President Borel, Robert Owen, Excelsior, Colonel W. B. Smith, Mrs. W. H. Fowler, Lord Brooke, Beauty of Exmouth, Lucy Kendall, and Charles Davis (grand). Incurved blooms are rather later, but the best W. H. Fowler, Lord Brooke, Beauty of Exmouth, Lucy Kendall, and Charles Davis (grand). Incurved blooms are rather later, but the best are the Princess and Queen family, Mrs. Shipman, Mons. R. Bahuant, Baron Hirsch, Mrs. Clibran, Jardin des Plants, Refulgens, Madame Darrier, and Lord Wolseley. The Anemone varieties look well, the best new ones being Duchess of Westminster, Beauty of Eynsford, Gladys, and Sabine.—Bernard Cowan.

CHRYSANTHEMUMS AT THE CRYSTAL PALACE.

It may not be so generally known as it ought to be that one of the finest displays of Chrysanthemums now to be seen in or near the metropolis is at the Crystal Palace. As effective as the cut blooms and trained plants were at the Show there last week, they failed to make such a fine display as did the plants which had been grown at the Crystal Palace under the direction of Mr. W. G. Head, the Garden Superintendent. We are informed that 7000 plants are cultivated here, and so it may be imagined that these now form an attraction of no ordinary character.

The majority of the plants are arranged in a large group at one end of the central transept near the fountain, and here attract considerable notice. They are well grown and carrying flowers of a good size and substance. Whilst all the standard varieties are cultivated the novelties of the current year receive attention, and these are in excellent condition. In addition to the group mentioned there are many other smaller collections placed in various parts of the Palace, these imparting a bright appearance to the huge building. more could be said in regard to the excellence of the Crystal Palace Chrysanthemums, but space is valuable, and although brief, this notice will be sufficient to indicate that the plants are deserving of more than a passing glance.

CHRYSANTHEMUMS IN SOUTH WESTMORELAND.

DURING the last few years Chrysanthemums have been extensively cultivated for the production of large blooms in many private places in Westmoreland. The past season has been very favourable to many of the Japanese, but the incurved lack the refinement of last year.

At Dalton Hall, near Burton, Mr. Moorhouse has been a grower more than a dozen years, and his collection of about 300 plants does him great credit. New ones are tested each year. Among the best are Colonel W. B. Smith, John Dyer, and Felix Cassagneux, Florence Davis, R. C. Kingston, Alberic Lunden, and Sunflower. Among the incurved are, Robert Owen (which here resembles a poor Chevalier Domage), Mons. R. Bahuant (very fine), Madame Darrier, small but

At Dalton Tower Mr. Sarple has over 300 dwarf plants in one house. Gloire du Rocher, Miss Anna Hartshorn, W. Tricker, Viviand Morel (both pure white and deep mauve), Mdlle. Marie Hoste, Sunflower, W. Tricker, and J. Stanborough Dibben, are very fine, the same applying to Gloire du Rocher, which has long spreading florets resembling Sunflower in build. Among incurved Miss M. A. Haggas, the Queen family and Tecks are prominent.

Mr. McGregor of Brettorgh Holt, near Kendal, has some excellent flowers on the 350 plants grown. These included thirty plants of Bouquet des Dames, which made a fine show, Viviand Morel, W. H. Lincoln, Pelican, Miss Anna Hartshorn, W. Tricker, Mrs. E. W. Clark, Jeanne Delaux, are carrying exceptionally fine blooms; while of the incurved John Lambert, Lord Alcester, and Empress of India are fine. Mr. McGregor is of opinion that there are too many varieties grown generally, and maintains that if twenty or thirty plants of each of the very best varieties were grown a better display might be made.

At Sedgwick House many new varieties are grown, the most promising being Le Verseux, a refined Etoile de Lyon; Eda Prass, very fine; John Farwell, dark crimson maroon; Mrs. Nesbit, fine deep reflexed Japanese magenta with silvery reverse; Excelsior, incurved Jap.; Colonel W. B. Smith, very fine flowers; and Mrs. C. H. Payne, the largest of all. Among older varieties, Sunflower, Etoile de Lyon, W. H. Lincoln, Mrs. E. W. Clarke, E. Molyneux, and J. Stanborough Dibben are good. Incurved varieties are rough generally, but Madame Darrier and Mons. R. Bahuant are very fine. Many other new ones have promising buds, but this collection is later by a week or ten days

than any of the others, owing no doubt to the low-lying situation where the plants have been grown. About 400 plants are grown here for the production of large flowers, also a good number of bush plants.—W. S.

CHRYSANTHEMUMS AT MAIDENHEAD.

A FEW days since I paid a visit to Mr. R. Owen's nursery at Castle Hill, Maidenhead, to look over his collection of Chrysanthemums, and note a few of his most promising varieties. Several houses are filled with seedlings, and others with older and established named kinds. The whole stock is in a very flourishing condition; good eulture, together with the healthy and open position of the nursery, having much to do

with the sturdy and robust state of the plants.

Japanese varieties predominate, but a fair proportion of incurved, Anemones, and Pompons are also grown. On entering the first house Golden Avalanche was one of the most prominent to catch the eye, a seedling from the well-known white, having the dwarf and sturdy habit of the parent. A very fine seedling white, named Beauty of Maidenhead, is of large dimensions, long, waxy petals, the points incurved. James Myers is of a distinct rosy fawn colour, difficult to describe, and very good. W. H. Fowler is a good yellow, already exhibited. Viscountess Hambledon I noted was carrying some large blooms, and Mrs. Dene is another fine Japanese, colour silvery pink. Beauty of Exmouth is strongly in evidence, beautiful flowers on dwarf plants. Thomas Hewitt is another new variety, and in an adjoining house I observed a promising hirsute variety of a bronzy yellow colour, not fully open. It is impossible to mention all, and many seedlings have not yet received names. Many plants of Charles Davis, the sport from Viviand Morel, were in bloom, but corresponding in colour or petal with those certificated on October 11th, the flowers apparently being from terminal buds, and all of a bronzy red colour, and very little of yellow in it. Presumably the crown bud of strong plants produces the yellow flower, and one may still ask, Where is the real yellow Viviand Morel? The same remark applies to the so-called white sport Mrs. Wells; the terminal flowers are not pure white.

Of incurved varieties Brookleigh Gem was conspicuous; it is a lilac sport from Jeanne d'Arc, the flowers equalling that variety in size. Baron Hirsch is decidedly the greatest acquisition in this class, and will be sure to find a place in most prizewinning stands. Robert Petfield, a seedling from Princess of Wales, certificated, but not sent out yet, is of a silvery lilac colour, the type of its parent. Several exhibition blooms are now open. Lord Rosebery is an incurved of a dark plum colour, and a seedling partly expanded promised to equal in colour the well-known

Jardin des Plants.

Growing outside was an interesting display of October and early flowering kinds, an unusual show for the end of the month, several of the Japanese being worthy of mention—namely, Lord Hawke, rich claret; Harvest Home, chestnut red and gold; Golden Shower, very free; Snowflake, white; Gold-mine, bronze and gold; Profusion, these were all raised at Castle Hill. Others very good were the Pompons, including Inimitable, Pomponium, Madame Edouard Lefort, Viscount Clicquot, Souvenir de Louis Ferie, M. A. Herlaut, and La Vierge.—VISITOR.

AT THE ROYAL GARDENS, WINDSOR.

THE collection of Chrysanthemums at the Royal Gardens, Windsor, may be truly termed a royal one, comprising, as it does, all the latest may be truly termed a royal one, comprising, as it does, all the latest introductions, and many of the best of the older varieties. There are in all upwards of 4000 plants grown, and Mr. Thomas, the well known gardener, estimates that he will have almost equally as fine a display at Christmas as he has now. The display is a magnificent one, rich in colour, and splendid flowers. The plants are not arranged in one structure, but are placed in almost all the cooler houses in the gardens. Some are in full bloom, while others are only just showing their buds. Amongst these latter must be mentioned a number of small plants in 6-inch pots grown from cuttings rooted in strong heat during the month of June, and which are now sturdy little specimens. They will come in admirably for decorative purposes and for supplying cut blooms, though for this latter purpose Mr. Thomas has a large number of plants planted out in a border. All the plants are well grown and carrying stout foliage, in almost all cases right down to the pots. Flowers are numerous, and as has been said before, highly coloured, there being an average of half a dozen blooms to each plant. This remark applies of course to the large flowered sections, and not to those grown for purposes of decoration or for affording a supply of cut flowers.

From amongst the varieties in bloom at the present time a few of the very best have been selected and are mentioned here. Immediately on entering the structure in which the earliest plants are shown is a superb bloom of Wm. Seward of exceptional size and perfect form. Avalanche, though an old variety, holds its own well with some of the later introductions as also does the bright yellow Sunflower. Colonel W. B. Smith is represented by several grand flowers, the colour in many being a rich old gold. A beautiful variety is found in Brocklebank Improved, the colour of which is a charmingly delicate straw. J. W. Penny is a chaste flower with narrow pure white florets which render it most attractive amongst its more substantial looking neighbours. Some grand flowers of the well known Baron Hirsch are prominent, and the same may be said of the elaret-coloured R. C. Kingston. Puritan is a very beautiful variety which is deservedly popular, as also is Gloire du Rocher, of which there are some exceptionally good examples. Chas. E. Shea is a refined looking flower of a pale lemon yellow tint, and Annie Clibran may be placed amongst the first of the pinks. Hairy petalled

varieties are not numerous but of unusual quality, more especially of the Louis Boehmer type, of which the white variety is decidedly the best. Excelsior is a pleasing variety with bright magenta florets, having a silvery reflex. Bouquet des Dames appears to be unusually good everywhere this season, some blooms at Windsor being perfect

in their symmetry.

Miss Anna Hartzhorn is represented by some superb flowers, as also is Comte de Germiny, which is, however, rather paler in colour than it is generally scen. Duchess of Devonshire is a really fine flower, which should become popular, the blooms having a delicately refined appearance which is most pleasing. The colour is a charming shade of pink. Primrose League is a superb variety, the outer florets being nearly white, a centre of pale primrose; the flowers are large in size, and of a handsome shape. Condor, with its broad pure white florets, is deservedly popular, as also is Elwin Molyneux. A pale lemon-coloured variety, named Emily Dale Improved, is very beautiful; and W. A. Manda, with its bright yellow hairy petals, is amongst the most showy. Wm. Tricker is to be seen in perfect form, as also are Gloriosum, G. W. Childs, and Richard Parker. An attractive variety is to be seen in Moonlight, which is white, tinged with sulphur in colour. Madame J. Laing is a bright rose coloured flower of splendid shape, and the bronze blooms of the well-known Lord Brooke were very fine. A good salmon-tinted kind is Lilian B. Bird, and for a brick red Masterpiece will be difficult to supersede. A curious flower is seen on a plant of Madame R. Owen, one half being pure white, and the remainder deep lilac. The bloom was perfect in shape, and others on the plant had retained their normal colour. Amongst the numerous others noticed were Ada Spaulding, Mr. A. H. Neve, Edwin Lonsdale, Mdlle. Marie Hoste, Mrs. Heale, Madame Cabriol, Eynsford White, F. A. Davis, and Robt. Cannell. A large flower of Viviand Morel measured 13 inches diameter, which will serve to illustrate the admirable manner in which the plants have been grown. It must not be thought that those above mentioned represent the varieties cultivated at Windsor, for such is not the case. There are dozens of others perhaps equally as good, but of which special mention account he was a Normal and Norm of which special mention cannot be made. - NOMAD.

EARLY AND SEMI-EARLY FLOWERING CHRYSANTHEMUMS.

NOTWITHSTANDING the admitted general depression in trade, the progress of the Chrysanthemum is great, and the early and semi-early varieties enjoy their full share in this advance. The summer of 1893 has been one of such exceptional length and sunshine that it is a chance if many persons will see the like in England again. Its effects on all vegetation has been most marked, not only due to its length and brightness, but by its long period of absence of rain. Where Chrysanthemums have been planted in the open gardens or fields where they could not be sufficiently watered, their flowers, even after the rain did come, have frequently proved abortive, and even in many cases where they were grown in pots and sufficiently watered and manured the blooms have come with what growers call a "weedy eye." I have noticed this particularly in the two crimson sorts—viz, Roi des Précoces and Ruby King, which latter, in most seasons, quite fills up and covers any slight weedy eye that does exist. It seems, like many other cases in which Nature appears to fear for the existence of the race, that extra effort is made for its perpetuation, though, as far as I can sec, this has not been a good season for the growth of seed in this country of the Chrysanthemum.

Another curious result of the season has been that in July many varieties came into bloom that should in usual seasons have been a month later. Thus at the end of July I had twenty-two sorts in bloom, and at the end of October some were only then in flower that in ordinary years would have done so a month before, so that in July the scason was a month in advance of usual summers, and at the end of October it was in some cases a month behind. Then some varieties have bloomed twice in the season. White Lady, Strathmeath, and Dodo did so, and Blushing Bride has even bloomed three times. Of course in all these cases I am speaking of plants grown naturally, not disbudded or cut down in any way. Many plants through their thorough ripening and maturity have produced vast masses of flowers, even more than they usually do.

At the first Show at the Aquarium at Westminster on September 6th the most striking feature as regards early flowering Chrysanthemums were two exhibits of twenty-four bunches in twenty-four varieties. These exhibits were quite typical of two different modes of growing, and equally meritorious in their way. The blooms in one stand were probably grown entirely in the open air and naturally, while those in the other exemplified disbudding and finish under glass. Certificates were awarded on that day for a variety named Mr. Barlow, and for a new yellow kind named Edwin Rowbottom. I do not mention here the many other varieties exhibited at this and the second Show, because many were merely late varieties, grown early by taking the first bud or other means. At the second Show at the Aquarium on October the 11th a plant of Lady Fitzwygram, the new white early sort, was exhibited, also several plants of Ryecroft Glory, the new yellow. A group, mostly

composed of Piercy's Seedling, was likewise exhibited.

It may perhaps be well here to mention that the splendid early October variety Comtessee Foucher de Careil has become one of the greatest market varieties sold in various forms. Fine plants have been exposed for sale in 48-size pots. It has been called Source d'Or, but the latter variety eaunot be had nearly so early, neither is it so manageable a plant, being very tall and much less profuse in flowering. Gustave Grunerwald, not Grundelwald as I have seen it spelt, is the name of the Emperor of Russia's gardener at the Gatschine Palace in

Russia. This plant is already in the hands of one or more large market but perhaps will not be a common flower for some time, as it rather more delicate than some, and not so profuse a bloomer as many, but for high-class trade it must take a place, because it is the most beautiful very early variety. It was figured in the Journal of Horticulture

for August 18th, 1392.

Of new sorts I must put first Ryecroft Glory, to which allusion has already been made. It is the very finest semi-early yellow, as it does not really fully bloom till the middle of October. It has nearly every good quality for a plant in its line. It is stout and dwarf, $2\frac{1}{2}$ to 3 feet high, and if disbudded will give flowers $3\frac{1}{2}$ to 4 inches across, of a rich golden yellow colour. If grown naturally it produces a mass of bloom. It is good for propagation, and if cuttings are rooted in the middle of May the plants will bloom at the end of October, doing well in small pots. It is a real advance on any we have had before of its colour, and is useful not only as a decorative plant but for providing cut flowers. Another variety which deserves mention is Gloire de Mezin. This was raised in France, and sent over here in 1891, but although I grew it last yerr I did not discover its great merits. It is called a red crimson, but it seems more appropriately to be considered a red bronze. It is a reflexed flower, and grows without disbudding 4 inches across. The plant grows 3 feet 6 inches high, with dark massive foliage, and it also bears fine massive tufts of flowers which are a wonder to see. It is very good for propagation, and is an excellent variety in every respect. It blooms in the middle of October, and can be had up to the end of that month, making it in most scasons a fine open garden plant.

Madame Marie Massé is another sent over from France in 1891. is an excellent variety, very early, and will bloom from a cutting put in at the beginning of May at the end of August. It starts with three or four blooms, after which it shoots out from below these, and blooms right on into October. It grows rather over 2 feet high with a stout habit. The flowers are reflexed Japanese, in colour of a pale magenta to mauve; very good for propagation. Orange Child was raised here in 1891 from seed said to be of Source d'Or, grown in America. It is an excellent variety, somewhat resembling the yellow sports of Madame Desgrange, but of better habit, inasmuch as the separate flower stalks are longer, thus enabling the flowers to come out witbout disbudding. It is a profuse blooming Japanese with orange yellow flowers $3\frac{1}{2}$ inches across. Grows $2\frac{1}{3}$ feet high and stout, requiring no sticks to support it. Blooms in September, and has a moderate foliage. It has the advantage that all the flowers can be cut at one time, and the plant

put out of the way.

Montague is a seedling of my own, raised from American seed. It grows 4 feet high with a fine open habit, spare foliage, and stout wood. The flowers are 4 inches across, reflexed Japanese; rich purple crimson in colour. It does well without disbudding. Blooms at the beginning of October, and is one of the best of its colour that flowers at that period. Another seedling of my own raising is American Star. This is a model for stoutness of habit and profuseness of blooming. It grows only 2 feet high, being so stout that it requires no sticks, but covers itself with a perfect mass of white flowers 2 to 3 inches across, slightly flushed and pinkish colour. This is grown from American seed.

Another seedling named Maria grows a little over 3 feet high with flowers 21 inches across, colour mauve, which come in a solid mass of profusion all over the top of the plant. They are of Japanese form, stand well, and are borne on stalks which make them most convenient for cutting. A great number of flowers can be produced on a small space of ground. They come to full perfection in September. Early Beauty is a seedling from American seed. Flowers mauve, rather reflexed, 3 inches across. The plant has a bushy habit, and keeps on blooming from September to October. Mrs. Gifford is a beautiful silvery white Japanese seedling. The plant grows 3 to 4 feet high with a thin habit. The flowers are 3 inches across, and produced in October. Florie Parsons is a mauve reflexed Pompon 18 inches to 2 feet high, flowers 3 inches across. A continuous bloomer during September and October. Mdlle. Marguerite Puisaye was sent from France in 1891, but is very little known. It is a remarkably dwarf plant, requiring no sticks, growing only 2 to 2½ feet high, with fine Japanese flowers 3 to 4 inches across. It is termed a red brown, but we may set it down as a bronze. It is an admirable plant, can be had in bloom from September to October, at which latter time it will flower if rooted at the beginning of May. It is a profuse bloomer, covering itself with flowers, and a plant of very handsome form.

Lady Fitzwygram has not come up to my expectations of it last son. Like so many others, when all the buds but some five or six are taken off, it is good, but disappointing when they are all left on; then the flowers are certainly most numerous but small, and weak in the stalks, which are too short to make the flowers generally available for cutting. To grow the flowers a fair size the plant requires vigorous cutting and thinning-out, as well as disbudding. Another way to manage it is to root cuttings late, say 1st of May; then grow the plants in small pots, the produce moderate sized blooms. clusion I may mention that Mdlle. Rence Cohn has quite come up to my good opinion of it last season. It is excellent as a decorative plant or for cut flowers. As a pink Japanese it comes before pink Mdlle, Lacroix, but not to be confounded with Madame Léon Cohn, which I have found to be inferior to the above. Other growers and myself have many good seedlings and we can hope the time is not far distant that the early varieties may receive the addition of one equal in colour and habit to the unsurpassed crimson late one, William Seward.
—W. Piercy, Beadnell Road, Forest Hill, London, S.E.

CHRYSANTHEMUM SHOWS.

HORSHAM.-OCTOBER 31ST AND NOVEMBER 1ST.

THE fourth annual Exhibition of the Horsham Chrysanthemum Society was held on Tuesday and Wednesday, October 31st and November 1st, at the Assembly Rooms, and proved to be equal to any of its predecessors. Five good groups were arranged, the chief honour being won by Mr. A. Haskell, Slinfold. Mr. G. Marshall was a good second, Mr. E. Daniels third, Mr. J. Salter fourth, and Mr. S. Charman fifth.

In the open class for cut blooms some spirited competition resulted. For twenty-four Japanese blooms, distinct, Mr. G. Duncan of Warnham Court won with splendid flowers, massive and bright. The best were Viviand Morel, John Dyer, Miss A. Hartshorn, Colonel W. B. Smith, W. H. Lincoln, W. Seward, Edwin Molyneux, Lilian B. Bird, Wm. Tricker, and Etoile de Lyon. Mr. W. Wallis, Hartfeld, was second; his best blooms were John Shrimpton, G. C. Schwabe, and Mrs. E. W. Clarke. Mr. T. Sparks, Wimblehurst, was third with fine and even blooms. For twelve Japanese Mr. E. Lawrence was first, Mr. J. W. Harris second, and Mr. E. Daniels third. With six Japanese, one variety, Mr. T. Dauncey staged six faultless Viviand Morel; Mr. Duncan followed with Avalanche, and Mr. J. W. Harris third. For one bloom of any Japanese Mr. J. Coles put up a grand Colonel W. B. Smith, Mr. Sparks followed with Mons. E. A. Carrière, and Mr. H. Harris with Molle. Marie Hoste.

In the class for twenty-four incurved blooms of not less than eighteen varieties Mr. T. Sparkes had a grand even box of all the leading varieties, and was a good first. Mr. Goldsmith, Leonardslee, was second, and Mr. Wallis third. For twelve incurved, distinct, Mr. E. Daniels was first, Mr. H. Harris second, and Mr. J. W. Harris third. With six incurved, Mr. E. Lawrence, G. Duncan, and G. Goldsmith scored; and in the single bloom, incurved, the winners were Messrs. Goldsmith, Sparkes, and Wallis.

For six Anemones Mr. H. Harris won with a good box of Jean Marty, Delaware, Mrs. Judge Benedict, Lady Margaret, Grand Alveole, and Mrs. Leven. Mr. T. Sparkes was second, and Mr. Dauncey third. With six reflexed Mr. H. Harris again scored first, Messrs. Sparkes and Lawrence following. Mr. T. Sparkes led with twelve Pompons, a fine box. Messrs. H. Harris and E. Lawrence followed. In a mixed class for twelve Japs and twelve incurved Mr. G. Goldsmith was first, Mr. G. Duncan second, and Mr. J. Sparkes third, all showing well the leading varieties of both sections. Classes were provided for the ladies for baskets, sprays, and bouquets. Miss Willison, Mrs. A. Aldridge, Mrs. Stott, and Mrs. Champion secured the prizes amongst them for some very pretty arrangements. A few classes were provided for amateurs, and the prizes were won by Messrs. Charman, Stott, Champion, and others.

Fruit was well shown, and prizes won by the following: Black Grapes, Messrs. Duncan, Laurence and Le Pelley; White Grapes: Messrs. Dauncey, Duncan and A. Kemp; Pears, Dessert: Messrs. Messrs. Duncan, Laurence and Le Pelley; White Grapes; Messrs. Dauncey, Duncan and A. Kemp; Pears, Dessert: Messrs. Goldsmith, Duncan and Webb; Pears, Stewing: Messrs. Goldsmith, Kemp and Daniels; Apples, Cooking: Messrs. Goldsmith, H. Harris and Webb; Apples, Dessert; Messrs. Kcmp, Coles and H. Harris. Six varieties of vegetables, the prizes given by Messrs. Sutton & Sons, brought five fine collections; Messrs. Lawrence. Sparkes and H. Harris winning in the order named.

winning in the order named.

Mr. T. Sparkes sent some beautifully trained plants of Chrysanthemums, not for competition, these were much admired and were one

of the features of the Show.

The Secretaries, Mr. S. Mitchell and Mr. G. W. Taylor, and the Committee deserve a word of praise for the excellent arrangements made and for the results achieved.

EWELL.-NOVEMBER 2ND.

To recoup a loss on the late summer Exhibition of some £10, the local Horticultural Society resolved to hold a first Chrysanthemum Show this season, and it took place at the Public Hall on November 2nd. All exhibits were honorary so far that whilst a schedule was issued and classes formed, the competition was restricted to certificates of three classes, and these, of a very handsome character in three colours, were much prized. The Show, though small, was so good that it merits very high praise, especially that the exhibitors could not have any pecuniary

Three fine groups of Chrysanthemums were staged, the best coming from Mr. Ewinton, gardener to Sir David Evans, whose arrangement and flowers were both excellent. The second best, showing many good cut bunches for the front rows, was shown by Mr. Whiteman, gardener to A. W. Gaddesden, Esq.; Mr. Elsey, gardener to Miss Carlisle, being third. Then in the mixed group class Mr. Whiteman was first with a charming collection, Mr. Elsey being second, Mr. Ewinton and Mr.

Worsfold, gardener to Lady Glynn, being equal third.

Mr. Whiteman had the best six Bouvardias, really fine well bloomed plants; also six best berried plants, the Giant Red Capsicum being very finely fruited. The finest six double Primulas in four large flowered sorts came from Mr. Ewinton, all well grown, also the best singles. Mr. Whiteman had handsome Zonal Pelargoniums, and showed a fine collection of winter flowering plants, including Salvias, blue and scarlet Cypripediums, Chrysanthemums, Eupatoriums, Heaths, and Begonias. Cut flowers were few and only fairly good. Fruit was very good, Mr. Ewinton having the best Grapes, Mr. Whiteman the best six dishes of fruit, Mr. Elsey the finest three dishes of Pears, and Mr.

Ewinton the best of Apples. There were good Tomatoes, flowers in baskets, epergnes, and numerous other exhibits, all helping to make a

November 9, 1893.]

very pretty show.

HIGHGATE.-NOVEMBER 2ND AND 3RD.

THE ninth annual Exhibition of the Highgate and District Chrysanthemum Society was held in the Northfield Hall, Highgate, on the above dates. As a local Exhibition this has for many years been regarded as a very good one, and the present year's Show proved no exception to the rule. The cut blooms formed the principal feature, although groups

Mr. J. Brookes, gardener to W. Reynolds, Esq, J.P., The Grove, Highgate, was second with larger but rather coarse flowers. Mr. S. J. Cook, Hendon, was third. Mr. Turk, gardener to T. Boney, Esq., Cholmondeley Lodge, was first with twelve incurved blooms in a special class; Mr. A. Page, Priory House, New Southgate, being second. For six blooms of any one incurved variety Mr. J. Brooks secured the leading prize with a stand of Madame Darrier in fine condition. Mr. Rowbottom followed closely, and Mr. H. A. Page was third. The last-named exhibitor, however, won the special prize, given by Mrs. H. R. Williams, for twelve incurved blooms. Mr. Rowbottom was a close second with well-grown

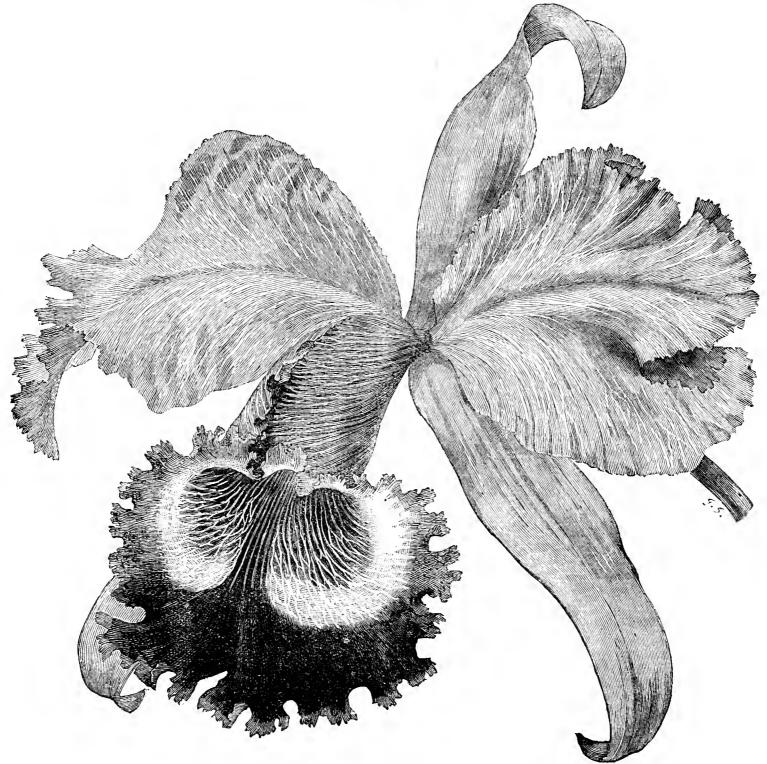


FIG. 62.—CATTLEYA LORD ROTHSCHILD. (See page 417.)

and plants were fairly well represented. Fruit and vegetables were also staged, but further reference to these cannot be made. The exhibits were very much erowded, which detracted considerably from the show as a whole. We append the names of the leading prizewinners in the classes provided for Chrysanthemums.

One of the principal classes in the cut bloom section was for twenty-four Japanese varieties, distinct. Mr. E. Rowbottom, gardener to H. R. Williams, Esq., The Priory, Hornsey, succeeded in winning the first prize. His blooms were in splendid condition, being large and well finished. The varieties were Mrs. C. H. Payne, Mrs. Falconer Jameson, Mdlle. Marie Hoste, E. Molyneux, Kentish Yellow, Alberie Lunden, W. Tricker, Avalanche, W. H. Atkinson, Gloire de Rocher, Golden Dragon, Utopia, Excelsior, Souvenir de la Malmaison, Col. W. B. Smith, Ada Prass, Chas. Davis, Edith Rowbottom, G. C. Schwabe, President Borcl, Sunflower, Viviand Morel, Miss Dorothy Shea, and Madame Thérèse Rey. Mr. J. Sandford, gardener to G. W. Wright-Ingle, Esq., Woodhouse, Finehley, was second with smaller flowers.

The incurved blooms were very good. Mr. J. Bureh, gardener to J. Smith, Esq., The Priory, Mill Hill, was placed first for twelve blooms, comprising Hero of Stoke Newington, Violet Tomlin, Princess of Teck, Princess of Wales, Novelty, Refulgens, Prince Alfred, Lady Dorothy, Madame Darrier, Alfred Lynn, Jeanne d'Arc, and Camille Flammarion.

specimens; and Mr. H. W. Hawker, Westerham, Kent, was third. A special prize was offered for thirty-six blooms, distinct, half to be incurved and the rest Japanese. There were three exhibitors in this class, and the competition was keen. Mr. J. H. Walker, gardener to J. Marshall, Esq., Goldbeater, Mill Mill, was placed first with a stand of grand blooms. The incurves were well finished, especially Mrs. Heale, Prince Alfred, Violet Tomlin, Madame Darrier, and Golden Empress. The best of the Japanese varieties were J. Stanborough Dibbens, Puritan, W. Tricker, Gloire de Rocher, W. H. Lincoln, Sarah Owen, Mdlle, Marie Hoste, and Col. W. B. Smith. Mr. E. Rowbottom was a very close second, the third prize going to Mr. J. Burch. Mr. Rowbottom secured the leading award for six blooms of one Japanese variety with a stand of magnificent examples of Col. W. B. Smith. These were the finest blooms we have seen this season. Mr. W. Hawker was second with blooms of W. Tricker.

A feature of the Show was a standard of twelve bunches of Chrysanthemums, arranged with foliage for effect. Mr. E. Rowbottom won the first prize with a charming arrangement. Mr. D. M. Hayter, gardener to W. Hannsford, Esq., Hendon, was second, and Mr. G. Quelch, Shepherd's Hill, was third. Mr. Sandford was placed first for six Japanese blooms, distinct, in a special class, Mr. A. Page being second. Mr. E. Linfield had the best six white Japanese in the amateurs' class,

Mr. Rowbottom gaining a similar position in the open class, both showing well grown blooms. The last named exhibitor was first for twelve Japanese blooms in a special class, Mr. Brooks occupying a similar position in another class. As before remarked, groups and specimen plants were fairly good, but the exhibits were so arranged as to render it impossible to distinguish the names of the prizewinners. For a group of Chrysanthemums Mr. J. Brookes was awarded the first prize.

Miscellaneous exhibits included a group of plants from Messrs. B. S. Williams & Son, Upper Holloway; a collection of fruit and vegetables from Messrs. W. Cutbush & Sons, Highgate; cut Chrysanthemum blooms from Mr. W. E. Boyce, Archway Road, Highgate; and some boilers from Messrs. Pearce & Heatley, Holloway Road, N. The amateurs' and cottagers' classes were well filled, and there were numerous baskets and epergnes filled with Chrysanthemums.

CRYSTAL PALACE .-- NOVEMBER 3RD AND 4TH.

AN Exhibition of Chrysanthemums was held at the Crystal Palace on the above dates, and as is usual on such occasions the produce staged was of excellent quality. Some of the classes were well filled, and the competition generally keen, the leading southern growers been repre-The Japanese blooms were splendid, being large, but not coarse, and well coloured. There were perhaps a few exceptions, but the foregoing remarks may be applied to the blooms in the leading stands. Taken as a whole the incurved blooms were also exhibited in excellent condition, especially in the principal stands; but in a few instances some rather rough ones were noticeable. The Anemone flowered varieties were exceedingly good, although not very extensively shown, the same applying to the Pompons. In two or three classes there were but few entries, and consequently some spare tabling was conspicuous. Trained plants were well shown, as also were the groups, some blooms on the plants being remarkably fine.

The principal class was for forty-eight blooms, twenty-four incurved twenty-four Japanese, not less than eighteen varieties of each, or more than two of one variety, for which the following prizes were offered: £10 first, £7 second, £5 third, £3 fourth. There were seven exhibitors, and the competition was very keen. As an example of this those veteran growers who have so many times in past years held the first prizes, Messrs. Drover, Fareham, were in this case placed fourth. coveted award fell to Mr. C. Ritchings, gardener to Dr. Frankland, The Yews, Reigate Hill, for an exquisite collection, the Japanese being massive, bright, and as fresh as it is possible to stage them. The incurved blooms were models of neatness, and seldom have we seen such fine flowers of the Rundle family as were staged in the front row of this exhibit. His Japanese blooms were staged as follows:—Colonel W. B. Smith, Edwin Molyneux, Viviand Morel (fine colour), W. H. Lincoln (good); Mrs. Harman Payne, John Shrimpton (fine), and the acme of brightness; Viviand Morel, Colonel W. B. Smith, Puritan, President Borel, Gloire du Rocher, W. H. Lincoln, Beauty of Exmouth, Edwin Molyneux, W. Seward, Sunflower, W. Tricker, W. H. Atkinson, Florence Davis, Excelsior, W. Seward, and Avalanche. Incurved: Baron Hirsch, Empress of India, Violet Tomlin, Madame Darrier, Empress of India, Prince Alfred, Baron Hirsch, Jeanne d'Arc, Queen of England, Madame Darrier (good), Princess of Wales, Violet Tomlin, Miss M. A. Haggas, Lord Wolseley, Jeanne d'Arc, Lady Hardinge (fine), Nil Desperandum, Mrs. G. Rundle, Mrs. Dixon, George Cockburn, Princess Beatrice, Cherub, and Mrs. G. Rundle. Mr. H. Shoesmith, gardener to M. Hodgson, Esq., Shirley Cottage, Croydon, was awarded the second prize for a very good collection. The Japanese were brighter than the rest and so keen did the third prize run him that it was not until con-The Japanese were brighter than the siderable amount of minute examination and pointing had been resorted to by the judges that the awards were made, only two points separating the second and third prize collections. Mr. Shocsmith's best Japanese were Edwin Molyneux, Viviand Morel, Col. W. B. Smith, Eda Prass, Charles Davis, Mdlle. Thérèse Rey, and a white Viviand Morel, which, as exhibited, is a distinct and appreciative variety. Mr. J. C. Salter, gardener to T. B. Haywood, Esq, Woodhatch Lodge, Reigate, was third. Excelsior, Charles Davis, Mdlle. Marie Hoste and Colonel W. B. Smith were amongst the best Japanese. Princess of Wales and Baron Hirsch were fine amongst the incurved in this stand. Messrs. W. G. Drover, Fareham, Hants, as before remarked, were placed fourth. The Japanese were somewhat weaker than the others and scarcely up to their usual brightness in colour; their incurved varieties were on the whole neat but a little flat.

In the class for eighteen incurved varieties, distinct, there were ten competitors, and Mr. W. H. Lees, gardener to F. A. Bevan, Esq., Trent Park Gardens, New Barnet, outdistanced the others with one of best and most even stands that could be staged. The blooms in the front row were as perfect both in size and form as those at the back. The varieties comprised Mons. R. Bahuant, Queen of England, Alfred Salter, Lord Alcester (magnificent), Lord Wolseley, Empress of India, Mrs. Coleman (good), Hero of Stoke Newington, Princess of Wales, John Doughty, Violet Tomlin, Jeanne d'Arc (grand), Madame Darrier, Alfred Lyne (good), Golden Empress of India, Princess Beatrice, and Miss Mr. George Carpenter, gardener to Major Collis Browne, Byfleet, was awarded the second place, Jeanne d'Arc and Madame Darrier being his finest blooms. Messrs. W. & G. Drover were third, and Mr. C. W. Knowles, gardener to Mrs. C. Egerton, Roehampton, fourth. For twelve incurved varieties, distinct, Mr. A. Felgate, gardener to Her Grace (Elizabeth) the Duchess of Wellington, Burhill, Waltonon-Thames, was placed first in the eight collections staged. The varieties were Mrs. Heale, Madame Darrier, Queen of England, Mons. R.

Bahuant, Princess of Wales, Noel Pragnell, Lord Wolseley, Jeanne d'Arc, Miss M. A. Haggas, Violet Tomlin, Eve, and Mrs. Coleman. Mr. W. Jupp, gardener to G. Boulton, Esq., Torfield, Eastbourne, was placed second, Mr. A. Turner, gardener to C. F. Murray, Esq., Woodcote Hall, Epsom, third, and Mr. T. Robinson, gardener to W. Lawrence, Esq., Elsfield Gardens, Maidstone, fourth. For six incurved, one variety, nine collections were staged, and Mr. Brown, gardener to A. B. Welch-Thornton, Esq., Beaupairc Park, Basingstoke, was placed first with six good blooms of Mons. R. Bahuant. Mr. W. Jupp was second with Princess Mr. George Goldsmith, gardener to Sir E. Loder, Bart., Horsham, third with Madame Darrier; and Mr. George Carpenter fourth with Prince Alfred.

No less than fifteen competed in the class for eighteen Japanese, distinct, the premier award falling to Mr. Lees with Viviand Morel, Stanstead White, Mr. C. Bryceson, Florence Davis, Edwin Molyneux, Condor, Sunflower, Charles Davis, Mr. F. Jameson, Madame E. Carrière (a magnificent flower), Col. W. B. Smith, G. C. Schwabe, Avalanche, Gloire du Rocher, W. Tricker, H. W. Lincoln, and Puritan. Messrs. W. & G. Drover were second; Mr. Charles Cox, gardener to J. Trotter, Esq., Brickenden Grange. Hertford, third; and Mr. Carpenter fourth. For twelve Japanese, distinct, there were twelve competitors, and Mr. E. Tickner, gardener to J. Watney, Esq., Shermanbury House, Reigate, won the premier position with Col. W. B. Smith, Violet Rose, W. H. Lincoln, Viviand Morel, Mdlle. Marie Hoste, Edwin Molyneux, President Borel, G. C. Schwabe, W. Tricker, Puritan, Lord Brooke, and Avalanche. Mr. A. Felgate; Mr. J. Harwood, gardener to A. J. Jack, Esq., Brightlands, Reigate; and Mr. W. Howe, gardener to H. Tate, Esq., Park Hill, Streatham Common, were placed second, third, and fourth respectively in the order of their names.

There were eleven exhibitors in the class for six blooms of one Japanese variety, and the competition was naturally very keen. The premier award, however, went to Mr. J. MacDonald, gardener to Captain Manling, Clanna, Sydney, Gloucester, who staged half a dozen splendid blooms of Edwin Molyneux. Mr. A. Felgate was second with exceedingly good Col. W. B. Smith. Mr. W. J. Owden, gardener to A. Morris, Esq., Court Green, Streatham, was third with Viviand Morel, and Mr. Chas. Cox, gardener to J. Trotter, Esq., Brickenden Grange, Hertford, was fourth with Stanstead White. In the class for eighteen reflexed and Japanese reflexed blooms there were three competitors. Mr. C. J. Salter secured the first prize for a stand of fine even flowers. These varieties were Wm. Seward, Eynsford White, Phidias, Elaine, Rosy Morn, J. Shrimpton, Edwin Becket, Mrs. Sullivan, Criterion, Gloire de Rocher, Maiden's Blush, Madame Prunal, La Triomphante, Ernest Asinils, Mons. Jules Chrêtien, Jeanne Delaux, and Emperor of Chiua. The second prize went to Mr. A. Felgate, and the third to Mr. C. Ritchings, Reigate Hill.

With eighteen blooms of Anemone and Japanese Anemone-flowered varieties there were seven exhibitors, and the competition was keen. Mr. C. J. Salter was first with Delaware, Ruche Toulous.ine, Mrs. Judge Benedict, Grand Alveole, Nouvelle Alveole, Annie Lowe, Minnie Chate, Lady Margaret, Acquisition, Cincinnati, Mons. Lebosqz, Duchess of Westminster, Sabine, Sœur Dorothée Souille, La Marguerite, Thorpe Junior, George Sands, and Gluck. Mr. J. Milner, gardener to Mrs. W. A. Higgs, Barnet, Herts, was second; Mr. R. C. Notcutt, Ipswich, third, and Mr. H. Harris fourth. Only one exhibitor was forthcoming in the class for twelve blooms of Japanese Anemone flowered varieties, but no award was made, as the stand contained two large flowered Anemones.

Four exhibitors competed in the class for twelve Pompons, distinct, three blooms of each. Mr. J. Knapp, gardener to F. W. Amsden, Esq., 22, Chichester Road, Croydon, secured the premier award for a stand of neat blooms. The best varieties were Perle des Beautés, Prince of Orange, Golden Madame Martha, Black Douglas, Florence Carr, and best varieties were Perle des Beautés, Prince Mdlle. Elise Dordan. Mr. C. J. Salter, gardener to T. B. Haywood, Esq., Woodhatch Lodge, Reigate, was second, and Mr. H. Harris, gardener to Mrs. Eversfield, Deene Park, Horsham, third. For twelve bunches of Anemone Pompons Mr. Salter was first, showing Aglaia, Antonius, Brightness, Madame Montel, Perle, Emily Rowbottom, Breolus, Madame Senter, Regulus, Mr. Astie, Bessie Flight, and Marguerite de Coi. Mr. Harris followed, and Mr. Knapp was third. There was only one exhibitor of twelve bunches of single Chrysanthemums, this being Mr. Geo. Carpenter, gardener to Major Collis Browne, Broad Oaks, Byfleet, but to whom the first prize was deservedly awarded. The flowers staged were delightfully fresh and formed a pleasing contrast to the other varieties. It is a pity these graceful Chrysanthemums are not more generally grown. The varieties staged by Mr. Carpenter were Bessie Conway, Miss Cripsly, Mrs. D. B. Crane, Sir T. Symons, Miss M. Wilde, Miss Mary Anderson, Rev. Rewfrey, Purity, Yellow Jane, Oceana, Lady Churchill, and Jane.

For a collection of Chrysanthemums in pots arranged for effect in a group not less than 50 feet square, and open to amateurs only, Mr. T. W. Wells, gardener to C. Ralph, Esq., Cranbrook Villa, Fox Lane, Upper Norwood, was placed first. This group was well arranged as regards colour, the plants also being dwarf and the blooms of a fair size. Mr. D. Baker, gardener to C. J. W. Rabbits, Esq., Westwood House, Sydenham, was a close second, the plants in this case being rather more crowded than in the first prize exhibit. They were nevertheless well arranged otherwise, and carried fine blooms. Mr. James Fry, gardener to W. Aste, Esq., Hill House, Sydenham, was third. There were two competitors in the open class for a collection of Japanese varieties only arranged for effect in a group of not less than 100 square feet. The firs

prize went to Messrs. J. Carter & Co., High Holborn, for a splendid group, comprising the leading varieties in excellent condition. Messrs. Mobsby & Son, 147, Moffat Road, Thornton Heath, were second. There was apparently only one exhibitor in the class for a group of incurved varieties, to be faced with Pompons and ornamental foliage plants. This was Mr. A. W. Young, 157, Holmesdale Road, South

Norwood, to whom the fourth prize was awarded.

Mr. J. Hughes, gardener to G. R. Higgins, Esq., Eastlands, Dulwich Village, was first for six trained specimens of Pompon varieties, showing Golden, Lilac and White Cedo Nullis, Saint Justin, Mabel (a yellow sport from Saint Justin), and Maroon Model in good condition. Mr. W. Wesker, gardener to A. Heaver, Esq., Upper Tooting, was second, and Mr. W. Carr, Croydon, third. Mr. Hughes was also first for six trained specimens of incurved varieties. The best of these were Mrs. G. Glenny, Mrs. Dixon, Prince Alfred, Mrs. G. Rundle, and Lord Wolseley, in grand condition. Mr. E. Cherry, gardener to Mrs. Gabriel, Norfolk House, Streatham, was second. Mr. Hughes repeated his success with six trained Japanese varieties, the finest of these being Margot, Stanstead Surprise, Cleopatra, and Viviand Morel. Mr. Wesker was second, and Mr. E. Cherry third. Mr. W. Carr secured the first prize for nine standard trained specimens with Mrs. G. Rundle, Alberic Lunden, Golden Madame Martha, Mrs. Dixon, Black Douglas, Elaine, Margot, Source d'Or, Mrs. G. Glenny, White Cedo Nulli, and Novelty. Mr. G. H. Cooper was second, and Mr. Carpenter third.

Miscellaneous exhibits were not so plentiful as we have seen them at the Crystal Palace. Mr. W. Wells, Earlswood Nursery, Redhill, staged a fine group of Chrysanthemums, also some splendid cut blooms of all the leading varieties. Messrs. W. Cutbush & Sons, Highgate, sen to box of blooms of Mrs. Leopold de Rothschild Carnation, a useful variety, which produces its charming pink flowers in the winter as well as in the summer. Messrs. J. Laing & Sons staged a group of flowering and ornamental foliaged plants not for competition, and some well grown blooms of Chrysanthemums, including the latest novelties. Mr. W. J. Godfrey, Exmouth, sent blooms of Beauty of Exmouth Chrysanthemum, for which a certificate was awarded. Mr. Godfrey likewise secured a certificate for a white Carnation named Mary, and staged a pink variety designated Reginald Godfrey. Both varieties are very fragrant. Mr. A. Ambrose, Bristol, also staged blooms of a white Carnation named Blagdon Surprise. The flowers were large, and of good Street, Messrs. Benham & Froud, Ltd., Chandos showed the simplex syringe fumigator, which appears to be a useful contrivance. Dr. Walker had some of his patent tubes and cups. Mr. C. E. Shea, Foot's Cray, staged splendid blooms of Chrysanthemums Miss Dorothea Shea and Mdlle. There'se Rey, and secured a certificate for the last named variety, which is one of the best acquisitions of the year.

NATIONAL CHRYSANTHEMUM SOCIETY.

NOVEMBER 7TH, 8TH, AND 9TH.

MANY persons who were present at the great autumn exhibition held under the auspices of the National Chrysanthemum Society, at the Royal Aquarium, Westminster, on the above dates, expressed the opinion that it was one of the finest ever seen there. This doubtless was the case, for taken on the whole the blooms were excellent, and the same may be said of the trained plants. In most classes the entries were very numerous, and the competition exceedingly keen. It is to be regretted, however, that space there does not permit the exhibits to be better arranged, inasmuch as a little irregularity on this point causes confusion amongst exhibitors who are desirous of finding any special class.

OPEN CLASSES.

The principal class in the cut bloom section was for forty-eight flowers, to consist of twenty-four incurved and twenty-four Japanese, distinct, the prizes being the challenge trophy and £10 as first, £6 as second, and £4 as third. This class is open to Chrysanthemum and horticultural societies on conditions as stipulated in the National Chrysanthemum Society's schedule. There were three entries, and the first prize fell to the St. Neot's Amateur and Cottage Horticultural Society. The member who contributed the blooms was Mr. R. Petfield, gardener to A. G. Thornhill, Esq., Widdington, Huntingdon. The Japanese were not particularly large, but wonderfully bright and fresh, and comprised the following varieties:—Mrs. C. Harman Payne, Violet Rose, Lord Brooke, W. H. Lincoln, Gloire de Rocher, Mrs. Hubbuck, W. Trickner, J. Dyer, Pelican, E. Molyneux, Waban, Chas. Davis, Eda Prass (grand), Alberic Lunden (very fine), Mdlle. Marie Hoste, G. C. Schwahe, Sunflower, W. W. Coles, Viviand Morel (fine), Mrs. Briscoe Ironside, Primrose League, Mr. E. C. Clarke, Avalanche, and Mr. C. W. Wheeler. The incurved blooms were neat and clean, but some of them were rather flat. The varieties were Mons. R. Bahuant, Empress of India, C. W. Whitnal, Princess of Wales, Lord Wolesley, J. Lambert, Violet Tomlin, Mrs. Robinson King (fine), Ami Hoste (good), Queen of England, Alfred Lyne, Novelty, Baron Hirsch, Jeanne d'Arc, Alfred Salter, John Doughty, Madamc Darrier (excellent), Golden Empress, Robert Petfield, Mrs. Heale, Prince Alfred, Lord Alcester, Brookleigh Gem, and Miss M. A. Haggas. After due consideration the second prize went to the Havant Chrysanthemum Society, the flowers in this case being contributed by Mr. J. Agate. They were well grown, particularly the Japanese, of which Mdlle. Marie Hoste, W. W. Coles, Viviand Morel, Lord Brooke, Princess May, and Chas. Davis may be mentioned as being capacially good. as being especially good. The incurved blooms were rather small and flat but neat, the best heing Lord Wolseley, Baron Hirsch, and Madame Darrier. The Sittingbourne and Milton Gardeners' and Amateurs'

Association came third with creditable blooms, the incurved in this stand being the best.

Incurved Blooms.—In the class for thirty-six incurved blooms, distinct, there were six competitors, and the fight for the Holmes Memorial challenge cup of £10 as first prize was very keen. The Judges were a considerable time in adjudicating, but eventually it was decided that Mr. W. H. Lees, gardener to F. A. Bevan, Esq., Trent Park, New Barnet, was first with a few points only. The blooms shown were grand, and comprised the following varieties:—Lord Alcester, R. Cannell, Mr. N. Davis, Prince Alfred, Mrs. Coleman, Cherub, Princess of Wales (grand), John Salter, Lord Eversley, Alfred Salter, Miss M. A. Haggas, Chas. Gibson, Lord Wolseley, Princess of Teck (fine), Mrs. Heale Mrs. Bobinson King, Ami Hoste, Princess Rostrice, Mons. Mrs. Heale, Mrs. Robinson King, Ami Hoste, Princess Beatrice, Mons. R. Bahuant, Jeanne d'Arc, Nil Desperandum, Queen of England, Lady Dorothy, Empress Eugénie, Violet Tomlin, Golden Empress of India, Mrs. Haliburton, John Lambert, Hero of Stoke Newington, Refulgens, Alfred Lyne, John Doughty, White Venus, Empress of India, Barbara, and Madame Darricr. Messrs. W. & G. Drover, Fareham, were awarded the second prize for a stand of fine blooms. The best of these were Empress of India, John Doughty, Lord Alcester, and Alfred Salter. Messrs. W. Ray & Co., Mount Pleasant Nursery, Teynham, secured the third prize; and Mr. H. Shoosmith, gardener to M Hodgson, Esq., Shirley, Croydon, the fourth, both staging fine blooms.

There were five exhibitors in the class for twenty-four incurved blooms, and here again the competition was keen. Mr. W. H. Lees repeated his former success, showing a stand of splendid blooms, which justifies him to a foremost position in the Chrysanthemum world. The varieties staged were Lord Alcester, Lady Dorothy, Princess Teck, John Doughty, John Salter, Madame Darrier (grand), Prince Alfred, Princess of Wales, Nil Desperandum, Mrs. Coleman, Hero of Stoke Newington, Miss M. A. Haggas, Lord Wolseley, Queen of England, Princess Beatrice, John Lambert, Alfred Lyne, Empress Eugénie, Violet Tomlin, Empress of India, Barbara, Golden Empress, Robert Cannell, and Jeanne d'Arc. Mr. C. W. Knowles, gardener to Chas. Egerton, Esq., Roehampton, was second; Messrs. W. Ray & Sons third; and Mr. J. Myers, gardener to the Earl of Sandwich, Hinchingbrooke Gardens, Huntingdon, fourth.

The class for twelve incurved blooms brought forth a very keen competition, there being no less than ten exhibitors. Mr. W. Collins, gardener to J. W. Carlile, Esq., Ponsbourne Park, Hertford, secured the leading award with a stand of neat blooms, deep in build. The varieties were Empress of India, Golden Empress, Princess of Wales, Mrs. Robinson King, John Doughty, Mrs. S. Coleman, Alfred Salter, Mrs. Heale, Violet Tomlin, Queen of England, Madame Darrier, and Lord Alcester, Mr. A. Felgate, Burchill, Walton-on-Thames, was second; Mr. B. Calvert Bishop Stortford, third; and Mr. G. Garpenter, Broad Oak, Byfleet. fourth. There were two competitors with six blooms of incurved varieties put into commerce in 1891 or 1892, but both were disqualified for staging flowers not in accordance with the schedule. With six incurved blooms of any one variety, there were seven competitors, and Mr. W. Collins was placed first with six grand specimens of Mrs. Heale. Mr. J. Hewett, Hillside House, Hythe, was second with Lord Alcester, and Mr. Calvert third with Violet Tomlin.

Japanese Blooms.—An exhibitor, who has been improving rapidly with florists' flowers during the past few years—W. Herbert Fowler, Esq., Claremont, Taunton—secured the first prize and the Holmes' Memorial challenge cup in the class for forty-eight Japanese, and his victory was the more creditable owing to the strength of the competition. His stand was not striking for weight, but it was wonderfully even, the flowers all being good and fresh. The varieties in the back row were J. S. Dibben, Etoile de Lyon, E. Molyneux, Stanstead White, Mrs. E. W. Clarke, Thos. Hewitt, Van den Heede, Thos. Selwood, Viviand Morel, W. K. Woodcock, Mrs. E. D. Adams, R. C. Kingston, Col. Smith, Julius Roehrs, W. H. Lincoln, and Duke of York. Middle row: Violet Rose, Sunflower, W. H. Lincoln, and Duke of York. Middle row: Violet Rose, Sunflower, Potter Palmer, Miss Dorothea Shea, a blush seedling, G. C. Schwabe, Florence Davis, W. W. Coles, Madamc J. Laing, Mrs. F. Jameson, G. W. Wheeler, Marie Hoste, W. Tricker, Miss Muriel Scott, Puritan, and Chas. Davis. Front row: Miss Anna Hartshorn, Beauté Toulousaine, E. G. Hill, W. Falconer, C. Shrimpton, Mrs. Alpheus Hardy, Rufacto Marshaletta, Mdlle. Thérèse Rey, Robt. Owen, Louis Boehmer, Beauty of Exmouth, Vice-President Calvat, Autumn Tints, Gloire du Rocher, J. Shrimpton, and Chas. Blick. Mr. Fowler had very sensible labels for his varieties. Mr. Chas. Cox, gardener to J. Trotter, Esq., Brickenden, Hertford, also had a very fine stand, some of his blooms, notably Hertford, also had a very fine stand, some of his blooms, notably E. Molyncux, Viviand Morcl, Boule d'Or, Chas. Davis, Wm. Seward, and Stanstead White, being grand examples. The old champion, Mr. C. Gibson, gardener to J. Wormald, Esq., Morden Park, was third. He had lighter flowers than the others, but they were otherwise admirable. Messrs. W. & G. Drover, Fareham, were fourth.

The stands in class 8 for twenty-four Japanese blooms made a show in themselves, for there were many fine exhibits. The best was that from Mr. W. Higgs, gardener to J. B. Hankey, Esq., Fetcham Park, Leatherhead, who had a very heavy and beautiful box, in which Colonel Smith (magnificent), Beauty of Castle Hill, Stanstead White, Violet Rose, W. Seward, J. S. Dibben, Puritan, and E. Molyneux were splendid It was one of the best twenty-fours ever shown. Mr. W. H. Lees, gardener to F. A. Bevan, Esq., Trent Park, New Barnet, also had an excellent stand, and was placed second, his Viviand Morel. Charles Davis, Mrs. Alpheus Hardy, Sunflower, Colonel Smith, and Mrs. Jameson being very finc. Mr. H. Shoesmith, gardener to M. Hodgson, Esq., Shirley Cottage, Croydon, was third, his Colonel Smith, Viviand Morel, E. Molyneux, and Madamc Calvat being excellent flowers. Mr. W. Collins, gardener to W. Carlile, Esq., Hertford, was fourth. There were seventeen entries.

Mr. W. Allan, gardener to Lord Suffield, Gunton Park, proved that he can grow Chrysanthemums as well as Strawberries by staging a splendid stand of twelve blooms. It was composed of a magnificent Viviand More, very fine Coronet, Stanstead White, W. H. Lincoln, and Miss A. Hartshorn, and excellent Mrs. Payne, Avalanche, Stanstead Surprise, Comte de Germiny, J. Dyer, Sunflower, and W. Tricker—altogether a very fine display. Mr. Felgate, gardener to the Duchess of Wellington, Burhill, Walton-on-Thames, had a very fresh stand, Col. Smith, Viviand Morel, W. H. Lincoln, and W. Tricker being exceptionally good. Mr. Thorne, gardener to Major Joicey, Sunningdale, was third, and Mr. Sturt, gardener to N. L. Cohen, Esq., fourth, both showing well. In the class for six white Japanese Mr. W. Collins was first with fine Avalanche; Mr. Calvert, gardener to Col. Archer Houlton, second with the same variety; and Mr. R. Jones, gardener to C. A. Smith-Ryland, Esq., third with Florence Davis. With six of any other salest Mr. W. Colling was partial beginning to the form of F. Malancara. colour Mr. W. Collins won again, having a grand box of E. Molyneux; Mr. Shoesmith was second with Colonel Smith, and Mr. Telgate third with the same variety. Mr. W. H. Lees was first with Japanese incurved, staging Col. Smith, E. Molyneux, W. Tricker, W. H. Lincoln, Mdlle Carrière and Mrs. Alphone Hordy in boardiful and Mrs. Mdlle. Carrière, and Mrs. Alpheus Hardy in beautiful order. Mr. Calvert was a very good second, and Mr. W. H. Fowler third. Much interest attached to the class for twelve Japanese of 1891 and 1892. Mr. W. J. Godfrey, Exmouth, won with Miss Dorothea Shea, Lizzie Cartledge, Primrose League, Mrs. Harman Payne (very fine), Chas. Blick, Aureole Virginale, Van den Heede, Princess May, Duchess of Devonshire, J. Farwell, Pearl Beauty, and Lilian Russell. Mr. H. Shoesmith was second, and Mr. Fowler third.

Reflexed, Anemone, and Pompons.-With twelve large reflexed blooms, there were twelve competitors, and Mr.J. F. Thorne, gardener to Major Joicey, Sunningdale Park, was awarded the first prize. This exhibitor had Cloth of Gold, Pink Christine, Cullingfordi, King of the Crimsons, Distinction, James Carter, Cloth of Gold, Phidias, White Christine, Golden Christine, and Putney George. Mr. A. Sturt, Round Oak, Englefield Green, was second, and Mr. Chas. Brown, gardener to R. Henty, Esq., Langley House. Abbots Langley, third.

Mr. A. Ivies, gardener to C. E. Jukes, Esq., Hadley Lodge, High Barnet, was placed first in the class for twenty-four large-flowered Anemones, showing fine blooms. The best of these were Empress, Annie Lowe, Madame Lawton, Delaware, Nelson, George Hawkins, Sabine and Minnie Chate. Mr. W. Skeggs, gardener to A. Moseley, Esq., West Lodge, Barnet, was second, and Mr. John Milner, Willenhall Park, Barnet, third. Mr. Ivies had the best twelve Japanese Anemones; Mr. R. C. Notcutt being second, and Mr. J. Milner third. Mr. Ivies also secured the first prize for twelve large Anemone blooms (Japanese excluded), showing amongst others Lady Margaret, Annie Lowe, Empress, and Mrs. Judge Benedict in grand condition. Mr. A. Sturt was second, and Mr. C. Brown third.

For twelve Anemone Pompons, three blooms of each variety, Mr. J. Myers secured the leading award for a stand of fine blooms. N. Aldridge, Palmers Green, was second, and Mr. C. Browne third. Pompons were best shown by Mr. C. Brown, who had an excellent stand of blooms, amongst which Brilliant, Cinderella, and Black Douglas were very good. Mr. Turk was second, and Mr. J. Myers third.

Special Prizes .- In the class for twelve incurved blooms for the special prizes offered by Mr. E. C. Jukes, Mr. Robert Petfield, Diddington, Hunts, was first with neat blooms, amongst which Baron Beust, Eve, Mabel Ward, Mrs. Shipman, Lady Dorothy, Mrs. Rundle, and Venus were conspicuous. Mr. W. H. Lees was second, and Mr. C. W. Knowles third. Mr. E. Rowbottom, gardener to R. Williams, Esq., The Priory, Hornsey, secured the first award for six blooms of seedling Chrysanthemums, the prizes being offered by Mr. H. J. Jones. The varieties staged were A. G. Hubbuck, Autumn Tints, W. H. Atkinson, Mr. Chas. Blick, H. F. Tiarks, and Miss Muriel Scott. Mr. Herbert Fowler, Taunton, was second, and Mr. J. Agate third. Mr. W. G. Godfrey, The Nurseries, Exmouth, secured the silver medal given by Mr. Jones for six seedlings sent out last year, and this with Beauty of Exmouth, Miss Dorothea Shea, Mrs. H. Payne, Van der Heede, Golden Wedding, and Pearle Beauty.

Mr. Agate secured the first prize given by Mr. R. Owen, Maidenhead, for twelve blooms of six new incurved varietics, and Mr. C. Ritchings, Reigate, gained Mr. Godfrey's special prize for six blooms of Beauty of Exmouth.

AMATEURS' CLASSES.

The amateurs came out in strong force with twenty-four Japanese. J. R. Wildman, Esq., 9, Grove Road, Clapham Park, had an excellent stand; albeit the blooms, with the exception of Viviand Morel, Mrs. Jameson, and one or two others, ran rather small. Mr. J. Horril, West Street, Havant, was second with bright smooth flowers, and Mr. A. J. Parker, 172, New Kent Road, was third.

For twelve incurved blooms in this section, Mr. J. Horril, West Street, Havant, was placed first, showing good blooms of Lord Wolseley, Golden Emperor, Mrs. Heale and Prince Alfred; amongst others J. R. Wildman, Esq., was second, and Mr. Thomas Lansley, Watford, third. Mr. Alfred Holmes, The Grange, Gosport, was first for six incurved blooms, Mr. T. Brown, South Wimbledon, being second, and Mr. C. E. Wilkins, Woodside, Surrey, third.

With twelve, Mr. Alfred Holmes, Fort George, Gosport, won, and he had an excellent stand. Mr. Thos. Lansley, 155, Pinner Road, Watford, was a very close second, his blooms being good in every way. Mr. Tullett, gardener to G. Alexander, Esq., was third, under protest. There was very close competition in the sixes. Mr. F. Durrant, 4, New Road, Ware, was first, having a splendid Viviand Morel in his stand. Mr. J. Brown was second, Mr. Alfred Holmes third, and Mr. F. W. Buckingham, Tonbridge, was awarded an extra prize.

Mr. W. C. Pagram, gardener to A. F. Hobhouse, Esq., The Whim, Weybridge, won with twelve single Chrysanthemums, and he had a charming stand, Yellow Jane, Bessie Conway, Mary Anderson, Jane, Millie Agate, and Rev. W. E. Remfrey being very fine indeed. Mr. J. Agate, Havant Nurseries, was second, some points in the rear, his Golden Star being, perhaps, the best. Mr. Carpenter, gardener to Major Collis Browne, Broad Oak, Byfleet, was a good third. Mr. John Little, Romford, had the best stand of twelve in the amateurs' and single-handed gardeners' classes, and a very good one it was; Mr. E. Tickner, gardener to J. Watney, Esq., Reigate, being second, and Mr. W. C. Pagram third. Mr. Tickner won with six, Messrs. E. Mawley, Rosebank, Berkhampsted, and W. Jones, gardener to W. Hooper, Esq., Sutton, being second and third. Mr. Little, Romford, secured the first prize for twelve in Little blooms in this section, showing neat examples. Mr. J. G. Turk, High-gate, was second, and Mr. E. Trickner, Reigate, third. Mr. Pagram, Weybridge, staged the best six incurved blooms, Messrs. W. H. Davis and C. E. Wilkins following.

The metropolitan classes were open to growers who reside within the limits of the London County Council, and the whole of them were well filled. For twelve incurved blooms, Mr. F. Bingham, Stoke Newington, was first; Mr. W. Davey, Stamford Hill, being second, and Mr. F. W. Wraight third. Mr. J. Bury, Tewkesbury Lodge, Forest Hill, had the best six incurved blooms in this section; Messrs. J. Brookes, Highgate, and F. Bingham following. Mr. Brookes was first in the class for twelve Japanese, distinct; Mr. W. Beech, Hereford House, South Kensington, second, and Mr. Bingham, third. The last named exhibitor had the best six Japanese blooms. Messrs, Vince and Bury, being second and third. six Japanese blooms, Messrs. Vince and Bury being second and third.

GROUPS AND TRAINED PLANTS.

Only two groups of Chrysanthemums were entered for competition, these being arranged by Mr. H. J. Jones and Mr. Davis, to whom the first and second prizes were awarded. Mr. W. Davey, gardener to C. C. Paine, Esq., won with six standard trained large-flowered varieties; Mr. W. Donald, gardener to J. G. Barclay, Esq., was second; and Mr. W. Wesker third. Mr. G. W. Hendon won with standards of any varieties, Mr. Silks being second, and Mr. Hughes third. Mr. Donald had some of the finest trained specimens ever exhibited at these Shows. His six were magnificent examples, both as to health, training, and flowers. Margot and Gloriosum were superb. Mr. J. Hughes was second, and Mr. Wesker third. Mr. Hendon won with four, these being about half the size of Mr. Donald's plants. Messrs. W. Davey and Gilks were second and third. Mr. J. Hughes was first for six trained specimens of Pompons, and Mr. F. Gilks, Forest Road, Walthamstow, had the best "naturally trained" plant. Mr. D. Donald, Leyton, secured the leading award for a single specimen, showing Margot in grand condition.

MISCELLANEOUS.

Miscellaneous exhibits were numerous. Mr. Robert Owen, Maidenhead, staged a splendid collection of Chrysanthemum blooms. comprising all the latest novelties. Mr. W. Godfrey, Exmouth, also had some grand flowers of the newest varieties, which attracted notice. Mr. H. J. Jones, Ryecroft Nurseries, Lewisham, made a special feature in the Exhibition by staging fine blooms in large vases, and these created quite a sensation. It would be well if this method of staging were more generally adopted. Messrs. E. D. Shuttleworth & Co., Limited, had a neat stand of table and greenhouse plants, healthy and wellgrown. Messrs. J. Laing & Sons had a table of large and richly coloured Apples. Mesers. B. S. Williams & Son contributed a stand of Orchids and Heaths, which was very much admired. Messrs. Cannell and Sons were represented by a splendid display of Chrysanthemums and Zonal Pelargoniums interspersed with Ferns, which created a most brilliant effect. Messrs. Sutton & Sons filled a long table with heaps of their fine Potatoes, Supreme, Windsor Castle, Triumph, Abundance, and Satisfaction, the tubers being of splendid quality. Mr. J. George, Putney, had horticultural sundries; Mr. J. Myers, Hinchingbrooke, the "Acme" self-clipping double rising tube for Chrysanthemums; G. W.

Davis, tins of fertiliser; and Williams, Iles & Co., pottery.
Mr. J. R. Chard, Stoke Newington, and Mr. F. W. Seale, Sevenoaks, divided the prizes for three vases or epergnes of Chrysanthemums, while Messrs. Perkins & Sons, Coventry, and Gilbert Davidson, Annanford, South Wales, won the awards for a table of bouquets and wreaths.

The special prizes offered by Messrs. Sutton & Sons for a collection of vegetables brought forth a good competition. Mr. W. Pope, High Clere Castle Gardens, was first for a grand collection. Mr. C. J. Waite was second, Mr. Richards, Sydmonton Court, Newbury, third, and Mr. G. Best, Basingstoke, fourth. Mr. Turton, Maiden Erleigh, Reading, was first for six dishes of culinary Apples, and also for a similar number of dessert Apples. Muscat and black Grapes were well shown by Mr. C. Giffen, Kingston-on-Thames, and Mr. Brown, Forest Hill, also had two good bunches of Gros Colman Grape, for which the first prize was awarded. Mr. W. Allan, Gunton Park, was first with six dishes of dessert Pears, Mr. W. Benwick being second. The last named exhibitor also staged a large number of Apples, and Messrs. W. Cutbush & Sons had Apples and bunches of Chasselas Napoleon Grapes. Amongst other things Potatoes were extensively shown in the competitive classes, and in addition to Messrs. Sutton's exhibits, C. Fidler staged Potatoes in fine condition, as did Messrs. H. Cannell & Sons, Swanley.

Numerous new Chrysanthemums were exhibited by some of the leading growers, including Messrs. H. Cannell & Sons, H. J. Jones, R. Owen, W. J. Godfrey, T. S. Ware and others, but no certificates had been awarded when our reporter left the building. These will be mentioned in our next issue.

KINGSTON AND SURBITON .- NOVEMBER 7TH AND 8TH.

THE seventeenth annual Exhibition of this far-famed Society must be recorded as among the very best that have been held this season, and Kingston again maintains the prestige it has won so well. Not a bad exhibit was to be found in the whole Exhibition, composed of over seventy classes. Marked excellence characterised the Show throughout, and Mr. G. Woodgate, the Hon. Secretary, Mr. John Drewett, the Hon. Treasurer, who has been connected with it from the first, and the executive may justly be proud of the success achieved.

More than usual interest centered in the Exhibition owing to there being two silver challenge cups awarded, one competition being for final possession. This was the sixth champion challenge vase, value 25 guineas, for forty-eight Chrysanthemum blooms, distinct, twenty-four incurved and twenty-four Japanese, arranged on separate boards. This having been won successively by T. H. Bryant, Esq., Juniper Hill, Dorking; Major Collis Browne, Broad Oaks, Byfleet; and Alfred Tate, Esq., of Downside, Leatherhead, the final competition this year was confined to those three gentlemen, as represented by their gardeners, Messrs. Beckett, Mease, and Carpenter respectively. Mr. W. Mease, who won the coveted honour last year, wrested it from the previous holders, and the vase now becomes Mr. Tate's property. The whole collection was massive, the blooms being of great depth, especially his twenty-four incurved. The collection consisted of the following varieties:—Japanese: Viviand Morel, George Daniels, Boule d'Or, Mrs. Harman Payne, Eda Prass, Edwin Molyneux, Condor, Col. W. B. Smith, Robert Owen (magnificent), Excelsior, W. Tricker (fine), G. C. Schwabe, J. S. Dibbin, Etoile de Lyon, W. Seward, V. P. Darquier, Mdlle. Thérèse Rey, Mrs. Falconer Jameson, W. H. Lincoln, Mrs. Cannell, Vice-President Calvat, Lord Brooke, Miss Anna Hartshorn, Chas. Davis. Incurved: John Lambert, John Doughty, Jeanne d'Arc (fine), C. B. Withnal, Robert Cannell, Mons. R. Bahuant, Marquise de Paris, Queen of England, Lord Alcester, Violet Tomlin, Golden Empress, Princess of Wales, Madame Darrier, Empress Eugénie, Mrs. S. Coleman, Empress of India, Princess Beatrice, Mrs. W. Shipman, Mrs. Heale, Nil Desperandum, Miss M. A. Haggas, Princess Teck, John Salter, and Novelty.

Mr. C. Beckett, gardener to T. H. Bryant, Esq., Juniper Hill, Dorking, was placed second. Most of his Japanese were of good build and possessed both finish and colour, but several of his incurves were lacking in depth. Sunflower, G. W. Childs, Beauty of Castle Hill, Excelsior, and Vice-President Darquier were amongst his best Japs; Jeanne d'Arc, Baron Hirsch, Princess of Wales, and Madame Darrier were the finest in finish of his incurves. Mr. G. Carpenter, gardener to Major Collis Browne, Broad Oaks, Byfleet, was a very close third, and he would probably have been in a stronger position had the Show been a few days earlier.

The seventh champion challenge vase, value twenty-five guineas, is open to subscribers of one guinea, for forty-eight Chrysanthemum blooms, distinct, twenty-four incurved and twenty-four Japanese, the winner to hold the vase till the next Exhibition. Should the same exhibitor win the vase twice (not necessarily consecutively) it shall become his property; but should it be won by three different exhibitors in the first three years, then the competition in the fourth year shall be confined to the three winners. Winners of the challenge vases:—1882, T. D. Galpin, Esq., Bristol House, Putney; gardener, G. Harding. 1883, W. H. Myers, Esq., Swanmore Park, Bishop's Waltham, Hants; gardener, E. Molyneux. 1885, W. H. Myers, Esq., Swanmore Park, Bishop's Waltham, Hants; gardener, E. Molyneux. 1887, J. Wormald, Esq., Morden Park; gardener, C. Gibson. 1888-9, W. Furze, Esq., Roselands, Teddington; gardener, E. Coombs. 1893, Alfred Tate, Esq., Downside, Leatherhead.

There were five collections staged for the new vase, the premier award being made to Mr. W. Neville, gardener to F. W. Flight, Esq., Cornstiles, Twyford, Winchester, who is now the holder for the first year of what in Chrysanthemum phrase is considered the blue ribbon of the show if not of the nation. This collection comprised of Japanese, Viviand Morel, W. H. Lincoln, Thomas Hewitt, E. Linsdale, Puritan, Beauté de Toulousaine, W. Tricker, Colonel W. B. Smith, Florence Davis, Stanstead Surprise, W. R. Woodcock, Marquise de Paris, R. Brocklebank, Condor, Lord Brooke, Stanstead White, Boule d'Or, Miss A. Hartshorn, Golden Dragon, Madame J. Laing, Comte de Germiny, Glorie du Rocher, J. Shrimpton, and Sunflower. Incurved: Lord Wolseley, Mrs. Colcman, Lord Alcester, Prince of Wales (fine), Mons. Bahuant, Golden Empress, Baron Hirsch, Jeanne d'Arc, Miss Haggas, Queen of England, John Doughty, Violet Tomlin, Empress of India, Prince Alfred, Mrs. Heale, Ami Hoste, Golden Queen of England, Mr. Brunlees, Alfred Lyne, and Mr. Bunn. Mr. G. J. Hunt, gardener to Pantia Ralli, Esq., Ashtead Park, Epsom, was a very good second. Robert Owen, a beautiful incurved Japanese, stood out most prominent in this collection; he had also good finished flowers of Jeanne d'Arc, Princess of Wales, and Nil Desperandum. Mr. J. Quarterman, gardener to C. E. Smith, Esq., Silvermore, Cobham, was placed third for an even and neat collection, and Mr. G. Woodgate, Warren House Gardens, Kingston, fourth.

In the class for twenty-four incurved, distinct, seven collections were staged. Mr. W. Higgs, gardener to J. B. Hankey, Esq., Fetcham Park,

Leatherhead, was well ahead with a magnificent collection throughout; probably he staged as fine blooms of the Queen family as has been exhibited this season. Golden Empress was grand, also John Doughty, John Lambert, Queen of England, John Salter, Lord Alcester, Empress of India, Alfred Salter, Jeanne d'Arc, Lord Wolseley, Miss Haggas, Violet Tomlin, Princess of Wales, Prince Alfred, Baron Hirsch, Lady Dorothy, Nil Desperandun, Alfred Lyne, Madame Darrier, Mrs. Heale, Ami Hoste, Empress Eugénie, and Mabel Ward. Second honours fell to Mr. W. Jinks, gardener to W. Grant, Esq., Fair Lawn, Cobham; and the third and fourth to Mr. W. Mease and Mr. W. Neville in the order of their names.

For twelve blooms, incurved, distinct, Mr. W. Hopkins, gardener to Mrs. Wodderspoon, The Chestnuts, Walton, was placed first with Mrs. Heale, Violet Tomlin, Miss Haggas, Prince Alfred, Mrs. Coleman, Empress of India, Princess of Wales, Jeanne d'Arc, Queen of England, Madame Darrier, Golden Empress, and Ami Hostc. Messrs. C. Beckett and Mr. A. Felgate were placed second and third respectively. In the class for six incurved blooms six collections were staged, first honours falling to Mr. J. Thorne, gardener to A. E. Flood, Esq., The Bush, Walton; second to Mr. G. Mileham, gardener to A. T. Miller, Esq., Emlyn House, Leatherhead; and third to Mr. G. Holden, gardener to Mrs. C. W. Izod, The Lammas, Esher. For six of one kind Mr. Hopkins was first with Violet Tomlin; Mr. Neville second with Princess of Wales; and Mr. E. Coombs third with Baron Hirsch out of nine collections set up, and all meritorious.

There were six competitors for twenty-four Japanese, distinct, and the first prize was awarded to Mr. W. Higgs for solid blooms of Eda Prass, Mrs. Nisbet, Boule d'Or, Condor, W. Seward, Etoile de Lyon, Sunflower, G. C. Schwabe, Col. Smith, Vice-President Audiguier, Edwin Molyneux, Sarah Owen, Mrs. Falconer Jameson, Mdlle. Marie Hostc, Alberic Lunden, Puritan, Stanstead White, J. S. Dibben, W. Tricker, Miss Anna Hartshorn, Violet Rose, Beauty of Exmouth, and Viviand Morel. Second honours fell to Mr. W. Mease, and third to Mr. G. Trinder, gardener to Sir H. Mildmay, Bt., Dogmersfield, Winchfield.

In the corresponding class for twelve Japs, distinct, there were eight competitors, and Mr. G. Hunt was first with Viviand Morel, Miss Anna Hartshorn (fine), W. Tricker, Edwin Molyneux, Mons. A. Carrière, Mrs. F. Jameson, Boule d'Or, Mdlle. Marie Hoste, Robert Owen, Eda Prass, Florence Davis, and Vice-President Darquet. Mr. G. Holden was a very good second; and Messrs. Hopkins and Ridge third and fourth in the order of their names.

For six Japanese, distinct, Mr. F. King, gardener to A. F. Perkins, Esq., Oakdene, Holmwood, Surrey, was well to the front; Mr. H. Head, gardener to W. Daniels, Esq., Inglewood, Kew, was placed second; and Mr. C. Slade, gardener to General Gardiner, third. Mr. R. Ridge, gardener to Swifton Eady, Esq., Weybridge, secured the first prize for six of a sort with Viviand Morel; Mr. A. Felgate the second award with grand blooms of Sunflower; and Mr. G. Hunt third with Marie Hoste. The competition was splendid in these classes.

Messrs. Meases, Felgate, and Pitcher shared the honours for twelve reflexed. Anemones made a fine display, and Messrs. Jinks, Woodgate, and Turner secured the prizes in order of their names. Singles, Pompons, and Anemone Pompons were all well represented, collections of three blooms each in six bunches of the Rundle family had a beautiful effect. Messrs. Wells, Redhill; Plowman, Long Ditton; and Dorsett were placed first, second, and third respectively. The blooms were shown on leafy stems.

The best incurved bloom in the Show was Mrs. Coleman in Mr. Flight's stand, and the best Japanese, Edwin Molyneux, was shown by Mr. Hunt.

Groups are always good at Kingston, and this year they were better than ever. Mr. Mileham was deservedly awarded first honours for a collection that not only excelled in dwarfness of tabit, quality of flower, and above all in arrangement. Mr. T. Read, gardener to R. S. Bond, Esq., was a very good second; Mr. G. Springthorpe, gardener to W. A. Bevan, Esq., Coombe Court, Kingston, third; and Mr. W. H. Pitcher, gardener to Mrs. Dunnage, Albanes House, Surbiton, fourth. Mr. G. J. Cook, gardener to J. S. Sassoon, Esq., Ashby Park, Walton, deservedly secured first prize for a miscellaneous collection of flowering and foliage plants. Mr. Swan, gardener to Murry Smith, Esq., Brockley Lodge, Weybridge, secured the first prize with six beautiful trained plants of Mrs. Forsyth, George Glenny, Golden Christine, Mrs. Rundle, Peter the Great, and Pink Christine. Mr. F. King was placed second. Mr. Swan also secured first honours for trained Pompons, staging good examples of Golden Mdlle. Marthe, Mdlle. Marthe, Mr. Astie, and Marie Stuart; Mr. Atkins was second, and Mr. W. Cusbon third.

Fruit was well represented. Mr. Waite secured the first prize for a collection of four dishes, and Mr. Griffin, gardener to Alex. Christy, Esq., Coombc Bank, secured the special prize given by Mr. W. Lane for three bunches of black Grapes with Alicante. Mr. Griffin was also first in a white variety with Muscat of Alexandria. Primulas were seldom shown in such excellent condition, more especially those exhibited by Mr. Mease, which not only secured first honours but the silver medal for high culture. Several bouquets were exhibited, but some too formal, and the prizes seemed to be awarded to the more free and pleasing arrangements. Epergnes were tastefully furnished, Mrs. Nuttall, a daughter of Mr. Flight, who used to win honours at Winchester, being the most successful exhibitor. Mr. Waite had a grand collection of vegetables, in fact many exhibits were worthy of notice if time and space permitted, at this the last and best show that has ever been seen in the ancient town of Kingston-on-Thames.

BRIGHTON.-NOVEMBER 7TH AND STH.

THE annual Chrysanthemum Show of the Brighton and Sussex ' Horticultural Society was held in the Pavilion on the above dates, when a magnificent display was brought together. The Japanese blooms were of exceptional merit, the incurved ranging rather smaller than is customary, but making up in quality for what they lacked in Fruit, including Apples, Pears and Grapes, were staged in good numbers and splendid condition, as also were vegetables in various kinds. The arrangements of the Show under the superintendence of kinds. The arrangements of the Show under the superintendence of Mr. M. Longhurst, Secretary, and a committee of management were perfectly carried out, and reflected much credit on these gentlemen. Groups and specimen plants were seen in exceptionally good form and in great numbers. The exhibition was such an extensive one and so highly meritorious that we are unable to give a full list of the prizewinners, and append the names of those in the principal classes only.

Mr. H. Head, The Drive Nursery, Hove, was awarded the first prize for a group, arranged in a space of 14 feet by 8 feet, in which some grand examples were staged. Mr. J. Hill, gardener to M. Wallis, Esq., J.P., Springfield, Withdeane, was a good second; and Mr. F. Meachen, gardener to Mrs. Armstrong, Woodslee, Withdeane, third. For a semi-circular group in a space of 11 feet 6 inches by 6 feet, Mr. Fairs, gardener to R. Clowes, Esq., Clayton, Wickham, Hassocks, was placed first for an admirable arrangement. Mr. Sims, gardener to C. J. Inwood, Esq., The Retreat, Dyke Road, Brighton, was second; and Mr. Lister, gardener to E. A. Wallis, Esq., Lewes Road, Brighton, third. Mr. C. Ritchings, gardener to Dr. Frankland was an excellent first, securing Ritchings, gardener to Dr. Frankland was an excellent first, securing a silver medal for thirty-six Japanese, in not less than twenty-four varieties, staging—back row: Colonel W. B. Smith, E. Molyneux, Viviand Morel, W. H. Lincoln, Puritan, E. Molyneux, Puritan, Mrs. C. Harman Payne, J. Shrimpton, Mdlle. Marie Hoste, Viviand Morel, Col. W. B. Smith. Middle row: Charles Shrimpton, Professor Whitmack, Mdlle. Marie Hoste, President Borel, Gloire du Rocher, Condor, J. Shrimpton, W. H. Lincoln, E. D. Adams, President Borel, Beauty of Exmouth, Mrs. A. G. Ramsey. Front row: Florence Davis, Sunflower, William Saward W. H. Atkinson, Florence Davis, Excelsion William William Seward, W. H. Atkinson, Florence Davis, Excelsior, William Tricker, Lord Brooke, Prince du Bois, William Seward, and Etoile de Mr. Slaughter was a good second; Mr. Hart was third; and Lyon. Mr. Penford fourth.

In the class for twenty-four Japanese, distinct, there were five stands staged, Mr. Slaughter, Jarvis Villa, Steyning, being first. His stand was comprised of-Back row: Vice-President Audiguier, Gloire du Rocher, Mdlle. Marie Hoste, Mrs. C. Harman Payne, Mrs. É. D. Adams, E. Molyneux, W. H. Lincoln, and a pale sport from Viviand Morel. Middle row: Alberic Lunden, Puritan, Val d'Andorre, Condor, Mrs. C. H. Wheeler, Florence Davis, Etoile de Lyon, John Dyer. Front row: Sunflower, Madame Baco, Sarah Owen, Excelsior, Avalanche, Lord Brooke, Amos Perry, Madame J. Laing. The blooms in this stand were splendid, being uniformly of good shape and colour. Mr. G. Goldsmith, gardener to Sir E. G. Loder, Leonardslee, Horsham, was second; Mr. Duncan, gardener to C. J. Lucas, Esq., Warnham Court, Horsham, third, and Mr. Wallis, gardener to Mrs. Mews, Hartwell, Hartfield, fourth. For twenty-four incurved, in not less than eighteen varieties, Mr. Ritchings, gardener to Dr. Frankland, Reigate, was first with compact blooms of fine form. They consisted of—Back row: Baron Hirsch, Lord Alcester, Violet Tomlin, Golden Empress, Empress of India, N. Davis, Golden Empress, Baron Hirsch. Middle row: Jeanne Manner, Prince Alford Princes & Welley William Princes & Welley Wel d'Arc, Prince Alfred, Princess of Wales, Miss M. A. Haggas, Violet Tomlin, Lord Wolseley, Jeanne d'Arc. Front row: Lady Hardinge, Nil Desperandum, Mrs. G. Rundle, Mrs. Dixon, Cherub, G. Glenny, Mrs. G. Rundle, and Jardin des Plantes. Mr. Goldsmith was second with larger blooms, which, however, were not so well finished, and Mr. Penford, gardener to Sir F. Fitzwygram, Leigh Park, Havant, third. Equal fourth prizes were accorded to Messrs. Heasman and Standing. There were ten competitors in the class for twelve incurved, distinct, Mr. Fowler, gardener to Mrs. Hall, Barrow Hill, Henfield, being first. The flowers were of fair size and substance. The blooms in the back row were Camille Flammarion, John Lambert, Ami Hoste, Prince Alfred. Middle row: Miss Haggas, Lord Wolseley, Mrs. Heale, Madame Darrier. Front row: Alfred Lyne, Jeanne d'Arc, Violet Tomlin, and Novelty. Mr. Horscroft, gardener to T. Potter, Esq., Ardingly, was a fair second; Mr. Tourle, gardener to F. Barchard, Esq., Uckfield, and Mr. Baker, gardener to F. H. Brady, Esq., Burgess Hill, fourth.

Mr. Horscroft was a good first for twelve Japanese, distinct, staging —back row: Viviand Morel, Edwin Molyneux, Florence Davis, Colonel W. B. Smith. Middle row: Avalanche, Gloire du Rocher, Madame J. Laing, Puritan. Front row: W. H. Lincoln, Louise Leroy, C. Becket, and Miss Anna Hartshorn. The second prize went to Mr. Fowler; the third to Mr. Emery, gardener to M. G. Megaw, Esq, Avoca, Eastbourne; and the fourth to Mr. Sayers, gardener to Mrs. Cook, The Hall, Nutley, Uckfield. Mr. Emery was first for six Japanese, distinct, with Mrs. C. Harman Payne, Edwin Molyneux, Florence Davis, Viviand Morel, W. H. Lincoln, and E. A. Carrière. Mr. Baker was second, Messrs. W. Miles & Co., West Brighton Nurseries, being third. Mr. Heasman was first for six Anemones, staging Jean Marty, Margouluie, Empress, Mons. Chas. Lebocqz, Mrs. Judge Benedict, and Grand Alveole. Mr. Penford was second, Mr. Tourle third, and Mr. H. Harris fourth. Mr. Heasman was first for six reflexed, showing Cloth of Gold, King of Crimsons, Dr. Sharp, Golden Christine, Mrs. Forsyth, and Pink Christine. Mr. Ritchings was a good second, Mr. Penford third, and Mr. Hart, Shoreham, fourth. Mr. Dancan was first for six incurved, one variety, with Jeanne d'Arc; Mr. Jupp second with Princess of Wales; Mr.

Fowler third with Madame Darrier; and Mr. Baker fourth with Jeanne d'Arc.

Mr. Duncan was first for six Japanese, one variety, with handsome examples of E. Molyneux; Mr. Horscroft second with Viviand Morel; Mr. H. Head, The Drive Nursery, Hove, third, with the same variety; and Mr. Slaughter, fourth, also with Viviand Morel. Mr. Duncan was first for six Japanese, white, staging Ava'anche in good form; Mr. Slaughter being second, Mr. Tourle third; and Mr. Heasman fourth. Mr. Baker was first for six yellow Japanese with fine Sunflowers; Mr. Duncan second with the same kind; Mr. Slaughter third with W. H. Lincoln, and Mr. Baker fourth. Mrs. S. Coleman, West End, Henfield, was first for twelve Pompons with charming flowers; Mr. Harris second; Mr. Blake, gardener to F. C. G. Roper, Esq, Polegate, third; and Mr. G. Hart fourth. Specimen plants were shown in grand condition, Messrs. G. Hart, E. Meachen, A. Scutt, and Jas. Hill being amongst the most successful exhibitors in these classes.

Miscellaneous exhibits were numerous, and included a collection of fruit from Messrs. J. Cheal & Son, Lowfield Nursery, Crawley; bulbs from Messrs. Tilley Bros., Brighton; Orchids and Palms from Mr. H. Garnett, gardener to R. G. Fletcher, Esq., Patcham; Chrysanthemums from Mr. W. Wells, Rcd Hill; and fruit, bulbs and Orchids from Messrs.

W. Balchin & Son, Hassocks Nursery, Sussex.

SOUTHAMPTON.—NOVEMBER 7TH AND 8TH.

AFTER a lapse of several years, through want of support financially, the Royal Southampton Horticultural Society ventured upon holding an autumn Exhibition this year on the dates named, in the Victoria Hall. From a horticultural point of view it was a success. The exhibits, if not numerous, possessed quality. The arrangements were, as they always are here, quite perfect, under the guidance of Mr.

S. Fuidge, the Secretary.
Cut blooms formed the principal part of the Exhibition. leading class was that for twenty-four, twelve Japanese and tweive incurved, the first prize going to Mr. G. Inglefield, gardener to Sir J. W. Kelk, Bart. His best blooms were—Japanese: Col. W. B. Smith, E. Molyneux, Mdlle. M. Hoste, Etoile de Lyon, W. H. Lincoln, W. H. Tricker, Avalanche, Mrs. F. Jameson, Le Verseau (good), Alberic Lunden, and Sunflower. Incurved: Golden Empress, Empress of Lunden, and Sundower. Incurved: Golden Empress, Empress of India, Emily Dale, Prince Alfred, Miss Haggas, Lord Alcester, Lord Wolseley, Princess of Wales, Jeanne d'Arc, Empress Eugénie, Queen of England, and Mrs. N. Davis. The second prize went to Mr. G. Hughes, gardener to W. Baring, Eq., Norman Court, Salisbury, with equally good incurved, but falling away in Japanese. Mr. Penford, gardener to Sir F. Fitzwygram, Bart., M.P., Leigh Park, Havant, was third.

The next important class was for twenty-four blooms, not more than two of one variety. Mr. Inglefield again led the way, closely followed by Mr. Hughes and Mr. Penford in the order named. Mr. Inglefield was also first for twelve Japanese and twelve incurved, the second prizes in both cases going to Mr. Hughes. For twelve blooms, not more than two of any one variety, Mr. Hughes was first. Mr. Budd, gardener to F. G. Dalgety, Esq., Lockerby Hall, Romsey, was second; and Mr.

Penford third.

Plants were well shown. For the best collection, arranged in a space Plants were well shown. For the best collection, arranged in a space 60 feet square, Mr. G. Busby, gardener to Colonel F. Willan, Thorn Hill, Bitterne, was an easy first, his plants being dwarf and carrying good blooms. Second, Mr. F. Rossman, florist, Shirley. For four Japanese, Mr. E. Rose, gardener to Dr. Allden, The Firs, Bassett, was first with fine specimens of Lady Selborne and Mdlle. Lacroix, closely followed by Mr. E. Carr, gardener to W. A. Gillett, Esq., Fair Oak, Bishopstoke. For a single specimen Japanese, Mr. E. Carr was easily first with Madame Bertic Rendatler, 5 feet through; and Mr. Rose second. For a group of miscellaneous plants arranged for effect. Mr. W. second. For a group of miscellaneous plants arranged for effect, Mr. W. Peel was first with a very light arrangement, closely followed by Mr. E. Wills, nurseryman, Shirley.

Fruit was good throughout. In the class for three distinct varieties Mr. W. Saunders, Junction Road, Andover, was first; and Mr. W. Mitchell, gardener to J. W. Flemming. Esq., Chilworth Manor, second. For two bunches of black Grapes Mr. T. Hall, gardener to S. Montagu, Esq., M.P., South Stoneham, was first with fine Alicante. Mr. Mitchell was second. Apples and Pears were well shown by Mr. G. Bushby, Mr. T. Hall, Mr. S. H. Goodwin, Meredith, Maidstone; and Mr. J. Miles,

gardener to W. Perkins, Esq., Portswood. Vegetables were best staged by Mr. Inglefield and Mr. Bushby.

Messrs. George Bunyard & Co., Maidstone, Kent, sent 100 dishes of Apples, which were greatly admired. Collections of plants not for competition also came from Mr. Wills; Major Montagu Day, Terrace House; Messrs. Toogood & Sons, Southampton; W. H. Rogers, Red Lodge Nursery, Southampton; and Mr. B. Ladhams, which helped to make the Show attractive.

WATFORD.—November 7th and 8th.

As anticipated, the Watford Chrysanthemum Show has proved a great success, there being really a gay Exhibition in the Clarendon Hall on the above dates. The number of entries were about the same as last year, but the blooms in colour and excellence generally certainly in advance of any previous season.

The President of the Society, the Earl of Clarendon, gives it most substantial support, not only by the interest he takes therein, but by the magnificent group that year after year he contributes for decoration. On this occasion Mr. Myers, his head gardener, exceeded his previous efforts by placing in the centre of the hall the finest group ever seen here. The Chrysanthemums were very fine, and the foliage plants choice. Many plants of Clerodendron fallax brightened the front of the

The competing groups were well worthy of admiration, and of the first in the miscellaneous class was one tastefully arranged and finished. The credit of the arrangement goes to Mr. Neve, gardener to C. Van Raalte, Esq., Aldenham Abbey, whose skill was conspicuously shown this year in other parts of the Exhibition. The second prize, which fell to Lord Esher (gardener, Mr. Brown), was also worthy of mention.

The classes in Division I were open to any growers, but the competitors were practically all local, and we fancy their merits could not well be exceeded. The competition between the groups which took the first and second prizes was very close, but to Mr. C. E. Keyser, Warren House, Stanmore, was awarded the premier honour, and he also took the silver cup (value 5 guineas) for the best group of Chrysanthemums in the Show, and the silver medal for the best exhibit. The second prize fell to the energetic Hon. Secretary, Mr. C. R. Humbert (gardener, Mr. Ashdown). The flowers and foliage of both exhibits were exceptionally good, and the colours well harmonised in arrangement. The groups in the other divisions sent by H. H. Gibbs, Esq., W. Gillilan, Esq., R. T. Prowse, Esq., Mrs. Robins, G. J. Beer, Esq., and W. B. Hawkins, Esq., also attracted considerable attention.

The cut blooms were of great excellence, and the judges were more

than surprised at the number of good blooms shown. Mr. C. Van Raalte was again prominent, and in the open classes was first for twentyfour incurved varieties, twenty-four Japanese varieties, and six incurved blooms, in addition to which he took the prize for the best incurved bloom in the Show, the specimen being Madame Darrier. Similar honours were taken by Mr. Beekett, gardener to H. H. Gibbs, Esq. Mr. C. E. Keyser secured the prize for the best Japanese bloom with a grand specimen of Viviand Morel. The exhibits by Mr. T. F. Blackwell displayed some good standard blooms, and there was very strong competition in the class for white Japanese blooms of one variety. In the open class for twelve Japanese some superb flowers were shown by Mr. Fortnum. These are a few of the principal exhibits among the many that were staged. In the other divisions there were also some very fine flowers, prizes being taken by Mr. K. D'Arcy, the Earl of Essex, A. G. Lucas, Esq., R. Henty, Esq., and numerous other gentlemen. Mr. Fox had some excellent blooms in the classes open to amateurs who do not employ a gardener. It was gratifying also to see the cottagers' classes so well filled.

The table decorations and bouquets were a distinct and beautiful feature of the Show, and the whole of the exhibits were good. From the body of the hall visitors proceeded to the gallery, where, it is said was set out the most magnificent show of vegetables ever seen anywhere. The exhibits were so excellent throughout that it would be extremely

difficult to go into detail. The exhibition of fruit was also splendid; in fact, taking the Show all through, we question whether the Society has ever been so successful

as in their present venture.

LEEDS PAXTON .- NOVEMBER 7TH AND 8TH.

THE fifth annual Show of the Leeds Paxton Chrysanthemum Society was held in the City Hall on November 7th and 8th. The numerous classes were not only well filled but the competition in most cases was The cut blooms were the leading feature of the Show.

For the eighteen incurved, not less than fourteen varieties, the first prize £5 and a 7-guineas challenge cup, were won by G. B. Cockburn, Esq., Lingdale Lodge, Claughton, Birkenhead. His flowers, reading from left to right, were Lord Alcester, Mons. R. Bahuant, Queen of England, Lord Alcester, Miss Violet Tomlin, Queen of England, Miss Violet Tomlin, Jeanne d'Arc, Golden Empress of India, Ami Hoste, Jeanne d'Arc, John Lambert, Miss M. Haggas, Madame Darrier, John Salter, Jardin des Plantes, Mr. Coleman, and Princess of Wales. The second prize fell to Mr. Jacobs, Cragge Road, Rawdon.

The class for eighteen Japanese, for similar prize money and cup of above value, fell to the same exhibitor, Mr. Cockburn. The blooms in the winning stand were Etoile de Lyon, Mrs. F. Jameson, Princess May, Mrs. E. W. Clark, Mrs. F. Jameson, Stanstead White, Mons. E. Bunard, Stanstead White, E. Molyneux, Florence Davis, W. Tricker, Gloire de Rocher, Viviand Morel, W. Tricker, Colonel W. B. Smith, Boule d'Or, Avalanche, Viviand Morel. The blooms of Japanese, both in this and other classes, were excellent, far above the average shown in other years, in size, depth, and quality. The second prize went to Rev. W. B. Thatcher of Cleat Hall, Stourbridge. This class drew no less than twelve exhibitors. In the class for twelve incurved, the Earl of Harrington (gardener, Mr. J. H. Goodacre) carried off the first prize. For the same number of Japanese C. J. Ormerod, Esq., of Brighouse (gardener, Mr. A. Barber), was first. In the remaining open class the winners were Sir Jas. Kitson (gardener, Mr. Grix), Mr. Bowling (gardener, Mr. Moore), and Mrs. Tetley (gardener, Mr. Eastwood).

The local class, confined to a radius of seven miles from the City

Hall, for a cup value £10 10s. and a prize of £5, brought four entries. A. Jacobs, Esq., gained first honours, by this means securing the cup, he having won it twice in succession. Sir James Kitson (gardener, Mr. Grix) was a very close second, Mr. Jacobs gaining the winning point with his Japs. Mr. Grix's incurved were both larger and better flowers.

The groups of Chrysanthemums were not up to the usual standard, only one group, shown by Mrs. Tetley (gardener, Mr. Eastwood), was at all worthy of note, he very easily securing the first prize, Judges withholding the second prize. The specimen plants of Chrysanthemums

were very well shown, Mrs. Tetley and C. F. Firth, Esq., of Adel (gardener, Mr. J. Linfoot), taking the principal prizes in the different classes. Groups arranged for effect were poor, only two exhibitors staging. E. B. Faber, Esq., Harrogate (gardener, Mr. Townsend), secured first prize; Mr. Sunley of Monk Fryston getting second. In the local class for a group Mr. P. Bowering easily secured first prize.

Table plants were very well shown, Sir J. Kitson securing prizes in two classes. Fruit and vegetables were also staged in excellent con-

Messrs. Charlesworth, Shuttleworth & Co., of Bradford, staged a magnificent display of Orchids; Mr. W. Crossley had a fine collection of Palms for decorative purposes; and Mr. Taylor also showed a stand Messrs. G. Bunyard, of Maidstone, sent a fine collection of 150 varieties of Apples and Pears; and Mr. Green staged a fine collection of Yorkshire-grown fruit, about sixty varieties.

NORTHAMPTON.—NOVEMBER 8TH AND 9TH.

THE twenty-second annual Show of the Northamptonshire Chrysanthemum Society was held in the Corn Exchange of the town on the above dates. The Exhibition was excellent in every way, the entries being large in many of the principal classes, and the competition remarkably keen. The cut blooms, more especially in the Japanese section, were of a high order of merit, the specimen plants and groups also being very noteworthy. Fruit, Vegetables, Primulas, and table plants were extensively and admirably shown, table decorations being also very fine. Space will not permit of a detailed report being given, the prizewinners in the principal classes only are therefore mentioned.

Mr. Reeve, The Gardens, Cliftonville, was first in the class for a group of Chrysanthemums arranged in a space not exceeding 8 fect by 7 feet 6 inches. The plants were dwarf, well flowered, and the arrangement excellent. For six Japanese, distinct varieties, not dwarf trained, Mr. Gwillam, gardener to Mrs. Shepard, was a good first, showing Margot, Source d'Or, Miss Gordon, Mdlle. Lacroix, Val d'Andorre, and W. H. Lincoln. Mr. Manning, Kingsley Park, was second; and Mr. Reeve third. Mr. Gwillam was first for four Japanese in distinct varieties, Mr. Reeve being second. For one Japanese Mr. Gwillam was again first with a fine plant of W. H. Lincoln, and Mr. Reeve second with Wm. Tricker. Mr. Gwillam was also first for six specimen plants of large flowering varieties with finely flowered plants of Mrs. Dixon, White Venus, John Salter, Mr. G. Glenny, Guernsey Nugget, and Mrs. Rundle. Mr. Manning was a good second. For four Pompons, distinct, Mr. Gwillam again took the premier position, showing Elsie Dordan, Nellie Rainford, Fremy, and Sœur Mélanie. Mr. Copson, gardener to Mrs. Phipps, Collingtree, was second; and Mr. Manning third. For one specimen Pompon Mr. Gwillam was first with White Code Nulli: Mr. Copson second with the same variety: and Mr. Cedo Nulli; Mr. Copson second with the same variety; and Mr. Manning third with Mdlle. Maither.

Manning third with Mdlle. Maither.

For a group arranged in a space of 6 feet by 6 feet, open to amateur growers only, Mr. Hemmings, 43, Hood Street, Northampton, was first with a splendid arrangement; Mr. Kirby, 29, Milton Street, Kingsley, being second; and Mr. C. Richardson, 10, Artizan Street, Northampton, third. Mr. J. Barkaway, 71, Long Thruft Street, Northampton, was first in the amateurs' class for three Japanese, not dwarf trained. The plants, which included Val d'Andorre, L'Adorable, and Mdlle. Lacroix, were well grown and flowered. Mr. C. Seaton, Great Houghton, was second; and Mr. H. Law, 38, Hood Street, Northampton, third. The chief prizewinners in the remainder of the amateurs' classes for plants in pots were Messrs. W. Kirby, E. Bellham, H. Law, J. Barkaway, C. Seaton, H. G. Dunkley, and W. F. Henman.

Mr. Copson was first for eighteen incurved distinct, showing clean, shapely blooms of—back row: Lord Alcester, Lord Wolseley, Empress of India, Mons. R. Bahuant, Queen of England, Alfred Salter. Middle row: John Doughty, Princess of Wales, Ami Hoste, Jeanne d'Arc, Camille Flammarion, John Lambert. Front row: Hero of Stoke Newington, Madame Darrier, Empress Eugénie, Mr. Brunlees, Princess Teck, and Lady Dorothy. Mr. Cole, gardener to Earl Spencer, was second, and Mr. Pearce, gardener to S. Loder, Esq., third. For twelve incurved, distinct, Mr. Copson was a splendid first with—back row: Lord Alcester, Mons. R. Bahuant, Empress of India, Lord Wolseley. Middle row: Alfred Salter, Jeanne d'Are, John Doughty, Queen of England. Front row: Mr. Brunlees, Prince Alfred, Lady Dorothy, and Hero of Stoke Newington. Mr. Cole was second, and Mr. Tipler, gardener to M. M. Smith, Esq., Aylesbury, third. Mr. Copson was first for six incurved, showing Lord Alcester, John Doughty, Alfred Salter, Queen of England, Lord Wolseley, and Empress of India in excellent form. Mr. Coles was second, and Mr. J. Kightley, gardener to Sir H. Wake, third. Mr. Kightley was first for six incurved, one variety, with beautiful examples of Jeanne d'Arc, and Mr. Copson second with Lord Alcester.

Mr. W. Pearce was first for eighteen distinct Japanese. There were six stands, the first being composed of handsome clean blooms of-back row: Mrs. E. W. Clarke, W. H. Lincoln, Viviand Morel, Stanstead White, Edwin Molyneux, Etoile de Lyon. Middle row: Avalanche, Comtc de Germiny, Mdllc. Marie Hoste, Mrs. F. Jameson, Florence Davis, Boule d'Or. Front row: Mons. Bernard, Puritan, Mrs. C. W. Wheeler, Bouquet des Dames, J. Stanborough Dibben, and Wm. Tricker. Mr. J. Copson was a good second, and Mr. J. Cole third. There were six competitors in the class for twelve Japanese, distinct, the competition being remarkably keen, Mr. W. Pearce being eventually placed first. The stand consisted of—back row: W. H. Lincoln, Viviand Morel, Florence Davis, Beauty of Castle Hill. Middle row: Louis Boehmer, Mdlle. Marie Hoste, Gloire du Rocher, Wm. Tricker. Front row: Mr.

A. H. Neve, W. K. Woodcock, J. Stanborough Dibben, and Bouquet des Dames. Mr. J. Copson was a good second, and Mr. Cole third. Mr. Cole was first for six Japanese, ctaging grand flowers of Etoile de Lyon, E. Molyneux, Colonel W. B. Smith, Mrs. E. W. Clarke, Sunflower, and Viviand Morel. Mr. J. Copson was a close second, and Mr. Alexander, gardener to Messrs. Westley & Sons, Blisworth, third. For six Japanese, one variety, Mr. J. Kightley was first with grand blooms of Sunflower, Mr. Tipler being second with the same variety, and Mr. Alexander third with Viviand Morel.

In the amateurs' class for eighteen incurved in not less than twelve varieties Mr. W. Issitt, 84, Princers Street, Kettering, was a good first, Mr. Hemmings second, and Mr. Dunkley third. For twelve incurved, distinct, Mr. Hemmings was a good first, Mr. Issitt second, and Mr. Dunkley third. Mr. Issitt was first for twelve Japanese with very handsome blooms, Mr. Kirby being second, and Mr. Dunkley third. For six Japanese Mr. Issitt was first, Mr. Dunkley second, and Mr. Kirby third.

Miscellaneous exhibits were not numcrous, that of Messrs. T. Perkins and Sons, Drapery, Northampton, consisting of grandly coloured Apples and fine Pears, being by far the most prominent. The same firm also decorated the bandstand and platform with Chrysanthemums and other plants in an artistic and highly creditable manner. Mr. Cole, Althorp Gardens, showed six handsome blooms of Mrs. Alpheus Hardy; and Mr. Colchester, Ipswich, arranged a stand of his Ichthemic guano.

PUTNEY .- NOVEMBER STH AND 9TH.

The sixteenth Exhibition of the Putney and Wandsworth Chrysanthemum Society was held in the Cromwell Hall, Putney, on the dates named. Five excellent groups were placed in competition, the first prize (silver cup) arrangement of Mr. S. Mynett, gardener to Col. Poe, C.B., Ashburton, Putney Heath, being remarkable for the superior quality of the blooms as well as tasteful association—one of the test groups of the season up to date. Mr. John French, Ambleside, Wimbledon Park, was a very strong second; G. Allen, Esq., St. John's, Putney Hill, a most creditable third; and Mr. J. Williamson, gardener to Thos. Jay, Esq., Holmwood, Putney Hill, fourth; an extra prize being awarded to Mr. W. Tew, gardener to Mrs. E. Gordon, Westcombe Lodge, Wimbledon Common.

Altogether creditable groups of eighteen plants were staged by amateurs, the silver cup collection, exhibited by W. B. Rogers, Esq., 19, Carlton Road, Putney, being of great excellence, as were the second prize plants of Alfred Lass, Esq., Sandown Lodge, Upper Richmond Road, Putney; G. W. Lambert, Esq., 6, Northumberland Avenue, Putney, being a most creditable third.

The most successful exhibitors of specimen plants were Mr. J. Portbury, gardener to W. N. Froy, Esq., Ripon House, Putney Heath; and Mr. C. Bentley, gardener to Capt. W J. Bosworth, Cedar Court, Roehampton, whose specimens displayed 'derable cultural skill.

The incurved cut blooms were fresh and neat, the Japanese full and bright. Mr. J. Dark, gardener to Jas. Hooker, Esq., Lomond House, Putney, was first in the class for twenty-four incurved, and Mr. Portbury second. Mr. S. Mynett was first with twelve good blooms, and Mr. W. J. Wright, Th Frove, Wimbiedon Park, third. Mr. Portbury won the first position with twenty-four, and also twelve Japanese, Messrs. Wright and Mynett being second respectively in those classes. Mr. Wright was first with reflexed and second with Pompons, Mr. Bentley being first with the latter; all very good.

The prizes for miscellaneous groups of plants were won, first by Mr. J. Portbury with a charming arrangement, and second by Mr. Macgregor, gardener to the Dowager Lady Hay, North House, Putney

Heath.

Mr. J. F. McLeo', gardener to J. P. Morgan, Esq., Dover House, Roehampton, exhibited a large and highly meritorious group of plants not for competition, which added materially to the interest of a bright and beautiful show. Fruit and vegetables were well represented, and the Show was admirably managed by Mr. J. Moore, Hon. Secretary and G. H. Pitt, Esq., the much respected Treasurer of the Society.



Peaches and Nectarines.—Earliest Houses.—These may be of two descriptions, according to the varieties they are planted with, and the time the fruit is required to be ripe. 1, Very early house, planted with Alexander, Waterloo, Early Louise, and Early Leopold Peaches, and Advance (Early Rivers is a better variety), Nectarine to have fruit ripe in April. 2, Earliest house on the old system, or with second-early and midseason high flavoured varieties, as Hale's Early, Early Alfred, Dymond, Stirling Castle, and Royal George Peaches, with Lord Napier and Elruge (some prefer Stanwick Elruge, but it casts its fruit in ripening in light soils), Nectarines, to have ripe fruit in May. Alexander and Waterloo Peaches are very much alike; some growers prefer one and some the other, but both are high coloured fruits of good size and fair quality. Their flowers are medium-sized, and set well on spurs or on

the annual growths at their points and base, the intermediate buds between those parts being frequently cast. Early Louise and Early Leopold Peaches have small flowers, and laden with pollen are excellent for fertilizing other varieties. Early Leopold is, perhaps, the best setter of the early Peaches, and its fruits, also Early Louise's, are better flavoured than either Alexander or Waterloo, both of which are clingstones, but the other two are freestones. Colour, of course, is everything in a marketing early-forced Peach, but the distinction must be made between the fruits for safe guidance. All the others named are

of superior quality, high colour, and good size. To have fruit ripe at the times named the houses may be closed about the middle of this month, fire heat not being applied until the beginning of December. This will allow the trees plenty of time, and express forcing-having the fruit ripe in three months from starting-is not safe, and only possible with potted trees. The house may be kept close, but admitting air freely above 50°, employing fire heat only to prevent the temperature falling below 35°. Trees that have not been started before will grow gently and safely under this treatment, whilst those forced before will start freely at the usual time without any preliminary excitement. The more slowly the trees are excited the stronger will be The outside border should blossoms and chances of a good set of fruit. be protected with a few inches thickness of leaves, and a little litter over them to prevent their blowing about, so as to exclude frost. Inside borders should have a thorough soaking of water, but if the lights have been off and the soil has been well moistened through to the drainage water will not be required for several weeks. Where the roof lights have remained on it may be necessary to repeat the watering, and if the trees are weakly, the soil friable, and the drainage good a soaking of liquid manure not too strong will tend to a more vigorous start and growth afterwards. Sprinkle the trees occasionally in the morning and afternoon of bright days, but do not keep them dripping with water, damping the borders and floors being sufficient in dull weather, and

Succession Houses.—All the leaves are off, except in the latest house, where they should not be forcibly removed, though the trellis may be sharply rapped or the trees brushed over with a light broom when they part readily from the trees. When they are all off unfasten the trees from the trellis, prune them, thoroughly cleanse them and the house, lime-washing the walls, and if need be paint the woodwork and trellis. Tie the trees to the trellis, leaving room for the branches to swell, tight tying being conducive of gum. Remove the surface soil without much disturbance of the roots, and supply fresh loam, sprinkling over it 4 ozs. of the following mixture per square yard: Three parts steamed bonemeal and one part kainit, following with a good watering. The manurial elements will be held by the soil and be in a suitable form for taking up by the roots when the trees start into growth. The roof lights may be removed, and be kept off until the buds commence swelling and are showing colour in spring. This is the best practice with late houses, especially unheated, so as to retard the blossoms; otherwise keep the houses as cool as possible.

Fresh Trees, Lifting, and Root-pruning.—Trees for planting in houses are best two, three or four years trained to walls outdoors or trellises in cool houses, and prepared for lifting by digging round them a year previously. Such trees can be lifted with an abundance of fibres, and being carefully planted they force well the first season, not bringing them on too rapidly, and taking a moderate crop. This is better than selecting young trees unfurnished with bearing wood, as these cannot bear any fruit until the second year, and not much the first three years to do them justice, hence the advantage of planting trees in an already bearing state. Any lifting or root-pruning should be performed at once, as the trees will often push adventitious roots freely into the fresh or moved soil, and the roots cut form a callus and push new fibres quickly in spring. Lifting and root-pruning is unquestionably one of the best preventives of gumming, and bringing trees not setting and stoning their fruits properly into a satisfactory condition in those respects. Done carefully and early (as soon as the leaves have fallen or before) it does not interfere with the following season's crop of fruit.

Strawberries in Pots.—All plants intended for early forcing should now be in frames, with a view to protect them from heavy rains, snow and severe frosts only. They should be well raised up to the glass and have the pots plunged in ashes, from whence they can be drafted into the houses as required. It is a bad practice to stack the plants in sawdust or earth in a cone-like manner against walls or place them in Peach houses with open ventilators, where, from the passing currents of air, evaporation is constant and excessive, which only waste the energies of the plants and not unfrequently destroys the roots at the sides of the pots. Drought at the roots is the great bane of the Strawberry, therefore those in frames must never be neglected, the soil always being kept moist but not excessively wet. Plants for midseason and late forcing may be plunged in ashes in a sheltered situation, affording a light covering of bracken or straw in severe weather.

Plants of La Grosse Sucrée and Vicomtesse Héricart de Thury must be started early in next month to afford ripe fruit in March either in the Peach house statted then or in the Strawberry house. Some start the earliest plants in bottom heat, making up a bed of leaves about 2 feet in height and place the plants in a frame upon it, packing the spaces between the pots with damp leaves. The bottom heat at the base of the pots is not allowed to exceed 65°, the top heat being kept cool, 50° not being exceeded, and when the weather is mild drawing off

the lights. This tends to promote activity at the roots and to steadily push the crowns without their developing leaves. After three weeks of this treatment the pots are gradually withdrawn from the bed, raising them so that the plants will bear the temperature of the Peach or Strawberry house without a check, as they would receive one if they were taken from a warm bed direct to the shelves. This practice is good where the plants are late, but in the case of those with well developed crowns and abundant roots the slight bottom heat is not necessary. Nevertheless bottom heat is one of the best aids in early forcing.

Those having the convenience of low pits, with a pathway inside, for forcing Strawberries, find it a considerable advantage to start the earliest plants in bottom heat, raising the bed well up so that the plants are near the glass, and not allowing the heat at the base of the pots to exceed 65°, nor the top heat to rise above 50° without full ventilation, and only using fire heat to maintain it at 50° by day and 45° at night in severe weather. Under these conditions the plants push the trusses strongly, and by the time they are clear of the crowns, the bottom heat will have declined so that the plants can be removed to their fruiting quarters without giving them any check, or it must be effected by withdrawing the pots gradually. Time is gained and the setting is generally satisfactory under such conditions. Watering must be judiciously performed, and if worms have gained an entrance into the pots dislodge them with lime water, rectifying any defects of drainage.

THE KITCHEN GARDEN.

Tomatoes.—Strong young plants in 11-inch or slightly smaller pots give the best late autumn and winter crops, and pay well for close attention. If there is head room do not stop the leading growths, as by allowing these to extend it will be possible to set good clusters of fruit for ripening early next spring. Pinch out all side shoots that form, and if the plants are all heavily furnished with leaves, reduce the latter to about half of their present size with a view to giving the lower clusters of fruit a better chance to ripen. According as the soil becomes crowded with roots give rich top-dressings, liquid manure also being applied occasionally Under this liberal treatment each plant ought to give not less than 8 lbs. of fruit, this ripening at a time when Tomatoes are somewhat scarce. An occasional rich top-dressing is also needed by old plants that have set, or are setting fruit freely, and all superfluous growth should be closely removed from them. Now that the colder weather has set in Tomatoes must have plenty of fire heat, accompanied by a circulation of dry air, fungoid diseases being inevitable in a moist atmosphere. The fruit will set freely at this late date under such conditions if only the stems are smartly tapped by a padded stick every morning towards twelve o'clock. If the "white fly" is troublesome dress the hot water pipes with flowers of sulphur mixed with milk, and make them as hot as possible occasionally. The fumes thus generated will gradually, but surely, exterminate the fly, and prove a good preventive of disease.

Mushrooms.—High temperature, especially when brought about by fire heat, is very prejudicial to Mushrooms. Only enough should be turned on to keep the temperature of a house in which beds are required to produce Mushrooms constantly from falling much below 50°, an increase of 5° being the maximum with fire heat. When subjected to higher temperatures the produce is thin and not nearly so succulent as Mushrooms grown without the aid of fire heat, the beds also becoming more quickly exhausted. Only when fire heat is used is there any need to damp the walls and floors daily. An occasional sprinkling will not be harmful, but beware of saturating the beds by a too free use of the syringe. The loss of moisture to an injurious extent ought to be prevented by means of a thick covering of soft strawy litter, and when it is necessary to water owing to the beds being too dry to commence cropping, or wants moistening after a first crop has been taken, give enough warm water at once or at the most twice to well moisten both the soil and manure to a good depth, merely wetting the surface being of no avail. If there is room form other beds, these, if properly managed, yielding extra heavy crops next February or March, if not earlier.

Beds either in the open or in unheated sheds should be heavily covered with a strawy litter, and the drier this is the warmer the beds underneath will keep. When the litter next to the soil becomes damp and musty remove it, and substitute some that is fresh and dry. If any of the later formed beds fail to produce Mushrooms during November they may not do so till next spring, and none should be too hurriedly condemned and broken up.

Asparagus.—This choice vegetable is very easily forced, but unless a supply can be maintained throughout the winter at not very wide intervals, it is scarcely advisable to start forcing so early as this. It must also be remembered that roots once forced are of no further value, and well established beds ought not lightly to be broken up unless there are others to meet the demand for naturally grown shoots next spring. Hard forcing ought in any case to be practised, an excess of fire heat being certain to force out nothing but poor weakly shoots. If deep heated pits are available fill two lights at a time with a gentle hotbed largely composed of leaves, a layer of rich soil being placed on the top of these. Pack the carefully lifted roots somewhat closely on the soil and cover with about 4 inches of rich moist soil. Then if the top heat does not exceed 55° to 60°, strong succulent shoots of a good length will be forthcoming in from three weeks to a month of the time the start was made. Asparagus can also be forced without the aid of fire heat, frames set on hotbeds being used, that is if no brick pits are available. In the course of another three weeks start more roots in the same manner, and

never let the soil about any of them become dry, also do not subject the roots to a dangerously strong bottom heat.

Seakale.—The roots of Seakale have now experienced the desired check by being frosted somewhat, and without which they do not force so readily as desirable. Forming hotbeds over the crowns where they are established in the ground is a slow, laborious process, the better plan being to lift two or three dozen strong young roots at a time, or better still, enough for two or three batches at one time, and to sink these up to the crowns in large pots or deep boxes filled with rich moist soil. At this early date, if the pots are set in a heated Mushroom house, progress is slow, a dark corner not far from the hot-water pipes in a forcing house being a more suitable position. In order to be certain of well blanched succulent tops, complete darkness, as well as a sufficiency of heat and moisture, is necessary, and the crowns should therefore be heavily banked over with either leaf soil or cocoa-nut fibre refuse, a depth of 5 inches being none too much. Start more crowns every ten days or a fortnight. Lily White is the best variety for forcing, but is not so hardy as the old form. When severe frosts are anticipated, either lift the bulk of the roots that are to be eventually forced, laying them in closely in good soil where they can be covered with litter or mats, or else bank over the crowns with fine soil, this being drawn up to them much as Potatoes are moulded up.

Rhubarb.—The early Rhubarb has now had a fairly good rest, the severe frost of October 31st also being of service in preparing the clumps for forcing. Any variety can be forced, though Early Albert, Hawkes' Champagne, and Johnstone's St. Martin's are the best for the purpose, earliness, colour of stalk, and good flavour being characteristics of these excellent forms. Comparatively young roots could be lifted, placed in large pots, and forced very much the same as advised in the case of Seakale, while large old clumps could be shifted to either a forcing house, warm corner over boiler, Mushroom house, or warm cellar, only enough soil either left on or placed over the roots to keep them moist being needed. A gentle heat is preferable, and soil about the roots should not be allowed to become at all dry. Rhubarb may also be had by Christmas by forcing in the old-fashioned way, the clumps having the soil about them loosened prior to being covered by either regular Rhubarb pots, tins discarded by sugar refiners, old flour tubs, or deep boxes. There should be lids on the tops of these coverings to admit of ready access to the Rhubarb, and they ought to be heavily banked over with enough leaves and stable manure to generate a fairly brisk bottom heat, or say from 75° to 80°, a close look-out being kept for any sudden and dangerous rise that might take place after a change from cold to mild weather.

HE BEE-KEEPER.

APIARIAN NOTES.

HINTS FOR BEGINNERS. (Continued from page 387.)

What the bee-keeper has to consider in order to make the most of bees at his command is, how long will the honey flow continue? If for five or six weeks, make an increase of stock up till the beginning of that time, as then more hives with fertile and prolific queens are placed into the field, and swarms always work better, while by the renewal of queens and combs all risks of losing hives through effete queens are gone, and finer honey and healthier hives are secured. But on the other hand, if the honey flow at the best can last only two or three weeks the stock should be limited, and if desirable an increase postponed until the great honey flow is past. Arrange to have the greatest number of workers in the field at the proper time. Try to have them swarm a month at least before the flow begins, and if the hives then are not in strength to your mind join several together. Prevent stocks having young fertile queens from swarming by providing ample breeding space.

In my own case the Clover is not usually profuse, although I have taken from one hive 130 lbs. at a time, and nearly 7 cwt. from six, which were exhibited at Glasgow in 1876. The present year from several stocks (spring count) 200 lbs. have been taken from a The Wild Thyme and Heather are what I prepare my hives to catch, and they are so manipulated that every one of them is equal in strength to a full sized non-swarmed stock. In most cases these Heather stocks come up of their own accord to that strength, but if the spring and early summer have been backward I sometimes transfer brood combs to nuclei formed early in the season, as they are at all times most reliable. In late Heather seasons it is almost futile to keep stocks under full strength, as such will not be profitable, neither are hives with prolific queens, unless they are ahead of the fertility of the queen. This is the rock on which many bee-keepers wreck themselves, and keeping bees in too small hives while bees and queen are determined on breeding is a wrong

I do not want to sulphur my bees, but they must not be allowed to increase at a time when they can be more profitably employed.

The number of stocks for wintering should be regulated before the close of the Heather season, and by having the hives properly arranged when set down this is sometimes easily accomplished. Occasionally it is better to do this before we move them, at the end of the Clover season, when the Heather is likely to be of short duration. But at Leadhills the Heather lasts so long that many hives are more reliable than few, but in all cases they should be strong. At "midheather," if practicable, remove surplus honey and join stocks. In cases where there is not much honey nor brood remove all empty combs from both, transfer to one of them all combs having honey, and brood along with the bees. Preserve the empty combs for future use if white, but if blackened with age melt them and take what wax they yield. It ought to be a rule to have no combs older than twelve months in any hive, as the honey from white combs is superior, while supers above them are magnificent and more pure than those above blackened with age.

Sometimes the bees may miss the Heather till after it is half gone, but it is a fact that it yields more honey then than in its earlier stages, and one week's fine weather then with double strength hives will enable them to store 100 lbs. each. As I have stated, the bee-keeper must study the best and proper time to perform the various manipulations according to circumstances and the best of his judgment, but even then it may sometimes happen that the best has not always been done. Still, work at all times for the best and in hopes of favourable results.—A LANARKSHIRE BEE-KEEPER. (To be continued.)

THE SEASON OF 1893.

As regards East Yorkshire, the past season has been a good one; never have I had honey of such quality before. From early spring to the present time the weather has been favourable for the bees. They were at work soon after 7 A.M. on October 19th on our Michaelmas Daisies, and at four in the afternoon were busy still. Our take of honey has been a good one, and very few swarms have been the result. My hives were well tired up, and having plenty of room, not one of my bar-frame hives swarmed, and been strong in bees, gave a good surplus. Large hives are far the best. The standard hive, with a capacity for holding ten frames and a crate of twenty-one sections, is a mere toy and a source of trouble. Where the honey season is over by the end of July the non-swarming hives give the best results. Large hives, with plenty of bees and young queens, are necessary if a good surplus is to be taken.

The Lanarkshire hive has again done well with me, one of mine

The Lanarkshire hive has again done well with me, one of mine occupying six divisions; it was a pleasure to see the busy toilers pouring in and out in crowds. This hive was worked for extracted honey. From another I took some good sections, for which I secured a first prize for twelve at our local show.—G. R.

PRESENTATION OF HONEY TO THE LORD MAYOR.

An interesting ceremony took place in the Mansion House on November 1st, when a number of gentlemen, representing the British Bee-keepers' Association, offered the Lord Mayor of London a collection of British honey to the amount of 1 cwt. The presentation was made in the State drawing-room by Sir J. Whitehead, M.P., in the absence of the President of the Association, Baroness Burdett-Coutts.

Sir J. Whitehead said that the honey had come from all parts of the United Kingdom-England, Scotland, Ireland, and Wales. His connection with the Association arose from the fact that he, as Pastmaster of the Fruiterers' Company, had taken a very great interest in the cultivation of fruit in this country, and all experts in fruit culture seemed to think that bees were essential for the fertilisation of the flowers. The net profit to be derived from the cultivation of honey depended on the successful treatment of bees, and the object of the Association was to impart the knowledge of the cultivation of bees, and possibly to recreate the industry. He had in his own knowledge a case in his native county of Westmoreland, where a small tradesman had eighty hives. the spring and summer, when the flowers in the fields were in bloom, and up to the time the bees had swarmed and made their casts he kept them in the valleys, and afterwards took them on to the moors where they could gather honey from the Heather, and the result of the eighty hives, after paying all expenses, was a net profit of 55s. per hive, or £100. The county of Kent had in some respect been taken as a typical county of what might be done with regard to bee culture, and it was estimated that there alone no less than 400 tons of honey could be grown, provided that those who had hives were sufficiently skilled in the art of cultivation. That 400 tons, sold at 9d. a pound, would give to that county alone no less than £33,600.

TRADE CATALOGUES RECEIVED.

Dicksons & Co., 1, Waterloo Place, Edinburgh.—Forest Trees, Shrubs and Coniferæ.

W. L. Lewis & Co., Southgate, London, N.—Special Catalogue of Orchids.

Fotheringham & King, Dumfries, N.B.—Forest and Ornamental Trees, Roses, and Fruit Trees.



*All correspondence should be directed either to "THE EDITOR" or to "THE PUBLISHER." Letters addressed to Dr. Hogg or members of the staff often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Bee subjects, and should never send more than two or three questions at once. All articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post, and we do not undertake to return rejected communications.

Blood Manure (J. H. W.).—Your letter arrived too late to enable us to deal with the question in this issue, but it shall be referred to next week.

Chrysanthemum Bloom (A. H. E.).—The distinctness or merits of a Chrysanthemum can only be determined from well developed blooms, and not from the small specimen you have forwarded. The other matter shall have attention in our next issue.

Scale on Kentia Leaf (W. D. M.).—The small brown scale can now be attacked effectively with an insecticide. Fir tree oil is very efficacious and harmless to plants, so also is Lemon oil, petroleum emulsion, Kilmright, Chelsea blight composition, carbolic and nicotine soaps, and other advertised insecticides, provided each is used at the strength advised in the instructions accompanying the several preparations. The insecticide should be applied with a brush, and the insects dislodged, and afterwards cleanse the plants with clear tepid water. Spirit of wine, diluted with about half its quantity of water, and applied with a small brush, so as to dislodge the pest, is a cleanly method of removing the scale. Methylated spirit may also be used very effectively, just moistening a brush with it and then wetting the scale insects with it. If the fronds are young the methylated spirit should be diluted similar to the spirit of wine; on mature fronds it either may be used neat, or only employing enough to wet the insects.

Fuchsias from Seed (Amateur).—Raising Fuchsias from seed is certainly, as you suggest, "interesting to amateurs," but it is very probable that only a few of the seedlings will on flowering prove equal to existing varieties. The pods should be carefully gathered when ripe. As the seeds are enveloped in a pulp it is necessary, in order to preserve them, to cleanse them effectually. This is done by washing; bruise the berries with the hand, and mix them with water; as soon as the pulp is all washed off pass the liquor through a hair-sieve fine enough to catch the seed, wash it repeatedly till it is quite clean, then dry it gradually; put it up in brown paper, and keep it in a dry room till spring. Sow then in a mixture of light sandy loam and peat, cover slightly, and place the pots in a gentle hotbed. When the seedlings are half an inch high transplant them in rows across pots 5 inches wide—these will hold about twenty or thirty plants each—and then replace them in the hotbed. In these pots they may remain for a month or six weeks, and then they will require placing singly into 3-inch pots. Place them for a few days in a cold frame, and keep rather close and shaded till fresh roots are formed, and then they are then able to bear the full light and a moderate admission of air. Give plenty of the latter as they acquire strength, and when the pots are full of roots give another shift into 4-inch pots, and let them remain in these till they flower. Many of them will flower the first year, and then is the time to make a selection. The selected ones should be repotted, and grown to the end of the season to prove them. Cuttings of the best may be inserted, and the whole kept in the coolest part of the greenhouse during the following winter.

Rooting Marguerite Cuttings (Reader).—The cuttings should be of the growing shoots, and about 3 inches in length, severing each transversely below a joint, and removing the leaves about half way up. The cuttings may be inserted singly in small pots (2½ inches in diameter), or five or six cuttings round the edge of a 4-inch pot. One crock is sufficient for drainage, with a little rough material over it, for the small pot; but an inch or more of material should be provided for the larger size. Fill the pots firmly with soil, composed of equal parts leaf mould and light loam passed through a half-inch sieve, adding a sixth of sharp sand, thoroughly mixed. Sprinkle about a quarter of an inch of sand on the top, and insert the cuttings with a blunt dibber, just deep enough to allow the base of each to rest on the sand carried down by the dibber, and about half the length of the cutting, or down to the leaves. Press the soil round the cuttings, particularly their base, and afford a gentle watering through a fine-rosed waterpot. Stand the pots on ashes or similar material in a house having a temperature of 40° to 50°, and cover with a bellglass or handlight, and keep close until rooted. The glass or handlight may be taken off each dull morning for about an hour for the dissipation of excessive moisture, and in the evening the

glass should be wiped dry. The cuttings will be rooted well in about a month, when they should be gradually hardened off. This plan is better than rooting the euttings in bottom heat, for the latter receive a eheck more or less when they are removed from it, unless care is taken to harden them off well beforehand. The large-flowered variety with green leaves is Chrysanthemum Halleri; the small one with glaueous leaves is C. frutescens.

Banksia integrifolia (B. M.).—This plant, to which you allude, has been figured in the Journal of Horticulture, but as you desire "to see it again," we reproduce the woodcut (fig. 63) with the description. Banksias are a peculiar genus of plants, the species forming which contribute largely to the native vegetation of New South Wales and other districts in the great Australian continent. These plants with their relatives the Proteas were at one time much grown in large establishments in England, but of late years they have been almost lost, and are now seldom seen except in botanie gardens. Some are perhaps more strange than beautiful, but there are several which are by no means devoid of attractions, and would add to the interest of many gardens. Of these the Australian Honeysuekle (Banksia integrifolia) is especially noteworthy as a free-growing and floriferous plant, which recommendations are not possessed by all its allies. The popular name appears somewhat far-fetched, as are many other popular names; but it does not refer to the habit of the plant as might be supposed, but to the quantity of

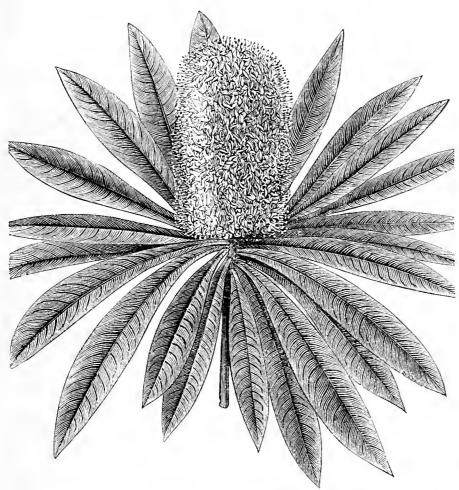


FIG. 63.—BANKSIA INTEGRIFOLIA. (Reduced.)

neetar secreted in the flowers. Banksia integrifolia is a shrubby plant, usually of moderate size in cultivation, but attaining much greater dimensions in its native land, where some of its near relatives rise to a height of 50 feet. The flowers are yellowish in a cylindrical head at the ends of the branches. The leaves are narrow and undivided, dark green, and firm in texture. The plant succeeds in light turfy loam and peat, and requires only the temperature of a greenhouse or conservatory, supplying water carefully when not in flower.

Rose Heps (N. H.) - These are not in any way injured by remaining on the trees to be frozen to some extent; indeed, it is questionable if severe frosts are detrimental to their germination. Gather them when ripe, open them, and store the seeds in damp eoeoanut fibre refuse or leaf mould till the spring. They may be sown either in pots or boxes in a frame on a mild hotbed, or in drills in the open ground in March. Artificial heat accelerates germination, but as the first essential of the Rose is hardiness some raisers sow in the open on the assumption that only seedlings that prove their undoubted hardiness are reliable for propagation. Some of the seeds are often slow in germinating, therefore there must be no undue haste in disturbing the beds, or withholding water from pots or boxes in which the seeds have been sown. Cover the seeds an ineh deep, and keep the soil uniformly moist by shading to arrest evaporation, and watering to supply moisture as it may be required.

Names of Fruits .- Notice .- We have pleasure in naming good typical fruits (when the names are discoverable) for the convenience of regular subscribers, who are the growers of such fruit, and not collectors of specimens from non-subscribers. This latter procedure is wholly irregular, and we trust that none of our readers will allow themselves to be made the mediums in infringing our rules. Special attention is directed to the following decision, the object of which is | F

to discourage the growth of inferior and promote the culture of superior varieties. In consequence of the large number of worthless Apples and Pears sent to this office to be named, it has been decided to name only specimens and varieties of approved merit, and to reject the inferior, which are not worth sending or growing. The names and addresses of senders of fruit to be named must in all eases be enclosed with the specimens, whether letters referring to the fruit are sent by post or not. The names are not necessarily required for publication, initials sufficing for that. Only six specimens can be named at once, and any beyond that number eannot be preserved. They should be sent on the first indication of change towards ripening. Dessert Pears cannot be named in a hard green state. (J. W. Allen).—1, Cox's Orange Pippin; 2, Tower of Glamis; 3, Spanish Bon Chrêtien; 4, Besi Vaet; 5, probably Lemon Pippin. (H. O. S.).—2, Golden Noble; 3, Lewis' Incomparable; 4, Margil. (J. M. K. C.)—1, Cox's Pomona; 2, Golden Spire; 3, Wadhurst Pippin; 4, Marie Louise; 5, Golden Winter Pearmain; 6, Urbaniste. (Colvile Browne).—1, Waltham Abbey Seedling; 2, Aromatic Russet. (F. J. Gray).—Pear not known. It has nothing to recommend it. You had better graft the tree. (E. R.)—1. Uvedale's to recommend it. You had better graft the tree. (E. R.).—1, Uvedale's St. Germain; 2, Beurré d'Amanlis; 3, Ne Plus Meuris; 4, Viear of Winkfield. (W. Strugnell).—Apparently a small wrinkled Seville Orange; large fruit, Diospyros Kaki, a native of Japan, sometimes imported into this country as a dried sweetment; small rosy seeds, probably the fruit of Magnolia acuminata, but in the absence of leaves and other characteristics it is impossible to identify with accuracy; black fruit, Juglans nigra or Black Walnut, not edible. (A. D.). Cox's Orange Pippin.

Names of Plants.—We only undertake to name species of plants, not varieties that have originated from seed and termed florists' flowers. Flowering specimens are necessary of flowering plants, and Fern fronds should bear spores. Specimens should arrive in a fresh state in firm boxes. Slightly damp moss, soft green grass or leaves form the best packing, dry wool the worst. Not more than six specimens can be named at onee, and the numbers should be visible without untying the ligatures, it being often difficult to separate them when the paper is damp, (W. Strugnell).—Priekly Plant, Colletia spinosa. (M. B., Betteshanger).
—Florists' flowers, varieties of Dahlia glabrata. (L. B.).—Lælia anceps. (H. L. M.).—Cypripedium caudatum. (A. D.).—Jasminum Sambae flore-pleno. (H. W. C.).—Impatiens Hookeri.

COVENT GARDEN MARKET .- NOVEMBER 8TH.

MARKET quiet, well suppli	ied	•			
			FR	UIT.	
Apples, per bushel		32 2	$\frac{6}{6}$	Peaches, per doz 0 0 to 0 Plums, per half sieve 0 0 0 St. Michael Pines, each 2 0 5	0
		$\nabla \mathbf{E}$	GE7	CABLES.	
Beans, Kidney, per lb. 0 Beet, Red, dozen 1 Carrots, bunch 0 Cauliflowers, dozen 2 Celery, bundle 1 Coleworts, dozen bunches 2 Cucumbers, dozen 1 Endive, dozen 1 Herbs, bunch 1 Lecks, bunch 0 Lectuce, dozen 0 Mushrooms, punnet 0		to 0 0 0 3 1 1 4 3 1 1 0 0	0 6 0 3	Mustard and Cress, punnet	0 0 0 6 6 5

AVERAGE WHOLESALE PRICES .- OUT FLOWERS.

Orchid Blooms in variety. Chrysanthemum blooms very plentiful this season, hence

S. d. S. d Orchids, per dozen blcoms 3 0 to 12 0	_
Azalca, dozen sprays 1 0 1 6 Pelargoniums, 12 bunches 6 0 9 0 Bouvardias, bunch 0 6 1 0 Pelargoniums, scarlet, doz. Camellias, dozen blooms . 1 0 3 0 bunches 4 0 6 0 Carnations, 12 blooms . 0 6 2 0 Primula (double), dozen sprays 0 6 1 0 Chrysanthemums, dozen bunches 3 0 6 0 Pyrethrum, dozen bunches 2 0 4 6	d.
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bunches	Ω
panenes o o o i l'iteration de la constant	0
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Eucharis dozen	
Gardenias, per dozen 2 0 4 0 ,, Yellow, dozen 2 0 4	0
Lilac (French) per bunch 3 6 6 0 Tuberoses. 12 blooms 0 4 0	6
Lilium lancifolium, dozen Violets, Parme (French),	
Hilliam landitolitani, dollar	0
blooms	•
Lilium longiflorum, perdoz. 6 0 9 0 Violets, Czar (French), per	c
Mainennair Fein, dozen	U
bunches 4 0 6 0 Violets (English), dozen	
Marguerites, 12 bunches 2 0 4 0 bunches 1 6 2	U
Mignonettc, 12 bunches 2 0 4 0	
Dr Avrag IN DOWS	

PLANTS IN POTS.

	a.	d.	s.	đ.	1		s.	d.	8.	d
Arbor Vitæ (golden) dozen						Ferns (small) per hundred			to 6	-
Aspidistra, per dozen 1	8	0	36	0		Ficus elastica, each	1		7	-
		0	10	6		Foliage plants, var., cach	2	0	10	- 1
Chrysanthemums, per doz.	4	0	9	0		Lilium Harrissi, per dozen		0	24	
, large plants, cach			2	0		Lycopodiums, per dozen		0	4	-
Dracæna terminalis, per						Marguerite Daisy, dozen		0	12	
dozen 1	8	0	42	0		Mignonette, per doz		0	9	-
Dracæna viridis, dozen		0	24	0		Myrtles, dozen		0	9	
Ericas, per dozen	9	0	18	0		Palms, in var cach		0	15	
	6	0	18	0		" (specimens)	21	0	63	
	6	0	24	0		Pelargoniums, scarlet, doz.	_	0	0	
		0	18	0	1	Solanums, per dozen	9	0	12	



PROFITABLE LIVE STOCK.

Many a grazier, struggling under stress of difficulties intensified and rendered almost insurmountable by the long hot dry summer, would be inclined to question if there is such a thing as profitable live stock at the present time. If so, it is certain that he has none of it. It is precisely because of the scarcity of stock in this country upon which any profit is possible that attention is called to the matter now. Inferior stock is plentiful enough, because of the general carelessness both in breeding and feeding, and we might add in selection. In most instances the fault dates from the very beginning of a tenancy, when the difficulty of obtaining really useful animals is considered so great that recourse is had to the Michaelmas auction sales, where so-called "bargains" are plentiful. Numbers of inferior animals are got together, costing just as much—often a great deal more—to keep, even in healthy condition, as really well-bred stock. Yet a little inquiry would enable any farmer to ascertain where better stock could be had. In this, as in other matters, demand brings supply, and it is surely worth while to purchase animals upon which, under good management, some profit is a certainty.

Taking cattle first, we know that while prices for ordinary beasts have fallen below any possibility of profit, ripe compact animals of moderate size have always had a prompt sale at remunerative prices. Said a recent market report, "The trade is overdone with meaty stores," or beasts about half ripe for the butcher. Not only is the metropolitan market g'utted with this class of stock (much of it imported), but it is always largely in evidence at every provincial market. It is true enough that there is money to be made out of "meaty stores," but it does not go into the pockets of the poor grazier. He sells them at a loss; it is the keen dealer who buys cheaply, fattens, and sells at a profit. The beasts come into his hands tolerably forward in condition, so that the fattening process is as speedy as it is certain. If only the grazier had a little more staying power he might do so much better than part with his stores just when they are ready to "pay" for high feeding. That the general practice in this matter is radically wrong is certain, yet there is no mystery about the right way; it is summed up in very few words. Have only well-bred cattle; either a pure breed or a good cross breed. Keep on the calf flesh, keep up condition always, but avoid the rash and extravagant forcing which involves the risk of heavy losses from Give equal attention to shelter and to a sound wholesome dietary. Let there be no exposure to heavy rain or cold cutting wind, no lying down on sodden litter, no inhaling foul air. Let the dietary be mixed wholesome, a wise combination of bulk with nutriment, preferably of home-grown produce—hay, silage, straw, corn, roots, green fodder, afford a sufficient range for a most nourishing dietary. Have no feeding by line and rule, know your cat'le individually, be much among them, understand the requirements and temperament of every one of them, and then wise discretion and sound judgment will guide weight and measure in the feeding. See that the water is pure, that crib and manger are clean. Allow no brutality; hindly, gentle treatment is all important apart from any mere sentimental feelings. When the autumnal growth of herbage on pastures is consumed, get the beasts settled for the winter in yards with broad commodious hovels. In doing this place the more forward larger animals together separate from the others; if large and small, weak and strong, are turned in together, the weaker literally go to the wall. We have seen them driven out of the hovels into the open yard, where they remain afraid to venture inside again. This often happens at nights with fatal results if rough weather prevails. The frightened animals will get what shelter is possible from the yard enclosures, but the standing there for hours, very likely in several inches of water, with rain or snow falling upon them, and gusts of wind sweeping round the yard, has led to colds, husk, consumption, and eventually the loss of many a valuable beast.

Worse than this is the battle for life going on every winter among cattle in open pastures, without shelter of any sort but the hedgerows, and with very short commons indeed. They have in the way of food to clear up the fog, which at best is a mixture of brown, dry, or decayed herbage and green growth, all sadly innutritious. A little hay is thrown about the pasture, forming a dietary barely sufficient to sustain vital heat. The famished beasts lose flesh so fast, and the strain upon them is so severe and prolonged, that it is wonderful to find so many of them surviving an ordeal which is alike cruel to them and ruinous to their owners.

WORK ON THE HOME FARM.

With Mangolds already up to 30s. a ton, a full root crop is something to be proud of this autumn. Let there be no more delay in getting them off the land into clamps, made by a road at points easy of access; a long ridge 10 or 12 feet wide at base, and 6 or 8 feet in height, answers best. Cover thickly with litter, over which place soil sufficiently thick to keep out frost, leaving air vents made with 2-inch drain pipes along the ridge. Treat early sown Swedes in a similar manner, or place them in small circular heaps in fields where sheep folding is to be done. Such folds on upland pasture are now in full action, and we have seen some good practice this month in folding a late growth on Clover layers, with the ploughs and drills following closely for Wheat.

Never was there better weather for winter corn sowing, and all other autumn sown crops. Glad were we recently to hear a keen discussion in a provincial market train, of the respective merits of Vetches, Rye, Coleseed, and Cabbage. Plenty of such and other green fodder crops to use with corn and relieve the pasture, are wanted everywhere. The dictum of Professor Wrightson that the great secret of successful farming is to make stock pay, and the corn will then take care of itself, is sound enough. Let work on the home farm at this season of the year tend that way, by judicious sheep folding, by careful tending of stock in cow, cattle yard, stable, and piggery. At farms generally the judicious production of milk, butter, cheese, pork, poultry, eggs, should all tend to profit now. Pullets selected from several broods in spring are giving a supply of eggs now that is invaluable. In this highly important manner it is just a question of timely selection, of number and also of breeds. We have had an excellent supply of winter eggs from white and coloured Dorkings, from cross-bred fowls and others, but never from those misnamed everlasting layers, the Hamburghs should not be forgotten that a warm poultry house must be had for winter layers, and they must be well fed. Let them also have a cosy dusting place, shut in from cold winds, but so placed as to catch every ray of winter sunshine. Warmth, shelter, and good food tell, and are indispensable.

METEOROLOGICAL OBSERVATIONS. OAMDEN SQUARE, LONDON, Lat. 51° 32′ 40″ N.; Long, 0° 8′ 0″ W.; Altitude, 111 feet

DATE.			9 A.M			:				
1893. October	Barometer at 32°, and Sea Level.	Hygro	meter.		Temp. of soil at		Tem- ture.	Radi Tempe	Rain.	
and November.	Barc at 33 Sea	Dry.	Wet.	Wind.	1 foot.	Max.	Min.	In Sun.	On Grass.	:
Sunday 29 Monday 30 Tuesday 31 Wednesday 1 Thursday 2 Friday 3 Saturday 4	Inchs. 29.806 29.898 30.126 30.009 29.687 29.941 29.881	deg. 50.6 41.9 34.4 38.4 47.3 48.7 53.8	deg. 46·0 39·2 32·2 33·3 47·1 47·4 51·9	S.W. N. N. S.W. S.W. S.W.	deg. 49.6 48.9 46.2 44.1 45.1 46.0 47.9	deg. 56.7 48.7 44.2 49.6 52.2 59.8 55.8	deg. 46.8 37.1 30.9 27.8 41.9 42.8 48.3	deg. 88.9 84.9 77.8 60.1 63.0 83.0 64.2	deg. 42·5 34·0 27·2 26·0 35·8 38·4 47·2	Inchs. 0 010 — 0.254 0.012 — 0.020 0 296

REMARKS.

29th.—Brilliant morning; occasional cloud in afternoon; overcast evening.
30th.—Almost cloudless throughout.
31st.—Cloudless almost throughout but some detached cumulus at midday.
1st.—Overcast till 3.45 P.M.; slight rain at intervals after.
2nd.—Continuous rain from 3.30 A.M. to 9 A.M.; occasional drizzle in morning; overcast afternoon and night.

3rd.—Fine about sunrise; overcast and dull from 8 A.M. to noon; frequent bright sunshine after 1.30 P.M.

4th.—Bright early; overcast from 9 A.M., frequent drizzle from 10.30 A.M., and rain from 0.30 to 1.30 P.M.; and overcast after.

At last we have a slightly cool week, not a cold one, but one slightly below the average, of which there have been very few since January.—G. J. SYMONS



T is many years since we have seen such heavy crops of Apples as were grown this season, yet there is every likelihood of the supply falling off very rapidly. As yet not a single early or midseason variety that has come under my notice is keeping really well, and, to all appearance, good Apples will be even scarcer at midwinter than they often are after what may be termed a very bad year for Apples. Duchess of Oldenburg was one of the first to indicate what we were to expect. Finer, cleaner-looking fruit of this variety I never gathered, yet within a fortnight of their being ripe not one was fit to use. Black spots first showed on the surface, and shortly after the disease, if such it may be termed, spread to the core, the fruit eventually either bursting or turning black. Irish Peach and Beauty of Bath among early dessert varieties, and Lord Suffield, Keswick Codlin, and Ecklinville of culinary sorts, all behaved very similarly, not a sound fruit being left at a time when they ought to be on the point of ripening. Manks Codlin being somewhat firmer kept rather better, but was past its best early in October, or more than a month earlier than usual. Warner's King I have known keep well till the middle of December, but hereabouts it is doubtful if there were any sound fruit by October 7th. It was quite distressing to see the large, clean-looking fruit of this variety becoming first spotted and then black all over, but the tale of woe does not stop there. Tower of Glamis is over, while Hollandbury, Lemon Pippin and Reinette de Canada are giving signs of failing. Our sheet anchor, the Beauty of Kent, of which we have several large trees, gave us heavy crops as usual, but fully one-half of the fruits are spotted, and instead of being good till February, there will be none left by the middle of November. It is very doubtful if either Lane's Prince Albert, Bramley's Seedling, or Lady Henniker will keep at all well, though Wellington seems sound enough at present.

Some of the dessert varieties are behaving better, King of the Pippins, Adams' Pearmain, Ross Nonpareil, and Court Pendû Plât, though ripening somewhat out of season, being as yet quite sound and good. Of Cox's Orange Pippin we gathered heavier crops of fine well-coloured fruits than usual, but these are keeping badly. At least one-third of the fruits are already spotted, and I am much afraid the rest will not keep long. When an Essex friend informed me, late in September, that he had then sent large quantities of this superior dessert Apple to the London markets, only getting about 2s. 6d. per bushel for them, I blamed him for his precipitancy, but probably he did the right thing after all. Since then, or about a fortnight later, another large grower of hardy fruit intimated that he also had sold some Cox's Orange Pippin, but either his samples were remarkably good or he found a better market, as his returns were at the rate of 7s. 6d. per bushel. In Somersetshire 3 peck baskets of Cox's Orange Pippin only fetched 1s. 6d., and did not go off very readily at that price. Blenheim Pippin being better known in country districts always sold well till this season, but those fruiterers who store for winter sales are very shy of their best paying Apple, and prices are very low indeed. Blenheim Pippin has also been consigned to Covent Garden in large numbers, and those who have sold the bulk of this variety at fairly good prices will get the best of the bargain, as it is very certain that few Blenheim Pippins will be found in a sound state in December—at any rate, not if they were grown in the south-western counties.

Nothing could well be more disheartening than the outcome of this great season of plenty. Luckily the glutted state of the markets quickly had the effect of making the owners of heavy crops of Apples decide to at once convert these into cider. Persons who had not the proper appliances for making cider sent their fruit to those who were in a position to undertake the work at a fixed charge, and at one time the latter were greatly overworked. Had the bulk of orchard grown Apples been stored, there would, ere this, have been so many heaps of rotten fruit to deplore the loss of, and in any case this year's experience must, to say the least, have a very disheartening effect upon numerous fruit growers who have been led to believe there are fortunes to be made in growing hardy fruit.

It may be that it is only in certain districts that Apples are keeping so badly, though the complaint of early ripening is general enough. That they would ripen abnormally early was to be expected, but surely it was not the excessive heat that is responsible for the premature decay of the fruit. Presumably the American summers are always hotter than ours, yet their Apples keep well, and doubtless will not be long before they arrive in large consignments. It may be that their selections of varieties suit their climate in the same way that ours are the best, as a rule, for this country. Some of our great fruit growers and exhibitors, such as Messrs. Bunyard, Cheal, Pearson, Rivers, Watkins, Veitch, and others who have very complete collections of Apples, including, doubtless, the best of the American varieties, ought to be able to supply some reliable information on this subject, and will greatly oblige by doing so. Are any of the Newtown Pippins, Baldwins, King of Tomkins County, and other American Apples grown in this country in a superior condition? I have no doubt they will be finer in every way, but the question is do they promise to keep better than our own popular varieties? If they do then ought more of them to be grown. Exceptionally hot summers will doubtless be as few and far between in the future as in the past, but all the same it is well to be prepared for them. Already there are unmistakeable signs that the selections of late years, especially in the case of market growers, have been too limited, those who formed them having probably erred in going too much to the extreme in the opposite direction of what our forefathers did. Apples pay best when growers are fortunate enough to have good crops in years of comparative scarcity, and this is more likely to happen when twenty-four instead of about twelve varieties are grown in quantity. Private growers are more given to plant a greater number of varieties, and may perhaps overdo it occasionally, yet may, occasionally, have good cause to be satisfied with what they have done in the matter.

As yet I have not seen nor heard any attempt at explaining the cause or causes of this premature decay of Apples. In several cases the black spots under the skin were showing some time before the fruit was gathered; in others they developed very quickly after storing. Either these unwelcome changes were brought about by the excessive heat, or what is more likely, they would not have occurred had there been no rainfall before the fruit was fit to gather. That Apples, as a rule, would have been undersized had the rain not fallen when it did was evident enough at one time, but I cannot help thinking chemical changes had already taken place, that is to say the starch and acids contained in them were fast being converted into sugar when the change in the weather came. Very premature ripening was prevented by a better supply of sap, but can any scientific observer state what would be the effect of the late addition of so much more watery matter to fruit on the point of ripening? Was it or was it not the cause of our trouble? Perhaps Mr. Abbey may be good enough to express his views on this subject.—W. IGGULDEN, Somerset.

FORCING BULBS.

CHRYSANTHEMUMS, which are now so infinite in variety and attractive in appearance, supply our gardens with such a wealth of flowers during the dullest months of the year, that the forcing of bulbs may with advantage be delayed to a later period than was formerly desirable. Although it is wise, even if not absolutely necessary in many instances, to have a few Roman Hyacinths and Narcissi in flower early in November, it is not till the middle of December, or about Christmas-time, that forced flowers are in great demand. Even then the late varieties of Chrysanthemums supply an abundance of bloom; still the bulk of them are over, and variety among them being less, a change in floral fare is welcomed, if for no other reason than to divert our thoughts from holding in too light esteem the charms and usefulness of the "Autumn Queen," an error which too long familiarity with things and beauty sometimes begets.

The present is a good time to place in heat bulbs for flowering at the time indicated. Roman Hyacinths rank among the most useful for this purpose, as they may be brought into flower quickly with but little risk of failure if good bulbs are obtained. It is surprising what hard forcing they will bear with impunity, provided suitable treatment is given them. If necessary it is quite possible to have them in flower ten days after their introduction in heat, if they have previously made a little more than an inch of growth before being removed from the plunging material. It is not often advisable to force them so rapidly, but whenever the imperious demands of special occasions renders the practice necessary it is well to be prepared with a safe plan of action.

Those which I brought into flower so quickly were managed in the following way. Shallow boxes were placed over the hot-water pipes in front of a pit; the pots of Hyacinths being stood in these, and a little cocoa-nut fibre packed around the base of the pots to keep the soil in them from drying too quickly at that point by reason of their close contact with the heated pipes. When the requisite number of pots were placed in position they received a thorough soaking with warm water, and were afterwards watered almost every day, only failing to do so should the soil appear quite wet when the usual time for watering arrived. No regular temperatures were kept up, but a strong heat was maintained in the pipes throughout, a little air being also left on the back of the pit. This treatment, with a couple of syringings daily, resulted in even potfuls of these useful flowers ten days after being placed in heat. For a couple of days before their removal from the pit they were put on pots near the glass, away from the hotwater pipes, to accustom them to the loss of bottom heat before being transferred to a much cooler temperature.

Tulips of the Duc Van Thol type bear hard forcing extremely well, and if they are allowed to make fully 11 inch of growth before being taken from the plunging material, and then gradually inured to light in cold pits, they are then in the right condition to bring into flower quickly whenever there is a demand for them. The Double Roman Narcissus is excellent for early forcing; but as soon as the improved form of Paper White (Snowflake) comes in in bulk the first-named is not wanted. If the flowers are required for cutting only the majority of Narcissi bear sharp forcing well. I find, however, that pots of various sizes, containing from five to nine bulbs, are extremely useful and effective for arranging singly in vases; those, therefore, that are required for this purpose should be kept quite close to the glass in a rather cooler temperature, otherwise the leaves become drawn and weedy looking.

Whenever it is absolutely necessary to force potfuls intended for vases on quickly they may be placed on a shelf near the glass in a Cucumber house, or forcing house having a similar temperature, till the flowers begin to show colour. If the pots are then removed to a cooler structure both leaves and flower stems will become considerably strengthened by the time the flowers are fully expanded. Poeticus ornatus is a grand Narcissus for bringing on in a gentle heat. If forced too sharply a large percentage of flower buds which never open are produced. Sir Watkin, which is now considerably reduced in price, is, I think, the variety of the future. Hitherto it has been too choice to subject to sharp forcing, but this season I hope to try its capabilities in that direction.

Freesias seem to become more popular each year, as their culture is better understood. If the bulbs are potted in light rich soil, the pots plunged in cocoa-nut fibre till an inch of growth has been made, and are then removed to a shelf in a cool house, they will succeed admirably. The earliest plants thrive well if grown in an intermediate temperature. Allium neapolitanum is also an extremely useful bulbous plant, which requires exactly the same treatment as Freesias. It ought, I think, to be more generally

Much of the success or failure experienced in bulb forcing is

due to the manner in which this operation is performed. I find there is a general tendency among young men to allow the soil to get into about the same state of dryness before water is given, no matter what position the pots occupy, or what temperature they are grown in. The effect of this is sometimes ruinous to the plants. When growing in a strong heat, especially if the pots are near the hot-water pipes, the soil ought to be kept constantly moist, for if it becomes thoroughly dry many of the roots are destroyed. On the other hand, when grown in cool houses where but little fire heat is employed, the pots should ring sharply when rapped, before water is given.

Notwithstanding much which has been said to the contrary, I consider frequent applications of liquid manure to be of great benefit in helping to swell the individual flowers up to their fullest size; for although each bulb already contains the embryo flower spike, strong healthy roots are required to feed and develop it, and in liquid manure these roots find stimulating food, in a form

most easily assimulated.—W.

SOME NEW VIOLAS.

On looking through my notes of new Violas for this year I find over a hundred varieties altogether have come under my notice. notes, however, I will deal principally with those sent out in 1893, and include a few varieties of 1892 because of their great beauty. I will refer to the new kinds yet to be introduced in another paper.

The early part of 1893 was all that could be wished for the Viola, mild and genial, and with such a wealth of bloom everywhere. In the south and the midlands, however, we had a very long spell of tropical heat and drought, with a pitiless downpour of brilliant sun heat, which drove vegetation into a state of misery, and Violas were in so many instances during the summer scorched up, and they had to bear a terrible infliction of brown aphis.

For bedding out many of the varieties in cultivation are very suitable, but I have no intention of touching upon these exclusively. I wish to draw attention to some of the best of the newer sorts.

Blue Bonnet (J. D. Stuart).—White with a broad edging or margin of height number and distinct

of bright purple, and distinct.

Bridesmaid (Dean).—Pale primrose and quite rayless and fine. Bridesmaid (Dean).—Pale primrose and quite rayless and nine.

Comet (McKie).—Rich rosy purple with a darker centre, fine.

Blue Gown (Dr. Stuart).—Blue self, dwarf and very free blooming.

Blush Queen (Dr. Stuart).—White tinted with blush.

Bridal Wreath (Dr. Stuart).—Pure white, very like Sylvia.

Mrs. D. Fergusson (Irvine).—Pure snow white, good form, very fine.

Mrs. MeDonald (Irvine).—Violet purple clouded with blue tinted

lilac, fine form.

Countess (McKie).—Shaded rosy plum and purple, fine.

Duehess (McKie).—Shaded lilac pink with lighter top petals, fine.

Edina (Dobbie & Co.).—A grand variety and so distinct; rich dark violet centre with a bright blue lilac margin, very handsome

Favourite (Dobbie & Co.).—Light blue; an excellent bedder.
Golden Flake (J. D. Stuart).—Deep yellow, good habit, a valuable

Hyaeinth (Baxter).—Shaded white and lavender, blue centre, and

quite distinct. Laveroek (J. D. Stuart),—A "skylark" style of flower, but an

improvement, and fine. Lemon Queen (Dobbie & Co.).—A little deeper in colour than Brides.

maid; fine. Magnet (McKie).—A rich coloured flower, and extra fine; a very handsome variety.

Mrs. Hay.—A very distinct striped flower, violet purple stripes and white ground; fine.

Peter Barr (Barr).—Yellow, bordered with pale pink; a peculiar

flower, and really a miniature Pansy.

Pieotee (Dr. Stuart),—White with a wire margin of blue lilac on

each petal, and small flowers, very pretty and distinct.

Rob Roy (Dobbie & Co.).—An improved "Vernon Lee," yellow, with with the top petals chocolate coloured with small gold band on each.

Sylvia (Dr. Stuart).—Creamy white self, type of Countess of Hope-

toun. White Flag (Baxter).-White, of great substance, and with long footstalks.

White Duchess (Baxter).—This is the "Duchess of Fife" with a white instead of yellow ground colour, a charming variety which will become popular.

The foregoing I have seen, and they are of the ordinary large flower section of Violas, but there are many others which were sent out last year for the first time, some of which I have not seen, and of others the plants came to hand late in the spring and had no chance of doing well owing to the very hot weather.

The pretty miniature section of the Violetta type has an earnest champion in Mr. George Steel, late of Heatherslaw and now of Etal in Dumfriesshire, who has discarded all Violas not of the Violetta type, so as to devote attention entirely to the latter. Dr. Stuart of Chirnside originated them, and is the raiser of Violetta and other pretty varieties.

The Violetta section is distinct in the smaller growth, which is of more procumbent habit, and in giving a profusion of small, well shaped flowers, all remarkable for their strong violet fragrance and dwarf bedding habit. Violetta itself is a white, and other pretty varieties are Marginata, Lady in White, Old Gold, Summer Cloud, Jeannie Turnbull, Mrs. Joseph Oliver, Maggie Steel, Mrs. George Finlay, and others, and some charming new varieties to be sent out in the spring by Mr. Steel. I have seen almost all, and there are many gems amongst the newcomers.

Of the more recently introduced Violas the following are all fine—viz., Annie King, Aeeushla, Colleen Bawn, Dorothy Tennant, Duehess of Fife, Golden Gem, H. M. Stanley, H. W. Stuart, Mrs. Frater, Mary Gray, Rothes, and Wonder. These are all aequisition to eolleetions.—W. D.



Plants that have well ripened pseudo-bulbs, and have been resting for some time, may be introduced again into heat, when they will be induced to flower. The flowers are always useful, and may with care and judgment be had over a lengthened period by starting plants into growth at different times. Plants that have completed their growth should be placed into a cool, dry, airy position after they have been properly hardened. A late vinery in which Grapes are hanging will be a good place for them. Even in this position expose them to the sun, and give sufficient water only to prevent their pseudo-bulbs shrivelling.—Specialist.

ORCHIDS AT FOREST HILL.

Whilst passing hastily through the Stanstead Road Nurseries of Messrs. J. Laing & Sons, Forest Hill, last week, I noticed that the Orchids made a good display. Several forms of Cattleya labiata were specially good, and the same may be said of the numerous Cypripediums. Amongst the latter the beautiful C. Spicerianum was most conspicuous, the flowers of this popular species always showing up well. A few Odontoglossums were flowering, and the whole of the plants, of which many are grown, presented a remarkably healthy appearance.—C.

DISA VEITCHI X TRIPETALOIDES.

This is a new hybrid raised at Kew, where, according to a correspondent in the "Garden and Forest," it recently flowered for the first time. As will be seen from its parentage, it combines three distinct species, D. Veitchi being the result of crossing D. grandiflora with D. raeemosa. These hybrids are much easier to cultivate than most Orchids, and they increase rapidly. The new hybrid has a crowded rosette of sturdy green leaves, from the centre of which springs a scape as thick as a swan's quill, and 1½ foot high. The flowers are as numerous as on D. racemosa, nearly 2 inches across, and coloured deep rose. These tufted Disas can be recommended to anyone in search of promising material to breed from, as it is scareely possible to make a mistake in crossing and raising them from seed.

FLORAL NOMENCLATURE.

As to the proper pronunciation of "Glädĭölüs," I may mention that more than twenty years ago I asked a distinguished classical scholar, of world-wide renown, for the correct pronunciation of that word. He replied, "The accent should be on the first syllable, as in Gladius; neither the i nor the o should be emphasised." Since then I have been content to follow such authority. The word, so rendered, may not run off the tongue so trippingly as Gladiolus or Gladiolus, but that it is correct I have, from that day, had no doubt. I have never heard, as Mr. Woliey Dod states on page 399, the word in question pronounced Gladjolus, but I have often heard great stress laid on the first syllable and the following i (pronounced e) given very short, which might give the effect of a j.

As to "West Anglian's" letter (page 399), it would indeed be a consummation devoutly to be wished, though searcely to be hoped, even in these days of County Council education, that every gardener should possess a thorough knowledge of Latin, Greek, and French. Until that event occurs there will be many mistakes in spelling and still more in pronunciation; but from perusing "W. A.'s" list of errors it seems very probable that many of them arose from the endeavour to copy almost illegible labels. As for myself I have always considered that the mastery of long Latin, Greek, and French names, without a glimpse of their meaning, is one of the gardener's hardest tasks, and the more letterperfect he becomes in his self-imposed lesson the more I respect him for his application. It is an easy thing for a man who is a fair classic and modern linguist to remember these names, for each word has for him its

meaning; not so for him who has no knowledge of any tongue but his own; with him it has to be parrot-learning, infinitely more difficult.

Then when a name is learnt it has often to be re-learnt, for lanei folium becomes speciosum; Spiræa, Hotcia. Tritoma changes to Kniphofia; Hyacinthus to Galtonia; while Clivia takes the place of Himantophyllum. Gardeners may well afford to ignore the jibes of thoughtless youth, in the knowledge that those of maturer judgment fully recognise both the difficulties under which they labour and the commendation they merit in successfully overcoming the same.—S. W. F.

CULTURE OF FRANCOAS.

FRANCOAS are exceedingly useful for the embellishment of the greenhouse or conservatory or for house decoration, their elegant appearance and floriferous character eminently suiting them for this purpose. When associated with other plants the long white spikes of F. ramosa, together with the beautiful pale red F. appendiculata, cannot fail to evoke the admiration of everyone, and I feel sure that the more they are known the more they will be appreciated. They are comparatively easy of cultivation, and, although the usual time of flowering is from July to September, may by a little judicious arrangement be had in bloom nearly all the year round. A compost of good fibry loam, leaf soil, and sharp sand will be found an excellent mixture for them. For general decorative purposes plants in 7-inch or 8-inch pots are large enough, but where large specimens are required 10-inch and 12-inch pots should be used.

Young plants may be raised either from seed, euttings, or by division; all of which methods should be resorted to in order to procure a long succession of bloom. Old plants that have been flowering throughout the summer will now be making new growth, therefore no time should be last in dividing them. After the plants are turned and of the nets

be lost in dividing them. After the plants are turned out of the pots divide them in two or three parts, and place in similar sized pots to those in which they were previously grown. After repotting water must be sparingly administered until the roots have taken full possession of the new soil. During the winter a temperature of from 45° to 50° should be maintained, and if attended to they will commence throwing up their flower spike about the beginning of April. For propagating by cuttings the offsets, which are freely produced from the base of the old plants, should be procured. The cuttings should be inserted singly in small pots filled with a similar compost to that recommended above. Give water through a fine rose after insertion, to settle the soil, and stand the outtings in a temperature of from 50° to 55°. When well rooted they

Give water through a fine rose after insertion, to settle the soil, and stand the euttings in a temperature of from 50° to 55°. When well rooted they should be placed in 5-inch pots, and grown in the temperature advised for old plants. Immediately the roots reach the sides of the pots the plants should be placed in others 7 inches or 8 inches in diameter.

Where the earliest flower spikes were not removed abundance of seeds may now be procured, and these should be sown as soon as gathered. In preparing the seed pan it is essential that good drainage be obtained, after which fill with a mixture of light sandy soil. Seatter the seeds thinly and evenly over the surface, slightly covering with soil. Most growers recommend raising these plants in heat, but I prefer growing them under cool treatment. It is of great importance that the young plants be pricked into pots or pans when large enough where they can have plenty of space and light, otherwise they will quickly become drawn, and failure must be the result. Before the plants become crowded they should be placed in 5-inch pots and stood on a shelf in a cool house, giving subsequent repottings as may be necessary. When the pots are full of roots liquid manure may be applied every other watering with great advantage. In the spring, when all danger of frost is over, the plants may be placed in a cold frame, letting them remain there till the last week in August, when remove to the greenhouse. If the foregoing instructions are properly carried out a good supply of flowers may be obtained. Some cuttings I inserted last autumn are now flowering profusely, as also are many seedlings which were raised at the same time.—G. PARRANT.

THE CARNATION AS AN ANNUAL.

The first introduction of the Marguerite Carnation was from the Continent, and for usefulness as a decorative flower it is now grown extensively. Mr. C. H. Herbert has been inspired to work on this strain by cross-fertilisation, using a grand scarlet bizarre as a pollen parent with very satisfactory results. The variety in colour, form, and marking is greatly diversified. Some of the blooms are clean cut at the edge approaching the petal of the stage varieties; others are freely serrated and beautifully fringed, whilst the colours are as varied as can be conceived. Then the flaking, splashing, spotting, and the feathering adds greatly to their value. Blooms sent me by the raiser have stood in water for more than a week, and they figured as a novelty and excited a considerable amount of admiration at our Chrysanthemum Show. The perfume is delightful, and the colours in the chaste green setting are beantiful.

For mixed beds and borders they will equal our old friend the Verbena, and for window and conservatory decoration I can conceive their rivalling the Cineraria, the Calceolaria, the Primula, and the Cyclamen, as the warm tones during the cold months will be so cheering. Mr. Herbert tells me that he is this season working on the same stock with the yellow grounds and fancies, so that the possibilities as to the future of the Carnation as an annual we may only imagine.—W. WARDILE.



MR. MAWLEY'S ANALYSIS.

WITH great respect for Mr. Mawley's analysis, I yet think there is something in Mr. Grahame's reasoning. I have no doubt that Mr. Mawley's results are as near perfection as possible, but as these results are expressed in "crude figures," it seems to me fair to state that the new Roses present an insuperable difficulty to that mathematical accuracy which should be expressed by figures. They do not afford the same data for calculation as the other Roses, and therefore the results founded on their data do not stand upon the same footing as the other figures in the list. This is only an outside view. Mr. Mawley has probably forgotten more about statistics than I ever knew, but it is well sometimes to take outside views into consideration.

In the old "Rose elections" the opinions of rosarians were the only data, and the result, of course, was only the general opinion; but this was, if the electors were numerous and representative enough, fairly without cavil.—W. R. RAILLEM.

A GOOD Rose, like good wine, requires no special commendation or assistance by the principle of selection, and as certain vintages year by year work to the front in the estimation of connoisseurs, so a good Rose as it becomes known is more and more cultivated, and therefore exhibited by the best rosarians. Time therefore would do all that was requisite in placing a good Rose in its proper position. Impostors soon disappear, effete ones die out, and genuine good varieties work to the front. If Mr. Mawley is, by an elaborate system, mathematically correct, I think it would be satisfactory for him to clearly explain this method.

To show that other authorities of high standing think ordinary figures (the analysed results of the experience reported by a large number of rosarians) to be sufficient to establish the position and habits of all our greatest Roses, I would instance and recommend the perusal of the R.H.S. report on the Rose Conference held at Chiswick in 1889. This, in my opinion, is the most valuable digest on the cultivation of Roses, and the results thereof, which has yet been published. Nothing but actual figures are there used or discussed, and the results arrived at are given with clearness and mathematical precision.—Charles J. Grahame, Croydon.

As Mr. Grahame (page 418) claims that he has friends who adopt his views on the above matter, perhaps it would be well if they would say so in the *Journal of Horticulture*. In the meantime allow me to express my feeling that the attack he has made upon Mr. Mawley is entirely unwarrantable.

Mr. Mawley's analysis I have for many years looked forward to as the crowning of the Rose season, and I fully endorse your remarks of appreciation thereof. Painstaking care and thoroughness have distinguished all of them, and these characteristics I would commend to the notice of your correspondent. Long years before Mr. Grahame became a member of the N.R.S. Mr. Mawley was doing valuable work for it, to which work the Society owes much of its position to-day. If, therefore, his work was now to be attacked it would have been more becoming if the attack had proceeded from someone who could claim to have done something for the Rose at least approaching in value to what Mr. Mawley has done.

As you are aware, I have usually signed the notes I have sent to your columns, but remembering the tremendous onslaught which a gentleman had to endure, who ventured to differ from Mr. Grahame last year, I take refuge on this occasion in the name of my county—Bucks.

POMONA FARM NURSERIES, WITHINGTON, HEREFORD.

THE above is the largest fruit tree nursery in the fertile county of Hereford, and very easy to reach, as it adjoins Withington Station on the Great Western and London and North-Western railways, also about four miles from the ancient city. Having arranged a convenient day with Mr. J. Watkins, the well-known proprietor, to see his famous fruit grounds, he met the writer at Hereford Station, with a sharp trotting horse and conveyance, driving direct to his Whitecross Nursery, out of the city. There was a magnificent collection of fruit trees of all kinds and forms, clean, and in the best of health, very small trees being well supplied with fruit buds. The planting season being an early and favourable one, great activity was exercised in lifting trees and executing orders. In one instance 500 standard Apple trees were being packed at the time of my visit, and better rooted trees could not be desired.

Like all nurserymen Mr. Watkins has trees to suit all classes of buyers, and standards, half-standards, trained pyramid and bush trees are in vast numbers. Dumelow's Seedling is very much to the fore here, and if this excellent Apple would answer everywhere the same as with Mr. Watkins, nothing would pay better to plant. All the trees ranging from small maidens to tall standards are covered with large fruit buds, and

entirely free from canker. Ecklinville Seedling is in great demand, and a large quarter is occupied by it. Annie Elizabeth, Cellini, and King of the Pippins cover a large space. Beauty of Bath and Bramley's Seedling Mr. Watkins considers to have a great future as Apples suitable for both market and private establishments, consequently many are grown to meet any requirements. Potts' Seedling is another favourite, and the same remark applies to Worcester Pearmain, Stirling Castle, Yorkshire Beauty, and Warner's King; in fact, all the leading market varieties are grown extensively in the Whitecross Nursery. Hereford Beefing is in much favour by farmers, and many trees are sold to them. I think they are wise to plant such a variety that is valuable for market, owing to its high colour; and if prices rule low it is equally valuable for cider making. Many other varieties of cider Apples are grown in great numbers, for which a good demand is found. Some of the choicer Apples are worked in a lesser degree, such as Ribston Pippin and Mr. Gladstone; but though these are only produced by hundreds instead of thousands, they are equally healthy and vigorous, and free from canker. There are many other sorts of Apples, too numerous to name, that are grown in very large numbers. Pears are also grown here, but to a less extent than at the Pomona Nurseries, the principal kinds consisting of Williams' Bon Chrêtien, Marie Louise, Louise Bonne of Jersey, and others, all being clean and admirably grown, and of all forms.

A large plot is filled with all the best and most famed Lancashire prize Gooseberries, each plant having a clean stem of about I foot from the soil to the branches. Winham's Industry, Whitesmith, and Keepsake are very largely grown. Keepsake is a favourite with Mr. Watkins, as he finds it one of the best market varieties, producing heavy crops of large berries almost from its infancy. Crown Bob is another good kind, and represented by a large stock, also many others. Currants, especially Black, are in great force, and finer well rooted plants could not be desired. Black Naples, Ogden's Black, Lee's Prolific, and Black Champion (Carter's) are grown by thousands. Amongst White Currants, White Champion is praised highly, as it produces the finest berries and clusters in great profusion, and is here considered by far the best in its class, while similar honours are awarded to Le Conde among the Red, being an improvement on the well-known Raby Castle Currant.

Plums are only grown on a limited scale at the Whitecross Nursery, so we pass on to the Pomona Nurseries. About a mile before reaching there we come to some of Mr. Watkins' fruit plantations, in which fruit is grown for market purposes. Standard fruit trees are planted in long lines with bush trees between in the lines, and between these lines are Gooseberries, Raspberries, Strawberries, and Currants. When it is stated that Mr. Watkins has about 100 acres of orcharding, independent of his nursery grounds of 60 acres, it will be at once apparent that his opinion is valuable as to the varieties of each kind of fruit most suitable to plant for profit, and a conversation with him on these matters is not only interesting but extremely educational.

On leaving these fruit plantations we arrive at the top of a hill over-looking the nurseries, Hop yards, residences, cider mills, packing sheds, and offices. After a short drive through the nurseries we adjourn to Mr. Watkins' house, where we rest for a little time, and again sally forth. I should mention here that Mr. Watkins has adopted an excellent plan on his house worthy of imitation. Instead of planting the usual crnamental climbers, cordon Pears have been planted on the favourable aspects. The trees have grown splendidly, and produce magnificent fruit. Not only are the trees highly attractive when in bloom but very useful in supplying first-class fruit, much of which finds its way to the exhibition table. Leaving the house we pass to a field filled with stocks for working next spring, and about to be added to the nurseries. Thence we proceed to view the cider fruit.

Imagine a large grass field covered with bright red and golden fruit, varying from 2 feet to $2\frac{1}{2}$ feet deep, weighing hundreds of tons, and then some idea may be formed of the quantity of cider manufactured. Each variety is kept separate and carted away to the mill, and here a few remarks on the mill itself may not be out of place. As the fruit is brought into this department it is shot into a large room, in which is a huge hopper for filling a crushing or pulping machine, the revolutions of which are 2000 per minute, keeping a man busy with a large shovel supplying this hungry monster with fruit. After passing through this process it is conveyed by machinery to another part to have the liquid extracted, which runs through a large 2-inch hose full bore into great vessels. All this work is done by steam power, and on the most approved principles, and as the work is completed the cider is bottled or put in casks, according to quality or demand. One noteworthy point was the extreme cleanliness prevailing in every portion of the manufactory. For this reason alone Mr. Watkins well deserves the large orders he obtains for his cider and perry. The making of the latter was over at the time of my visit, and except that Pears are used instead of Apples the process is much the same.

Opposite the cider factory is the fruit room containing at least 300 varieties of Apples of large size, and mostly of exquisite colour. It would take up too much space to name even the most striking in detail, but the following are worthy of a place in every exhibitor's collection—Belle de Boskoop, Atkins' Seedling, Flanders Pippin, Devon Red (very high colour), Lady Waldron, Crimson Costard, Warner's Seedling, similar to Washington but heavier, Backley's Seedling, Scarlet Tiffing, and Roundway Magnum Bonum, very fine; some of the fruit must weigh a pound each. Many other comparatively unknown varieties deserved noting, but time would not permit. Leaving the fruit we pass to the trees in the nursery, which are in far greater numbers and variety than

at Whitecross. Something like 60 acres are filled with Apples, Pears, Plums, Cherries, Apricots, Peaches, Nectarines, and Damsons, which are planted in long rows containing 2000 trees per row. All the trees are in admirable health and condition, and not a trace of American blight to be seen. To give some idea of the number, I may state that in one portion of the fruit plantation over 600 distinct varieties of Apples are grown, besides a great number of British, Continental, and American sorts on trial. Plenty of room is allowed the trees, which are in bush form and lightly pruned, merely thinning out the shoots where too thick or crossing. Many varieties of Apples not much grown are to be seen in these nurseries, some of which deserve extended culture. One of these not much known outside the county is Stoke Edith Pippin, somewhat resembling King of the Pippins, but larger, with a higher colour and longer keeping qualities, also excellent for dessert.

A collection of native Japanese and American Plums are on trial,

but it is doubtful if they will prove profitable in this country. appears to be an acquisition in the trial department is an American Raspberry named Cuthbert; it is a free fruiting summer variety, and has this season produced a fair autumn crop. At the time of my visit (November 2nd) the fruit was in large clusters and of exquisite flavour. Another Raspberry that promises well is the Black Raspberry; the canes are black in colour, strong, short-jointed, and look as if they would be self-supporting. Superlative and other kinds are grown extensively; also Currants, Gooseberries, and Nuts in great variety and in admirable condition. Strawberries are represented by immense stocks of all the known varieties, including Alpines. All the best kinds are grown by thousands in small pots, as well as numbers in bcds. Contrary to my expectation, John Ruskin has been in great demand this season. It seems to revel in the Withington soil-in fact, all the varieties are exceptionally strong and healthy.

Not only fruit and fruit-producing plants are grown at these nurseries, but adjoining are fields devoted to Potato culture, principally for seed purposes, in which Mr. Watkins does a large trade. Several varieties of fine quality have originated here, and no doubt many readers will have seen the grand samples staged by Mr. Watkins at some of the large agricultural and horticultural shows. Hops are also an important crop. A large Hop yard faces the cider factory, and thousands are grown for sale annually. The demand has been very heavy this season for Hop

roots at high prices, still a good supply is left.

Leaving this part, we make our way to the station, and having a few minutes to spare we inspect some more fruit hurriedly in buildings near the station. Here were magnificent Pears in great variety which have done excellent service at shows. Tons of Blenheim Orange and other Apples were stored, to be sold later on as prices advanced. At the back of these store rooms are other packing sheds in which men were busy packing and conveying trees to the station only a few yards away. A line of rails runs right through a portion of the nursery and up to the cider factory, enabling the proprietor to execute heavy orders of each in the least possible time. Time expiring, I have to leave after a very interesting visit, and greatly obliged to Mr. and Mrs. Watkins for their kindness and hospitality, my only regret being that I did not see Mr. Vaughan, the able foreman, who was winning premier honours for Mr. Watkins at Portsmouth for collections of Apples and Pears.— S. T. WRIGHT.

FRITILLARIA BREVICAULIS.

THIS Fritillaria is a dwarf-growing plant, rarely exceeding a height of 9 inches. The flowers, as will be seen by referring to the illustration (fig. 64), are rather small and produced singly as well as in pairs. They are of a tawny colour, and although not particularly attractive, the species is well worth growing. Our engraving was prepared from a sketch of a plant growing in the Royal Gardens, Kew, last spring. Like other choice Fritillarias the species under notice requires a sunny and sheltered position, a deep sandy loam suiting it admirably. It can also be grown in pots for the embellishment of the greenhouse in spring.

ROYAL HORTICULTURAL SOCIETY.

NOVEMBER 14TH.

THERE was a good display of Orchids and Chrysanthemums at this meeting, and many noveltics were shown, but it was impossible to see the true colours of the flowers, owing to the bad light in the Drill Hall. Fruit was not so well represented as usual, but some fine Potatoes were

FRUIT COMMITTEE.—Present: Philip Crowley, Eq. (in the chair); Messrs. J. Lee, T. F. Rivers, G. Taber, T. J. Saltmarsh, W. Warren, J. A. Laing, W. Balderson, F. Q. Lane, James Smith, H. J. Pearson,

J. Willard, and Dr. Hogg.

As before mentioned fruit was not extensively shown. Mr. W. J.

Godfrey, Rolle Street, Exmouth, sent a dozen clusters of Apples of a second growth. The fruit of such varieties as Grenadier, Lord Grosvenor, and Domino were about half grown, whilst others were larger than Walnuts. A vote of thanks was accorded for this interesting exhibit. Mr. J. Edmeads, Bevingford, Uckfield, sent a dish of Edmeads' Seedling Apple, a fine well-coloured variety, but no award was made. Mr. W. Jenkins, The Willows, Abergavenny, had a dish of Monmouthshire Beauty Apples, and Mr. W. H. Divers, Ketton Hall Gardens, sent samples of Barnack Beauty in ripe condition. A vote

of thanks was accorded in each case. Mr. J. Crook, Forde Abbev, Chard, had a dish of Coe's Late Red Plum, and Mr. W. Roupell, Harvey Lodge, Roupell Park, staged a basket of splendid Newton Wonder Apples (vote of thanks), and Mr. J. Fitt, had Bananas in good

Messrs. H. Cannell & Sons sent a large collection of Potatoes, clean well-grown tubers that deserved the silver Banksian medal recommended. They exhibited a tuber of The Bruce that weighed $2\frac{1}{2}$ lbs, Mr. Leach, Albury Park Gardens, Guildford, sent Leach's All the Year Round Parsley, and an extensive collection of Celery came from the Society's gardens at Chiswick,

FLORAL COMMITTEE.—Present: W. Marshall, Esq. (in the chair); Messrs. R. Owen, H. Herbst, C. T. Druery, G. Stevens, W. C. Leach, F. Ross, J. Jennings, W. Bain, C, Jeffries, W. Furze, C. E. Pearson,



FIG. 64.—FRITILLARIA BREVICAULIS.

T. Baines, H. Cannell, J. D. Pawle, J. T. Bennett Poë, E. Mawley, G. Paul, J. H. Fitt, Owen Thomas, C. E. Shea, Peter Barr, and Rev. H. H. D'Ombrain.

Chrysanthemums were the principal exhibits brought before this Commictee. Messrs. J. Veitch & Sons, Chelsea, sent a large group tastefully arranged, comprising all the leading varieties (silver Flora Amongst others were some exceptionally fine blooms of Lord medal). Amongst others were some exceptionally fine blooms of Lord Brooke, Viscountess Hambledon, Robert Owen, and Charles Blick. A plant of Mdlle. Therese Rey was also shown by Messrs. Veitch, and an award of merit was adjudged. Mr. W. Wells, Earlswood Nurseries, Surrey, had a splendid collection of cut blooms of all the latest novelties in the Japanese, single and Anemone-flowered forms (bronze Banksian medal). Mr. W. Salmon, West Norwood, sent some bouquets and baskets of Chrysanthemums (bronze Banksian medal), and Mr. G. Wythes, gardener to the Duke of Northumberland, Syon House, Brentford, had a collection of blooms charmingly arranged with small Palms and Ferns (silver Banksian medal). Mr. C. E. Shea, The Elms, Foots Cray, Kent, had a collection of Japanese varieties arranged in a manner that he offered as a suggestion for staging cut Chrysanthemums. The stands were in sections of about 6 inches in width, three blooms being staged in each section (bronze Banksian medal). An award of merit was adjudged for a bloom of Mdlle. Therese Rey, shown by Mr. Shea.

In a competitive class for a collection of cut Chrysanthemums there were several exhibitors, Mr. J. McLeod, Dover House Gardens, Roehampton, had a fine collection of Japanese incurved and the smaller flowered types, but was disqualified for non-compliance with the schedule. Mr. G. Wythes was then placed first, Mr. Thomas Osman,

Ottershaw Park, Chertsey, second, and Miss Debenham, St. Albans, third. Mr. W. Slogrove, Gatton, Kergate, was first for eight new Chrys-Mr. G. Wythes was anthemums showing varieties now in commerce. second also in this class with smaller flowers of similar varieties.

Messrs. H. Cannell & Sons, Swanley, Kent, sent a very fine collection of Chrysanthemums and Zonal Pelargoniums (silver Flora medal). The former comprised all the novelties of the day in splendid condition. The Pelargoniums were also excellent, and made a grand display. Mr. R. Parker, The Gardens, Impney Hall, Droitwich, sent a collection of cut Chrysanthemums, arranged with Ferns and small plants of Ficus repens (silver Banksian medal). Mr. Robert Owen, Maidenhead, sent six boxes of new Chrysanthemums, and awards of mcrit were adjudged for the following varieties:—John Bunyan, Lord Rosebery, Niveus, Golden Wedding, Rose Wynne, and Wilfred Marshall. These are described below. Mr. Crawford, Reigate, showed Chrysanthemums, and a bronze Banksian medal was recommended.

Messrs. J. Veitch & Sons sent a box of Begonias John Heal and Mrs. John Heal, the last named a large flowcred variety. The same firm secured a first-class certificate for Dracena Jamesi, which is described elsewhere. Sir Trevor Lawrence, Bart., sent a basket of Primula

Forbesi, for which a first-class certificate was awarded.

ORCHID COMMITTEE.—Present: H. J. Veitch, Esq. (in the chair); Dr. Masters, Messrs. J. O'Brien, E. Hill, Thomas Statter, T. W. Bond,

Dr. Masters, Messrs. J. O'Brien, E. Hill, Thomas Statter, T. W. Bohu, C. J. Lucas, H. Williams, and H. Ballantine.

Messrs. Hugh Low & Co., Clapton, sent a small group of Orchids tastefully arranged with Crotons and other foliage plants (silver Banksian medal). Messrs. F. Sander & Co., St. Albans, were represented by a group of Orchids, comprising Calanthes, Cattleyas, and some charming Cypripediums (silver Flora medal). R. J. Measures, Esq., Cambridge Lodge, Camberwell, sent a charming collection, amongst which were the beautiful Cypripedium insigne Sanderæ, C. Exul. C. × Bellona. C. insigne Ernesti, some varieties of Cattleya amongst which were the beautiful Cypripedium insigne Sanderæ, C. Exul, C. × Bellona, C. insigne Ernesti, some varieties of Cattleya labiata, and the brightly flowered Sophronitis grandiflora (silver Flora medal). Mr. T. Statter, Stand Hall, Manchester, sent various Cypripediums, amongst which C. Southgatense superbicns (first class certificate), and C. Ariadne were conspicuous. Mr. Joseph Fitt Panshanger, Hertford, sent a variety of Cypripedium Leeanum, distinct from and smaller than the type. F. S. Moseley, Esq., 448, West Strand, had a seedling Cypripedium

had a seedling Cypripedium.

Messrs. J. Veitch & Sons, Royal Exotic Nursery, Chelsea, had
Lælio-Cattleya Statteriana (first-class certificate), Lælis-Cattleya pallas superba, and several distinct Cypripediums, including C. × Euryades, and C. Œnone. Messrs. B. S. Williams & Son staged a very fine collection of Cypripediums, Cattleyas, and Odontoglossums tastefully arranged (silver Flora medal). Mr. E. H. Woodall, Nicholas House, Scarborough, sent a plant of Cypripedium insigne var. albo-purpureum. Messrs. W. L. Lewis & Co., Southgate, N., staged a collection of Cypripediums, Cattleyas and Odontoglossums, which made a bright display (silver Banksian medal). Several Orchids that have not been mentioned were

certificated, but these are described below.

CERTIFICATES AND AWARDS OF MERIT.

Chrysanthemum Chas. Davis (J. Veitch & Sons and G. Stevens).— The well-known bronzy yellow sport from Viviand Morel (award of merit).

Chrysanthemum C. J. Salter (W. Wells). — A pretty Anemone-flowered variety raised by Mr. Wells. The flowers are medium in size and of a terra cotta shade (award of merit).

Chrysanthemum Duke of York (H. Cannell & Sons).—A massive incurved Japanese variety, broad purplish crimson florets with a silvery pink reverse (award of merit).

Chrysanthemum Golden Wedding (R. Owen, G. Stevens, J. Veitch and Sons, and H. Cannell).—A fine Japanese variety, rich golden yellow

(award of merit).

Chrysanthemum Mdlle. Thérèse Rey (C. E. Shea and J. Veitch and Sons).—A charming creamy white Japanese variety which is figured on page 449 of this issue.

Chrysanthenum Wilfred Marshall (R. Owen).—An English-raised incurved Japanese variety of a bright yellow colour (award of merit).

Chrysanthemum Rose Wynne (R. Owen).—An incurved Japanese variety, bloom large, white heavily tinted pink (award of merit). Chrysanthemum Niveus (R. Owen).—An American reflexed Japanese

variety, of good build, white tinted pink (award of merit). Chrysanthemum Robert Petfield (R. Owen).—A fine incurved variety,

blooms of great depth and substance (award of merit).

Chrysanthemum Lord Rosebery (R. Owen). — An English-raised incurved variety; blooms large, deep, and in colour a shade lighter than Lucy Kendall (award of merit).

* Chrysanthemum John Bunyan (R. Owen).—A charming Anemone-flowered variety of a striking yellow colour (award of merit).

Croton Russelli (H. Low & Co.).—A broad-leaved showy kind, the foliage being green, richly spotted and veined with yellow and red

(first-class certificate).

Cypripedium Ashworthæ (E. Ashworth, Esq.).—This hybrid is the result of a cross between C. Leeanum superbum and C. selligerum majus. The dorsal sepal is very fine, chiefly white, with a green base and spotted purple. The sepal and lip are bronze purple (award of merit)

Cypripedium Leeanum var. James Hamilton (F. Sander & Co.).—A beautiful variety of C. Leeanum, the chief feature being the fine white dorsal sepal (award of merit).

Cypripedium southgateense superbum (T. Statter, Esq.).—This is

apparently the result of a cross between C. bellatulum and C. Harrisianum. The sepal and petals are heavily spotted purplish crimson, and likewise is the lip (first-class certificate).

Cypripedium Swinburnei Stand Hall var. (T. Statter, Esq.).—A

pretty form, with sepals and petals densely covered with browish spots,

the lip being shiny brown (award of merit).

Dracæna Jamesi (J. Veitch & Sons).—A narrow-leaved Dracæna of an ornamental character. The centre of each leaf is dark brownish red,

the margins being bright red (first-class certificate).

Lælio Cattleya Statteriana (J. Veitch & Sons).—An exceedingly pretty bigeneric hybrid, being the result of a cross between Cattleya labiata and Lælia Perini. The sepals and petals are of a rosy mauve shade, and the lobe of the lip is a rich purplish crimson (first-class

Pleione maculata alba (G. W. Law, Esq.).—A chaste variety, with small white flowers, a tinge of lemon yellow being noticeable in the

throat (award of merit).

Primula Forbesi (Sir Trevor Lawrence).—A small-flowering species from China. The flowers are rosy lilac colour, and obviously very freely

produced (first class certificate).

Stanhopea Lowi (H. Low & Co.).—A very fine species with large creamy white flowers, faintly spotted with crimson (award of merit).

THE LECTURE.

At the afternoon meeting, Mr. R. Parker, The Gardens, Impney Hall, Droitwich, read an excellent paper on the culture of Chrysanthemums. As a successful grower, Mr. Parker dealt with his subject in a practical manner, detailing the most salient points connected with the cultivation of these popular flowers. The essayist illustrated his remarks with some well grown plants and very fine blooms. A vote of thanks to Mr. Parker was unanimously accorded.



EVENTS OF THE WEEK .-- Apart from the Chrysanthemum Exhibitions, some of which are mentioned on another page, nothing of special interest to horticulturists will take place during the ensuing week. Several auction sales are announced, and particulars of these can be found in the advertisement pages.

- AT the monthly meeting of the UNITED HORTICULTURAL BENEFIT AND PROVIDENT SOCIETY held on Monday last five new members were elected. The Secretary announced that out of the 500 members not one was on the sick fund.
- THE WEATHER IN LONDON.—During the past week the weather in the metropolis has been of a changeable character. Sunday was fine, and a sharp frost occurred at night. Monday was also dry and cold, freezing during the night; but Tuesday proved a typical November day, being damp and foggy. During the evening it rained heavily, and Wednesday opened dismally. At the time of going to press it is raining slightly.
- WEATHER IN THE NORTH.-We have had a week of seasonable weather. In the beginning frosts of from 5° to 8° occurred. There was heavy hoar frost on the morning of the 9th, and slighter on that on the 13th. There has been little sunshine, and cold north-easterly winds have generally prevailed.—B. D., S. Perthshire.
- THE YORK GALA.—As announced in our advertisement pages the great Floral Fête at York next year will be held on June 13th, 14th, and 15th. A sum of £650 will be offered in prizes. Mr. Chas. W. Simmons, 13, New Street, York, is the Secretary, and schedules will be ready in January next.
- MESSRS. DOBBIE & Co., Rothesay, inform us that they have this week received a Royal Warrant appointing them seed growers and florists to the Queen. They also announce that Mr. Archibald M. Burnie, a prominent member of the Institute of Bankers in Scotland, becomes a partner in the firm, taking charge of the counting house.
- CARNATIONS FOR WINTER FLOWERING, a correspondent observes, were in splendid condition at Ketton Hall last week, and several plants of Urceolina aurea were in full bloom. Some good Orchids, including Cypripedium insigne Maulei, and bushes of Salvia Pitcheri were very attractive. On the roof of a warm house large numbers of flowers of Allamanda Hendersoni and Bougainvillea glabra were hanging. A plant of Aristolochia and a Bignonia in flower were also conspicuous.

- GARDENING APPOINTMENT.—Mr. Harry May, late of Roscmount, Sunningdale, has been appointed as head gardener to Mrs. McIntosh, Havering Park, Romford.
- PYRUS JAPONICA FRUITING.—"G. H., Gosport," writes, "I enclose a fruit of the well-known Pyrus japonica for your inspection. Is it not a very unusual thing for it to fruit? I have not heard that a fruit has ever before been seen in this part. It is growing on a south wall." [Pyrus japonica has fruited abundantly this year in many gardens.]
- POTATO PICKING IN SOUTH LINCOLNSHIRE.—At Holbeach and Long Sutton (large Potato growing districts), there has been a great demand for labour, in order to get up the tubers. The Potatoes are turning out well, and in the marshes so great is the demand for hands that the farmers are outbidding one another to obtain pickers. Boys and girls are getting as much as 2s. and 2s. 3d. per day, and labourers with large families are reaping quite a harvest. In Hertfordshire the other day we noticed there were many fields of Potatoes undug.
- Peaches and Nectarines at Ketton Hall. Mr. A. Harding, Orton Hall, writes:—"It is not only Chrysanthemums that are to be seen at Ketton Hall, for the most commanding feature is undoubtedly the Peach and Nectarine trees under glass, and Mr. Divers, the courteous and talented gardener there, has made himself famous as an exhibitor of these fruits, as the columns of the Journal has often testified. The Peach trees alone are worth a journey to see, and although the fruit is over for this season, the growths for bearing next year are splendid, and show good culture."
- A NEW CALLA.—Messrs. E. H. Krelage, Haarlem, Holland, write:—"I beg to inform you that the rose-coloured Calla, imported by our firm and mentioned in your columns (page 420), has proved to be identical with Richardia Rehmanni, which was first described by Engler in his 'Botanisehe Jahrbücher,' 1883, under the name of 'Fantedeschia Rehmanni.' We exhibited a flowering plant at the last Floral Committee meeting of the Royal Netherlands Horticultural and Botanical Society, where it was awarded a first-class certificate."
- ROYAL BOTANIC SOCIETY.—A meeting of this Society was held on Saturday last, Mr. T. H. Burroughes in the chair. On the proposition of the Duke of Teek, President, the Duke of York was nominated for the fellowship of the Society. The following also were eleeted, and the nominations of many others read for ballot at the next meeting:—Mrs. Haslam, Mr. J. Hutchinson, jun., and Mr. W. E. Whadcoat, The donations received since the last meeting included many uncommon and seldom seen fruits, both home-grown and from the continent, illustrating the special fruitfulness of the year just closing.
- —— SEVERAL METHODS OF PRESERVING APPLES THROUGH THE WINTER were discussed at a Conference in Somersetshire. The boiling of fruit and filling sulphurised casks with them was recommended, also burying Apples in pits and thatching them in, and laying them in clamps, all of which methods were said to have proved successful. One farmer has adopted the plan of drying his Apples by evaporation. It was not mentioned at the aforesaid temperance meeting, but our contemporary states that the pomace of the Apples—that is, the residue after they have been ground and the juice pressed out—is almost as good for stock as the Apples themselves, and it can be easily preserved by clamping it like Potatoes and thatching it over.
- VEGETABLE AND ROOT SHOW AT LEICESTER. Messrs Harrison & Sons have again held their annual vegetable and root Show, and, says a local contemporary, another success has been seored. The Exhibition was opened at the Market Hall on Wednesday, November 8th. Liberal prizes had been offered by the firm for the roots and vegetables grown from seed supplied by them, and, judging from the excellent quality of the exhibits, the judges must have had no easy task in awarding the prizes. A better exhibition of Celery has very rarely been seen. Some fine heads of Harrison's Leicester Red Celery and the Early Rose variety were staged. The competition was strong in the Carrots, and of the Early Market and the Selected Intermediate Carrots it would be impossible to speak too highly. There were also some good specimens of the Autumn Giant Cauliflower, but the competition was not quite so marked in this class. Savoys were very strongly represented, and some exceedingly large ones were on view. The quality of the Brussels Sprouts was very good, whilst the same remarks would apply to the Onions and Beets. Perhaps the Cheltenham Greentops were the most conspicuous in the Beet line. Messrs. Harrison usually excel in Potatoes, and the exhibits this season did not prove an exception. here were some very fine tubers on exhibit.

- FORESTS OF APPLE TREES.—According to "Meehans' Monthly," the Apple has become wild in the Sandwich Islands, and forests of trees of many aeres are found in various parts of the country. They extend from the level of the sea far up into the mountain sides. It is said that miles of these Apple forests can oceasionally be seen. One traveller gives the extent of one of them as between five and ten miles in width and about twenty miles long.
- —— GROWING FILBERTS AND HAZEL NUTS.—Inquiries are frequent in regard to the probability of profitable culture of the Hazel and Filbert Nuts. Trees growing by themselves seldom produce large creps, on account of the different periods at which the catkins mature and the bearing flower opens. In order to get them suecessful, therefore, they have to be grown in large quantities together. Of all trees Filberts are the most gregarious. When numbers are planted in an orchard by themselves they bear remarkably well. The best situation is one exposed to the north, as the southern exposures might induce a still greater period between the openings of the two classes of flowers.—("Mechans' Monthly.")
- BRITISH FUNGUS FLORA.—Some three months ago we published a notice of two volumes of Mr. George Massee's "British Fungus Flora." The third volume of the series has now come to hand, and within we perceive an intimation that in order to complete the subject the issue of a supplementary volume is contemplated. The present volume is even more comprehensive than those which preceded it, and presents the same excellent appearance in respect of binding and typography. The Basiomycetes occupy more than half the book, and the remaining two hundred pages comprises the Hyphomycetes and other funguses. The exhaustive and analytical character of the work is well preserved, and those who are interested in this recondite subject will find many of the old obscurities and uncertainties peculiar to fungology cleared away.
- Pentstemon anterrhinoides.—Mr. W. Watson of Kew, in referring to this plant in a recent issue of the "Garden and Forest," says:—"This interesting shrubby species of Pentstemon was introduced to Kew from California about twenty years ago, and flowered in the open ground in September. It is not, however, hardy, and eonsequently it had disappeared from cultivation here until it was shown in flower at the Royal Horticultural Society meeting recently by Sir Trevor Lawrence. It is a much-branched, glabrous, subcinerous shrub with slender leafy shoots, suggesting those of Myrtle or Leptospermum, and bearing numerous lemon-yellow flowers an inch across, short in the tube, with the lower divisions of the limb incurved. It might prove a good plant to cross with the popular herbaceous species of the genus."
- How Plants Sicken and Die was the subject of an exceedingly interesting and most instructive lecture delivered before the members of the Paxton Society at their rooms at the Saw Hotel last weck by Mr. H. Crowther, F.R.M.S., Curator of the Philosophical Hall, Leeds, and late of Truro, Cornwall. Mr. W. Tunnicliffe presided, and Mr. G. Gill occupied the vice chair. The lecture was illustrated by a large number of very beautiful photographs, and shown by means of the lime-light. The lecturer dealt with his subject in a very masterly manner, and his remarks were most attentively listened to. He showed in the first place the great similarity in many respects between human beings and plants and trees, and after clearly demonstrating the form of the various parts, and the work they carry on, he explained how plants are attacked and destroyed by various insects and also by means of foul gases.
- FLORA OF NEW ZEALAND.-Mr. George Thomson of Dunedin calls attention to some suggestive facts about the flora of New Zealand. As everyone knows, New Zealand when discovered did not possess any mammals, with the doubtful exception of a species of rat. Accordingly, we find that those plants, which have defensive structures such as spines, prickles, and those whose seeds or fruits are fitted for adhering to the coats of passing animals, and thus obtaining dissemination, belong in almost every instance to species having a wide range outside of the islands. The inference, therefore, is that the characters referred to have been developed outside the New Zealand region, and that such species have been introduced into that country at a comparatively recent period. The general absence of conspicuous flowers is attributed to the corresponding absence of insects necessary for their fertilisation. Previous to the arrival of European bees the Clover did not set seeds, and if the native birds mentioned are destroyed a similar fate may befall the plants to which they are co-related.

THE APPLE CROP in the cider districts of the west is exceedingly abundant this year. The orchards of Herefordshire, says a daily contemporary, have been heavily laden with fruit, and in Somersetshire cider Apples are so plentiful that the farmers in many cases are giving them to stock instead of grinding them for eider. The Mid-Somerset Temperance Village Mission, objecting to cider, held a conference lately, in which speeches were delivered and letters read showing the value of Apples for stock, and discouraging the manufacture of cider. A gentleman writes: "Our worst Apples are given to the cows, who are more eager for them than for meal or cake." A lady made the following statement: "We give our Apples to the cows every day, about 12 lbs. to each cow, and find it increases the butter and improves the condition of the cows. The very small Apples we shall boil for the pigs." She declared that Apples suit young pigs better than any roots that can be mentioned. One informant states that Apples at 28s. a ton—the present price-were much cheaper as food for milch cows and other kinds of stock than Mangels at 12s. a ton.

- GIRDLING BRANCHES TO PROMOTE FRUITFULNESS.—It has long been known that if a ring of bark be taken from a branch it will cause that branch to prematurely bear fruit. But that branch usually dies soon. The ring may not be taken completely around, that is to say, a connection between the bark above the ringed portion and below the ringed portion remains. In this case, the part above the girdled portion does not die, but is brought into fruitfulness, which continues for several years. This, says "Meehan's Monthly,' has only been employed as a matter of curiosity, as it is usually considered that the quality of the fruit is impaired by this procedure. Certainly in Grapes, the fruit produced after girdling is not nearly as sweet or in any way as much appreciated, with the single exception of size, as in cases where the girdling process has not been attempted; but in the Orange culture in Florida, it is stated that this girdling is becoming a part of general practice, and perhaps this may account for the enormously large increase of sour instead of sweet Oranges, which is being poured into markets from that State.

- IMPROVEMENT OF THE CARNATION.—For many years when Carnations were grown simply for their beauty as cut flowers, little attention was given to any other point except to their fragrance, tints and colour, or size of bloom. When they were cut for florists' purposes, artificial stems had to be given to each flower. This made it very troublesome to florists, and besides prevented the general use of the Carnation in boutonières, because for want of stems there was no opportunity to put articles retaining moisture around the stalks by which withering could be prevented; they were soon, therefore, useless. American florists, however, have turned their attention to developing Carnations which produce flowers singly on long stems, and yet will stool up so as to give bushy, stocky plants, producing these long-stalked flowers in the greatest abundance. So successful has the improvement of the Carnation been in this way, that no one ever thinks now of buying Carnations except with stalks often 5 or 6 inches in length. It is interesting to note that this particular kind of improvement does not seem to have been appreciated by improvers in the Old World, as the popular Carnation for florists' work is still one which was raised in France nearly twenty years ago, known as Souvenir de la Malmaison. This produces one enormous flower, oftentimes $1\frac{1}{2}$ inch in diameter at the top of the stalk, with numerous short-stalked buds along the main stem. No florist here could make his salt out of the cultivation of such a Carnation. Little instances, says "Meehans' Monthly," like these show the immense advance made by American florists in certain lines of improvement over the progress which the same thing has made in the Old World.

PRIZES AT THE GARDENING AND FORESTRY EXHIBITION.

I was pleased to see this matter noticed on page 419 of the Journal of Horticulture. I fear that "Exhibitor" will require a considerable amount of patience before he can get those in authority at Earl's Court to do what is just and what should have been done long ago. They not only refuse to pay, but add insult to injury by refusing to answer letters respecting payment of prizes; and when, after much pressure, a reply is obtained it is evasive, prolonging the exhibitor's agony, and adding to expenses. I was heartily glad to see "Exhibitor's" letter, and I trust that its publication and these notes will assist those who have given much time at considerable cost in endeavouring to make the exhibitions attractive and won the prizes that were offered.

I would suggest that the exhibitors meet together as soon as possible and subscribe to take a test case into Court, and compel payment of the prize money. This will be an easy matter for a number, whereas one person could ill afford it. I will gladly contribute my share towards

the object in view, and in future I would beg those interested in horticulture to give Earl's Court exhibitions a wide berth. Though we were misled by the respected names of Messrs. Milner and Turner as managing this section, we shall in future know that the syndicate are unworthy of support. Last year they failed to give the charities connected with horticulture the donation promised with such a loud flourish of trumpets, and undoubtedly that promise led gardeners and others to exhibit the more cheerfully, in the assurance that institutions established for the support of the aged and orphans would be in some measure assisted.

If any exhibitors have been paid the prize money to which they are justly entitled, it would be well if they would state the fact. I know several gardeners who have received no prize money after spending, to them, considerable amounts in the necessary expenses connected with exhibiting.—Another Exhibitor.



CHRYSANTHEMUM SHOWS.

THE following Chrysanthemum shows, which have been advertised in our columns, remain to be held during the current month:—

Nov. 16th, 17th, and 18th.—Edinburgh, York.

" 17th and 18th.—Bolton, Sheffield. " 24th and 25th.—Eccles and Patricroft.

REPORTS OF CHRYSANTHEMUM SHOWS.

WE are very much obliged to our friends who favour with reports of Chrysanthemum shows in the provinces, but those which come to hand so late that they cannot be published till a fortnight after date have perforce to be put aside for more recent matter.

EXHIBITORS' CARDS.

WILL you kindly allow me space in your valuable paper to make a suggestion now the Chrysanthemum exhibitions are prevalent? I think it would be better both for judges and exhibitors alike if the cards with names and addresses on were not placed till after the judging, but each exhibitor could have a private mark to avoid any mistake. It would, I think, save the judges from being accused of partiality in any points, and would also satisfy exhibitors as to the justice of the awards.—OBSERVER.

NATIONAL CHRYSANTHEMUM SOCIETY.

A MEETING of the General Committee of the National Chrysanthemum Society will be held on Monday evening, November 20th, at Anderton's Hotel, Fleet Street, E.C., and at the termination of the regular business Mr. Charles E. Shea, The Elms, Foots Cray, Kent, will read a paper on "Judging Chrysanthemums." The annual dinner will take place at the same place on Thursday, November 30th, when the President, Sir Edwin Saunders, will occupy the chair.

THE N.C.S. AND ITS CERTIFICATES.

I AM glad to see the Floral Committee are exercising a tight hand in respect to the awarding of certificates. The standard of merit is now a high one, and unless a variety is really good and distinct it is passed over. This is how it should be, and the certificates will be much more valuable. I cannot help thinking the Floral Committee should adjudicate on the blooms in a place where something like fair daylight can be obtained. I believe one or two really good varieties were passed over because the light was insufficient to distinguish the colours.

Whilst writing of certificates, I think it would be a good plan to follow out the system adopted by the R.H.S.—viz., that the names of the members of the Floral Committee present be published, and also that the list of varieties certificated should be published in the schedule or report, with the date of the award and the number of votes each variety obtained.—A Mummer.

A FRACAS AT THE AQUARIUM SHOW.

At the recent Exhibition of the National Chrysanthemum Society I, with some scores of other persons, witnessed a most unseemly and unpleasant scene. It appears two Fellows of the N.C.S.—aye, and members of its Floral Committee—were in competition in a certain class. A wins first, B second. The award upset B considerably. He shouted and made a great disturbance—not for a short time, but for hours, ultimately tearing his prize card in pieces. It was certainly a very bad example for any exhibitor to make, especially one in the position of B. If every man who thought he was going to get the prize and did not get it acted in such a manner, what melées our exhibitions would be!

I never heard anyone complain of the awards but this particular member, and for his sake I think it would be well for the Society to adopt the rule in existence among provincial Societies—viz., "Any person finding fault with the decision of the Judges in any other way than by a written protest, or otherwise creating a disturbance in the place of exhibition, shall forfeit the amount of his prizes for the day."

—A. B. C.

CHRYSANTHEMUM MDLLE. THÉRÈSE REY.

THE above mentioned Chrysanthemum is unquestionably one of the finest novelties of the year. It is a magnificent Japanese variety of continental origin, being raised by Mr. Ernest Calvat. The flower is large, with long, drooping, broad creamy white florets. Already two certificates have been awarded for this splendid variety, one to Mr. H. Shoesmith by the National Chrysanthemum Society on October 11th, and another to Mr. C. E. Shea at the Crystal Palace Show on November 3rd and 4th. The illustration (fig. 65), which indicates the character of the flower, has been prepared from a bloom grown and exhibited by Mr. Shoesmith at the Crystal Palace on the occasion mentioned.

JUDGES AND JUDGING.

BEING an exhibitor in the Japanese class at the recent Chrysanthemum Show at the Royal Aquarium I had the opportunity of seeing the judges deciding on the merits of the blooms, and venture to express my opinion that sufficient time was not given to the work to enable absolutely correct awards to be made. I think every bloom should be taken independently and allowed the number of points to which it may be entitled. Neither do I think that a judge should be an exhibitor at the same show, nor do I think it quite right for a man in business to judge his customer's exhibits.—AN EXHIBITOR.

A LARGE VIVIAND MOREL.

In answer to "F. J., Olton" (page 422), regarding a large Viviand Morel, I may mention that at Leeds Chrysanthemum Show last year a bloom of the above variety was exhibited by Mr. Hayes of Woodville, Keighley, which measured 20 inches over, which was deservedly awarded a certificate for cultural skill.—T. H. B.

WHITE VIVIAND MOREL.

YOUR note on page 422 referring to the white Viviand Morel, shown by Mr. Shoesmith at Crystal Palace, will I am afraid be misleading. The class in which it was shown required twenty-four Japanese and twenty-four incurved, in not less than eighteen varieties of each and not more than two of one variety. As Mr. Shoesmith had only one pink Viviand Morel in his stand he evidently did not intend it to be recognised as distinct, and I feel sure that until a true white sport has been certificated by the N.C.S. it will not be wise to exhibit it as a distinct variety on the same stand with a pink one.-W. H. LEES, Trent Park Gardens, New Barnet.

[Whether Mr. Shoesmith intended the pure white sport from Viviand Morel to be recognised as distinct or not, it was all the same absolutely distinct from the type—quite as distinct as Mrs. Heale from Princess of Wales, and blooms of both these varieties have often been cut from the same plant. Since the publication of our note the Secretary of the National Chrysanthemum Society has been consulted on the point in its bearing on the Hull Show, and his view is this. "If a bloom of Mrs. W. R. Wells is pure white it can be staged with the deep pink Viviand Morel without risk of disqualification, but it must be free from the pink tinge." The other Judges appointed to officiate at Hull, Messrs. G. Gordon and J. Wright, concur, as do both Mr. J. Douglas and Mr. J. Laing, both of whom have been specially consulted, but not one of these gentlemen would vote a certificate for the white sport because of its instability. Mr. James Hudson, who judges at Hull in the unavoidable absence of Mr. Wright, is in complete accord with the opinions expressed. Intending exhibitors at shows generally must decide for themselves whether it will be wise in each particular case to stage the white sport and its pink prototype in the same stand, and we shall be quite content for them to be on the safe side, as suggested by the accomplished grower and successful exhibitor Mr. W. H. Lees.]

EXPERIMENTS IN CHRYSANTHEMUM CULTURE.

AT the meeting of the National Amateur Gardeners' Association held in the Memorial Hall, Farringdon Street, E.C., last week, Mr. D. B. Crane of Highgate read an excellent paper on the above subject. There were considerably more than 100 members present, and the crowded audience listened most attentively to the discourse. As an authority on Chrysanthemums and a winner of many prizes in open competition, Mr. Crane, although an amateur, dealt with the matter in a thoroughly practical manner. During the past season he had, it was remarked, made many experiments, but owing to the abnormal season the majority of them had proved valueless. The essayist strongly urged his hearers to grow the best varieties only, and where space was limited it would, he said, be better to cultivate half the number of plants that could otherwise be had. Many beginners made the mistake in endeavouring to grow too many plants. In such cases the Chrysanthemums were crowded, and the results were not of a satisfactory nature.

Cultural details were described at length, and amongst other hints Mr. Crane remarked that whilst some growers advised the cuttings, after insertion, to be placed in a cold frame, he had found it advantageous to place the pots containing them in a small frame in a greenhouse. The pots were, in his case, plunged in cocoa-nut fibre refuse, which to a great extent prevented damping. Oyster shells he could recommend as drainage, and whilst some half-inch bones used by him this year had answered admirably for the purpose, others, through not having been properly prepared, became putrefied and killed several

plants of choice varieties. It is impossible in this brief reference to mention all the useful hints put forth by Mr. Crane in his paper, but it may be said that, after remarking on soils, manures, and repotting, he detailed the methods of securing the buds, dressing the blooms, staging them for exhibition, and various other essential points in a masterly manner.

CHRYSANTHEMUM CHARLES DAVIS.

I SHALL be glad to learn which tint of colour is considered the correct one for this variety. It was introduced as a rosy bronze, but when it was certificated, two blooms, perfect in shape, fresh, and of a rich bronze, were passed over for two of the same size but pale yellow with a darker edge. At the late meeting of the National Chrysanthemum Society the various exhibitors vied with each other as to who had the darkest blooms. In its parent Viviand Morel, a blush or pale bloom would not count as much as one of a deeper tint, and the same system prevails in judging Etoile de Lyon and many others. If such be the case, will anyone say which is correct for Chas. Davis? If richness of colour is required, why did the certificate go to blooms of a most undecided yellow?—QUERIST.

NOVELTIES AT THE AQUARIUM SHOW.

WITHOUT taking into account such recent introductions of high merit as Colonel W. B. Smith, W. Tricker, William Seward, Charles Davis, G. W. Childs, Beauty of Exmouth, Gloire du Rocher, Lord Brooke, Florence Davis, and others of the past season or two, all of which were very well represented at the Aquarium Show last week, there was a large number of novelties presented for public inspection at the Floral Committee, and also in one or two of the trade stands. As some of these are likely to occupy a prominent position in a short time to come it may be useful to record the names, and give a brief description of some of the best.

In addition to those which received first-class certificates, and described below, a few others merit notice—namely, Mrs. Cox, a crimson sport from M. Bernard, closely resembling its parent in form, seemed to be a promising variety for those who care for that type of Japanese flower. Ernest Caille, a seedling Anemone, raised by Simon Délaux, colour rosy straw with yellow disc, will be sure to become a favourite in that section. Sautel 1893 is a bold Japanese incurved hairy variety, a valuable addition to the ostrich plume class, the colour is rosy purple with silver pink reverse. Lady Saunders is a Japanese variety with long drooping florets, and of a peculiarly pleasing shade of pale yellow. W. Mease is a large incurved Japanese, of a type somewhat resembling Mrs. C. Harman Payne.

Bride of Maidenhead unfortunately too closely approaches Avalanche, or it would unquestionably become a leading exhibition flower, the colour seemed to be a shade or two whiter than the variety it resembles. Hibernia, a large Anemone of an ochre yellow shade with a rosy buff disk, and Caledonia a large Japanese Anemone with long white incurving guard florets, and a rosy disk tipped yellow, will both be welcome additions to the Anemone section in which so few additions of merit seem to be made. Pearl of Maidenhead is an enormous tubulated curly petalled Japanese, rather ragged, colour white, and as shown by Mr. Owen, seemed almost to require a board to itself. W. H. Fowler is a perfectly formed Japanese, a most effective flower with long petals of a deep rich golden yellow. A heavy built massive flower is Thomas Hewitt, the colour is white but the outer florets are shaded blush. E. L. Jamieson is a fine colour, the petals are rather short, but they are of a bright crimson hue, having a bronzy gold reverse. Gettysburgh is another of the G. W. Child's stamp, but rather darker in colour. A thorough Japanesc is James Myers with thin fluted delicate petals of deep rosy salmon. There is no doubt that some of the above will be favourably received next season although passed over now.

CERTIFICATED CHRYSANTHEMUMS.

The following new Chrysanthemums were awarded first-class certificates by the Floral Committee of the National Chrysanthemum Society at their meeting on November 8th.

Golden Wedding (Mr. Godfrey).—A fine golden yellow Japanese with rather thin incurved florets.

Elsie Neville (Mr. W. Seward).—A single flowered Japanese with long crimson florets of a pleasing and effective shade.

Mrs. C. J. Salter (Mr. W. Wells).—A golden buff-coloured self Aneone of medium size.

G. W Childs (Mr. H. J. Jones).—A bright chestnut crimson Japanese with golden reverse, rather broad pointed petals.

Colonet Chase (Mr. E. Beckett).—Long fluted drooping florets; a large Japanese show bloom; colour pale blush with centre shaded yellow.

Rose Wynne (Mr. R. Owen).—This is a heavily built Japanese incurved with long florets of a delicate pale blush colour.

W. W. Astor (Mr. R. Owen).—A large Japanese Anemone with ray florets light salmon blush, and a high disk of golden rose.

John Bunyan (Mr. R. Owen).—Another excellent Japanese Anemone of light lemon yellow, good disk and thin pointed ray florets.

Several other good varieties were staged which the Committee desired to see again. Mr. Calvat sent over some new seedlings which were hardly up to his usual standard. Messrs. Cannell, Mr. Jones, Mr. Owen, Mr. Godfrey, and Mr. W. Seward were the principal exhibitors on this occasion. Among noteworthy flowers mention should be made of Miss Sturgis, a large white Japanese; Pcarl Beauty, a fine white incurved Japanese; and Florence Carr, a pretty orange bronze Pompon (commended).—C. H. P.

CHRYSANTHEMUMS AT WOODVILLE, KEIGHLEY.

ONE of the best grown collections of Chrysanthemums in this neighbourhood is to be found at Woodville, the residence of C. A. Haggas, Esq., where his gardener, Mr. Hayes (raiser of the now well known incurved variety, Miss M. A. Haggas) grows about 200 plants of the leading varieties for the production of large blooms. Amongst Japanese the following are especially fine:—W. Tricker, Sunflower, Bouquet des Dames, Louis Boehmer, Mdlle. Marie Hoste, Lord Brooke, R. C. Kingston, Colonel W. B. Smith, Viviand Morel, and Edwin Lonsdale. Mr. Hayes speaks highly of an improved W. H. Lincoln as a promising variety, and quite distinct from the original type.

A fair proportion of incurved are also grown, his best being Alfred Lynne, Golden Empress, Mons. R. Bahwant, Miss M. A. Haggas, Queen of England, and Lord Wolseley. In another house a number of bush plants are grown for cut blooms. Mr. Hayes is also a successful cultivator of the Primula. His papers and lectures given at the different gardening associations in the district are much appreciated.—T. H. B.

CHRYSANTHEMUMS AT KETTON HALL.

By the kind permission of Mr. and Mrs. Hopwood the gardens and greenhouses of Ketton Hall were thrown open to the public on November the 2nd and 9th, and will be opened again on November 16th. The gate is opened at two o'clock and closed at five. Sixpence is charged for admission, and the proceeds are to be devoted to the Royal Gardeners' Orphanage Fund. The chief attraction at the present time are the Chrysanthemums, of which many hundreds are grown and tastefully arranged in the Peach houses.

With a friend I paid a visit to Ketton Hall on November 9th, arriving soon after the gates were open. We soon found the Chrysanthemums, and a fine display they made, a large number of the blooms being of good quality and size. Most noticeable amongst them were Col. W. B. Smith, Florence Davies, Mdlle. Lacroix, Avalanche, Gloire de Rocher, Etoile de Lyon, Thunberg, Mr. A. H. Neve, W. H. Lincoln, Lord Wolseley, Lilian B. Bird, Louis Boehmer, Viviand Morel, W. W. Coles, Mrs. E. W. Clarke, Mrs. Robinson King, Comte de Germiny, and older

I also noticed some useful plants in 6-inch pots, several cuttings having been put in each pot the end of August, rooted, and allowed to remain there. These are now bushy, and about 1 foot in height, carrying plenty of flowers. About 500 more plants in 9-inch pots of such varieties as Fair Maid of Guernsey, Madame C. Audiguier, and Peter the Great looked very promising for a fine display throughout December and onwards. There are many other good features at Ketton Hall, but only Chrysanthemums can be mentioned here.—A. HARDING, Orton Hall.

AT WOODHATCH LODGE.

This, the residence of T. B. Haywood, Esq., has become known as a place where horticulture is thoroughly carried out. Everything is done well and cleanliness prevails. Not by any means the most insignificant feature of the gardens are the Chrysanthemums, in which, as, in fact, in all horticultural matters, Mr. Haywood takes such an interest, and supported as he is by the gardener, Mr. C. J. Salter, the display is a magnificent one. Though at the time of my visit the blooms were on the wane, probably the very best of them had gone, but those remaining were ample proof of the skill with which they had been grown. The Japanese section, taken as a whole, was perhaps the richest in fine flowers, both as regards form and colour, though the incurved varieties were handsomely represented. The Anemone flowered kinds, too, were in fine form, many superb flowers being still on the plants. The collection is one of the most complete that could be desired, all the novelties of last season being grown, as well as others not yet in commerce. Though the new kinds are procured the older ones are by no means discarded, every one of real merit being grown.

From amongst the best of those still in flower, I have selected a few of those which were possessed of exceptional merit either in form, substance, or colouration. Than Lord Brooke it would be difficult to find a better with which to open any list, for the flowers seen were magnificent. The colour was of the greatest richness, and the flowers massive and shapely. Wm. Seward was grand, being particularly fine in colour. The same may be said of the brightly hued W. H. Lincoln, than which there is yet no yellow superior in its own particular style of One of the most chaste and beautiful was Miss Anna Hartshorn, which has been seen in such good character this season. Mdlle. Marie Hoste is represented by some of the grandest flowers one could wish to see, as also was the popular Col. W. B. Smith. Of the pinks Vice-President Audiguier, Mrs. Harman Payne, and Wm. Tricker form a grand trio. The flowers of each of these are perfect as regards colouring, and Mrs. Harman Payne carried blooms which were of an enormous size and substance. Many blooms of the grand Edwin Molyneux were to be seen amongst the others, as also were neveral Chas. Davis of a high order of merit as regards colour and form of flower. Elmer D. Smith is a velvety, maroon coloured, ragged bloom which promises to be an acquisition, as also does the exquisite Viscountess Hambledon. Excelsior was one of the most distinct, and Robert Flowerday, purplish maroon with a silvery reverse, one of the most pleasing. Beauty of Exmouth was of grand shape but lacking size and substance; the green centred Florence Davis on the other hand left nothing to be desired. Ruche Toulouaise amongst the Anemones was magnificent, as also were Mrs. A. Lowe, Lady Margeret, and Delaware. Many others might be mentioned, but these must now suffice. Both Mr. Haywood and his gardener are to be congratulated on the success they have achieved in bringing

plants and flowers to such a high state of perfection, and this through a season that has been most trying for Chrysanthemum growers in more ways than one.—H.

AT SYON HOUSE.

CHRYSANTHEMUMS, amongst innumerable other things, are splendidly grown by Mr. G. Wythes at these gardens. Upwards of 1500 plants are included in the collection, which comprises many of the new varieties of the last season. The object has not been entirely to obtain large flowers, many of the plants being kept exclusively for affording an abundance of cut flowers. The plants are dwarf in habit and clothed with healthy foliage.

Amongst the varieties now in flower, Excelsior must be accorded a foremost place, its distinct blooms being very striking. Lady Selborne is admirably represented as also is Jeanne d'Arc. W. W. Coles is in magnificent form, and the same may safely be said of Mr. C. Orchard. The flowers of Viviand Morel are of exceptional substance and grandly coloured. The bright yellow flowers of Sunflower are amongst the most showy, and Puritan is one of the very finest in every way. The blooms of Stanstead Surprise are superb, the same remark applying to Baron Hirsch. Alberic Lunden is a very beautiful variety, which may be seen in almost all collections. Well named is Curiosity, pale yellow in colour. Lord Alcester is fine, and Baronne de Prailly is one which should be more grown. Monsieur William Holmes is carrying superb flowers, and makes one of the brightest ornaments of the display. Mr. A. H. Neve, Sarah Owen, William Tricker, Lady Margaret, Lord Brooke, Miss M. Wheeler, Roseum superbum and Grandiflorum were noticeable amongst others, of which many excellent ones must be missed. The plants are a credit to Mr. Wythes, as everyone who sees them will readily admit.—NOMAD.

THE GRANGE, HACKBRIDGE.

THE display of Chrysanthemums at these gardens has come to be an annual event, and through the goodness of Mr. and Mrs. Smee the grounds are thrown open to the public, who come in great numbers to see the flowers. When at Hackbridge I asked Mr. Cummins, the genial gardener, if he could say how many people had visited the gardens. He replied, "I cannot tell, but all the afternoon on Sunday last the usually quiet road from Hackbridge to Wallington was lined with people. The carriage drive and garden walks were crowded, and the large orchard house, where the Chrysanthemums are arranged, was packed all the time." The Cattleya house, containing some fine forms of the beautiful autumn-flowering C. labiata, and the Fern house were admired by many. That Mr. Smee's kindness in providing a free annual Show is appreciated by the inbabitants of Wallington and the neighbourhood is proved by the thousands of people who have passed through the lodge gates.

Among the most prominent varieties of Chrysanthemums Mr.

Among the most prominent varieties of Chrysanthemums Mr. A. H. Neve is in grand style, and the deliciously scented Progne is one of the most popular and attractive. The handsome examples of Viviand Morel call for continuous bursts of admiration. Mons. R. Bahuant is splendid, as also is Sunflower, the colour of which is unusually bright. The showy and floriferous Roi des Précoeés is deservedly a favourite, and the chastely pure flowers of Lady Selborne leave nothing to be desired. Amongst the darks Edouard Audiguier is perhaps the best, though it has a worthy companion in R. C. Kingston. The hairy-petalled W. A. Manda and Louis Boehmer are both particularly prominent, and Gloriosum may be regarded as a variety of very much merit.

AT EARLSWOOD.

DURING the past few years Mr. Wells of the Earlswood Nurseries has come very prominently before the public as a grower and exhibitor of Chrysanthemums, and late though it was I thought when the opportunity arose that I could not do better than to spend an hour amongst his plants. I was amply compensated, for the collection is certainly a good one. Upwards of 3500 plants are grown, and they now show the mark of unremitting and skilful attention. All these plants are not grown for large blooms exclusively, many being required to furnish cut flowers in great numbers. Perhaps a thousand plants are grown for providing exhibition flowers, the remainder being for the purpose above mentioned. Innumerable single and seedling varieties are grown, and amongst the latter were some of great promise. As may very readily be imagined, with such an extensive exhibitor as Mr. Wells, most of the finest flowers had long been gathered, but amongst those remaining were many of such sterling merit that we have deemed them worthy of special mention.

Mrs. E. D. Adams, with slightly tinged florets, was one of the most charming, and the old Peter the Great was in splendid form. Beauty of Hull is too much after the style of Mr. Shoesmith to become universally popular, though it carries some good and shapely blooms. Mrs. Governor Fife is a most pleasing variety, the outer petals of which are pure white, with a centre of the most delicate cream. Ada Spaulding and Sunflower were both seen in fine condition, as also was the Baronne de Prailly. The white blooms of Mons. J. M. Pigny were very beautiful, as also were those of Florence Davis. A charming creamy white variety was found in Cognac, and Lord Alcester was of exceptional form. Mrs. G. W. Clarke was grand, as also was Vice-President Audiguier. The colour of Viviand Morel was magnificent, and the blooms left little to be desired as regards shape. Stanstead White may be numbered amongst the purest of whites, and Crimson King one of the best of its class. J. Stanborough Dibben, Lord Alcester, Empress, and numerous others might be mentioned, but these may be taken as a criterion of a collection which represented by some of the best flowers one could wish, to see.—R. H. R.

CHRYSANTHEMUM SHOWS.

HULL AND EAST RIDING .- NOVEMBER 15TH AND 16TH.

THE tenth annual Exhibition of the Hull and East Riding Chrysanthemum Society opened yesterday (Wednesday) in the Artillery Barracks, Park Street, Hull. The Hull Shows are famed for their magnitude and excellence. As was generally anticipated the liberal prizes, including a challenge vase worth 20 guineas, several silver cups, and pieces of plate of considerable value, brought forth many of the principal growers. Our reporter telegraphs the names of the prizewinners in the leading open classes, and says the high reputation the Society has long enjoyed is fully maintained. In most of the classes the entries were numerous, and the competition was keen. The tables of bouquets and floral decorations were not quite so numerous as usual, but good; while the groups of plants were magnificent. Incurved blooms were some of the best seen this season, and the Japanese superb, being large and well coloured.

In the class for twenty-four incurved blooms, in not less than eighteen varieties, and no more than two blooms of one variety, Mr. W. Lees, The Gardens, Trent Park, New Barnet, secured the coveted first prize of £10 and a silver cup valued 5 guineas. His blooms were grand, being splendidly finished. Mr. H. Shoesmith, gardener to M. His blooms were Hodgson, Esq., Shirley, Croydon, was a close second, winning the £5 prize; and Mr. Peter Blair, Trentham, third.

For twenty-four Japanese blooms, distinct varieties, Mr. Shoesmith secured the premier award of £10 and a silver cup valued 5 guineas with a stand of excellent blooms. Mr. Heany, the Gardens, Mossley House, Liverpool, was second; and Mr. Musk, Haveringland Hall, Norwich, gained a third position. In the class for twenty-four blooms, Japanese, distinct, arranged for effect, and set up in any manner the exhibitor desires, with or without Chrysanthemums or other foliage, on a table space not exceeding 6 feet in length by 2 feet 6 inches in width, the competition was good. The object of this class is to introduce a more tasteful system of staging highly developed flowers. Mr. Musk here repeated his success with a charming arrangement, securing the 5-guinea prize, given by Harold J. Reckitt, Esq., J.P., M.P., Winestead Hall. Mr. Wilson, Swanland Manor, was second; and Mr. Jarvis, Ciffe House Gardens, Hessle, third.

The class for a table of bouquets, wreaths, sprays, buttonholes, or other floral arrangements, illustrating the decorative value of Chrysanthemums, with any kind of foliage or Grasses, was interesting. Each exhibitor was restricted to a table space of 12 feet by 3 feet, but less space could have been occupied if desired. Mr. Taylor, Newland, was first, gaining the National Chrysanthemum Society's silver medal and

3 guineas, with a beautiful arrangement.

In the class for twelve incurved blooms, open to exhibitors residing in Lincolnshire, within twenty miles of Hull or anywhere within the East Riding of Yorkshire, Mr. Burrows, gardener, Westlands, Grimsby, was first, winning the silver cup given by Messrs. E. P. Dixon & Sons, Queen Street, Hull. His blooms were very fine. Mr. Jarvis was second, and Mr. Pike, Warter Priory Gardens, third. Mr. Burrows also secured another silver cup given by the same firm for twelve Japanese blooms; Mr. Walker, Hotham Hall, being second, and Mr. Richard Willey, Cottingham Gardens, third.

As already mentioned the groups were exceedingly fine. For a group of Chrysanthemums, interspersed with foliage plants, arranged for effect in a space of 100 square feet, the first prize being a silver challenge cup, value 20 guineas, presented by James Reckitt, Esq., of Swanland Manor, Vice-President of the Society, and £6, on the condition that the winner hold the cup until the next Exhibition, Mr. Coates, gardener, Milton Terrace, Hull, was first with a beautiful group. Mr. Cottam, Cottingham, was second, and Mr. Marchison

Hessle, third.

The other features of this grand Exhibition will be detailed in our next issue.

GRIMSBY AND DISTRICT .- NOVEMBER 3RD AND 4TH.

THE fourth annual Show was held in the Town Hall on the dates given, and it was without doubt the best exhibition ever seen in Grimsby. The large hall was filled with groups of Chrysanthemums, choice foliage and flowering plants. The orchestra was beautifully decorated with flowers and foliage plants from the nurseries of Mr. Jno. Clark, Cromwell Road, Grimsby. Adjoining the large room was another of rather less dimensions, filled with cut flowers and fruit.

In the class for twenty-four blooms Japanese, in not less than eighteen varieties, the first prize went to the Rev. W. D. Thatcher, Clent Hall, Stourbridge, who had good flowers. The second prize was secured by Sir Hy. Bennett, Westlands, Grimsby (gardener, G. B. Burrows), who only lost by two points. Mr. G. A. Carr, Waltham Grove, Grimsby (gardener, Jno. Walker), was third with neat blooms.

In the class for twelve Japanese, nine varieties, the first prize went to Mr. G. B. Burrows for excellent blooms in good condition. For twelve blooms Japanese in six varieties Mr. S. J. Grange, The Cedars, Laceby

(gardener, Mr. Fred. Isle), was first.

For twenty-four incurved blooms G. A. Carr, Esq., Waltham Grove (gardener, Mr. Jno. Walker), was a good first. Second, Rev. W. D. Thatcher, Clent Hall, Stourbridge; third, Sir Hy. Bennett, Westlands. With twelve incurved or nine varieties, Mr. John Clark, nurseryman, Cromwell Road, was first; G. A. Carr, Waltham Grove, second. Sir H. Bennet gained the special prize for the premier Japanese, and the Rev. W. D. Thatcher for the best incurved bloom.

LIVERPOOL.—NOVEMBER 7TH AND STH.

THE fourteenth autumn Show was held in St. George's Hall on the above dates, and compared favourably with those of former years. The centre of attraction was the splendid challenge vase presented by Messrs. R. P. Ker & Sons, Aigburth Nursery, and which was won last year by Mr. Jellicoe, gardener to F. H. Gossage, Esq., Camp IIill, Woolton, he being required to win it two years in succession to become the owner of the vase. This has been done, the Association being the poorer by the loss of such a fine trophy, and Mr. Jellicoe the richer by winning it in such a short space of time. The following is the prize list, regret being expressed that only the larger classes can be dealt with owing to

For twenty-four incurved and twenty-four Japanese, not less than thirty-six varieties, Mr. Donald Forbes, gardener to Alfred Holt, Esq, Crofton, Aigburth, was placed first with a very heavy stand containing in the back row—Japanese: Col. W. B. Smith, Etoile de Lyon, E. Molyneux, Col. Smith, Stanstead White, Mrs. E. W. Clarke, Florence Davis, and a grand Mrs. C. H. Payne. Second row: Mrs. E. D. Adams, Mrs. F. Jameson, W. H. Lincoln, W. Tricker, G. C. Schwabe, E. Molyneux, Viviand Morel, and Sunflower. Front row: Viviand Morel, Sunflower, Violet Rose, Marie Hoste, Mr. C. H. Payne, Avalanche, Chas. Davis, and W. Tricker. The incurved, although rather early, were marked by well built substantial blooms, the best being Queen of England, Mons. R. Bahuant, John Doughty, John Lambert, and Baron Hirsch. A very good second was Mr. T. Carling, gardener to Mrs. Cope, Dove Park, Woolton, who had some fine blooms, the best being Mrs. C. H. Payne, Viviand Morel, Princess May, Wm. Seward, Puritan, W. H. Lincoln, and Marie Hoste. Incurved: Baron Hirsch, Mons. R. Bahuant, Madame Darrier, Alfd. Lyne, Lady Dorothy (grand), and Lucy Kendall. Mr. G. Eaton, gardener to W. H. Shirley, Esq., Allerton House, Allerton, was a close third with very fresh blooms. The fourth position was occupied by Mr. Sydney Bremmell, gardener to W. H. France Hayhurst, Esq., Overly, Wellington, Salop. This exhibitor would probably have been placed higher had his flowers been set up properly, for his Japanese were the heaviest and brightest coloured in the Show.

As before remarked the Ker's challenge vase was won by Mr. Jellicoe, there being four entries for it, and the competition was keen. Mr. there being four entries for it, and the competition was keen. Mr. Jellicoe won by the superiority of his incurved blooms alone. The varieties were—Japanese: Col. W. B. Smith, Mrs. C. H. Payne, Gloire du Rocher, Mdlle. Marie Hoste, Princess May, Wm. Seward, Chas. Davis, E. Molyneux, Sunflower, Stanstead White, W. W. Cole, and Viviand Morel. Incurved: Mons. R. Bahuant, Queen of England, Alfred Salter, Lord Alcester, Jeanne d'Arc, Baron Hirsch, Emily Dale, Empress of India, Madame Darrier, Violet Tomlin, Lord Wolseley, and Prince Alfred. Reflexed, two of each: King of Crimsons, Chevalier Domage, Golden Christine, Cullingfordi, Mrs. Forsyth, and James Carter. Mr. J. Edwards, gardener to H. Tate, jun., Esq., Allerton Beeches, was second with splendid blooms. Mr. D. Heany, gardener to H. G. Schintz, Esq., Mossley House, was placed third, his stand of Japanese being admirable. The fourth prize went to Mr. R. Foster, gardener to Mrs. Thompson. The fourth prize went to Mr. R. Foster, gardener to Mrs. Thompson, Thingwall Hall, near Liverpool.

For eighteen incurved Mr. Jellicoe was again first, showing Mons. R. Bahuant, Madame F. Mistral, Madame Darrier, Lord Wolseley, Baron Hirsch, and Mrs. Coleman in fine form. Mr. C. Osborne, gardener to Arthur Cook, Esq., Aigburth Hall, was second; the third prize going to Mr. J. Haynes, gardener to Mrs. B. C. Nicholson, Oswaldcroft, Woolton, a fine exhibit. In the class for twelve incurved Mr. Jellicoe again took a fine exhibit. In the class for twelve incurved Mr. Jellicoe again took first honours, Mr. T. Healey, gardener to Colonel Wilson, Hillside, Allerton, being second. The prizes in another class for a similar number went to Mr. H. Howard, gardener to A. S. Mather, Esq., Beechwood, Woolton, and Mr. W. Wilson, gardener to H. Cunningham, Esq., Gorsey Cop, Gateacre. For six incurved Mr. W. Hignett, gardener to C. W.

Carver, Esq., Woodbourne, West Derby, was successful. In the class for eighteen Japanese Mr. C. Osborne came out in strong force, having grand blooms of Etoile de Lyon, Gloire du Rocher, Sunflower, Florence Davis, Viviand Morel, Marie Hoste, and Mrs. F. Jameson. Mr. T. Healcy staged well for a second place. Mr. Jellicoe was third. For twelve Japanese Mr. Sydney Bremmell was an easy first, having very fine Viviand Morel, Excelsior, William Seward, William Lincoln, and Beauty of Exmouth. Mr. J. Edwards was second. In the class for twelve Japanese the honours went to Mr. Hignett, gardener to C. W. Carver, Esq.; the second prize going to Mr. P. Greene, gardener to L. H. Macintyre, Esq., Greenheys, Aigburth. For six Japanese Mr. E. Wharton, gardener to J. Findlay, Esq., Mavis Court, Sefton Park, was first. The same exhibitor was also first for six reflexed and twelve Pompons, in bunches of three flowers, with fresh examples. Mr. J. Broome, gardener to Thos. Harrison, Esq., Belle Vale, Gateacre, was first with Anemone flowered beautiful blooms. In the class for six incurved and six Japanese for those who have never won a prize at the Show, Mr. J. Grant, gardener to W. S. Gladstone, Esq., Thornlea, Aigburth, was successful out of several very fair stands.

Rarely have such grand trained plants been seen at Liverpool as they were on this occasion. Mr. W. Wilson, gardener to H. Cunningham, Esq., who was first in the classes for three large flowering, one large flowering, one Pompon, and second for one pyramid. The second prizes going in the two former to Mr. J. Harrison, gardener to Mr. W. G. Bateson, Esq., Aigburth, who was also first for three Pompons and a highly effective group of Chrysanthemums arranged for effect not to exceed 60 square feet. The second places for three Pompons and one Pompon falling to Mr. J. Rose, gardener to J. C. Kitchen, Esq., Huyton. For one pyramid one standard, six untrained and one untrained Mr. T. Gower, gardener to J. A. Bartlett, Esq., Mossley Hill, was the most successful exhibitor.

Miscellaneous plants have seldom been seen to greater advantage particularly the splendid examples of Crotons Montfontainensis and Countess which secured Mr. Jellicoe the first prize for six stove and greenhouse plants. Mr. T. Healey was second, having a good Erica and Croton Williamsi, Mr. R. Pinnington, gardener to Mrs. Banner, Blacklow House, Roby, being third, in which a choice Daphne indica rubra was conspicuous. The class for Orchids attracted much attention by a charming plant in the first prize collection of Mr. Cromwell, Oncidium crispum, with over 200 fully developed flowers. Palms, Ferns, Mignonette, Primulas, Cyclamen, table plants, and Poinsettia were admirably represented, the winners being Messrs. Gower, Cromwell, McFall, P. Greene, J. Kelly, and A. Lewis.

As was anticipated, the fruit made one of the finest displays ever seen in St. George's Hall. For six dishes Mr. J. Wallis, gardener to R. Sneyd, Esq., Keele Hall, Staffordshire, was placed first. Mr. T. Elsworthy second; Mr. J. Barker, Rock Ferry, being a good third. Messrs. Glover, T. Ferguson, W. Wilson, G. Middleton, and J. Wallis were winners in the Grape classes. The chief prizes for Apples were won by Messrs. Davis, Hannagan, Cromwell, R. Pinnington, Large, and Owen. The arrangements were excellent, and the Show was a credit to

all concerned.—R. P. R.

WELLS .- NOVEMBER 7TH AND STH.

THE very cold weather which prevailed on the first day of the Show rendered the staging of tender plants difficult and risky. In spite of this disadvantage the groups of Chrysanthemums and miscellaneous plants, arranged in the Council Chamber of the Town Hall, were quite up to the usual high standard of excellence. One of the Judges characterised the premier group the prettiest and most perfect he had yet seen.

In the class for large groups, open to all, Mr. Williams, gardener to J. F. Hall, Esq., Sharcombe, led with a light arrangement, Orchids in variety, and Crotons, brightly coloured plants of Croton Warreni, being effectively employed as a draping for the Cyclamen, Cattleyas, and other plants which faced the group to the boundary lines. Mr. Fewtrell, gardener to C. C. Tudway, Esq., secured the second prize, Mr. Payne, gardener to the Lord Bishop being third. The smaller group were also

of great merit, Mr. Jas. Gardner securing the first prize.

Cut blooms were numerous and good, the Japanese being exceptionally fine, but the incurved flowers have been seen in better condition For twenty-four blooms, distinct, twelve incurved and twelve Japanese, Mr. Williams was first, showing—Japanese, back row: Edwin Molyneux, Puritan, Col. W. B. Smith, W. Tricker. Middle row: Miss Florence Davis, Sunflower, Viviand Morel (extra good), W. H. Lincoln. Front row: Mons, Bernard, Madame John Laing, Avalanche, and Edwin Lonsdale. Incurved, back row: M. R. Bahuant, Golden Empress, John Doughty, Jeanne d'Arc. Middle row: Lord Alcester, Alfred Salter, Queen of England, Lord Wolseley. Front row: Princess of Wales, Mrs. Coleman, Mrs. Heale, and Miss Haggas. Mr. Fewtrell was second, Mr. Payne third. Mr. Fewtrell had the best board of incurved, Mr. Williams second, Mr. Payne third.

In the class for twelve Japanese, distinct, Mr. Payne led, followed by Mr. Currey and Mr. Williams in the order of their names. Anemoneflowered Chrysanthemums were sparingly staged; Mr. Fewtrell being

first in the class for twelve blooms.

Mr. Williams was first with two specimen plants; Mr. Currey securing a similar award for four table plants. Trained plants were well shown by Mr. Porter, gardener to A. Colson, Esq., who secured the principal prizes in that section. The National Chrysanthemum Society's certificates were awarded to Mr. Payne for a bloom of Queen of

England, and Mr. Porter for a plant of Lord Wolseley.

Fruit was not quite equal to last year's display, Messrs. Payne, King, Isgar, Fewtrell and Mackenzie, being the principal prizewinners. Messrs. Jarman & Co. showed a large table of fruit and vegetables; Messrs. Brown & Sons having a similar exhibit. Messrs. Mogford & Son exhibited a magnificent bouquet of Violets which was greatly admired. Messrs. Payne and Currey obtained awards for floral decorations; numerous awards were also made for windows, baskets, &c., decorated with autumn foliage and berries. About 800 school children of the neighbourhood visited the Show on the morning of the second day-feature for which the officers and Committee are to be congratulated.

TORQUAY .- NOVEMBER 8TH.

As usual the annual autumn Exhibition was held in the Bath Saloon. The groups were artistically arranged about the room, some in circular form, others square, so that a full view of them was obtained.

The entries in the cut bloom classes were not quite so numerous as in some former years, yet sufficient were contributed to make an excellent display. The groups lacked nothing, either in numbers or individual quality. Several classes were provided for groups of Chrysanthemums arranged for effect, the principal one being for an arrangement in a circle, 8 feet in diameter, in not less than eighteen varieties. Mr. J. Hunt, gardener to P. B. Drinkwater, Esq., Lyncombe, Torquay, won the premier position, having dwarf plants of mixed sections, carrying well developed blooms and furnished with good foliage, not too much crowded. Mr. J. Hill, gardener to the Rev. H. Rutherford, Red Cliffe, Torquay, was a good second. Mr. F. Ferris, gardener to J. W. Kimber, Esq., Tracey, Cockington, third. In a smaller class, Mr. W. Satterly,

gardener to Mrs. Matthews, Braddon Villa, Torquay, won the first prize with a most creditable display. In the class for a group of miscellaneous plants arranged for effect, the tallest plant not to exceed 10 feet high. Mr. Satterley was an easy first with a bright arrangement; Mr. H. Dammerell, gardener to Lady Macgregor, Glencarnock, Torquay, second. Orchids were most creditably shown by Mr. G. Medland, gardener to Morton Sparke, Esq., Rooklands, Torquay, and Mr. J. Slowman, gardener to Captain Fane Tucker, Braddon Tor, Torquay. Mr. Satterley had the best table plants, compact plants of suitable kinds, well coloured.

Cut blooms were good in quality if not numerous. The principal class was for thirty-six, half incurved and the remainder Japanese. There was but one exhibitor, however, in this class—Mr. Foster, gardener to H. H. Spencer, Esq., Teignmouth, who was worthily awarded the first prize. The Japanese were heavy fresh, and well arranged. Col. B. Smith, E. Molyneux, Viviand Morel, Mrs. F. A. Spalding, A. H. Lingels, Vice President, Andiquier, and Princess, May were the most Lincoln, Vice-President Audiguier, and Princess May were the most noteworthy. The incurved were large and neatly set up. For twelve incurved several good stands of blooms were staged. Mr. H. Veale, incurved several good stands of blooms were staged. Mr. H. Veale, gardener to the Rev. A. H. Simms, Wolborough Rectory, Newton Abbott, was first with heavy fresh blooms, Princess of Wales, Lord Alcester, Jeanne d'Arc, and Madame Darrier were prominent. Mr. Foster second. The last two exhibitors changed places in the next class, that for twelve Viviand Morel, Edwin Molyneux, Violet Rose, Mdlle. M. Hoste, Etoile de Lyon, Col. W. B. Smith, and Alberic Lunden were exceedingly meritorious. Mr. Veale also staged well.

Anemone blooms were thoroughly well represented. Mr. Veale was an easy first with six varieties; Gluck, Grand d'Alveole, Mrs. Judge Benedict, Miss A. Lowe, and Delaware were the best. For six reflexed, any one variety, Mr. J. Slowman showed Cloth of Gold in really good condition, and took first prize. Mr. Veale staged Mrs. J. Benedict in the class for six of any one Anemone variety for first prize; he also won first prize for six incurved, any one variety, with compact examples of Jeanne d'Arc, and for the same number Japanese, in one variety, with

Viviand Morel. Mr. Foster was second.

In the class for six single-flowered blooms, Mr. Wilkinson staged well developed blooms of Admiral T. Symonds, Mr. Satterley was second. Mr. Foster had the premier Japanese bloom, an almost perfect one of Viviand Morel, a similar honour falling to Mr. Veale in the incurved section for Jeanne d'Arc. For distinct for twelve incurved and twelve Japanese, confined to the district, there was strong competition, Messrs. Satterley and Wilkinson being first and second in the order of their names.

Fruit made a good display. Mr. Foster won premier honours for black Grapes with Alicante good in every respect. Apples and Pears

were admirably shown.

Non-competitive groups were numerous. Messrs. R. Veitch & Son, Exeter, had a collection of Orchids. Mr. W. B. Small, Torquay, had a large group of Chrysanthemums, representing many of the newer kinds. Messrs. Curtis & Sanford, Torquay, had a similar group. Messrs. W. H. Burridge & Sons staged a very attractive group of miscellaneous flowering and foliage plants from the South Devon Fruit Farm, Torquay. Mr. Pender brought excellent Tomatoes, Mushrooms, and Gros Colman Grapes.

CIRENCESTER .- NOVEMBER 8TH AND 9TH.

THIS Society under the able direction of the Honorary Secretary, Mr. Frank Sare, assisted by a good working Committee, continues to make progress, the gardeners well backed up by amateurs and cottagers,

arranging a really fine all-round Exhibition.

There were two classes for groups of Chrysanthemums, those occupying a space of 63 square feet being allowed to use Ferns and fine-foliaged plants. In this instance Mr. T. Arnold, gardener to Earl Bathurst, Cirencester, was first. The second prize went to Mr. Bathurst, Cirencester, was first. The second prize went to Mr. W. Larner, gardener to J. Hyde, Esq. With smaller groups four competed, Mr. T. Painter, gardener to C. Green, Esq., being a good first; Mr. J. Young, gardener to W. Warne, Esq., second; Mr. J. Rouse, gardener to J. Mullings, Esq., third; and Mr. W. Kirby, gardener to F. Sare, Esq., highly commended. Specimen plants were fairly good, and with these the most successful were Mr. O. Orpet, gardener to the Misses Brown: Mr. G. Rignell gardener to Mrs. Brewin: Mr. the Misses Brown; Mr. G. Bignell, gardener to Mrs. Brewin; Mr. H. R. Saunders, gardener to James Taylor, Esq.; and Mr. W. Ezzle, gardener to the Rev. G. A. C. Kempson. Cottagers also exhibited quite a large number of well-grown plants. Three gardeners competed with groups of miscellaneous plants, but Mr. T. Arnold was very easily first Mr. D. Elkins was a creditable second; and Mr. O. Orpet third. Bouvardias, Poinsettias, Cyclamens, Mignonette, Zonal Pelargoniums, and table plants were all remarkably well shown, principally by the gardeners already

Cut blooms were more numerous and of superior quality generally to what have previously been seen at Cirencester. In the class for eighteen each of Japanese and incurved varieties, the first prize went to Mr. G. Price, gardener to Mrs. Bulley, who had W. H. Lincoln, E. Molyneux, Florence Davis, W. Tricker, Miss A. Hartshorn, Viviand Morel, Alberic Lunden, Stanstead White, A. H. Neve, Mrs. F. Jameson, Sarah Owen, Sunflower, Boule d'Or, Gloire du Rocher, Avalanche, Golden Wedding, Elainc, and J. Délaux of Japanese varieties, and large solid blooms of incurved Empress of India, Lord Wolseley, Jeanne d'Arc, Prince Alfred, Lord Alcester, Mons. Bahuant, Miss Haggas, Princess of Wales, Mrs. Coleman, Violet Tomlin, Empress Eugénie, John Salter, Pink Venus, Queen of England, Jardin des Plantes, Princess Beatrice, Madame Darrier, and Refulgens. Mr. D. Elkins was second, his blooms being also very good. Mr. Price was again well first with twenty-four blooms, twelve each of Japanese and incurved. Mr. Elkins was second. For twelve Japanese Mr. Price was again first, Mr. F. Exell, gardener to E. A. Leatham, Misarden Park, being a good second, and Mr. Elkins

Mr. Elkins was first. Mr. Price was second in this class and first with twelve reflexed blooms. The classes for vases of Chrysanthemums with Fern fronds was particularly well filled, several ladies competing.

The silver medal of the National Chrysanthemum Society was

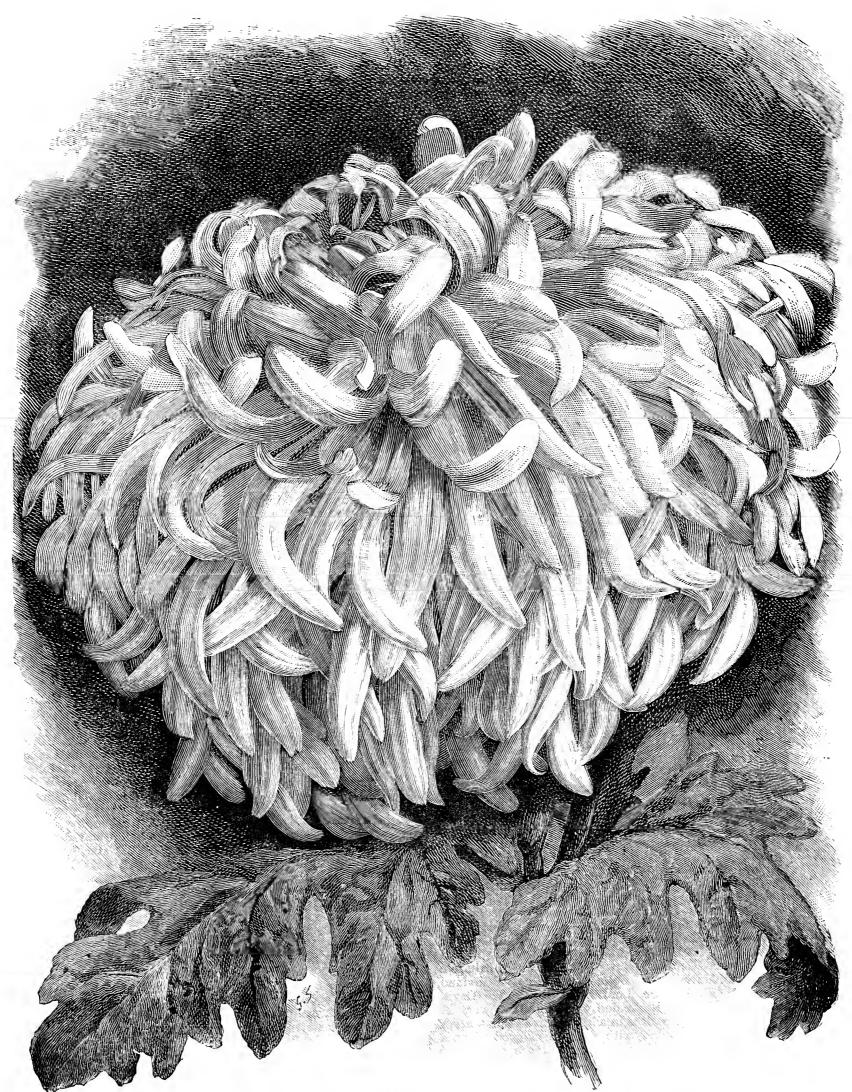


FIG. 65.—CHRYSANTHEMUM MDLLE. THÉRÈSE REY. (See page 445.)

third. The competition in the class for six blooms of any one Japanese variety was very keen, Mr. F. Exell winning the first prize with Viviand Morel; Mr. Price being second with Mdlle. Marie Hoste; and Mr. W. Taylor third with Avalanche. With Anemone-flowered varieties

awarded to Mr. Arnold for his admirable group of Chrysanthemums, and the certificates went respectively to Mr. G. Bignell for a fine specimen plant of Viviand Morel, and Mr. Price for collection of cut blooms.

Fruit and vegetables were shown, the prizes being principally won by Messrs. Exell, Arnold, Price, and others, whose names have repeatedly appeared in this report. Mention must also be made of the grand bank of Chrysanthemums, and a variety of other flowering and fine-foliage plants, arranged, not for competition, by Messrs. John Jeffries & Son,

KIDDERMINSTER .- NOVEMBER STH AND 9TH.

This, the first annual Exhibition of the recently formed Kidder-minster Chrysanthemum Society, was held in the Town Hall on the above dates under very favourable auspicies, and it is hoped, considering the patronage afforded, that it will prove an annual event. Considering the first attempt, the arrangements were admirable, and well carried out

by the very efficient and hard-working Committee.

Not the least praiseworthy exhibits were the non-competitive groups of plants and stands of blooms which were set up by neighbouring gentlemen. Particular mention must be made of the magnificent group gentlemen. Particular mention must be made of the magnificent group arranged by Mr. T. Poole, gardener to W. Hatton, Esq., Hill Grove; also Mr. W. Farrant, gardener to Mrs. Brown-Westhead, Lea Castle; Mr. J. Kemp, gardener to Sir Thos. Lea, Bart., M.P.; and Mr. C. Lee, gardener to F. Elkington, Esq.; likewise the stands of blooms by Mr. R. Parker, gardener to J. Corbett, Esq., Impney Hall, Droitwich; G. W. Grosvenor, Esq. (gardener, Mr. Gold); R. B. Martin, Esq., M.P., and A. F. Godson, Esq., M.P. Another very praiseworthy non-competitive exhibit was nine fine bunches of Grapes set up by Mr. T. Poole. These comprised equal numbers of Mrs. Pince, Gros Colman, and Lady Downe's; all beautifully finished.

For a group of Chrysanthemums the first prize was awarded to For a group of Chrysanthemums the first prize was awarded to Mr. F. Walters, gardener to A. Baldwin, Esq., M.P., Wilden House, Stourport. Second, Mr. H. J. Dines, gardener to W. F. Spencer, Esq., Spring Grove, Bewdley. Third, Mr. T. Hooper, gardener to Major Goodwin, J.P. The next class was for a group of Chrysanthemums, flowering and foliage plants, arranged for effect, and here Mr. J. Woodberry, gardener to E. C. Newmarch, Esq., The Lakes, was awarded the

first prize, Mr. W. F. Spencer second, and Mr. T. Hooper third. One specimen plant (Japanese).—First, Mr. T. Hooper and second Mr. G. Whikeman, gardener to the Bishop of Worcester.

In the class for twenty-four cut blooms, half to be Japanese and half incurved, Mr. S. Wallis, gardener to Mrs. Nash, Severn House, Bewdley, was well ahead, he having, amongst others, good blooms of Japanese, ley, was well ahead, he having, amongst others, good blooms of Japanese, Sunflower, Mdme. E. A. Carrière, Viviand Morel, Mdlle. Marie Hoste, and Avalanche. Second, Mr. T. Hooper. With twelve blooms of Japanese Mr. D. Thomas, gardener to the Rev. J. L. Chesshire, gained the premier award for a really beautiful stand, Mr. F. Walters and Mr. T. Hooper having the remaining prizes. For twelve blooms of Japanese, the same number of incurved, and also for six of each section, the prizes were divided between Mr. J. Smith, Mr. D. Thomas, Mr. G. Whikeman, Mr. H. J. Dines, and F. Walter.

The remaining sections of the exhibition were devoted to Primulas, Zonal Pelargoniums, Ferns and fruit, this latter section comprising good stands of Grapes, Apples, and Pears, besides honorary exhibits of fruit and vegetables:

HORNSEY.-NOVEMBER 8TH AND 9TH.

On each occasion during the past four years the annual Exhibition of the Hornsey and District Chrysanthemum Society has proved a success from an horticultural point of view, if not always financially. The same may be said of the Show this year, which was held in the National Hall, Hornsey, on the above dates, and it is to be hoped that the returns were such as to relieve the Society from the slight financial embarrassment with which the current year was started. Much credit is due to Mr. Courtney Page, the Honorary Secretary, and to Mr. Newman, the Secretary, for the admirable manner in which the exhibits were arranged. The cut blooms were remarkably good, as also were the groups and trained plants. In addition to these there were flowers and plants from the gardens of the President of the Society, H. R. Williams, Esq., J.P., which assisted much in forming one of the best autumn shows ever held in the district.

The Japanese blooms in most of the open classes were exceptionally fine, especially those shown by Mr. E. Rowbottom, gardener to H. R. Williams, Esq., The Priory, Hornsey. This well-known exhibitor was in his best form, and secured the first prize in the class for twenty-four Japanese. The flowers staged were large and well finished, and included Golden Dragon, Excelsior, Mdlle. Thérèse Rey (grand), President Borel, Mrs. Falconer Jameson, Vice-President Audiguier, a seedling named Hoar Frost, Van der Heede, Kentish Yellow, G. C. Schwabe, Primrose League, W. Seward, Mdlle. Marie Hoste, Colonel W. B. Smith, Viviand Morel, C. Shrimpton, Mr. E. Whittle, Lord Brooke, Florence Davis, Claire de Beaber, Alberia Lundon, Etaile de Lyon, and Sunflower, Alberta Lundon, Etaile de Lyon, and Sunflower, and Sunflower, and Sunflower, and Sunflower, and and alberta Lyon, and and alberta Lyon, and and alberta Lyon, and and alberta Lyon, and alberta Lyon, and and alberta Lyon, and alberta L Gloire du Rocher, Alberic Lunden, Etoile de Lyon, and Sunflower. A certificate was granted to Mr. Rowbottom in addition to the first prize. Mr. J. Brookes, Highgate, was second with a stand of good blooms. Mr. A. Bonyard, 85, Fairfax Road, Hornsey, secured the special prize open to amateurs for eighteen blooms of Japanese, incurved, and reflexed varieties. Mr. W. Lester was second, and Mr. B. R. Durrant third. Mr. Sears, Gordon Road, Hornsey, won another prize given by the President. Mr. W. Northormer, 23, Wolsely Road, Crouch End, secured the silver cup given by Messrs. W. Wood & Sons, of Wood Green, for eighteen Japanese blooms, showing these in splendid condition.

The class for twelve incurved blooms brought forth a good competition. Mr. J. C. Turk, gardener to F. Boney, Esq., Cholmelly Lodge, Highgate, secured the first prize with a stand of neat blooms. The

varieties shown were Lord Wolseley, Princess of Wales, Madame F. Mistral, Mrs. Heale, Prince Alfred, Mrs. Coleman, Violet Tomlin, Miss M. A. Haggas, Refulgens, Baron Hirsch, White Beverley, and Madame Darrier. The second prize went to Mr. Rowbottom, who had much larger flowers than those in the leading stand, but they were rather rough. There were, however, fine examples of Baron Hirsch, Madame Darrier, and Jeanne d'Arc included in the stand. Mr. G. Amos, gardener to W. Lister, Esq., Ladywell, Hornsey, was third. Mr. Rowbottom had the best six blooms of one incurved variety, showing Mr. J. Brooks followed with the same variety, and Madame Darrier. Mr. E. Jones was third with neat examples of Mrs. Geo. Rundle.

Mr. Turk was placed first for a stand of thirty-six Pompons, twelve varieties, three blooms of each. The flowers staged were remarkably good, especially Black Douglas, Comte de Morny, and Nellie Rainford. Mr. E. Rowbottom was a good second with fine blooms. Mr. Rowbottom was first with six Japs, showing magnificent blooms of Col. W. B. Smith. Mr. J. Brookes was second with good blooms of Avalanche, Mr. E. Jones following with Viviand Morel. The class for twelve Japanese brought forth a good competition, the first prize, however, falling to Mr. Rowbottom, who was followed by Messrs. T. L. Turk and W. Northover, all staging fine blooms. The same exhibitors were placed first, second, and third respectively in the class for eighteen blooms, the prizes being given third respectively in the class for eighteen blooms, the prizes being given by Mrs. Williams. Mr. Rowbottom also gained the first prize in a special class for twelve large Anemone flowered varieties, steging these in fine condition. Mr. G. Amos was second. In the amateurs' and cottagers' sections the cut blooms were very good, and reflected credit upon the growers. Mr. J. Newman, 28, St. Joseph's Road, Hornsey, secured several prizes, including a first for Pompons, and for which also a certificate was awarded.

Groups and trained plants were well represented. For the best group of Chrysanthemums arranged for effect, Mr. E. Rowbottom was placed first with an excellent collection of well grown plants. Mr. G. Amos was second with a creditable arrangement. In another class for a group, Messrs. Sears, Durrant, and Courtney Page secured the prizes. Mr. J. Brookes had the best four trained plants, these being fine specimens and well flowered. A certificate was also awarded for this exhibit. Mr. B. R. Durrant was second, and Mr. G. Amos third. Mr. Brookes likewise succeeded in gaining the special prize given by Mr. C. W. Cousins of Wood Green for two trained specimens. Table plants, Primulas, and bouquets of Chrysanthemums were well shown by Messrs. E. Rowbottom, J. Brookes, G. Amos, and W. Wilkinson.

Miscellaneous exhibits included a group of plants from Mr. A. M Gregor, Prospect Nursery, Turnpike Lane, Hornsey, who also had a number of tastefully made bouquets and wreaths, which formed quite a feature in the Show.

Fruit and vegetables were extensively shown in various classes, as also were bouquets and floral decorations, but want of space precludes further mention.

BATH.—November 8th and 9th.

THIS Show was held under rather more favourable circumstances as regards the weather than usual, and was better attended accordingly. With the exception of trained specimens the display was well up to the high standard always maintained at Bath.

Groups of Chrysanthemums were a great feature, the competition being very keen and close. Mr. W. Davis, gardener to S. P. Budd, Esq., Bath, was placed first, his group being remarkably well finished. There were also fine flowers in the banks formed by Mr. Kerslake, gardener to the Rev. E. Handley, and Mr. Southard, gardener to W. J. Brown, Esq., who were respectively second and third. This year, for the first time, prizes were offered for groups of Chrysanthemums with foliage plants and Ferns, and in this instance Mr. T. J. Tate, gardener to W. Pumphrey, and Ferns, and in this instance Mr. T. J. Tate, gardener to W. Pumphrey, Esq., was first, his arrangement being less formal and more attractive than that which gained R. B. Cater, Esq., the second prize. Messrs. J. Southard, Charles Lee, T. J. Tate, and J. West were among the most successful with trained plants, but these, as before stated, were not good. Miscellaneous plants were well shown by R. B. Cater, Esq., and Mr. W. Bergren, and ornamental foliaged plants by Messrs. E. S. Cole & Sons and J. T. Holmes, Esq. Orchids were remarkably good for the time of year, the first prize for a group shown by J. T. Holmes, Esq. Mr. R. B. Cater was a good second. Table plants were well shown by Mr. W. Strugnell, gardener to W. H. Long, Esq., M.P., Rood Ashton, and Mr. T. J. Tate. There was a good display of Primulas, Cyclamens, and Bouvardias.

Cut blooms may fairly be said to have well saved the reputation of the Show. In every class the competition was very close and good, the Judges having a most difficult matter to decide which should have the prizes. In the premier class, that for twenty-four Japanese varieties, distinct, Mr. J. Aplin, gardener to W. M. Baker, Esq., Gloucester, was first, having massive and fresh blooms of Alberic Lunden, Avalanche, D. B. Crane, Sunflower, Excelsior, E. Molyneux, Ruth Cleveland, Primrose League, Charles Davis, Mons. Henri Robert, White Louis Boehmer, W. Seward, Viviand Morel, Edward Beckett, Mrs. C. W. Wheeler, Robert Owen, A. H. Lincoln, A. H. Neve, Kate Mursell, Prefect Robert, Gloire de Rocher, and W. Tricker. Mr. P. Mann, gardener to W. H. Laverton, Esq., Westbury, was awarded the second prize. Mr. Robinson, gardener to Lord Justice Lopes, Westbury, took the third prize. In the class for twelve Japanese varieties Mr. P. Mann was first, having fine blooms of G. C. Schwabe, Etoile de Lyon, F. W. Flight, M. E. A. Carrière, A. H. Lincoln, Condor, Excelsior, Princess May, Sunflower, Mrs. C. W. Wheeler, Viviand Morel, and Col. Smith. Mr.

Robinson was a good second, and Mr. W. Strugnell a creditable third. The best six varieties were shown by Mr. W. Follen, gardener to

J. D. Willis, Esq.; Mr. Tucker, gardener to Major Clarke, being second, and Mr. Tickle, gardener to T. Carr, Esq., third.

The competition with large flowering Chrysanthemums was not quite so strong as in the foregoing classes, though better than at one time anticipated. Mr. I. Aplin was well fort for twenty four vericies. anticipated. Mr. J. Aplin was well first for twenty-four varieties, staging fresh and fairly massive blooms of Lord Alcester, Mons. Bahuant, Mrs. Robinson King, Empress of India, John Lambert, Princess of Teck, Camille Flammarion, Princess of Wales, Mrs. Clibran, Matthew Russell, Hero of Stoke Newington, John Salter, Miss B. Wilson, Queen of England, Lord Wolseley, Golden Empress, Miss Haggas, Madame Darrier, Jeanne d'Arc, Lady Dorothy, Mrs. N. Davis, Empress Eugénie, Florence McDonald, and Nil Desperandum. The second prize was well won by Mr. G. H. Copp, gardener to W. G. S. Erle Drax, Esq., Sherborne, and Mr. Robbson was third. For twelve varieties Mr. J. H. Copp was first, John Salter, Mons. Bahuant, Nil Desperandum, and Mrs. Robinson King being the best in his stand. Mr. P. Mann followed closely, while the third prize went to Mr. W. Marsh, gardener to T. P. W. Butt, Esq. Mr. W. Follen was first, Mr. Tucker second, and Mr. G. Pymm, gardener to Mrs. Gouldsmith, third, for six varieties.

The best Anemone-flowered varieties were shown by Mr. Robinson, the second prize going to Mr. Aplin. The former was also awarded a first prize for six new varieties sent out since 1889, winning with W. K. Woodcock, J. S. Dibben, Beauty of Exmouth, Viviand Morel, and Mrs. Nisbet. Mr. P. Mann was second. Mr. Robert Owen, Maidenhead, staged twelve new Japanese varieties that have been duly certificated, but were not shown at their best or sufficiently large to judge of their merits. They consisted of Thomas Hewett, R. Dean, Mr. G. B. Darby, Thomas Wilkins, Rose Wynnc, W. H. Fowler, Duke of York, Charles Davis, Viscountess Hambledon, and Etna. The champion bloom in the Show was found in a perfect flower of incurved Mrs. Robinson King, shown by Mr. J. Aplin.

Fruit, as usual, was extensively shown, and of excellent quality. For a collection of six dishes, Mr. W. Nash, gardener to the Duke of Beaufort, Badminton, was well first. Mr. Pymm was second; and Mr. J. Gibson, gardener to Earl Cowley, Chippenham, third. Mr. W. Taylor was first for four bunches of Grapes in two varieties. Other Grapes of high finish were well shown by Miss Marriott, Mr. Taylor, and Mr. Nash. Apples were remarkable for their size and rich colouring, and Pears were also good. Among the prizewinners were Messrs. Hall, Strugnell, Garraway, Dunn, Leeson, and H. Taylor.

BOURNEMOUTH.-NOVEMBER STH AND 9TH.

THE seventh Exhibition of this Society was held in the Winter Gardens, and a more suitable place for the purpose could scarcely be found. The space was again taxed severely, several good groups being arranged around the sides, while the cut flowers were plentiful. Fruit and vegetables were also there in abundance. In the cut bloom section the principal attraction was in the class for thirty-six (eighteen Japanese and eighteen incurved); first prize a silver challenge cup, value £10 10s., to become the absolute property of any exhibitor winning it twice, with money prizes added. Mr. N. Molyncux, gardener to J. Carpenter, Esq., Rooksbury Park, Wiltshire, was well ahead of the other competitors with the following collection:—Viviand Morel, G. C. Schwabe, Mdlle. Marie Hoste, Etoile de Lyon, President Borel, Lord Brooke, Viviand Morel, Col. W. B. Smith, Charles Davis (the finest bloom we have seen exhibited this season), Alberic Lunden, Etoile de Lyon and Gloire du Rocher. Incurved included Queen of England, Lord Alcester, Golden Empress, Empress of India, Beauty, Mrs. Robinson King, John Lambert, John Lambert and Miss Haggas. His collection was in splendid condition, being large and well finished. Mr. Thos. Wilkins gardener to Lady Theodora Guest, Henstridge, was placed second, and Mr. G. W. Taylor, gardener to Mrs. Elphinstone, third

For twelve Japanese Mr. Wilkins was awarded first honours with Viviand Morel, Colonel W. B. Smith, H. H. Neve, Gloire du Rocher, Edwin Molyneux, Mrs. J. S. Fogg, Etoile de Lyon, Florence Davis, Evelsion Sunflewer Vel d'Anderes and Conden Mr. Torlor nes canada. Excelsior, Sunflower, Val d'Andorre, and Condor. Mr. Taylor was second, and Mr. Grace, gardener to W. R. Neave, Esq., third, all showing well. In the corresponding class for twelve incurved blooms Messrs. Molyneux, Taylor, and Grace shared the honours in the order of their names. Anemones were well shown by Mr. Grace, who secured the first position; and Mr. Phillips, gardener to T. J. Hamkinson, Esq., the second.

Reflexed blooms were well shown by Mr. Woolford, gardener to Mrs. Trevor Goff, Lymington, and Mr. T. Head, gardener to Mrs. C. Stuart, Christchurch, who were placed first and second respectively. Mr. Woodford's collection consisted of Amy Furze, Christine in all the varieties (Golden, White, Pink, and Peach), King of the Crimsons, Chevalier Domage, and Cullingfordi; these were all well finished. Japanese bloom was shown by Mr. Ingram, and it was a glorious flower of Mrs. Alpheus Hardy. The now well known Viviand Morel secured the second and third positions.

In one class for groups of 60 feet, Mr. T. K. Ingram, Parkstone, was a splendid first, well arranged, bright, and dwarf. In another class for 50 square feet, Mr. Eldridge, gardener to G. W. Young, Esq., obtained the premier position. Mr. G. Scretch, gardener to the Misses Evans, was awarded the second prize. Mr. G. J. Fenwick was a good third. For a 40 square feet group Mr. Charles Brampton, the Rev. J. Rodgers, and Mrs. Squires were placed in the order of their names; and for one 30 squarc feet the awards fell to Mr. T. W. Tharle, Mr. Frank Hardy,

and W. H. Mate, who were placed first, second, and third respectively, all exhibiting grandly.

Fruit, vegetables, dinner-table plants, epergnes, bouquets, shoulder sprays, buttonholes, and honey, all in their separate classes, well contested, and made a large and attractive display. The Show was patronised by a large and fashionable assembly. Mr. Spong, the zealous patronised by a large and fashionable assembly. Mr. Spong, the zealous Sccretary, Mr. Swaffield, the Treasurer, and Dr. Hitchcock, the Referee, and others of the Executive laboured hard to make it a success, and their efforts were rewarded.

WEYBRIDGE.—NOVEMBER 9TH.

THE nineteenth annual Exhibition of the Weybridge and District Chrysanthemum Society was held on the above date. Though not large the Show was a highly meritorious one, the cut blooms especially being of splendid quality. Taken as a whole the Show was a slight improvement on its predecessors, due probably to the energetic action of Mr. G. Masters, the Secretary, and to the Show Committee, by whom the

arrangements were carried out in a praiseworthy manner.

The principal class was for forty-eight blooms, to include twenty-four Japanese and twenty-four incurved, in not less than thirty-six distinct There were three competitors, Mr. Carpenter, gardener to Major Collis Browne, Byfleet, proving an excellent first. staged were fresh, clean, and weighty, amongst the best being Mrs. Harman Payne, Viviand Morel, Edwin Molyneux, Col. W. B. Smith, William Seward, Gloire du Rocher, Sunflower, Excelsior, Lord Brooke, John Doughty, Queen of England, Baron Hirsch, Princess of Wales, Madame Darrier, Alfred Salter, Mrs. G. Coleman, Lord Alcester, and Alfred Lyne. Mr. J. Quartermain, gardener to C. E. Smith, Esq., Cobham, was second; and Mr. J. Cook, gardener to J. S. Sassoon, Esq., Walton, third. In the class for thirty-six flowers, eighteen Japanese and eighteen incurved, Mr. J. Hopkins, gardener to Mrs. Woodderman, Walton, was placed first, thereby winning the silver cup. The blooms shown were magnificent, amongst the best being Gloire du Rocher, Col. W. B. Smith, Edwin Molyneux, Sunflower, Viviand Morel, John Doughty, Baron Hirsch, Jeanne d'Arc, and Empress of India. Mr. Quartermain was a close second with handsome examples; Mr. Caryer, gardener to A. G. Meissuer, Weybridge, being third.

Mr. Felgate, gardener to the Duchess of Wellington, Hersham, was first for twelve incurved blooms, distinct, showing fine examples of Queen of England, Empress of India, Alfred Salter, Princess of and Violet Tomlin (superb) amongst others. Messrs. Caryer and Hopkins were second and third in the order of their names. There were six competitors for twelve Japs, distinct, the stands staged being very fine throughout. Mr. R. Ridge, gardener to Swifton Eady, Esq., Weybridge, was a splendid first, Mr. Caryer being a close second, and Mr. Hopkins third. For six Japanese, distinct, Mr. Swan, gardener to G. Murray Smith, Esq., Weybridge, was first, closely followed by Mr. Pagran, gardener to A. F. Hobhouse, Esq., Weybridge, second, and Mr. Cheesman, gardener to — Riddell, Esq., Walton, third. Mr. Thorne, Mr. Thorne, gardener to A. E. Flood, Esq., Walton, took the premier position for six incurved, distinct; Mr. Cawte, gardener to H. Preston Thomas, Esq., Weybridge, was second; and Mr. Cheesman third. For six incurved, one variety, Mr. Hopkins was first with Violet Tomlin in magnificent form, Mr. Felgate being second with the same variety, Mr. Ridge being third with M. P. Martignat. Mr. Stedman was first with Sunflower in the class for six Japs, one variety, Mr. Felgate being second, and Mr. Ridge third. For twelve reflexed blooms Mr. Pagran was accorded the premier position, Messrs. Caryer and Felgate being second and third Mr. Cawte, the only competitor in the class for twelve as named. Anemone Pompons, and was deservedly awarded the first prize. There were two competitors for six specimen plants, dwarf trained, Mr. Cawte being placed first, closely followed by Mr. Swan

Bouquets were shown in great numbers, and in the one to which the premier award was given the arrangement was charming, perfect taste having been shown in the placing of the flowers by Mrs. Flood. Fruit was largely shown, Apples and Pears being splendid. Mr. Davies, gardener to G. Churchill, Esq., Weybridge, arranged a stand of forty-

eight grand blooms not for competition.

WESTON-SUPER-MARE.—NOVEMBER 9TH.

All things considered this Show was the best of the series of nine exhibitions that have been held in the above mentioned town. Mr. Vanes is the Hon. Secretary, and no fault could well be found with

the way in which he and the Committee do their work.

Specimen plants are particularly well grown in this neighbourhood. The first prize for four large flowering varieties was won by Messrs. Brooks & Son, Weston-super-Mare. Mr. W. Daffurn, gardener to Donald Cox, was second with somewhat smaller but remarkably well grown plants; the third prize going to Mr. C. Holland, gardener to W. Ash, Esq., who also had fine plants. In the corresponding class for Japanese varieties Mr. C. Holland was first, Messrs. W. Brooks & Son were a very close second, and Mr. Daffurn third. For a single specimen Mr. Holland was first for a grand plant of Mrs. Rundle, 6 feet through, and well flowered; Messrs. Brooks & Son being second, and Mr. Daffurn third. The last named took a first prize for standards, Mr. Holland following with plants only slightly inferior. There were several other classes for trained plants, but mention can only be made of the very fine Pompons shown by Messrs. Brooks & Son. Mr. C. Holland also had remarkably good Pompons, his plants being only a little smaller. Prizes were also provided for untrained plants of Japanese, incurved, and large flowered varieties, but the results were not altogether satisfactory.

Messrs. H. Lambert, gardener to the Rev. W. W. Aldridge, W. Treble, gardener to T. Mullins, Esq.; and F. Blackmore, were among the most successful exhibitors of these.

The groups were very much better than usual, and were quite a feature. Mr. H. W. Whitehead, gardener to R. W. Gibbs, Esq., arranged an admirable group. Mr. Summerhayes, gardener to H. Pethick, Esq., was second, Mr. F. Williams, gardener to R. Cox, Esq., being third with a group that would have been well first in previous years. Three good groups of miscellaneous plants were shown, Messrs. Brooks & Son being first, Mr. Daffurn second, and Mr. Summerhayes third. Table plants, Primulas, and such like were also shown in good style.

Cut blooms occupied the best part of two long tables, and but few inferior flowers were seen. The first prize for twenty-four incurved blooms, in not less than eighteen varieties, was well won by Mr. J. Lloyd, gardener to Vincent Stuckey, Esq., Langport, who had Lord Alcester, Alfred Salter, Empress of India, Golden Empress, Mons. Bahuant, Jeanne d'Arc, Mrs. Coleman, Prince Alfred, Mrs. Heale, Lord Wolseley, Jardin des Plantes, Miss Haggas, Mrs. N. Davis, Violet Tomlin, Lady Dorothy, Cherub, Hero of Stoke Newington, and Princess Beatrice, all in good condition. Messrs. W. Brooks & Son were second. With twelve incurved varieties Mr. J. Atwell, gardener to J. B. Bain, Esq., Clifton, was first, some of his best being Mr. Brunlees, Jeanne d'Arc, Baron Hirsch, Novelty, Violet Tomlin, and Lord Wolseley. Mr. G. W. Deake, Cardiff, was second; while for six varieties Mr. A. Currey, gardener to C. Bailey, Esq., Frome, was first, and Mr. G. Sutton, gardener to W. A. Todd, Esq., second. The best twenty-four Japanese varieties were shown by Mr. J. Lloyd, who had fine fresh blooms of Etoile de Lyon, E. Molyneux, R. George, Mrs. C. H. Payne, Colonel W. B. Smith, Vice-President Audiguier, W. W. Coles, W. H. Lincoln, Excelsior, Florence Davis, R. Owen, Madame Appuis, G. Daniels, Madame Picard, Prefect Roberts, C. Davis, Viviand Morel, Ralph Brocklebank, J. S. Schwabe, President Borel, Beauty of Castlewood, Miss A. Hartshorn, Louis Boehmer, Sunflower. Mr. Deake was second, and Messrs. Brooks & Son third. Mr. Daffurn was first for twelve varieties. Mr. A. Curry and Mr. J. Atwell were placed equal second. The first prize for six varieties went to Mr. J. Marshall, gardener to J. Dole, Esq., Clifton, Mr. G. Sutton, gardener to W. A. Todd, Esq., being a close second. Mr. Daffurn had the best reflexed varieties, and Mr. Atwell took the second prize.

The bouquets of Chrysanthemums and Fern fronds were particularly attractive, that which gained Messrs. Brooks & Son the premier prize being really beautiful. Mr. J. H. Deaske was second, and Mr. A. Curry third. Messrs. Brooks & Son were also the most successful with other bouquets, vases, and baskets of flowers; this firm also showing a magnificent cross not for competition.

The show of fruit was good. Mr. J. Marshall was first for excellent Alicante Grapes, Mr. Daffurn being second; while in the any other Black class Mr. Daffurn was first for grand bunches of Gros Guillaume, Mr. Curry being second with Mrs. Pince's Muscat in good condition. The best Muscats were shown by Mr. J. Marshall, Mr. J. Atwell being a close second. Messrs. Daffurn, F. Williams, and W. Summerhayes were among the most successful in the Apple and Pear classes.

BIRKENHEAD AND WIRRAL.-NOVEMBER 9TH.

THE seventh annual Exhibition of the above Society was held on the above date, and although the competition in some of the larger classes was not so good as one would have liked, yet everything staged was of high quality. The arrangements were admirable, and every exhibit could be seen to proper advantage.

In the class for eighteen Japanese blooms Mr. T. Ransom, gardener to H. R. Rodger, Esq., Spital, was first, staging in the back row magnificent blooms of Mrs. C. H. Payne, G. C. Schwabe, W. H. Lincoln, E. Molyneux, Marie Hoste, Viviand Morel. Second row: Wm. Seward, Mrs. E. W. Clarke, Gloire du Rocher, Louis Boehmer (very fine), Beauty of Castle Hill, Col. W. B. Smith. Front row: Florence Davis. Sunflower, J. Shrimpton, Miss Anna Hartshorn, Chas. Davis, and L'Enfant des Mondes (splendid). The second honours went to Mr. J. Trelford, gardener to C. Gatehouse, Esq., Noctorum. Mr. J. Williams, gardener to C. J. Proctor, Esq., Noctorum, was third with a stand of bright coloured smaller For twelve Japanese Mr. H. Howard, gardener to A. S. Mather, Esq., Beechwood, Woolton, put up a splendid stand, the best being Chas. Davis, Marie Hoste, W. H. Lincoln, and Col. Smith. Mr. J. Pink, gardener to J. T Sealby, Esq., was a very fair second. For eighteen incurved Mr. T. Ransom was the only exhibitor, but his stand was well worthy the first prize awarded. Very fine indeed were his blooms of Robert Cannell, Emily Dale, Mons. R. Bahuant, Jeanne d'Arc, Prince Alfred, Mrs. Coleman, and Princess Beatrice. For twelve incurved Mr. H. Howard showed in fine form Mons. R. Bahuant, Emily Dale, Baron Hirsch, Violet Tomlin, Mrs. Coleman, and Jeanne d'Arc. Mr. J. Trelford was second, and Mr. J. Williams third. In the local class for twelve Japanese Mr. Ransom repeated his successes; Mr. J. Pink was second, Mr. J. Williams third. The same exhibitor was again first in the class for twelve incurved. For six Japanese Mr. J. Bradshaw, gardener to C. W. Pitt Taylor, Rock Ferry, put up special stand. Mr. W. Thomas, gardener to G. E. Grayson, Esq., was first for six incurved Lord Wolseley. For six incurved and six Japanese, open to those who employ one gardener, the prizes were taken respectively by Messrs. Jos. Hay, gardener to E. C. Thin, Esq., Oxton, and Mrs. Leete, Oxton, Messrs. R. R. and J. H. Anderson taking honours for six blooms in the class for those who do not employ a gardener. In the class for those who have never won a prize at the show Mr. J. Cubbon, gardener to

G. E. Moses, Esq., Higher Bebington, had a good stand, and Mr. H. Holford, gardener to C. MacIver, Esq., Heswall, coming in second.

The groups were much superior to those seen at Liverpool on the

The groups were much superior to those seen at Liverpool on the previous Tuesday. The leading honours went to Mr. A. Price, gardener to F. Jevons, Esq., Claughton; Mr. A. Brown, gardener to Geo. Webster, Esq., Upton, being placed second. For three vascs of Chrysanthemums arranged for effect Mr. J. Williams had no difficulty in securing the award. Primulas and Cyclamen were good, as were also Mignonette and table plants, the prizes going respectively to Mr. J. W. Totty, gardener to W. Laird, Esq., Birkenhead; Mr. W. Thomas, Mr. A. Price, Rev. Canon Robin, and Mr. A. Brown. Bouquets did not call for special comment, being much under the average in every instance as regards arrangement and colouring.

Fruit and vegetables were grand, the black Grapes being in every way superior to those at Liverpool. Awards of merit were granted to Messrs. Dickson, Limited, Chester, who had a table containing a general collection of fruit gathered from young trees in the nurseries, very attractive. Also to Mr. Henderson, Oxton Hill, Birkenhcad, for plants and blooms; and to Mr. Bradshaw for miscellaneous plants.

GLOUCESTER .- NOVEMBER 9TH AND 10TH.

This annual Show was again held in the Corn Exchange, and was a decided improvement on the past few years. Mr. J. Aplin, gardener to W. M. Baker, Esq., was the most successful exhibitor of Chrysanthemums, taking first honours for a well-arranged group of healthy well bloomed plants, and also premier honours for forty-eight cut blooms, thirty-six Japanese and twelve incurved, thus repeating his Bath successes of the previous day. The back row was composed as follows:—W. Tricker, W. H. Lincoln, W. Seward, Gloriosum, Mdlle. M. Hoste, Viviand Morel, Edwin Molyneux, Avalanche, Perfet Robert, Stanstead White, W. G. Drover, W. Woodcock. Second row: Colonel W. B. Smith, Excelsior, Geo. Atkinson, Charles Davis, Etoile de Lyon, Sunflower, White Louis Boehmer, Baronne de Prailly, Mrs. C. Wheeler, Amos Perry, Gambetta, Mrs. A. H. Neve. Front row: Mrs. J. Laing, Comte de Germiny, John Dyer, Ruth Cleveland, Fimbriatum Japonaise, Thunberg, Stanstead Surprise, Mrs. W. Clarke, Eynsford White, Florence Davis, B. D. Crane. Incurved: Lord Wolseley, Queen of England, Lady Dorothy, Empress of India, Miss Haggas, Prince Alfred, Jeanne d'Arc, Violet Tomlin, Beauty, Mr. Bunn, and Flora Macdonald. Mr. Wheeler, Blackmore Park, was a fair second.

Fruit is always well shown at Gloucester, and this year the entries were extra numerous. Mr. J. Watkins, Pomona Nurseries, Hereford, practically swept the deck with Apples and Pears, taking first position in the following classes. Collection of culinary Apples, seventy dishes; collection of desert Apples, sixty dishes; collection of Pears, and in the following single-dish classes: Ribston Pippin, Blenheim Orange, immense fruits, and Dumelow's Seedling. The English Fruit and Rose Company, King's Acre, Hereford, were very close to Mr. Watkins in collections of dessert and culinary Apples, taking second honours in each case. The same Company took first position for any variety of desert Apple with Scarlet Nonpareil, first for Ashmead's Kernel Improved, and first for the best dish of culinary Apples with a grand dish named Byford Wonder. The first staged by the above exhibitor was very fine indeed.

For the best collection of dessert and culinary Apples, twenty-four dishes, prize given by Mr. J. Watkins, C. Lee Campbell, Esq. (gardener, Mr. S. T. Wright), was a good first with a large, highly coloured fruit. Mr. J. R. Bennett, Chaxhill House, Newnham, was second, who also staged well. Mr. Watkins was an easy first for a collection of cider Apples with fruit of a lovely colour. With white Grapes Mrs. Gambier Parry, Highnam Court (gardener, Mr. Sowray), was first with good bunches of Muscat of Alexandria, and a similar position for black with beautiful Alicante. Mr. J. H. Jones, Churchdown, was second with the same variety, badly coloured, while some well-finished Gros Guillame and West's St. Peter's were left out, a decision which caused a good deal of comment. The same applies to the first prize awarded in the Cox's Orange Apple class, in this case the dish taking premier honours was not Cox's Orange Pippin at all. Vegetables, grain, and roots (agricultural) were largely exhibited, and generally of high quality.—VISITOR.

LEATHERHEAD.—NOVEMBER 10TH.

THE ninth annual Chrysanthcmum Show of the Leatherhead Horticultural Society was held in the Institute of that town on the above date, when a bright and beautiful display of flowers was brought together. The quality of the flowers and plants was as a rule high, more especially in the classes devoted to the Japanese section. The incurved blooms, too, were fine, and reflected high credit on the growers. The arrangements of the Show, under the supervision of Mr. Pennington, the Secretary, and a Show Committee, were admirably carried out.

For a group of Chrysanthemums to be arranged in a space not exceeding 40 square feet, Mr. G. Mileham, gardener to A. T. Miller, Esq., was a very good first. The plants were carrying clean, shapely flowers, and were effectively arranged. Mr. Buck, gardener to W. Maples, Esq., Ashtead, was second. The blooms in this exhibit were of high quality, but the plants were not so well arranged as those of the first group. The third prize was accorded to Mr. F. Hodgson, gardener to H. White, Esq. Mr. Mileham was first for six distinct large-flowering varieties in pots with good plants. Mr. Long, gardener to J. F. Chance, Esq., was placed second. For three plants Mr. Mileham was again first with finely flowered plants. The same exhibitor was also awarded

the first prize for a specimen Pompon, Mr. Mease, gardener to A. Tate, Esq., being a good second, and Mr. Buck, gardener to W. Maples, Esq., third. Mr. Mileham won easily with three grandly flowered specimen Pompons. In the class for twenty-four blooms, twelve Japanese and twelve incurved, distinct, Mr. Mease was a splendid first, staging—back row: Mrs. C. Harman Payne, Stanstead White, Eda Prasse, Col. W. B. Smith, John Lambert, Queen of England, E. B. Hithnall, Jeanne d'Arc. Middle row: Robert Owen, G. C. Schwabe, Excelsior, Charles Davis, Empress of India, John Doughty, Robinson King, Lord Alcester. Front row: Viviand Morel, J. Hanborough Dibben, Mdlle. Thérèse Rey, Etoile de Lyon, Mrs. S. Coleman, Empress Eugénie, Violet Tomlin, and Princess of Wales. The Japanese in this stand were heavy, superbly formed flowers, and the incurved were of fine size and perfect finish. Mr. Beckett, gardener to T. H. Bryant, Esq., Mickleham, was a good second, his Japs being especially noteworthy. The best were Viviand Morel, Jean Delaux, Marie Hoste, and Sunflower.

Mr. C. Beckett was first for twelve incurved, distinct, staging—back row: Marquis du Bois, Hero of Stoke Newington, John Lambert. Middle row: Lord Wolseley, Princess of Wales, Lord Alcester, Ami Hoste. Front row: Jeanne d'Arc, Madame Darrier, Baron Hirsch, and Miss M. A. Haggas, all the blooms being very fine. Mr. Mease was a very close second. For twelve Japanese Mr. Mease was first with a magnificent stand, consisting of—back row: Col. W. B. Smith, Etoile de Lyon, Edwin Molyneux, Mrs. C. Harman Payne. Middle row: H. Seward, V. P. Darquet, Mrs. Cannell, J. Stanborough Dibben. Front row: Mdlle. Thérèse Rey, Lord Brook, Mrs. Falconer Jameson, and Viviand Morel. Mr. C. Beckett was second with a highly creditable exhibit, amongst the best blooms in which were W. H. Lincoln, Marie Hoste, and Sunflower. For six Japanese Mr. G. Rowes, gardener to R. H. M. Praed, Esq., Mickleham Downs, who showed Etoile de Lyon, Col. W. B. Smith, Violet Rose, Viviand Morel, Lizzie Cartledge, and Condor, all in fine condition; Mr. Mileham being second; and Mr. Peter, gardener to H. P. Sturgis, Esq., Leatherhead, third. For six incurved Mr. Peter was first with Robt. Cannell, John Lambert, Princess Teck, Lord Alcester, Camille Flammarion, and Miss M. A. Haggas. Mr. Mileham was a good second. Mr. Peter was first for six reflexed with charming blooms, Mr. Mease being second.

Mr. Higgs, gardener to J. B. Hankey, Esq., Fetcham Park, staged a stand of Japanese and incurved not for competition. Both sections were represented by some beautiful examples. Mr. Page, gardener to A. Dixon, Esq., Cherkley Court, also showed a highly creditable stand. The double Primulas with which Mr. Mease gained the premier award were splendid examples of high culture, and proved conclusively to what perfection these plants may be brought in the hands of an intelligent man. Fruit and table plants were also largely shown, as also were Cyclamens and Bouvardias. The amateurs' classes were strongly

contested, many fine blooms and plants being staged.

HITCHIN.—NOVEMBER 10TH.

THE third annual autumn Exhibition of the Hitchin and District Horticultural Society was held in the Corn Exchange, Hitchin, on Friday last. As was general anticipated, the cut blooms formed a prominent feature of the Show, these being staged in excellent condition. Most of the classes were well filled, and in some of them the competition was very keen. Groups and trained plants, although not numerous, were fairly good, and, as will be seen by the remarks that follow, fruit and

vegetables were well represented.

One of the principal classes in the cut bloom section was for eighteen incurved. In this there were three entries, and the competition was exceedingly close. The first prize went to Mr. W. Collins, gardener to J. W. Carille, Esq., Ponsbourne Park, Hertford, who has a stand of neat and well finished blooms. These comprized Lord Alcester (grand), Robert Cannell, Mrs. Coleman, Alfred Salter, Queen of England (magnificent), Violet Tomlin, White Empress (good), Madame Darrier (fine), Mrs. Heale, Mrs. Robinson King, Alfred Salter, and Miss M. A. Haggas. Mr. J. Turk, gardener to P. Bosanquet, Esq., Poufield, Little Berkhampsted, was a good second. The best flowers in this stand were Lord Wolseley, John Doughty, Alfred Salter, Mrs. Coleman, and Jeanne d'Arc. Mr. E. Beckett, gardener to H. H. Gibbs, Esq., Aldenham House, Elstree, was third with a stand of neat blooms.

Mr. Ernest Cotton, gardener to A. W. Lines, Esq., Hitchin, secured the leading award for twelve incurved blooms, showing Violet Tomlin, John Lambert, Jeanne d'Arc, Madame Darrier, Novelty, Miss M. A. Haggas, Queen of England, Lord Wolseley, Barbara, Lord Alcester, John Salter, and Empress Eugénie. Mr. G. R. Allis, gardener to Major Shuttleworth, Old Warden Park, Biggleswade, was second, this exhibitor's best blooms being Prince of Wales, Pink Venus, John Salter, and Lord Wolseley. Mr. W. Collins gained the leading award in a class for six incurved blooms of one variety, showing Madame Darrier. The second prize went to Mr. E. Beckett for six fine blooms of Miss M. A. Haggas.

Mr. E. Cotton was third with Jeanne d'Arc.

The Japanese blooms were very good and formed quite a feature. Mr. E. Cotton won with twelve blooms, showing fine examples of Edwin Molyneux, A. H. Neve, W. Tricker, Etoile de Lyon, W. H. Lincoln, Eynesford White, Fair Maid of Guernsey, W. W. Coles, Louis Boehmer, Mrs. F. Jameson, Viviand Morel, and Sunflower. Mr. E. Orseman, gardener to G. Lucas. Esq., Hitchin, was second, W. H. Lincoln, Sunflower, and Val d'Andorre being especially good in this stand. Mr. J. R. Allis was third.

There were five exhibitors of stands of twenty-four Japanese blooms and the fight for supremacy was very keen. Mr. E. Beckett, however,

gained the first prize with a stand of well finished blooms. The varieties staged were Viviand Morel, J. P. Kendal, Violetta, Edwin Molyneux, Golden Wedding (grand), Excelsior, Mrs. C. H. Payne, Lord Brooke, Mrs. Watt's Cutting, G. W. Childs, Mdlle. Thérèse Rey, (splendid), Waban, Colonel W. B. Smith, Le Verseux, Mdlle. Marie Hoste, Etoile de Lyon, Mrs. F. Jameson, Val d'Andorrc, Puritan, Beauty of Castlewood, W. H. Lincoln, Silver King, Charles Davis (fine), and W. Tricker. Mr. W. Collins was a good second, the best flowers in this stand being Edwin Molyneux, W. H. Lincoln, Pearl Beauty, Mdlle. Marie Hoste, and Robert Owen, the last named being exceptionally good. Mr. J. Turk was third with a stand of excellent blooms. Mr. George Saunders, Gas House, Hitchin, secured first prizes for six Japanese blooms distinct, and for three Japs, and the same number of incurved blooms, also for six bunches of Chrysanthemums. Mr. W. Collins won in the class for six blooms of one coloured Japanese variety, staging fine blooms of Edwin Molyneux. Mr. E. Cotton was second with well grown Viviand Morel, and Mr. J. Kipling, gardener to J. C. Osgood, Esq., Knebworth House, Stevenage, third, with the same variety, staging Mdlle. Marie Hoste. Mr. W. Millard, gardener to W. Ramson, Esq., Fairfield, Hitchin, was second with six neat blooms of Mrs. Alpheus Hardy. Mr. J. Kipling third. Mr. E. Beckett was placed first with six Pompons, distinct, staging Cendrillon, Perles des Beautés, Black Douglas, Scapion, William Westlake, and Eynesford Gem. Mr. J. Turk was second, and Mr. E. Cotton third.

Trained plants were shown in good condition, if not very numerously. For six plants Mr. W. Springham, gardener to J. H. Tukes, Esq., was placed first. This exhibitor showed fine specimens of J. M. Pigny, Edwin Molyneux, Madame Bertie Rendatler, Margot, Elaine, and Sarah Owen. The plants were remarkably well flowered. Mr. E. Osman was second. Mr. Springham also had the best three plants in pots, showing Madame Baco, Cullingfordi, and W. H. Lincoln. Mr. W. Millard was second, and Mr. A. Wilson, gardener to A. Ransom, Esq., Benslow, Hitchin, third. Mr. E. Osman won with a group of Chrysanthemums, the plants being well grown and admirably arranged. Mr. W. P. Clark, 10, Fishpond Road, Hitchin, the Assistant Secretary of the Society, was second with a group that reflected great credit on the grower. Mr. J. Upchurch, gardener to F. Lucas, Esq., Hitchin, was third; and Mr. R. Sharp fourth.

The table decorations open to ladies were very good, Mrs. R. Shillitoe, Bancroft, Hitchin, was placed first, Mr. E. C. Foster, Bancroft, Hitchin, Miss Tindall Lucas, Foxholes, Hitchin, third, and Miss Mary Ransome fourth. Miss Tuke secured the leading award for a bouquet of autumn foliage, Miss Ellen Pollard second, and Miss A. Foster third. The same exhibitors secured prizes for bunches of Chrysanthemums.

Amongst the miscellaneous exhibits a group of Violets in pots and bunches of flowers shown by Mr. C. E. Martin, gardener to Viscount Hambledon, The Hoo, Welwyn, Herts. These were admirably grown and

loaded with bloom.

Fruit and vegetables were well shown. Mr. Beckett won with two bunches of white Grapes, staging good clusters of Muscat of Alexandria. Mr. R. Allis was second. Mr. A. Burgess, gardener to the Earl of Harkwicke, Wimpole Hall, Royston, was first with two bunches of black Grapes, staging well finished Alicante. Messrs. E. Beckett, G. R. Allis, and W. Millard followed. Culinary Apples were best staged by Mr. John Buckingham, Ickleford, Hitchin, who also won the first prize for one dish of Pears. Mr. C. E. Martin gained the first prize for five dishes of culinary Apples; and Mr. C. Welch, gardener to J. H. Tukes, Esq., Hitchin, was first with five dishes of dessert varieties. Mr. Burgess was first with three dishes of dessert Apples, Mr. Kipling following. Mr. J. Brandon was first with six Cyclamens; and Mr. E. Beckett followed. Mr. Springham had the best six Primulas; and Messrs. Brandon and W. Millard were second and third respectively.

WINDSOR.—November 10th.

THE second annual Exhibition of this Society was held in the Albert Institute and showed a marked improvement on the initial attempt last year there being a great increase of exhibits

Aftert Institute and showed a marked improvement on the initial attempt last year, there being a great increase of exhibits.

The principal class was that for a group arranged in semicircular form, quality and general effect to be the leading feature. No less than six competed, making a good display. Mr. J. Edge, gardener to Lord Harlech, Ascot, was an easy first with dwarf plants carrying good blooms, not too much crowded. Mr. H. Wood, gardener to Lord Boston, second, and Mr. F. H. Berry, gardener to Lady Mary Currie, third. Mr. W. Skeet, gardener to Sir H. D. Gooch, Bart., Windsor, was the only exhibitor of four specimens, but they were magnificent examples. Amateurs staged some well grown plants, T. Wyborr, Esq., Clifton House, Windsor, winning for twelve.

Cut blooms were the most important part of the Exhibition, so

Cut blooms were the most important part of the Exhibition, so numerously and well were they shown. The principal class in this section was for thirty-six distinct varietics, half to be incurved and the remainder Japanese, seven competed Mr. Thorne, gardener to Major Joicev, Sunningdale Park, Ascot, won the premier award by the superiority of his Japanese. The Japanese were Viviand Morel, E. Molyneux, Etoile de Lyon, W. H. Woodcock, M. E. A. Carrière, G. C. Schwabe, John Dyer (good), Excelsior, John Shrimpton (grand), W. H. Lincoln, Mrs. E. W. Clarke, Mdlle. M. Hoste, Florence Davis, Gloriosum, Mdlle. Thérèse Rey, M. Baco, G. W. Childs, and Col. B. Smith. Incurved—Queen of England, Camille Flammarion, Golden Queen of England, Lord Alcester, Brookleigh Gem, Empress of India, Miss M. A. Haggas, Madame Darrier, Willie, Prince Alfred, Lord Wolseley, Golden Empress, Princess Teck, Flora Macdonald, Lady

Dorothy, Princess Beatrice, Nil Desperandum, and Barbara. Mr. G. Lane, gardener to Miss A. S. Ridge, Ascot, second, and Mr. H. Popple, gardener to The Hon. Lady Cowell, Stepney, Ascot, third.

In the class for twenty-four incurved in not less than eighteen varieties Mr. J. Williams, gardener to F. Ricardo, Esq., Ascot, won the first prize with medium sized, neat blooms of leading varieties. Mr. Skeet was second. Mr. G. Lane won for twelve incurved with well finished examples; especially good were Miss M. A. Haggas, Violet Tomlin, Lucy Kendall, and Princess of Wales. Mr. G. Woodhouse, gardener to Miss Belcher, Windsor, was second. For six incurved, any one variety, Mr. Skeet with Mrs. Heales secured the premier award, Mr. J. Williams was second with Jeanne d'Arc, Mr. Lane third with Prince Alfred.

Japanese varieties were very good. For twenty-four in not less than eighteen varieties Mr. A. Sturt, gardener to N. L. Cohen, Esq., Ascot, secured the premier position with heavy, fresh blooms, admirably arranged. Mr. J. Williams was second, Mr. Skeet third, both staging well. For twelve varieties Mr. E. Johnson, gardener to A. Gilliat, Esq., Windsor, was an easy first with remarkably fine flowers; Mr. G. Lane second, and Mr. J. Cowie, gardener to B. L. Oliver, Esq., Ascot, third.

Anemone varieties were really well shown by Messrs. Sturt and Williams, the prizes going in the order here given. The same remark applies to the reflexed section, no less than six lots of twelve being staged. Mr. Popple was first with blooms not extra large, but full and highly coloured; Mr. Thorne second, and Mr. Woodhouse third.

EXETER.—November 10th.

THE Devon and Exeter Horticultural Society's Chrysanthemum Show was held in the Victoria Hall, of the above named city, on Friday last, and in every way proved a decided success. The exhibits were so numerous that an extra room had to be requisitioned to accommodate much of the fruit and some trade displays. Groups of Chrysanthemums, arranged with Palms and other foliage plants, had a most pleasing effect, and the cut blooms, especially of Japanese, were remarkably good, and the competition in most instances very keen. The Show was the best the Society has yet held, and, favoured by beautiful weather, was

largely patronised.

In the cut bloom section the leading class was that for thirty-six Japanese; six good stands were staged in competition, a silver cup value 5 guincas, being offered as the first prize. The collections staged by Mr. G. Foster, gardener to H. Hammond Spencer, Esq., Torquay, and Mr. Hawkins, gardener to W. H. Fowler, Esq., Taunton, were very close in merit. The blooms of the latter, although good, lacked freshness, and had to take second place. The first prize stand consisted of the following, reading from left to right:—Back row: Etoile de Lyon, Golden Wedding, Viviand Morel, Sunflower, Dorothea Shea, Princess May, Silver King, W. H. Lincoln, Mrs. F. Jameson, Boule d'Or, Mrs. C. H. Wheeler, Mrs. E. D. Adams. Middle row: Col. W. B. Smith, E. Molyneux, Robt. Owen (good), Alberic Lunden, Stanstead White, Vice-President Audiguier, Wm. Lane, Mdlle. Marie Hoste, Lizzie Cartledge, Florence Davis, Ruth Cleveland, Gloire du Rocher. Front row: G. C. Schwabe, Beauty of Exmouth, Excelsior, Mr. Broomhead, W. K. Woodcock, Charles Blick, Violet Rose, Mrs. L. Allen, Mr. A. H. Neve, Puritan, J. Stanborough Dibben, and Madame Baco. Mr. Fowler had some magnificent blooms in his second prize stand. Third, Mr. J. Lloyd, gardener to Vincent Stuckey, Esq. With eighteen varieties, J. Lloyd, gardener to Vincent Stuckey, Esq. With eighteen varieties, distinct, the latter exhibitor was placed first, having good blooms; Mr. Foster was second; and Mr. Thomas, gardener to Wilfred Marshall, Esq., Taunton, third.

For twelve Japanese eight competitors staged, the best coming from Mr. W. H. Veale, gardener to the Rev. A. H. Sims. They comprised Viviand Morel, E. Molyneux, W. H. Lincoln, Mrs. H. Payne, Madame Baco, Sarah Owen, Mdlle. Marie Hoste, Lord Brooke (good), W. Tricker, Miss A. Hartzhorn, Gloire du Rocher, and Etoile de Lyon. Second, Mr. F. Dark, gardener to T. S. Philpot, Esq. In his stand was a magnificent bloom of Robert Owen, which was unanimously selected as the best Jap bloom in the Shelley was bloom in the Show. Mr. Mairs, gardener to Sir John Shelley, was third. Three classes were devoted to sixes of Japanese, one variety, white, yellow, and any other variety, a grand lot of flowers being staged. With white Mr. Fowler was first with Beauty of Exmouth; second, Mr. Veale with Florence Davis, larger flowers, but scarcely at their best. Six yellow.—First, Mr. Veale with extra fine W. H. Lincoln. Second, Mr. Foster with Golden Wedding, also good. For six of any other colour, Mr. Fowler came first with finely coloured E. Molyneux. Second, Mr. Stiles, gardener to Miss Fripp, Teignmouth, with monstrous blooms of

Viviand Morel, but rather pale.

The incurved blooms were not quite so numerous as the above. For twenty-four, distinct, Mr. Foster gained another first, having-back row: Alfred Salter, Golden Empress, J. Lambert, Miss Belle Wilson, Queen of England, Violet Tomlin, Lord Alcester. Middle row: Jardin des Plantes, Madame Darrier, Empress of India, Hero of Stoke Newington, Mrs. Robinson King, Lord Wolseley, Princess of Wales, Mrs. Mitchell. Front row: Camille Flammarion, Empress Eugénie, Lady Hardinge, Jeanne d'Arc, Prince Alfred, Miss Haggas, Baron Beust, and Princess Alice. Second, Mr. Lloyd. The competition was stronger in the class for twelve blooms. Mr. F. Prothero, gardener to W. McKenzie Bradley, Esq., coming in first. Second, Mr. Heath, gardener to Sir W. Walrond, in whose stand was a fine Jeanne d'Arc. Third, Mr. Veale. The best incurved bloom in the Show was a large and finely will Baron Hirosh. incurved bloom in the Show was a large and finely built Baron Hirsch in Mr. Stiles' third prize stand of twenty-four. The reflexed and

Pompons were not strongly represented, and call for no special com ment. Two exceedingly pretty stands of six varieties of single were shown in bunches of three. First, Mr. Prothero, with Souveair de Londres, Admiral Symonds, Calliope, Mrs. Killock, Tisiphone, and Snowflake. Second, Mr. Emmett.

At Exeter the schedule stipulates that a Palm shall be used for the centre of each group (the groups are all circular), and Ferns may be used to finish off the base, which has a good effect. A class is also provided in which Chrysanthemums and foliage plants intermixed shall form the groups. Four competitors entered in each class, Mr. Rowland, gardener to W. Brock, Esq., Exeter, winning easily in each instance. Second, Mr. Rogers, gardener to G. Randall Johnson, Esq. Third, Mr. Higginson, gardener to Mark Farrant, Esq. Mr. Rowlands' other group was a very clegant arrangement. Second, Mr. A. Williams, gardener to W. C. Sim, Esq. Mr. Rowland was also first for a miscellaneous group of plants, Chrysanthemums excluded; second, Mr. Williams.

There was a wonderful display of Apples and Pears, the colour of the former being remarkably bright. Forty classes were provided for these, the competitors in most instances being numerous. The principal prizetakers were the gardeners (whose names we failed to obtain) to the following gentlemen—Sir J. Amory, Sir'J. D. Ferguson Davie, Lord Poltimore, Sir J. Copp, Major Tracey, Sir T. Acland, Sir W. Walrond, W. C. Sim, Esq., and Mr. Whitehead.

Miscellancous exhibits were largely contributed by Messrs. Robt. groups. Four competitors entered in each class, Mr. Rowland, gardener

Miscellancous exhibits were largely contributed by Messrs. Robt. Veitch & Son, Exeter; the Exeter Nursery Co., Exeter; Mr. Jarman, Chard; Mr. Godfrey, Exmouth, ten stands of Chrysanthemum blooms; and Mr. G. C. Sclater, Heavitree Nursery, Exeter.

TADCASTER PAXTON SOCIETY .- NOVEMBER 10TH.

On Friday last the above Society held its second annual Chrysanthemum Show, which was opened by H. H. Riley-Smith, Esq., in the Town Hall, and was largely attended. The Show was a decided improvement on last year, especially in the cottagers' classes, where some fine collections of vegetables were staged. The entries in the gardeners' class were very poor. Three groups were arranged, not for competition, by T. Fielden, Esq., Grimston Park; H. Bromet, Esq., Tadcaster, and Miss Bethell, Newton Kyme. The Chrysanthemums in the amateurs' classes were highly creditable. An award of merit was given to Mr. Grix, gardener to J. M. Dawson, Esq., Wighill, for a handsome "sport" from Mrs. Shipman, also to Mr. William Green of Garforth Nurseries, near Leeds, for a fine display of home grown fruit.

BRADFORD AND DISTRICT .- NOVEMBER 10TH AND 11TH.

THE seventh annual Exhibition of Chrysanthemums under the auspices of the above Society was held in the Technical College, Bradford. The entries numbered nearly 300, against about 200 last year.

A splendid group (not for competition) of very choice Orchids was arranged in front of the orchestra by Messrs. Charlesworth, Shuttleworth, & Co., of Heaton, which was one of the main features of the Exhibition, and a certificate of merit was awarded. Mr. Bell, gardener to J. H. Rand, Esq., Baildon, exhibited a small but very neat group of Palms and other plants, for which a certificate was also awarded.

In the cut flower department, open class for twenty-four Japanese in not less than eighteen varieties, Mr. C. J. Ormerod was placed first, the Earl of Harrington second, and Mr. John Edwards third. twenty-four incurved blooms, in not less than eighteen varieties, Mrs.

Cope, Dove Park, Woolton, was first, the Earl of Harrington second and Mr. Adolph Jacobs, Cragg Royd, Rawdon, third.

In the amateur classes Mr. Ben Baxter, Lidget Green, Great Horton, took nine first prizes, five second prizes, and one third prize, as well as a silver medal. Mr. Jesse Hall, Shipley, and Mr. John Whittingham, Shipley, also secured many prizes. In the open and local classes, Mr. T. Newbould, gardener to Adolph Jacobs, Esq., Cragg Royd, Rawdon, was very successful, taking six firsts, three seconds, and one third prizes. In the local classes Messrs. H. Clark & Son, Rodley, did very well, taking three firsts, four seconds, and two third prizes. Mr. Lindsay, Stockfield-on-Tyne, and Mr. Jellicoe, Liverpool, officiated as Judges.

The silver cup. valued £5 5s., given by the Mayor of Bradford for the best group of Chrysanthemums, was won by Mr. Sam Dean, Great

Horton.

PONTEFRACT .- NOVEMBER 10TH AND 11TH.

THE seventh annual Show was held in the Town Hall, and although the exhibits were of good quality generally the classes were not so well filled as in previous years. Cut flowers were well shown, the principal class being for twenty-four blooms, twelve incurved and twelve Japanese, the first place being secured by Mr. Ketchell, gardener to C. H. Simpson, Esq., Moor Top, Ackworth. His incurved were rather small but of high finish; they included Jeanne d'Arc (2), Mons. Bahwant (2), Lord Wolseley, Camille Flammarion, Mr. Bunn, Madame Darrier, and Hero of Stoke Newington (premier bloom). The Japanese were very fine, particularly Eva Knowles (new, and for which a first-class certificate was awarded), Viviand Morel, Colonel W. B. Smith, Gloire du Rocher, G. C. Schwabe, W. Tricker, Alberic Lunden, and E. Molyneux. Mr. Groom, gardener to T. Tew, Esq., Carlton Grange, was a good second. His Japanese were better than in the winning stand, but the incurved were rougher. He had grand blooms of J. Shrimpton, W. Seward, W. Tricker, and G. C. Schwabe. Mr. Dunn, gardener to Mrs. D. L. Jones, Elmsall Lodge, Pontefract, was third. The premier Lapanese bloom was a splendid Viviand Morel in Mr. Findlay's stand. Mrs. D. L. Jones, Elmsall Lodge, Pontefract, was third. The premi-Japanese bloom was a splendid Viviand Morel, in Mr. Findlay's stand.

For twelve incurved blooms Mr. Ketchell was again first for neat

flowers similar to his other stand. Second, Mr. Groom. Third, Mr. Pearson, Knottingley. For twelve Japanese Mr. Groom was first with fine blooms. Second, Mr. Ketchell; and third, Mr. Findley, gardener to R. H. Jones, Esq., Badsworth Hall, Pontefract,

The only group which was highly creditable was from Mr. Bell, gardener to Jno. Rhodes, Esq., Snydalc Hall, Pontefract, who was given first place. Trained plants were not well represented, but table plants

first place. Trained plants were not well represented, but table plants

and Primulas were fine.

Fruit was well shown, notably Apples and Pears, also excellent Grapes, the principal winners being Messrs. Ketchell, Findley, Hirst, and Shaw. Vegetables made a fine display both in the local and cottagers' classes. Nurserymen's classes were represented by two fine tables from Mr. J. Sunley, Monk Fryston Nursery, and Mr. Lamprey of Ackworth.

LEICESTER.—NOVEMBER 10TH AND 11TH.

THE seventh annual Show of the Lcicester and Midland Chrysanthemum Society was held in the Floral Hall, Leicester, on the above

dates. The cut flowers were very good indeed.

dates. The cut flowers were very good indeed.

In the class for eighteen incurves, in not less than fifteen varieties, Mr. J. Underwood, gardener to R. Walker, Esq., was well first with Empress of India, Alfred Salter, J. Lamoert, Mons. R. Babuant, Lord Alcester, Queen of England, Lord Wolseley (2), Miss Haggas, Princess of Wales, Madame Darrier, Prince Alfred, Alfred Lyne, F. McDonald, Refulgens, Mrs. Coleman, Jeanne d'Arc, and Madame Darrier, The same exhibitor was also first for eighteen Japanese, distinct, with, amongst others, very fine blooms of Condor, W. W. Coles, Mrs. W. E. Clarke, Florence Davis, Mrs. F. Jameson, and Mdlle. Marie Hoste, Mr, Underwood was likewise first in each of the classes for twelve incurved and twelve Japanese, distinct. W. Bolton, gardener to — Billson, Esq., and twelve Japanese, distinct. W. Bolton, gardener to — Billson, Esq., was second for eightcen incurves, for eighteen Japanese, and for twelve Japanese. For twelve incurved the second prize was taken by H. Dunkley, gardener to S. Symington, Esq., Market Harborough, For six Japanese, of one variety, Mr. Underwood was first with superb Sunflowers, Mr. H, Rogers coming very close to him with six very fine Viviand Morels.

Four groups of Chrysanthemums and foliage plants were shown. Mr. H. Rogers, Gipsy Lane Nurseries, Leicester, was first with a charming arrangement. Mr. J. Smith, Vicarage Lane Nurseries, Belgrave,

also had a very pleasing group, not for competition.

Fruit was extensively shown, and in splendid condition. Mr. G. Boyes, florist and fruiterer, filled two large tables with collections of about seventy varieties Leiccstershire grown Apples. The other exhibitors of collections of very fine home grown fruit were Mrs. G. H. Ellis, Knighton Hayes, and Jas. Ellis, Esq., The Gynsils, Leicester.

The classes for bouquets of dried flowers brought a remarkable dis-

play, which proved one of the most attractive features of the Show. Some beautiful wreaths were also shown, not for competition, by Mr. H. Rogers and Mr. W. K. Woodcock, Barkley Road Nurseries. Messrs. T. Harrison & Sons, the Midland Seed Warehouses, were also well represented.

GODALMING .- NOVEMBER 10TH AND 11TH.

THE tenth Exhibition of the Godalming and District Chrysanthemum Society was held in the Public Hall on the 10th and 11th inst. and must be classed as one of the best the Society has yet held. Taken as a whole the exhibits were of a high order, especially the large trained specimens, Mr. H. Paddon carrying all before him in this class.

In the class for a group quality and effect being the leading feature, Mr. Tyler, gardener to — Hitchings, Esq., Monk's Hatch, won with a high class exhibit admirably arranged. Mr. Neal, gardener to H. Wyatt, Shackleford House, was a close second. Mr. King, gardener to Grahame Cooper, Esq., was third with very dwarf plants, good quality, but arranged somewhat too flat for effect. For three plants not disbudded the prize went to Mr. F. Jordan, gardener to Birket Foster, Esq., The Hill, Witley.

For eighteen cut blooms (incurved) Mr. Paddon, gardener to — Ricardo, Esq., Bramley, was again to the front. For twelve incurved the awards were:—First, Mr. Neal; second, Mr. Clarke; third, Mr. R. Jordan. Mr. Baker, gardener to W. Webb, Esq., was a good first for eighteen Japanese, closely followed by Mr. Paddon and Mr. Neal had a very fine board of the Rundle family, Ir. Clarke.

Mr. Jordan being second, and Mr. Jordan third.

In the class for six table plants Mr. F. Jordan was first with clean handsome specimens, Mr. Jordan second, Mr. Lampard third. For six distinct dishes of fruit Mr. R. Jordan led the way; for two bunches of white Grapes, Mr. Baker was first with well finished Muscat of Alexandra, Mr. R. Jordan being second with the same variety. In the other fruit classes Messrs. Paddon, Jordon, Tyler, Burfoot, Clarke, and Sutton secured the prizes.

In the class for miscellaneous groups a good competition resulted in Mr. Mitchell, of the Mead Row Nurseries, Godalming, being first with a very fine arrangement. Mr. Burfoot was a good second, and Mr. Butler was third. Table decorations and cottagers' exhibits were good.

IPSWICH.—NOVEMBER 14TH AND 15TH.

THE growing popularity of the autumn queen in East Anglia was clearly evinced on the occasion of the annual autumn Show, which opened on Tucsday in the Public Hall. The varieties were more numerous than ever, while the excellent quality displayed was sufficient evidence the eastern men know how to grow Chrysanthemums as well as Roses. The halls were filled to overflowing, and the vegetable exhibits

had to be accommodated in the corridors. The Executive Committee arc to be congratulated on the excellent arrangement of the Hall. The groups were numerous and meritorious, Mr. W. Pooley, gardener to G. R. Turner, Esq., gaining the first position with well grown plants. Mr. G. Howlett, gardener to Dr. Casley, was second; and Mr. Rolfe, gardener to P. S. Bruff, Esq., third. The groups of miscellaneous plants arranged for effect added considerably to the beauty of the Show. Mr. Chenery, gardener to Dr. Adams, had a very light arrangement, the Poinsettias, Crotons, and Ericas being the chief feature. Mr. G. Gilbert, nurseryman, was second with a bright display. Third, Mr. A. Soman, gardener to General Hessey, Melton.

The competition in the class for twenty-four Japs, distinct, was very keenly contested. Finally Mr. A. Bishop, gardener to R. Burrel, Esq., Westley House, was placed first; his best flowers were Viviand Morel, W. H. Lincoln, Lilian B. Bird, Sunflower, and Volunteer. Second honours were awarded to Messrs. Saltmarsh & Son, Chelmsford. Third, Mr. R. C. Notcutt, Broughton Road Nursery. In the class for twelve Japs Messrs. Notcutt, Saltmarsh, and Bishop divided the honours in the order named. In the class for twelve incurves Messrs. Saltmarsh were first with good even flowers of Violet Tomlin, Barbara, Golden Empress, Lady Dorothy, and Hero of Stoke Newington. Mr. Notcutt was a good second, showing good heavy flowers of Lord Wolseley, Prince Alfred,

and Empress Eugénie.

The leading prize offered consisted of a silver cup, value £5 5s., for eighteen Japs and a like number of incurves. The contest was a keen one, and gave the Judges some difficulty to decide; ultimately it was secured by Mr. J. C. Sheddick, gardener to Hon. A. C. Fellows, M.P. secured by Mr. J. C. Sheddick, gardener to Hon. A. C. Fellows, M.P. The stand was strongest in incurves. His flowers were—Back row: Viviand Morel (2), Florence Davis, E. Molyneux, Mdlle. Marie Hoste, Edwin Molyneux. Middle row: Gloriosum, G. C. Schwabe, Etoile de Lyon, Gloire de Rocher, J. S. Dibben, and W. K. Woodcock. Front row: Mrs. E. W. Clarke, Avalanche, W. H. Lincoln, A. H. Neve, G. C. Schwabe, and Florence Davis. Incurves—Back row: Lord Alcester (grand), Queen of England, Lord Wolseley (2), Jeanne d'Arc, Alfred Salter Second row: Princess Teck Madame Darrier Jeanne d'Arc. Salter. Second row: Princess Teck, Madame Darrier, Jeanne d'Arc, Novelty, Mrs. Robinson King (good), and Empress Eugénie. Front row: Miss Haggas, Princess Teck, Madame Darrier, Mrs. Heale, Princess of Wales, and Lady Dorothy. The Rev. H. Berners was second (gardener, Mr. Jordan) with fine Japanese, but weak in the other section. Stanstead White, Etoile de Lyon, Boule d'Or, E. Molyneux, and Lord Brookc were the most notable flowers. Mr. G. Rogers, gardener to Lord Rendlesham, was third, showing in good form Viviand Morel, W. H. Lincoln, Colonel Smith, G. C. Schwabe, and Lord Brooke.

Six blooms of Japanese, one variety, made a fine display, Messrs. Saltmarsh proving invincible with Viviand Morel, Mr. Light following with E. Molyneux, while Mr. Bishop staged the third winner in Lilian B. Bird. The class for six incurved, one variety, contained Lord Alcester from Rev. Berners, Mrs. Dixon from Mr. Bishop, third Empress of India

from Messrs. Saltmarsh.

The display of fruit was excellent, Mr. G. Rogers securing first honours for six dishes; second, Mr. Andrews, gardener to Hon. W. Lowther; third, Mr. Messenger, gardener to C. H. Berners, Esq. For three bunches of Alicante, Mr. Thos. King was placed first, followed by Messrs. Andrews and Messenger. Other black Grapes, Mr. Messenger was first with Gros Colman, Mr. Jordan with Gros Maroc, and Mr. Andrews with Mrs. Pince. The classes for Apples and Pears formed quite an exhibition in themselves, but space forbids entering their good qualities here. The vegetables were also very numerous and

TWICKENHAM.—Nov. 14TH AND 15TH.

THE annual autumn Show of the Twickenham Horticultural Society was held in the Town Hall on the above dates. The display was a handsome one, somewhat marred, however, by a thick fog which hung persistently over the town. Groups were very fine indeed, but the Japanese section in the cut blooms was by far the best represented. Incurved flowers here, as elsewhere, lacked substance and finish. Fruit was finely staged, as also were vegetables, Orchids, Palms, and other plants. The greatest credit is due to Mr. J. J. G. Pugh, Hon. Secretary, and the Show Committee, for the excellent manner in which all arrangements were carried out.

In the class for a group arranged in a space not exceeding 50 square feet, Mr. J. Parsons, gardener to T. Twining, Esq., was placed first for an admirable collection. Both flowers and plants were splendid. Mr. Rickwood, gardener to Lady Freake, was a good second, lacking taste in arrangement; Mr. J. Simmons, gardener to W. Cunard, Esq., third; and Mr. Weaton, gardener to J. B. Hilditch, Esq., being third. In the class for six untrained plants distinct open to constant. In the class for six untrained plants, distinct, open to amateurs only, Mr. J. T. Attwood was a good first, Mr. J. Brill being second, and Mr. J. T. Hoar third. For twelve blooms in not less than three varieties, Mr. J. Brill was first, Mr. J. T. Hoar second, and Mr. J. H. Gilbert third. In the class for twenty-four blooms, twelve incurved and the remainder Japanese, distinct, Mr. E. Coombes, gardener to W. Furze, Esq., was first. Amongst the best of those staged were Sunflower, G. C. Schwabe, Viviand Morel, Colonel W. B. Smith, Miss M. A. Haggas, Violet Tomlin, Robert Cannell, and Empress Eugénie. The second prize went to Mr. Woodgate, gardener to Lady Wolverton, with a superb exhibit; and the third to Mr. Waite, gardener to Hon. W. P. Talbot. There were five competitors for twelve incurved, distinct. Mr. E. Coombs was an excellent first staging. Emily Dale Violet Temlin. Deignet Temlin. cellent first, staging Emily Dale, Violet Tomlin, Princess Teck, and others in grand form. Mr. Woodgate was a very close second, and Mr.

Waite third. The prizes in the class for twelve distinct Japanese were very keenly contested, Mr. Coombs again taking the premier position. Amongst the best of his flowers were Viviand Morel, William Seward, G. C. Schwabe, and W. H. Lincoln. Mr. J. Osman was a good second, and Mr. J. Wilkins, gardener to Mrs. Pearson, third.

Mr. Waite was first in the class for twelve Anemone varieties with a The best were Lady Margaret Jeanne Mantz, Fleur de Marie, fine stand. and J. Thorp, jun. Mr. Woodgate, was accorded the second prize.
Mr. Woodgate was a good first for twelve bunches of Pompons, staging highly creditable examples of Bob, Rosinante, Mrs. Bateman, and Mdlle. Elise Dordan amongst others. For six Japanese, one variety, Mr. T. Osman was first with magnificent examples of Sunflower. Mr. Waite second with Viviand Morel, and Mr. Woodgate third with Etoile de Lyon. In the class for six incurved, one variety, Mr. Waite was first with superb examples of Queen of England, Mr. Coombs second with John Salter, and Mr. T. Osman third with Jeanne d'Arc. In the class for six bunches of singles, in not less than three varieties, Mr. J. Parsons was a good first, Mr. J. Wilkins being second, and Mr. G. Woodgate third. For twelve incurved, distinct, Mr. W. Ludbrook was first, Mr. J. Parsons second, and Mr. J. Simmons third. In the class for twelve Japanese varieties, distinct, Mr. J. Simmons was a good first, Mr. W. Ludbrook second, and Mr. J. E. Burton, gardener to Sir E. J. D. Paul, third. Mr. H. G. Fordham, nurseryman, Twickenham, staged a charming group of plants, not for competition.

CROYDON.--NOVEMBER 14TH AND 15TH.

A VERY fine show was held in the Public Hall on the above dates. The groups, trained plants, and the cut blooms were arranged in the

large hall, and the fruit and vegetables in the smaller one.

In the open class for eighteen Japanese and eighteen incurved, distinct varieties, Mr. Shoesmith, gardener to M. Hodgson, Esq., Shirley, was first with grand blooms. Back row: Colonel W. B. Smith, Mrs. E. D. Adams, Etoile de Lyon, Stanstead White, Viviand Morel, E. Molyneux, John Lambert, Empress of India (the finest incurved in the Show), Alfred Salter, Golden Empress, Queen of England, and Jeanne d'Arc. Second row: Mrs. Harman Payne, Coronet, Florence Davis, C. Shrimpton, Mdlle. Marie Hoste, Waban, Miss Haggas, Violet Tomlin, Princess of Wales, Mrs. Coleman, Lord Wolseley, and Mrs. Heale. Front row: Mrs. F. Jameson, Madame Baco, Charles Blick, Lord Brooke, Madame J. Laing, Sunflower, Lady Dorothy, Empress Eugénie, Madame Darrier, Mons. Davis, Princess Teck, and J. Salter. Mr. Wyatt, gardener to James Perry, Esq., Caterham, was a good second. Mr. H. Alderman, gardener to G. Hatfield, Esq., Morden, third. In this stand was the best Japanese bloom, a grand one of Viviand Morel.

Mr. Shoesmith was first for six Japanese, one variety, showing Viviand Morel; Mr. Wyatt second. In the corresponding class for incurved the same exhibitors changed positions, Mr. Wyatt being first with Qucen of England. Mr. Shoesmith was defeated by T. Wickham Jones, Esq., South Norwood. In the class for eighteen Japanese Mr. J. Knapp, gardener to F. W. Anderson, Esq., obtained first for twelve bunches of

There were several good groups of Chrysanthemums edged with foliage plants. Mr. Carr, gardener to Mrs. Clarke, Croydon Lodge, was awarded first; his blooms were of fine quality, but the arrangement was scarcely so good as Mr. Padley's, Bramley Hill Nursery, who came in second. Mr. Carr was also first for six trained plants, large flowering, also for six trained Pompons. Mr. Cooper, Sydenham Road Nursery, was second in both classes.

In the local classes Messrs. D. Love, C. Perret, and F. J. Strover were awarded the prizes for groups. Mr. H. Shoesmith was first for twelve Japanese, also for the same number of incurved varieties. Mr. Wickham Jones was awarded first for six Japanese, distinct, also six of one variety, showing Viviand Morel in fine style. Mr. Carr had the best six large flowering Anemones, and Mr. J. Knapp the best Pompon Anemones. Amateurs and cottagers exhibited well in the classes provided for them.

In the special class for eighteen Japanese, distinct, Mr. Shoesmith was first, and also for the best Japanese bloom with foliage as grown, showing a grand E. Molyneux, and for incurved with Empress of India.

Fruit, vegetables, and table plants were well shown.

Among the exhibits not for competition was a fine collection of Apples from Messrs. G. Bunyard & Co., Maidstone, all highly coloured. Messrs. J. Cheal & Sons, Crawley, had Apples and Pears. Messrs. Laing & Sons, Forest Hill, exhibited a collection of Apples, also a group of Chrysanthemums and miscellaneous plants. Mr. W. Wells, Earlsof Chrysanthemums and miscellaneous plants. Mr. W. Wells, Earlswood, had several stands of cut blooms; and the Secretary, Mr. W. B. Beckett, contributed a creditable stand of blooms.

PLYMOUTH .-- NOVEMBER 14TH AND 15TH.

THE second autumn Exhibition held by the West of England Chrysanthemum Society took place in the Guildhall, and was a decided advance upon that of last year—not only in the quality of the cut blooms, but in the classes for groups. The Executive deserve every praise for the spirited policy adopted in offering such handsome prizes. Mr. C. Wilson and Mr. Damerell managed the Exhibition in a commendable manner.

The principal class was that for forty-eight in not less than thirty-six varieties, half to be incurved and the remainder Japanese. Prizes of £15, £10, £5, £2, and £1 were offered. There were four competitors so close in point of merit that considerable time was spent by the Judges in making their awards. The honours eventually fell to Mr. N.

Molyneux, gardener to J. C. Garnier, Esq., Rooksbury Park, Fareham, and Messrs. W. & G. Drover, Fareham. Mr. Molyneux beat his strong opponents by a very few points in both sections. The incurved were not large, but very solid and perfectly finished. The Japanese were not large, but very solid and perfectly finished. The Japanese were particularly bright and well staged. The names were—Incurved: Lord Alcester (2), Queen of England (2), Golden Queen of England (2), Empress India (2), Princess Teck (2), Robert Cannell, Beauty (2), Mrs. R. King, C. B. Whitnail, Miss M. A. Haggas, Nonpareil, Lord Eversley, Hero of Stoke Newington, Mrs. Mitchell, W. P. Louis Blancard, Barbara, Lady Dorothy and Princess of Wales. Japanese: Etoile de Lyon (2), Princess May (2), Vice-President Calvat (2), Charles Davis (2), Viviand Morel, G. C. Schwabe (2), Mrs. F. A. Spaulding, Florence Davis, Mrs. C. Wheeler, Lord Brooke, C. Shrimpton, Duchess of York, Mdlle. M. Hoste (2), P. C. Kingston, Vice-President Audiguier, Pelican, Lizzie Cartledge and Lilian Bird. The best blooms in Mr. Drover's stand were Lord Alcester, Emily Dale, Lord Dorothy Mr. Drover's stand were Lord Alcester, Emily Dale, Lord Dorothy (grand), Mrs. N. Davis, J. Doughty, Golden Emperor and Nil Desperandum in the incurved. Japanese Charles Davis, Mdl e. Therese Day, Mrs. E. D. Adams, and Lord Brooke. Mr. Foster, gardener to H. H. Spencer, Esq., Teignmouth, third, with perhaps some of the finest Japanese blooms in the Show, the incurved somewhat stale. Mr. Stiles, gardener to Miss Fripp, Teignmouth, fourth.

In the class for twenty-four incurved, Messrs. Drover turned the tables on Mr. N. Molyneux, winning by the small margin of one point. The blooms in both stands were not large, but remarkable for high finish and freshness. The best blooms in the winning stand were Golden Empress, Lord Alcester, Emily Dale, Lady Dorothy, Princess Teck, Mrs. Coleman, Lord Wolseley, and Alfred Salter. Hero of Stoke Newington and Beauty were especially noteworthy in the second prize stand.

In the class for twenty-four Japanese Mr. Stiles was distinctly ahead

of Mr. Foster with full heavy blooms, capitally staged, of Viviand Morel, Stanstead White, Mrs. F. A. Spaulding, M. Bernard, M. Baco, Violet Rose, Beauty of Castlewood, and C. Shrimpton. For twelve Japanese Mr. N. Molyneux won with full blooms; Princess May and Mdlle. M. Hoste were especially good. Mr. Veele cardener to the Roy. A. H. Hoste were especially good. Mr. Veale, gardener to the Rev. A. H. Simms, Newton Abbott, second. Florence Davis won for Mr. Veale the premier award in the class for six white, any one variety, Messrs. Drover second. For six Japanese, any one variety, Mr. Stiles won with Viviand Morel in faultless style; Etoile de Lyon second, belonging to Mr. Foster. For six Japanese, any two varieties, Mr. N. Molyneux won with Mdlle. M. Hoste and Etoile de Lyon; Messrs. Drover second, Mr. Stiles third. Anemone and reflexed varieties were fairly well shown.

Groups of Chrysanthemums were a distinct feature of the Show, no less than nine competing: The best came from Mr. T. F. Ussher, Connaught Avenue, Plymouth, an excellent display. Admiral Parker, Plymouth, a good second. His gardener also won the premier award for six specimens with fairly good plants. For a group of miscellaneous plants Mr. Amos Groombridge, Tothill Nurseries, Plymouth, was first; Mr. C. Watts second. Mr. Godfrey, Exmouth, staged new Chrysanthemums not for competition, and so did Messrs. Smaile, Torquay.

DEVIZES .- NOVEMBER 7TH.

A BAZAAR was held in conjunction with the Chrysanthemum Show and a very pretty and effective display resulted. What also proves most satisfactory is the fact that a very handsome balance invariably accrues, this being distributed in the way of charity to the poor during the ensuing winter. Mr. T. King has the sole management of the Chrysanthemum Show proper, and arrangements are very good.

Cut blooms are the great feature of the display, valuable prizes attracting noted growers from various parts of the country. For twenty-four incurved varieties, in not less than eighteen varieties, the premier award went to Mr. J. Inglefield, gardener to Sir J. Kelk, who had Emily Dale (3), Lord Wolseley, Lord Alcester, Golden Empress (3), Queen of England, Empress of India (2), John Doughty, Princess of Wales, Lucy Kendall, Prince Alfred, Jeanne d'Arc, Miss Haggas, Madame Darrier, Mrs. N. Davis, Nil Desperandum, Empress Eugénie, Mrs. Heale and Brookleigh Gem, a lore excellent condition. Messrs. Ward, G. Drover, Fareham, were a close second, being only about four points behind. Mr. C. J. Salter, gardener to T. B. Haywood, Esq., Reigate, was a creditable third, four others also competing. The last named took the lead with twelve incurved varieties, staging fairly good blooms of John Lambert, Empress of India, John Salter, Lord Alcester, Violet Tomlin, Mrs. Heale, Jardin des Plantes, Prince Alfred, Mrs. Coleman, Lord Wolseley, Golden Eagle, and Miss Haggas. Mr. W. Robinson, gardener to Lord Justice Lopes, Heywood Park, Westbury, was a close second, the third prize going to the veteran Mr. J. Baylis, Winterbourne. In another class for incurved varieties to be shown with 4 inches of clear stem and Chrysanthemum foliage allowed, Mr. Robinson was well first.

For twelve Japanese varieties the first prize was a silver cup, value 5 guineas, this being presented by the Mayor of Devizes, and was well won by Mr. C. J. Salter, who staged grand blooms of Edwin Molyneux, W. H. Lincoln, Col. W. B. Smith, Mrs. C. H. Payne, Viviard Morel, J. S. Schwabe, Condor, C. Shrimpton, Chas. Davis, Excelsior, Mdlle. Marie Hoste, and Lord Brooke. Mr. P. Mann, gardener to W. H. Laverton, Esq., Westbury, lost by two points. Mr. J. Inglefield was a highly creditable third, his blooms, though of great depth, lacking in breadth. Eight others competed. There was also good competition with Anemone-flowered varieties, and with these Mr. Salter was again first. Mr. W. Robinson was second, the third prize going to Mr. W. H. Clack. For reflexed varieties Mr. Robinson was first, having good massive blooms. Mr. C. J. Salter was second, and Mr. Clack third. No less than five competed with a group of Chrysanthemum plants to occupy a space 10 feet by 60 feet, and a very grand display was made, all being deemed worthy of prizes, and received them accordingly. Mr. W. H. Clack, gardener to Col. C. E. Colton, M.P., Roundway Park, Devizes, was first. Mr. W. Mantell, gardener to W. Brown, Esq., Pottering, was second with a very imposing group. The third prize went to Mr. G. Pymm, gardener to Mrs. Gouldsmith, Trowbridge; an extra prize going to Mr. Smart, gardener to T. Chandler, Esq.; and a fifth to Dr. Rayment, Pewsey. Other plants were shown well.

[We have been compelled to abridge the reports of many shows, and to omit some of which no notification was received either by advertisement or in the form of reporters' tickets.]



HARDY FRUIT GARDEN.

Strawberries.—Clear away all surplus plants from between the rows, at the same time forking up strong weeds, or, if the latter are only small, hoeing them down in dry weather will suffice. Runners attached either to old or young plants ought to be cut, and the largest of the old leaves if at all withered or shabby may with advantage be removed. Weedy, untidy, and crowded Strawberry beds are at this season very unsightly, besides being detrimental to the well-being of the future crop. A mulching of manure may advantageously be applied between the rows of old plants, but recently planted Strawberries on fairly rich ground will not need at present any stimulation from the surface.

Raspberries.—If not previously cut away the old bearing canes must now be removed, disposing the stout current year's canes evenly along the trellis if such be employed. Shorten them to about 5 feet in length. When grown in stools or clumps divide the canes equally into three portions. Shorten one portion to the height of the stake used, which may be 5 feet, the next to $3\frac{1}{2}$ feet, and the remaining one to 2 feet, so that a pyramidal form of growth may be obtained and the fruiting portions disposed more regularly than is usually the case when all the canes are pruned to one uniform height.

Planting Raspberries.—Raspberries may now be planted, digging or trenching the ground well to a depth of 2 feet, adding some partially decayed manure, which must be well incorporated with the soil. Raspberries enjoy a rich, deep, loamy soil, as may be evidenced in a few years by the length and strength of the canes produced. When planting in clumps the canes from each being tied to a single stake, 3 feet apart is a proper distance, but in lines, the canes being secured to wires 2 feet will suffice. Plant strong roots with stout canes and plenty of fibres. After planting mulch with manure, and shorten the canes to within a foot of the ground. Strong growths will issue next year, but no fruit will be had. It is better to sacrifice the first year's crop in order to obtain extra vigorous growth and establish the plants. This once obtained in rich soil will continue with annual mulchings in the autumn for the purpose of feeding, and a similar application of manure in the

Blackberries.—The cultivated forms of Blackberries produce fruit which is exceedingly useful in the autumn. They succeed well in gardens possessing a strong rich soil in a sheltered but open position. The Parsley-leaved and Wilson, jun., Blackberries are two of the best, the former doing well in cold late districts. The fruit is large, juicy, and black in colour. Their cultivation is simple, being chiefly on the same lines as Raspberries. They take rather longer to establish themselves, seldom being strong enough to fruit before the third season after planting, inasmuch as it is imperative for strong canes to be produced before the plants are allowed to bear.

Planting Blackberries.—Young plants, which are better than old ones, obtained and planted now, cutting them down close to the soil immediately after, or before growth commences in the spring, will grow freely next season. Select an open position sheltered from northerly or easterly winds. Trench the ground to a depth of $2\frac{1}{2}$ feet, thoroughly breaking up the subsoil, but not bringing it to the top. Enrich the whole bulk of soil with manure of a suitable character. If rather light, cow manure may be employed, but light shallow soils are not suitable for producing superior growth and abundant fruit. Heavy soil may be dressed with partially decayed horse manure, working it as well in through the bulk of material as possible.

Blackberry canes grow to a great length, therefore plant at a distance of 5 feet from each other in rows 8 to 10 feet asunder. A stout stake should be driven down opposite each plant, and another midway between the two, making them $2\frac{1}{2}$ feet apart. To strengthen them and hold them together cross and diagonal pieces may be secured upon them, and a trellis formed 6 to 8 feet high, to which the canes may be trained. Laterals issue from the canes in summer, flower, and produce fruit in immense clusters, which ripen at a time of the year when they prove especially welcome.

Pruning and Feeding.—As before mentioned the plants should be cut down closely immediately after planting, or at the latest before

growth commences in the spring. Shorten again the following autumn, encouraging the subsequent season's canes to grow vigorously, thinning them out early to four or five of the strongest. Thorough ripening will ensure fruitfulness. A good mulching of rich manure must be applied every autumn to enrich the soil. Liquid manure in the summer and at other times proves most beneficial to well established plants.

FRUIT FORCING.

Pines.—Young Stock.—Small houses, span or three-quarter spanroofed, are the most suitable for young plants, where, with proper
attention to ventilation and close proximity to the glass without touching it, they will make steady progress without being drawn and weakly,
as occurs when they are kept too close and warm, and a considerable
distance from the light. A temperature of 65° at night should not be
exceeded, and a mean between that and 55° at night, with 65° in the
daytime, will keep young stock in a healthy progressive condition,
admitting a little air at the top of the house at 65°, leaving it on all
day, but not to lower the temperature below that point. Keep the
bottom heat steady at 80°, avoiding anything approaching to a damp
atmosphere, but moderate humidity is necessary. Apply water only at
the roots when the plants become dry, and then give tepid weak liquid
manure. Allow the plants plenty of room. Suckers ready for starting
now may be kept until March, and if there is likely to be a scarcity of
these for starting at that time, any recently potted may be afforded
a light position in a moderately moist pit, with slight bottom heat, and
a temperature of 55° at night, keeping them rather dry at the roots.

In the fruiting department 65° will be ample at night, 5° lower in

In the fruiting department 65° will be ample at night, 5° lower in the morning in cold weather, 70° to 75° by day artificially, and 10° to 15° rise from sun heat. Take every opportunity of collecting leaves whilst dry, Oak and Beech being the best, and whenever a favourable opportunity offers push forward whatever may be necessary in the renewing or augmenting the fermenting beds.

Vines.—Earliest forced in Pots.—Those started early in the month will respond promptly to the call made upon them by the warmth at the roots and the moist genial atmosphere, and will soon be showing signs of growth, when the temperature may be slightly increased—55° minimum and 65° maximum from fire heat, with 10° more from sun heat, proportionately increasing the atmospheric moisture and keeping the soil healthfully moist. Ventilation will only require to be moderate, affording what is needed at the top of the house, or if side air be given it should be made to pass over the heated surface so as to become warmed, for cold currents of air are very pernicious.

Houses of Thin-skinned Grapes.—November weather, as a rule, is not forceweable to hanging Grapes often causing them to damp consider.

Houses of Thin-skinned Grapes.—November weather, as a rule, is not favourable to hanging Grapes, often causing them to damp considerably. Grapes have ripened well this season, the skins being thicker and the flesh firmer than usual, whilst the juices are particularly rich and sugary. Black Hamburgh and Foster's Seedling, ripe in August, are keeping wonderfully well, also Madresfield Court which keeps better than Hamburghs, but loses colour seriously. Black Hamburghs with the roots of the Vine entirely inside are shrivelling, whilst those with the roots outside are quite fresh. Vines ripening their crops in September are still in foliage, and will bear more moisture at the roots and in the atmosphere than those that have had the Grapes ripe since August. Slight heat in the pipes will be required almost constantly to maintain an equable temperature, but this must not be high or it will cause the berries to shrivel prematurely, ventilating freely and early in bright weather so as to prevent moisture being condensed on the berries. The outside borders are best protected from rains, as excessively moist borders affect the Grapes prejudicially, and inside borders should have sufficient moisture to prevent the soil cracking, and if covered with a little clean sweet straw the Grapes will keep better. Covering the border prevents its cracking, and keeps down moisture likely to arise and prove injurious to the Grapes.

Houses Cleared of Grapes.—Where the Vines are leafless and the Grapes cut, attend to the pruning and cleansing of the house. If the Vines have stout, short-jointed well-ripened wood, the bearing shoots (side growths or laterals as they are frequently termed) may be pruned to a couple of eyes. If, however, the base buds are small, and the Vines from similar buds in previous years have not given as large bunches as desired, the shoots may be left a little longer, taking care to secure a plump, round (not flat), well developed bud on stout, hard, thoroughly ripened wood for pruning to, as this class of buds are necessary to give close compact bunches of well set berries, with a stoutness of footstalk that does not fall an easy prey to shanking. Large flat buds on longjointed pithy wood generally throw out large uneven badly set bunches, with thin large flabby leaves on long-jointed wood, and these are incapable of elaborating the food and concentrating it in the buds at their base. Also avoid pointed buds, as they are not always productive of bunches, and those produced arc often so small and tendril-like, as to be scarcely worth allowing to remain for a crop. Wash the glass with clear water, the wood and ironwork with softsoap, water, and a brush. Remove the loose bark from the rods and spurs, but avoid close peeling and hard scraping. Wash the Vines with tepid softsoap water 3 ozs. to a gallon, using a brush with care and judgment, and follow if necessary with an insecticide. Clear away the mulching or loose surface soil down to the roots, and place on a couple of inches thickness of fresh turfy loam. Afterwards sprinkle over it 4 ozs. per square yard of a mixture composed of three parts bonemeal and two parts kainit, and this will be dissolved and washed down to the roots by the early watering. If the houses must be used for plants they should be kept cool, admitting air freely, and not exceeding 40° to 45° by artificial

means. Otherwise admit air freely in all but very frosty weather, a few degrees of frost not injuring the Vines, but insuring more complete rest.

Melons.—Where the latest fruit is beginning to net, and will be ripe some time next month, the plants need a genial atmosphere to secure the swelling of the fruit. Damp the paths in the morning and early afternoon, admitting a little air in the early part of the forenoon to insure the dissipation of moisture, and induce evaporation from the foliage and fruit. Keep the growths thin, yet allow a fair amount of foliage. Maintain the night temperature at 65°, 70° to 75° by day, advancing as much as possible by closing at midday from sun heat. Afford liquid manure about twice a week. The plants that set their fruit early in September from the July sowings should have all the air possibly admitable with maintaining a temperature of 70° to 75°, yet husbanding the sun heat without closing the house, withholding moisture from the atmosphere and water from the roots.



APIARIAN NOTES.

HINTS FOR THE SEASON—REPAIRING HIVES.

ALL empty hives should be stored in a thoroughly dry place, and when in condition, overhaul, clean, and repair all defects. Paint or tar, the latter being the most durable, but if it cannot be tolerated, creosote the wood, then varnish with stain according to the taste of the bee-keeper. After this is done fill the frames with foundation. When full sheets cannot be afforded use narrow guides 1 inch broad. If half sheets are employed the bees are liable to work out the space with drone comb. When thus finished close the hives, and then they are in readiness for swarms when the time of swarming comes.

STORMS AND WRAPPINGS.

All hives should be stood level on a small piece of slate. If a daub of tar is placed under each foot it will prevent decay. When not loaded with weights to prevent storms overturning them, an iron rod or wooden stake driven into the ground close to the hive, a cord or wire round the hive and tied to the stake, will prevent them being turned over by any gale. Wrappings should not be stored away damp. When the hives are thoroughly protected there is no better place to keep them than on the tenanted stocks. Crates and supers are also kept upon the hive during the whole year. All our hives being made to accommodate three stories, with sufficient space for crown packing for the winter, are replete, and in readiness at all times for immediate use.

MELTING COMBS.

After the honey has been taken from the combs, then the latter steeped in water, they should be melted at once, as when left lying about moths attack them, and soon render the whole waxless. I find no be ter plan than to put the combs in bags of cheese cloth and place them in a tin or copper of water one at a time; boil slowly for a few minutes, then press the bag with a piece of wood, and as the wax oozes out and rises skim it off, as too much boiling spoils it. When the wax is thoroughly softened and melted remove the bag to a wide cylinder of fine perforations connected with the honey presser, then bring the screw to bear upon Meanwhile, the boiler must have a fresh bag of combs, so that the work is constantly and expeditiously performed. As the wax is prevented from squirting by an outer tin cylinder, it runs into a spouted tin, connected with another vessel. The above plan is the most effectual of any I have ever tried in separating the wax from the dross. When it is all formed into cakes it is put in tin, and this placed inside another. When melted it is lifted from the fire and allowed to cool slowly, and then all sedi-The foregoing method is ment may be removed by scraping. applicable to large or small quantities.

BEES QUIESCENT.

Although pollen was carried in by our bees up till the last day of October, they will not try to fly much during the coming two months, so ought not to be disturbed in the slightest degree. At the end of that period they get more restless, and will fly out at a temperature which in November and December would not induce them to do, the reason being that at that time many young bees are being brought forward.

FOUL BROOD.

A correspondent signing himself "George" wishes to know how to cure foul brood, and to disinfect the hives. Foul brood is practically incurable for several reasons. By the time foul brood is detected it would not pay to put off time and be at any expense in attempting a cure, and even if arrested for the time being, it

would be sure to re-appear whenever warm weather came. I wish to emphasise this last statement because certain persons have asserted over and over again that warm weather is favourable for the suppression of foul brood, whereas it is the very opposite, as frequently proven by well managed experiments. Every beeas frequently proven by well managed experiments. keeper should endeavour to keep away foul brood by preventing all accumulation of moisture inside the hive. Hives painted outside causes the moisture to condense on the inside of single-cased hives absorbing much of it, and as the temperature rises it passes off in the form of vapour and condenses upon bees and combs, while the honey absorbs it, all which tends to cause disease. It is even worse in the case of double-cased hives, inasmuch as it causes them to decay in addition to the other injury. It is much safer to have the inside of hives painted, even with the outside done, as then the moisture runs down and out of the hive, at least all that is not absorbed by the floor, the most death-dealing thing to bees during the winter. A ventilating floor, whether the hive is painted or not, is a safety valve during the whole year. As foul brood is as easily incited by overheating as by dampness, both evils are overcome by employing a ventilated floor.

When foul brood is suspected make an examination, and if present it may be known by the clammy feel of the combs, offensive smell, and the sunken or concave perforated sealings of the brood cells, these last containing a tough, gluey, putrid mass of dead larvæ. Do not tamper with foul brood. The moment it is detected place the bees in an empty hive. Disinfect every hive or appliance each time the bees have been in contact with them. Subjecting these things to the fumes of sulphur or charcoal, then washing thoroughly with lime and carbolic acid perhaps cannot be excelled, but as prevention is better than cure,

use the hives I have advised.

EARWIGS AND BEES.

On page 402 Mr. J. R. S. Clifford asks gardeners to report on what they know about earwigs. I am not a naturalist enough to give a full and reliable description on the habits of earwigs, but I

can in some measure answer the questions put.

Earwigs are gregarious, congregating in great numbers in sheltered places such as under bark of trees, whether on living trees or when in heaps. During the winter they take up their quarters under different material near the ground. In the spring and early summer I have frequently observed amongst colonies of these large white ones. What are they? Many years since, thinking they robbed bees of their honey, I had my bee house made clear of the ground, supported at the corners by blocks, which stood in basins of tar. Imagine my surprise when I went out after dark with a lantern to see the outside of the house swarming with them, where they could not reach unless they had flown.

Several times I have observed earwigs killing bees by catching them in their forceps; but, on the other hand, I have as often observed bees kill earwigs. I am inclined to think earwigs congregate about hives for warmth, that they naturally are afraid of bees, although they eat dead ones and the larvæ of moths and other enemies of the garden, being more the friends of the gardener

than his enemy.—A LANARKSHIRE BEE-KEEPER.



*All correspondence should be directed either to "THE EDITOR" or to "THE PUBLISHER." Letters addressed to Dr. Hogg or members of the staff often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Bee subjects, and should never send more than two or three questions at once. All articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post, and we do not undertake to return rejected communications.

Growing Strawberries on a Small Scale for Profit (A. H. E.). — By hiring a little ground, growing, and sending the fruit to a London salesman you would only be able to do so profitably by getting the fruit early or late, as in the height of the season small consignments, unless of great excellence, hardly pay expenses of gathering, packing, carriage, toll, and salesman's commission. Large, high-

coloured, even-sampled, first-class fruits only command remunerative prices, and these you are more likely to obtain in your immediate locality than by sending the produce to the London markets.

Cunila Mariana (A. F. G.).—The term Dittany is applied to several different plants. For example, the Dictamnus Fraxinella is so named, as also are two species of Origanum, while Cunila Mariana is known in North America as the common Dittany. Possibly these names have arisen from some fancied resemblance between the plants so designated; but to say the least the similarity of the Cunila to the



Dictamnus is by no means strongly marked. Cunila Mariana, of which an illustration is given in fig. 66, is a tufted dwarf hardy perennial plant included in the Mint family, and related to the Monardas and Salvias, though differing materially in general appearance. The plant rarely exceeds a foot in height, and produces its small rosy purple two-lipped flowers in great profusion, in dense corymbose or cymose clusters. According to Gray this Cunila is found in the dry hills south of New York; in England it thrives in any ordinary soil not too wet, and flowers in late summer.

Making Blood Manure (J. II. W.).—It is useless attempting to dissolve the protosulphate of iron in muriatic acid in the proportion given in the recipe, and it is quite unnecessary to do so. The protosulphate ought to be in powder and mixed with the muriatic acid before the liquid is poured on the blood, which must be rancid or smell strongly, and then it will be converted into a paste and ultimately powder. In that state it is a handy manure. As to its value as a fertiliser compared with blood manure formed by mixing wood ashes with blood we prefer the latter on account of the potash and other salts the wood ashes contain, and as a general fertiliser it is perhaps unexcelled. The other method may be handier for those requiring small quantities of manure for their potted and other plants. But there is nothing better for encouraging growth and sustaining crops of flowers or fruit than blood formed into a paste with dry ashes from twigs, dried, and reduced to a fine powder.

Diseased Pears (J. F. E. and Amateur).—The skin of the fruit in each case is disfigured by several depressed spots or scabs, and around these there is a whitish margin with a dark border permeated by mycelium, from which a few narrowly ovate bodies spring (stroma) contracted in places, and these cells breaking off act as conidia or spores. It is the condition of the fungus, Cladosporium dendriticum pyrinum, called Spilocœa pomi, Fries. The fruit seems to have been attacked by the fungus and then arrested, probably by the unusual hot weather, so that the growth of the Pears was irregular and swollen in places. The fungus develops on the fruit (even after it is gathered and stored) when the conditions are favourable, and greatly diminishes its using value. All affected fruit should be destroyed by burning, as it is unsightly and not perhaps wholesome. It is advised to lift the trees if not too large and give them some good fresh loam, or otherwise afford support. This tends to a better growth in the trees and assists them to resist the

disease. The trees should also be sprayed with sulphate of copper, 1 lb. to 25 gallons of water, when the buds commence swelling with a view to destroying the spores of the fungus, and they should be sprayed again as soon as the fruit is set with Bordeaux mixture, made as follows:—dissolve 4 oz. of sulphate of copper in a vessel by itself in 2 or 3 gallons of water, slake 4 ozs. quicklime (light lumps) in another vessel and form into a thin whitewash, then pour this through a hair sieve slowly into the vessel containing the sulphate of copper solution, stir well and add enough water to make $7\frac{1}{2}$ gallons, and use this at once as a spray, coating every part of the trees with the finest possible dew or film. If necessary, repeat in about three weeks. A third application may be necessary if the attack is a bad one at a similar interval.

Names of Fruits.—Notice.—We have pleasure in naming good typical fruits (when the names are discoverable) for the convenience of regular subscribers, who are the growers of such fruit, and not collectors of specimens from non-subscribers. This latter procedure is wholly irregular, and we trust that none of our readers will allow themselves to be made the mediums in infringing our rules. Special attention is directed to the following decision, the object of which is to discourage the growth of inferior and promote the culture of superior varieties. In consequence of the large number of worthless Apples and Pears sent to this office to be named, it has been decided to name only specimens and varieties of approved merit, and to reject the inferior, which are not worth sending or growing. The names and addresses of senders of fruit to be named must in all cases be enclosed with the specimens, whether letters referring to the fruit are sent by post or not. The names are not necessarily required for publication, initials sufficing for that. Only six specimens can be named at once, and any beyond that number cannot be preserved. They should be sent on the first indication of change towards ripening. Dessert Pears cannot be named in a hard green state. (H. R. D.).—Maréchal de Cour. (P. K.).—Beurré Superfin. (Mrs. J. H. Fanning).—Calebasse Grosse. (G. H.).—Pear Josephine des Malines. (J.B.).—1, Margil; 2, Winter Calville; 3, Cockle's Pippin; 4, Pearson's Plate. (T. S. N. P.)—1, General Todleben; 2, Beurré Diel; 3, Glou Morçeau; 4, Doyenné du Comice.

Names of Plants.—We only undertake to name species of plants, not varieties that have originated from seed and termed florists' flowers. Flowering specimens are necessary of flowering plants, and Fern fronds should bear spores. Specimens should arrive in a fresh state in firm boxes. Slightly damp moss, soft green grass or leaves form the best packing, dry wool the worst. Not more than six specimens can be named at once, and the numbers should be visible without untying the ligatures, it being often difficult to separate them when the paper is damp. (H. M).—1, Pteris serrulata cristata; 2, P. cretica albo-lineata. (A. B.).—Woodwardia radicans. (Somerset).—Lælia autumnalis. (L. D.).—Hoya carnosa. (E. F.).—Centropogon Lucyanus.

TRADE CATALOGUES RECEIVED.

W. Cooper, 755, Old Kent Road, S.E.—Illustrated Catalogue of Horticultural Sundries.

W. Clibran & Son, Oldfield Nurseries, Altrincham.—Chrysanthemums. Dobbie & Co., Rothesay.—Catalogue of Chrysanthemums.

COVENT GARDEN MARKET .-- NOVEMBER 15TH.

AVERAGE WHOLESALE PRICES .- CUT FLOWERS.

Orchid Blooms in variety. Chrysanthemum blooms very plentiful this season, hence the price is very low.

one price is very to							-		-
	g.	d.	s.	$^{\mathrm{d}}$			d.	з.	
Arum Lilies, 12 blooms		0 to	5	0	Orchids, per dozen blcoms	3	0 to	12	0
Azalea, dozen sprays			1		Pelargoniums, 12 bunches	6	0	9	U
Bouvardias, bunch	0	6	1	0	Pelargoniums, scarlet, doz.				
Camellias, dozen blooms	ĭ	ō	3	ō	bunches	4	0	6	0
Carnations, 12 blooms		-	2	Ö	Primula (double), dozen				
Chrysanthemums, dozen	•	•	~	•	sprays	0	6	1	0
	3	0	ß	0	Pyrethrum, dozen bunches	2	0	4	0
bunches			2	ŏ	Roses (iudoor), dozen	0	6	1	6
Chrysanthemums, doz. bls.	ú	0	_	ő	,, Tea, white, dozen	1	Ō	2	
Eucharis, dozen		U	•	-	,, Tea, white, dozen	2	ŏ		ō
Gardenias, per dozen	2	0	4	0	"Yellow, dozen			_	-
Lilac (French) per bunch	3	6	6	0	Tuberoses, 12 blooms		4	0	6
Lilium lancifolium, dozen					Violets, Parme (French),				
blooms	1	0	3	0	per bunch		6	3	0
Lilium longiflorum,perdoz.	6	0	9	0	Violets, Czar (French), per				
Maidenhair Fern, dozen	-	-			bunch	2	0	2	6
bunches	1	Λ	6	0	Violets (English), dozen				
Dunches	2	Õ	4	ŏ	bunches	1	6	2	0
Marguerites, 12 bunches	_	-	_		bunenes	-	-	_	
Mignonette, 12 bunches	2	0	4	0					

PLANTS IN POTS.



PROFITABLE LIVE STOCK.

In a herd of cows selection and judicious breeding are the chief factors in obtaining really superior animals. See what they have done among the Shorthorns, Herefords, Devons, and Black-polled breeds for the production of beef, and among Channel Island cattle, Ayrshires, Red Polls, the Kerries, the cross breds aye and also among the Shorthorns, for the production of milk, butter, and cheese. Given careful selection, it really becomes very much a local matter of ways and means. It is not every man that can afford to indulge in the purchase of pedigree stock from a herd of high repute, but by being on the alert to purchase really good stock as opportunity offers the herd improves slowly but surely, becoming increasingly valuable and profitable year by year. Twice recently have we been shown the cow of its particular locality, one of them in Leicestershire, the other in Derbyshire. Both were remarkable for their regular yield of an exceptionally large quantity of rich milk. Such cows but too often are regarded as curiosities, without any thought being given to the possibility of herds of them being got together by selection and breeding. It is in this matter that a few thoughtful men of more than average intelligence combined with energy and steady perseverance excel. They never let any chance of obtaining such cows pass by, are willing to pay something extra for their fancy, and then take good care to turn them to full account.

In the report of a "Typical Farm in Cheshire and North Wales" in the last number of the Royal Journal, there are some interesting facts about the herds of cows kept by the Cheshire dairy farmers. Most of them evidently give preference to a cross between Shorthorns and Welsh, due attention being given in the crossing to the selection of the progeny of deep milkers. In only one instance is there mention of a cross between Ayrshires and Shorthorns carefully selected for the last twenty-one years. This was at Spurstow Hall, Tarporley, the farm of Messrs. David Byrd & Son, whose herd of 109 milking cows is a fine one, well fed, well cared for, and deep milkers. This herd is so well managed that we give some further particulars of it taken from the report. The practice of the farm is to sell the milk from the whole of the cows during the six or seven autumn and winter months of the year, and to convert it into cheese the remainder of the time. About eight cows go to each milker. Each cow's milk is weighed once a week. The milk is strained outside the dairy and conducted by an open trough into the milk vat, thus preventing any ingress by the milkers into the dairy. After cheese-making the whey stands for two days; the cream is then skimmed off by hand and churned into whey butter. The whey is afterwards carried by a pipe to a cistern in the piggeries and pumped therefrom into the pig troughs. The dairy, although adjoining, is distinct from the house.

The account kept by Messrs. Byrd is equally instructive. Here is part of it for last year.

DAIRY PRODUCE 1892 FROM 104 COWS.

475 lbs. butter at 11½d. 37 calves sold 30 ,, reared 26,175¾ galls. of milk sold Less freight 31,353 galls. of milk made = 12 tons 3 cwt. 0 qr. to cwt) = 553⅓ galls 1 qr. 22¼ lbs. cheese	into 459 ch 29 lbs. (12) per cow, 2	l lbs.	£ s. 6 24 14 45 0 938 18 1 135 1	per £ s 0 4 4 0 15 0 15 0 7 14 7 15	rage cow. d. d. 4 3 934 712	Total. £ s. d. 22 15 2½ 69 14 4 803 17 9
Whey, 17s. per cow \cdot .	•• ••	••		0 17		88 8 0
Total		••		£17 1	101	£1779 12 0½

The average for the thirteen years, 1880 to 1892, was £18 17s. 10d. per cow, and the falling off in 1892 was attributed to the unfavourable season. It would be curious to see how the average of the current year is affected by the drought. The bulls appear to be especially well selected, and seem likely to perpetuate the good dairying qualities of the herd. Numbers are kept up and increased by rearing the heifer calves. This is carefully done, and the heifers go into the herd with their first calf at an age of about two to two and a quarter years.

WORK ON THE HOME FARM.

Sorry indeed were we to see sheepfolds on Swedes since writing our last farm notes. The only thing in sound practice to justify such a thing would be the bringing of more land into course for winter corn. If Swedes are used in this way so long before Christmas what is to be done for the sheep later on in midwinter? There should now be for early folding Mustard, Coleseed, early Cabbage, and Thousand-headed Kale, some late growth of Clover, and mixed layers, with a run on pasture by day. Do not keep sheep of any sort confined altogether in the folds, a change is healthful, and a frequent turn on a hard road is good for them. Look regularly to the feet; allow no creeping in of bad cases of foot rot, but let the hoofs be pared whenever it is necessary, and any difficult case be at once isolated. Ewes forward in lamb must have quiet comfortable quarters, and be under very frequent observation by day and night. Do not disturb them at night, but approach them quietly just to see all is well and there is no disturbance, or worrying by dogs. This is entirely worth while. A friend of ours going to his ewefold one night found the fold empty, and evidence of a rush in several broken hurdles. The barking of dogs in the distance heard by him through the hush of night told the sad tale but too well. Two large lurcher dogs had driven them out of the fold to a considerable distance, and the loss both of ewes and lambs was most serious.

Home farmers having the advantage of a park with its lofty enclosures do well to have the ewes in there for a month or two before lambing time; they are then safe from nocturnal disturbance. Keep all ewes in lamb off the Turnips for every reason. We cannot too often repeat this note of warning. To allow them to consume large numbers of half-frozen roots tends seriously to lower vital heat, and so taxes the system seriously; to keep them in muddy folds causes so great a strain upon their frames as also to prove a severe trial just when they require extra care. Both things cause abortion largely in a flock, and foot rot often runs riot at the same time.

METEOROLOGICAL OBSERVATIONS. OAMDEN SQUARE, LONDON, Lat.51° 32' 40" N.; Long. 0° 8/0" W.; Altitude, 111 feet.

DATE.			9 A.M	•	:					
1893.	Barometer at 32°, and Sea Level.	Hygro	meter.		Temp.		Tem- ture.	Radi Tempe	Rain.	
November.	Barc at 32 Sea	Dry.	Wet.	Wind.	at 1 foot.	Max.	Min.	In Sun.	On Grass.	
Sunday . 5 Monday . 6 Tuesday . 7 Wednesday 8 Thursday . 9 Friday . 10 Saturday . 11	Inchs. 29.951 30.017 30.254 30.314 30.288 30.251 30.334	deg. 37.4 35.8 36.1 38.9 39.7 42.8 46.2	deg. 35·1 34·1 35·0 35·9 36·3 39·0 44·1	N. N.E. N.E. N.E. N.E.	deg. 47·1 44·9 43·3 42·3 42·7 42·1 42·9	deg. 43.6 46.9 46.2 45.0 45.9 46.4 50.1	deg. 34·4 32·1 32·0 32·4 36·1 34·4 41·5	deg. 51·1 77·9 75·3 66·3 80·7 52·1 59·8	deg. 33·0 28·4 29·0 27·9 33·0 31·0 38·4	Inchs
	30.201	39.6	37.1		43.6	46.3	34.7	66.2	31.2	0.010

REMARKS.

5th.—Fair early; drizzly from 10 to 11 A.M., then occasional sunshine till noon, and bright afternoon and night.
6th.—Almost cloudless from sunrise to midnight.

of rain and hail, the sun shining meanwhile; generally cloudy after 3.15 P.M.

8th.—Cloudy morning; bright sunshine from 1.30 P.M. to 3.30 P.M., and generally cloudy after.

9th.—Bright sunshine almost throughout, with brisk N.E. wind.

10th.—Overcast throughout, and high wind in the morning.

11th.—Overcast till noon; much bright sunshine in afternoon.

A cool dry week with northerly wind and very little cloud.-G. J. SYMONS.



DURING the year 1885 we had the pleasure of inspecting the results of crossing one of the species of Potatoes described as Solanum Maglia with three good English varieties. This was at Reading, in the grounds of Messrs. Sutton & Sons, and in the same grounds we have had the pleasure of inspecting a no less remarkable and decidedly more promising output this autumn from a similarly conducted series of experiments. S. Maglia as the seed bearer and a seedling from Victoria as pollen parent crossed in 1887 produced two "hybrids," one having reddish, pebble-shaped tubers with no particularly attractive character to recommend them, the other wholly different, the tubers being round, of full size, white, with a rough skin like Schoolmaster; yet entirely distinct, unquestionably an interesting, and may prove a decidedly valuable acquisition.

In the summer of 1891 the well-known variety Imperator, also another unnamed cultivated Potato, were pollenised from the small reddish tubered No. 1 hybrid; also a commercial variety was pollenised from it as well. In the following year (1892) these hybrid Potato seedlings were remarkable for the number and size of the tubers they produced, and the present year's crops were looked forward to with no ordinary degree of interest. Though the impress of the pollen parent was very apparent in the growth, which to coin a word was decidedly magliaised, yet the tubers from the red polleniser were white with one exception, a mottled round, five of the other varieties being white rounds, and six white kidneys. The yield from some of these was remarkable. For instance, though the tubers planted were of necessity small, yet eight of them (No. 5), a lemon fleshed kidney, produced 33 lbs. 9 ozs. of extremely fine Potatoes; six tubers of No. 8 gave 17 lbs. 7 ozs. of mottled roundish tubers packed closely round the stem; eight small seed tubers of No. 11 gave 32 lbs. 2 ozs. of large white fleshed kidney Potatoes; and eight of No. 12 yielded 24 lbs. 3 ozs. of lemon fleshed full sized kidney-shaped tubers. Those four varieties appeared to stand out as the greatest producers from the twelve raised from the Imperator cross indicated—the red tubered variety as the pollen

From the other cross-an unnamed commercial varietypollenised as above, twenty-nine seedlings were raised, nine of them producing kidney-shaped, and the remaining twenty round tubers-all, both round and kidney, being white. The diversity in yield was very great, some giving poor returns, several fair to good crops, and others again large yields, the heaviest, No. 11, white round, being 25 lbs. 14 ozs., from eight small tubers. As a rule the round varieties were the best in this cross, the kianeys in the other. Also, as a rule, the crops possessed the characteristic strikingly apparent, of the tubers being thickly clustered, almost densely packed, close round the stems, and in this respect presented an appearance wholly dissimilar from Potatoes generally as the seedlings were lifted and "stood," for it cannot be said they were "spread," on the ground. Most of them were of medium size, but to have obtained this size so quickly and the bulk of many so great augurs well for the future, for if the bountiful character of the best of them can be combined with the almost faultless form and superior quality of the best of our cultivated varieties, there will be added to existing good properties an abundance in yield to which they at present have no claim. Whether this combination can be effected and fixed time alone can tell. The vagaries of Potatoes produced by intercrossing cannot be foreseen, they have a habit of sliding back, quickly or slowly, also intermittently, and often provokingly, to nature so to say. Some appear to attain constancy in a comparatively short time, while others "sport about" for years. They may be to all appearance "true" one season, and the next as uncertain as the weather—as "shifty," as it has been humorously described, "as a waggonload of monkeys." The one strong character of these seedlings, so strong that it ought to be retained, and exert a dominating influence on others, is the heaps of tubers packed and piled on each other, as if clinging together closely around, above, and below the parent set.

This is a character not, we think, possessed by Solanum tuberosum, the supposed progenitor of our present race of cultivated Potatoes. It may be so. Mr. Baker of Kew has no doubt about it, and he is a very great authority. At the same time, Heriot's report of the country visited by Sir Walter Raleigh describes the Potato as growing there in "damp places;" tubers as large as Walnuts, some much larger, and good for food either boiled or baked. This description would appear to apply more nearly to the coast plant Solanum Maglia than to the hill plant S. tuberosum, and Heriot was in the Raleigh Expedition when tubers were collected and brought to Ireland. It is certain, too, that anterior to the outbreak of the Potato disease in 1845 and in subsequent years, before endeavours were made to raise new varieties, that Potatoes were grown in fields and gardens in the north-eastern counties that had far greater resemblance to S. Maglia than S tuberosum; also it is certain that during the years of failure of English crops that large cargoes of Potatoes from Belgium, Holland, and Germany to our eastern ports had the Maglia characters of peculiar rugged (contracted in places) shape, as well as the purplish red colour; in fact, many of the tubers were so like Maglias that it would have taxed an expert to distinguish them from each other. But whether or not S. Maglia was once grown in England, and had a share in the production of English varieties, it is not to be found now among cultivators, and Messrs. Sutton & Sons have done well to obtain tubers from Kew for purposes of fertilisation in the hope of giving a more vigorous and consequently greater disease-resisting nature to stocks that may be raised from them, and possessing also the other good properties that invest the Potato with value as a commercial product and necessary article of diet.

But why, it will naturally be asked, these Reading experiments de novo, since an elaborate series was conducted not many years ago? Because there was a doubt as to identity of the species chosen, as we indicated at the time, pointing out that the variation in the tubers was clear enough for them to be separated into two sections differing in colour. In fact one of the plants sported and gave white tubers, while those of S. Maglia are as far from white as any tubers can be. The Reading firm, accurate and thorough in its undertakings, could not have the experiments rest on a doubt, and therefore set aside all the painstaking and time-consuming work, gaining nothing but—and this must be very valuable—information. Hence the new series and going back to the beginning, the experiments founded on fact and conducted with the same extreme care as it is possible to exercise in such work. Slow and delicate work it is, as may be understood by an example in routine.

Three seeds obtained from the first 1887 cross were sown on March 5th, 1888, and the first plant appeared on April 2nd. On May 30th, one cutting was taken from a side shoot, and three rooted suckers removed, all potted singly. In August seven cuttings were taken, and the plants grown in pots. In May, 1889, there were established in pots from tubers, cuttings, and offshoots twenty-five plants, four being sent to Mr. Baker, Kew, the rest planted outdoors, and so increased from year to year, the hybrid

remaining the same in every respect as the first year, except that the tuhers are rather larger.

The No. 2 seedling was grown in pots for three years on account of its weakness, hut last year (1892) was planted outdoors, which much improved it in size of tubers. Although a most trying season, there was no trace of disease. Three tubers were planted, but one failed. Upon lifting the two plants on October 11th, 1892, the crop consisted of twelve tubers—a very handsome white round, of excellent shape, and crackled skin, such as cultivators Six tubers were planted this year (1893), and upon examination when lifted four roots were found to be of the same type as the previous year, and these produced an extraordinarily large crop, but not quite so round in shape as last year, owing to a second swelling after the rain. The other two plants ran back to very small tubers and a large quantity of delicate fibrous roots, but the haulm was the same in every respect as the four plants just described, being very strong; leaves rough, like Victoria, but the points of the shoots resembling those of the

Such is the routine. The results obtained no one could see without heing interested and without wondering what will he the outcome of this most carefully conducted series of experiments. If perseverance has its reward it will in this case be well won after so many years of persistent work in endeavouring to increase the yield and improve the character of the most important of our root crops, and with such a foundation to rest on as has now been laid the conductors of the work are looking hopefully onward to the future.

AUTUMN AND WINTER HARDY FLOWERS.

The appearance above the ground of two autumn Snowdrops—Galanthus octobrensis and G. corcyrensis, gives us no ordinary degree of pleasure. Their own heauty will he great in a week or two, and with a protective sheet of glass we may enjoy them until their delicately beautiful sisters of January and February appear. One may well ask, Why should the garden of hardy flowers remain desolate so long? Why, with so many winter flowering plants should a walk along its paths show nothing of brightness, and little but a melancholy array of dead stems and tallies?

Looking along one of my rockeries the other day I paused before a good plant of Saxifraga Fortunei, and admired its thick and succulent looking leaves and its curiously beautiful flowers. They are alike curious and heautiful with their green sepals and unequally sized petals of white, which are described as "saw-edged," a term which may he botanically correct, hut which fails to express the form in which they are shaped so as to add greater attractions to the flower, and which one cannot properly describe. The lower one is longer than any of the others, while the two upper ones again are shorter than the two which come between. The golden hoss in the centre of the flower adds to its charms also, and a good plant with many of these flowers in panicles on thick, fleshy stems, fails not to please. Pity it is that the inevitable failing must be disclosed that early frosts at times play sad havoc with the plant, and that one night will destroy the hope cherished of the usual blooms. Fortune's Saxifrage, which was introduced from Japan in 1863, to be most satisfactory on rockwork facing almost due south, and planted in sandy peat with the addition of a quantity of gritty matter. It is increased by division, and a small piece I received a few years ago has now assumed quite respectable proportions.

Extremely beautiful for a long period has been Androsace lanuginosa. A fine plant on the same rockery as Fortune's Saxifrage is still in bloom, and its spreading stems of silvery leaves and rose coloured flowers with yellow eye, are very charming. I am referring to this plant at this time principally for the purpose of advising its covering with a sheet of glass or slate raised a few inches above the foliage, so as to throw off wet, and at the same time admit of the free circulation of air. When a slate is used I generally remove it during the day in fine weather, and, even with this trouble, I consider the slate preferable to glass, which in the spring sometimes overstimulates the growth. All my Androsaces are thus covered from October until March or April, and the little trouble is more than repaid by the wealth and heauty of these charming alpines.

The white "spring" Heath, Erica carnea alha, has been so long in bud that I was not surprised to see it in flower a few days ago, and thus coming in long ere the Cornish Heath, E. vagans, has passed

away. One is at a loss to know why more use is not made of this pretty Heather which, on sunny rockeries, will yield its bloom through some of the darkest and dullest months of the year. In my garden it is thoroughly at home, the white form which is sometimes known as E. herbacea, being always earlier than the flesh-coloured one.

The time is rapidly coming when the claims of the autumn and winter Crocuses to inclusion in our gardens will need little advocacy. I may, perhaps, be allowed to mention two as indicative of the variety of beauty we may have. One of these is C. cancellatus, of which the type has pretty little white flowers veined with purple at the base, the flowers appearing before the leaves. This species, which is a native of Asia from North Palestine to Armenia, varies in colour, however, from lilac to white, and thus a considerable variety may be obtained. Very charming, too, is C. ochroleucus, which I had previously but unfortunately lost, and received this year through the kindness of a reader of the Journal. This is a beautiful little Crocus of a pretty creamy white with orange base. It is a native of Syria and North Palestine, and appears to be rather tender. It is, however, worthy of all care, and a little protection will be well repaid.

The value and beauty of the Michaelmas Daisies become more and more apparent, and bushes of blue, purple blue, pink, lilac, and almost pure white in the borders fill us with pleasure. Nor are the flowers less beautiful or valuable when cut for house decoration. little favourite with me, not so much from the size or beauty of the individual flowers, but from the habit of growth of the plant and the charming appearance it presents when in full flower, is Aster diffusus horizontalis. It smothers itself with small white starrylooking flowers with raised pink centres. The plant is so sturdy in habit that in a position where it is slightly sheltered from our severe gales from the Solway it requires no staking or tying, a great addition to its heauty being gained by the absence of the comparative stiffness inseparable from such supports. This season it has reached rather over $2\frac{1}{2}$ feet in height, and its spray-like branches add much to the beauty of the garden. It has also the merit of being extremely hardy, and with moderate weather should bloom on until Christmas Day. Indeed, in former years I have cut flowers from it within a day or two of the New Year.—S. ARNOTT.



THE ORCHID GROWERS' MANUAL.

MESSRS. B. S. WILLIAMS & Son, Upper Holloway, inform us that they have a new (the seventh) and much enlarged edition of "The Orchid Growers' Manual" in the press, with numerous additional illustrations, which will be issued early in the new year.

LÆLIO-CATTLEYA STATTERIANA.

This is another of the many beautiful higeneric hybrids which have been raised by Messrs. J. Veitch & Sons, Royal Exotic Nursery, Chelsea. It is the result of a cross between Lælia Perrini and Cattleya labiata, and is a charming novelty, meriting the first-class certificate awarded by the Royal Horticultural Society on November 14th. The flower, as depicted in the illustration (fig. 67), is large, the sepals and petals resembling those of Cattleya lahiata in form and colour. A trace of Lælia Perrini is noticeable in the lip, the front lobe of which is a rich purplish crimson. The base of the lip is white faintly marked with crimson.

ORCHIDS FOR FLOWERING AT CHRISTMAS.

ORCHIDS are always valued highly during the winter months, but at no period are they so much appreciated as at Christmas time, because most of those then obtainable furnish bright or distinct shades of colour, that are especially welcome when flowers are never too numerous or diversified. Many beautiful groups can be formed with the best of the winter-flowering Orchids, associated with Roman Hyacinths, a few early Lilies of the Valley, Ferns, and light Palms, as such arrangements are adapted for situations where bolder groups of the late Chrysanthemums are out of place. Some also are useful for cutting when flowers for buttonholes, sprays, or choice houquets are not very abundant. As the present is a critical and important time in the preparation of Orchids for Christmas, the opportunity has been chosen to give a few practical hints on the general management needed to ensure a prospect of

success, also to name some of the species or varieties which have been proved by many years' experience to be the most reliable and satisfactory for the purpose.

The Orchids that may be had in flower at the particular season now under consideration can be classed under three heads:-Firstly, Those which flower naturally in late December, or that require little assistance to induce them to do so. Secondly, Those which usually flower in November or January, and that may be retarded or hastened sufficiently to cause the production of the flowers when desired, or to prolong the usual period. Thirdly, There are some Orchids almost continuously in flower, or which blossom at different seasons and occasionally yield their

attractions in midwinter. Upon the first group we must chiefly depend for our Christmas display, and to them the principal attention will be devoted in these notes. With regard to the second group there is more uncertainty and risk, as the majority of Orchids do not readily submit to the ordinary processes of hastening or delaying the flowering period. In either there is often much danger of losing the blooms, and even the plants themselves, unless of naturally vigorous habit, will frequently suffer to a serious extent. Forcing, as commonly understood and practised, can be safely adopted with very few, and

temperatures and the due but not excessive supply of moisture, while near large towns a still greater difficulty is found in the poisonous fogs that too frequently spoil all our hopes just as they are on the point of being realised. One essential must be kept in view in the preparation of such plants for winter flowering, and that is to have them as sturdy as possible with firm, well-developed, and matured leaves, or in the case of the partially deciduous kinds to ensure plump, thoroughly ripened stems or pseudo-bulbs by a previous season's careful culture. The avoidance of excessively high temperatures, with great quantities of moisture and insufficient ventilation, or exposure to light, is absolutely necessary to ensure the required condition, and happily the present season has been in many respects most favourable to the maturation needed. The

hot bright weather has imposed a severe tax upon growers in many ways, but it has permitted a free and continuous ventilation which with attention to supplying sufficient water to prevent the ill effects of a parched atmosphere on delicate foliage, has ensured a ripening that will enable the plants to endure their

winter's trials with less danger.

It is a common mistake with beginners in Orchid culture to fancy that their success must largely depend upon the accuracy with which they maintain certain temperatures for each month as given in the

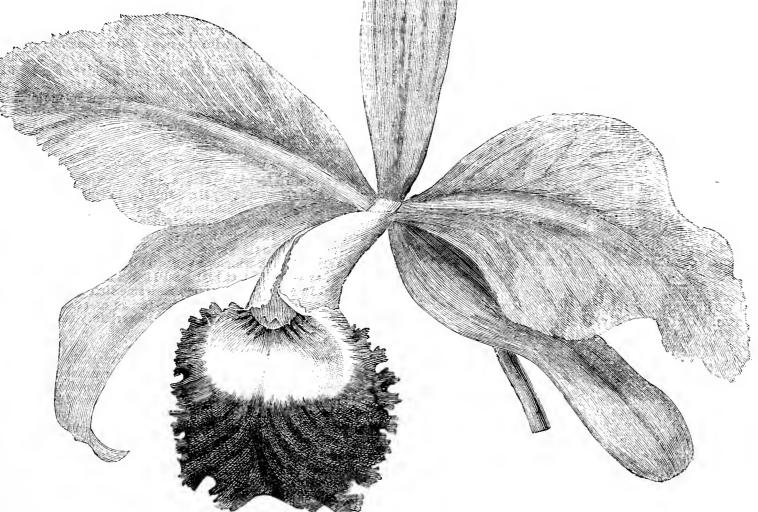


FIG. 67.—LÆLIO-CATTLEYA STATTERIANA.

these chiefly the deciduous kinds bearing large pseudo-bulbs as storehouses of nourishment, such as the Dendrobiums of the nobile and Wardianum types, the Calanthes and a few others. Even with them the truth of the old adage, "The more haste the less speed," is often exemplified, and "hasten slowly" may serve as a useful motto for Orchid growers who wish to secure plants in flower before their usual season. In the third group a long list could be given of Orchids that have been had in flower during December, for in large collections some will produce occasional flowers at all seasons; but these may be termed the accidents, and the only sorts to be relied upon in this group are those which flower almost continuously throughout the year, some of the hybrids being remarkable examples of this character, especially Cypripedium or Selenipedium Sedeni, for I have had vigorous plants of this which have not been without flowers expanded or showing for nearly three years.

As regards the winter treatment of Orchids to yield flowers freely and retain them as long as possible, the difficulties that cultivators have to contend with are chiefly in the regulation of

guide books and calendars. In this they misunderstand the object of the writers, who, if they are practical men, usually try to furnish some indication of what is required to be varied according to circumstances by the judgment of individual cultivators. Nothing leads to more disastrous results in the winter culture of Orchids than endeavouring to keep up a fixed temperature by hard firing when outside the thermometer may be down extremely low. Fuel is consumed wastefully, and the air in the houses is dried to such an extent that water has to be distributed liberally, ventilation is impossible, and the plants are exposed to a "stewing" atmosphere, effectually weakening the growth and foliage already made, and frequently encouraging the production of unseasonable growths at the expense of the plants themselves, the flimsy leaves seldom properly mature, and a good period of flowering can never be recognished expected under such conditions flowering can never be reasonably expected under such conditions. It is far better to allow a fall in the warm houses of 5° or even 10° in exceptionally severe weather, reducing the supply of moisture proportionately, without permitting the plants to suffer in any way, than to parboil them for the delusive satisfaction of preserving a regulation temperature.

There are always some plants more delicate than others and more impatient of variations in the heat provided, and whether these are grown in an Orchid house proper or in a structure containing other plants, they should be assigned positions where the conditions are more in accordance with their requirements. Observation will soon acquaint a man with peculiarities of this character, and I have had in my own experience many striking examples of how much attention to this matter will contribute to success. There are, indeed, few plant growers who could not bear witness to the strange partiality displayed by some plants for particular positions in houses, and how they will thrive just where they are suited and not succeed so well in another part of the same house. In the winter, when all circumstances are more trying to plants and cultivators, these apparently simple matters become very important.

In providing ventilation at the present time and onwards much caution must be exercised, as though the day may be extremely bright, yet a cold cutting wind admitted direct to the foliage is a prolific source of injury. For winter the openings of the ventilators should be covered with perforated zinc or some woven material that will prevent a sudden inrush of cold air, and the method of admitting air from the outside by means of pipes under the paths, gratings or hot-water pipes is very convenient, as it can be stopped at any time and does not admit too great a body of air at once. In unusually severe weather it is better not to attempt ventilation at all; in fact, whenever the temperature is near freezing point it is not safe or necessary if care is exercised in regulating the heat as already suggested.

With one more hint we will close these notes on general management. This is in regard to the application of water, which should always be employed of the same temperature as the house, for supplies of cold water to the tender roots are even more dangerous than draughts of cold air on the foliage. When tanks are inside houses which catch the rain falling upon the house, it often happens after heavy autumn or winter storms that the large quantities of water admitted remain of a low temperature for a much longer time than is supposed unless pipes pass through the tank. It is preferable to keep a can or two full of water standing near the pipes to be used only for watering the plants, the other being employed for damping the paths or shelves. Syringing the plants is better dispensed with altogether unless the weather be warm and bright, when one occasional dewing will refresh the foliage greatly.

Most gladly would we give an antidote for the ill effects of fogs were such a one known. Unfortunately, though, the chief difficulties Orchid growers have to encounter in the Metropolitan district in the winter are caused by the fogs, and many a promising Christmas display has been cut off prematurely by a day or two's dense fog in December, yet little can be done to prevent or nullify the injuries. It is advisable to keep the house as securely closed as possible, avoiding opening the doors unnecessarily; and some advantage has even been found from pulling down the blinds where these are still attached. Very little moisture should be distributed about the house, and none on the foliage. This is all that can be done, and with the greatest care it must often result in the loss of many flowers, and can only be regarded as in great degree an unavoidable evil, though it must be observed that the conditions of sturdy growth already advocated assist considerably in enabling the plants to withstand the evil influences. Selections of Orchids for flowering at Christmas will be given in a future issue.—Orchidist.

NOTES BY THE WAY.

SOME FINE CONIFERS.

GARDEN wanderings lose their charm to a large extent when the thermometer registers several degrees of frost and the snow and sleet are being driven wildly about by a hiting wind. And even when these conditions are varied by thick fogs or soaking rains the conditions are little more tempting. It is easy enough to find inspiration when the spring sunshine illuminates the garden or the mellow breath of summer is upon it, but in autumn it is impossible. We must live now on memory and hope—on recollections of the past and anticipations of the future.

In a retrospective survey of gardens visited during the past summer my thoughts rest on one where a noble collection of Conifers graces the surroundings of a pleasant Sussex residence. It is near East Grinstead, on the road running from Purlcy Corner through the beautiful valley hetween the Caterham hills, past Riddlesdown, Godstone, and Blindley Heath, and so on to Felhridge. In the years that are past the road was frequently traversed by gentlemen driving down from town, but it is left now to the holiday seekers and the cyclists. The latter

revel in its easy gradients and smooth surface more than in its richness of wayside gardens and the charming views which open out from it, for even if they have nowhere in particular to go they are always in a desperate hurry to get there, and have no time to waste on trifles.

Felbridge Place lies on the right hand, a mile or two on the London side of East Grinstead. The house commands delightful views, and gives one fresh impressions even after he has seen, as he may have thought, every variety of scenery which this heautiful corner of England possesses. Truly Grinstead has a charm all its own. The town itself presents attractions foreign to most country places of its size, and it would he easy for any fortunate individual who had nothing to do but rove during the golden days to pass more than one pleasant week in its gardens and byeways.

Mr. Gatty, the owner of Felbridge Place, has strong scientific leanings. This, of course, is vague for those to whom science represents more than some formidable abstract thing, and who ask for details, but it is all I know. Let it suffice to say that his studies, whatever they may he, are not so absorbing as to prevent him appreciating the merits and beauties of the very fine collection of Conifers which surround his house. I understand that his knowledge of the trice is no limited one, but that he is fully capable of judging whether there is anything of special value amongst his trees. To give general readers an opportunity of forming an opinion I will proceed to name some of the specimens and to indicate their altitudes.

One of the first trees to he observed and admired is a noble specimen of the Silver Fir, about 90 feet high and 9 feet in girth. Unfortunately I have to give approximate figures, and cannot say with certainty how this specimen would compare with the one at Dropmore. In Mr. Cecil Bartlett's paper on the Dropmore Conifers, published in the Journal on April 20th this year, he gives the height of a Silver Fir as 94 feet, and the girth as 8 feet 6 inches. I should say that these trees must he as near twin specimens as it is possible to find, and a splendid pair they are. Dr. Gatty's tree is perfect in every way, and measured by the simple system adopted hy Mr. Harding at Orton seems to excel the Dropmore tree in girth if not in height.

A Wellingtonia, 70 feet high, also attracts attention. This is a source of special pride to the gardener, Mr. Jupp, for he planted it himself, a bantling $7\frac{1}{2}$ inches high, in a thumh pot thirty years ago. While the planter has been growing grey the tree has been gaining rapidly in vigour and heauty. It is an almost faultless specimen as to shape, and is a great ornament to the grounds. Mr. Bartlett describes one of the Dropmore Wellingtonias, which was planted ahout six years before the Felbridge one, as heing 67 feet high and 11 feet 3 inches in girth, and a second, planted in 1862 or just about the same time as Mr. Gatty's tree, as 62 feet high and 12 feet in girth. So far as an estimate tells us the Sussex tree is taller than either, and has certainly made more rapid growth.

Another very fine tree is Taxodium sempervirens, 60 to 65 feet high, 29 feet in girth, and it would have been more remarkable hut for losing 14 or 15 feet of its top in a gale of wind. Ahies Douglasi is a handsome specimen, hut it would appear to be hut a babe beside the marvellous Dropmore tree, which is said to he upwards of 120 feet high, the hranches sweeping the ground at a diameter of 64 feet. There is ohviously no comparison here, so I must pass on to Cedrus deodara. The height of this is put down at 75 feet, while one at Dropmore is given as 72 feet high, which means another wonderfully close struggle for supremacy. The Felbridge specimen is in every respect a noteworthy one, and it would be interesting to have its height carefully taken and supplied.

This point of exact measurement is emphasized when we come to Finus insignis, for in my notebook I have the altitude jotted down as 90 feet, and on turning to Mr. Bartlett's paper I find, curiously enough, that he quotes a tree as being exactly the same height at Dropmore. Which of the two is the finer is doubtful; they are both splendid specimens. That at Felhridge Place spreads like a huge forest tree. Another nohle giant is Abies Nordmanniana, which is 80 feet high, of perfect shape, being even from top to hottom, and it was full of cones. In the notes on the Dropmore collection this is classed with others as "good and healthy," hut the altitude is not stated. Other fine Pines are P. nobilis, 85 feet high, and Monticola, 50 to 55 feet and full of cones. P. cembra, P. Benthamiana, and P. Pinsapo run from 30 to 35 feet, P. Benthamiana is therefore well heaten by the Dropmore tree, which is quoted at 56 feet, and must be a wonderful object.

There is no such Araucaria imbricata at Felbridge as the gigantic 70 feet tree at Dropmore, the largest hardly exceeding 40 feet, hut it is a very heautiful specimen, its contour being perfect. Nor is Abies Albertiana so fine, its altitude heing about 40 feet as against 60 feet in the case of the tree under Mr. Herrin's charge. A. Hookeriana, though a small tree, is extremely beautiful, its glaucous foliage heing very distinct and prominent. A. grandis again is not more than 40 feet, and A. concolor will not grow at all, hut A. nobilis glauca towers up 75 feet or more, and is a truly noble tree.

Mr. Bartlett contents himself with saying in reference to Cryptomeria japonica that there are some fine specimens of good shape and with branches to the ground. Mr. Gatty boasts a tree 45 feet high. The branches are rooting and young shoots springing up. Cupressus Lawsoniana erecta viridis, 30 feet high and in splendid colour, is also noteworthy.

Laurels and Rhododendrons thrive with wonderful luxuriance at Felbridge Place, and there are many splendid Beeches' and Oaks in the It is without doubt one of the most interesting of what I may term the tree places in the country. The gardens are well managed throughout, but my object when commencing these notes was to refer only to the Conifers. What I have said will enable skilled readers to see for themselves that Mr. Gatty's Conifers are capable of providing a rich source of pleasure for every tree lover.—W. P. WRIGHT.



NATIONAL ROSE SOCIETY.

WE are informed that the annual meeting of the National Rose Society will be held at the Horticultural Club Rooms, Hotel Windsor, Victoria Street, Westminster, on Thursday, December 7th, at three o'clock; the Rev. W. Wilks, Secretary of the Royal Horticultural Society, will take the chair. The annual dinner will be held at the same place on the same day at 6 P.M. The dates fixed for the Exhibitions in 1894 are:—The Southern Exhibition, June 27th, at Windsor; Metropolitan Exhibition, Crystal Palace, July 7th; Northern Exhibition at Halifax, July 19th.

MR. MAWLEY'S ANALYSIS.

"BUCKS" (page 440) reminds me of the little street boys who tie crackers to my hall door and then run away—they amuse themselves, don't hurt me, and remain in the obscurity they prefer, and to which their methods are best suited! I am sure Mr. Mawley will feel as proud of his champion as I feel deeply injured by this anonymous gentleman's "tremendous onslaught" on me.

Without wisning to detract one iota from Mr. Mawley's services to the N.R.S., which in fact I have never brought into question, I must notice the last paragraph of "Bucks'" communication; and in comment thereon, say that the N.R.S. was formed in 1876, and I joined the Society in 1878, so that the words subsequent to "long years" are nonsense.

Very evidently not to be known by "Bucks" is to be unknown!—

CHARLES J. GRAHAME, Croydon.

[We suspect that Mr. Mawley could give a different version of Mr. Grahame's work in connection with the N.R.S. to that which seems to be entertained by "Bucks."]

THE ROSE IN 1893.

I HAVE now grown Roses for more than a quarter of a century. I have visited most of the Rose gardens in the kingdom, and have had as Secretary of the National Rose Society from year to year much intercourse with the principal Rose growers both amateur and professional. I have heard various and contradictory reports as to the condition of the plants and flowers, but never during all that time have I heard from growers so general a condemnation of the season (if I except the northern men) as in the present year of 1893. This was all the more regretable, as early in the year the prospects were bright, and the hopes of exhibitors proportionately elated.

The wood had been fairly well ripened in the autumn, the winter had not been very severe; January and February preserved their normal character, and at the time of pruning wood was strong and the buds promising; but from that time all was changed. We had no April showers, and a period of droughtunexampled I believe in our climate set From March to July, a period of four months, we had not in this locality I inch of rain, and consequently no good Rose season could be anticipated: the result of the shows proved this to be true. The southern grower was handicapped, the sub-tropical character of the season had driven the flowers into bloom long before their proper time, and consequently those varieties which bloom early were pretty well out of the field; while from the earlier districts nothing was to be seen. There can be no question that it was a hard time for amateurs especially. The nurseryman has perhaps many places differing in soil and situation, and as Roses are worked on various kinds of stocks, in a season like the present if he cannot cut from one portion of his grounds he can from another. The amateur on the other hand is confined to one small piece of ground on which he is obliged to grow his Roses year after year, and I often wonder that under such circumstances he is able to show as well as he does. In a season like the past one the small amateur fared especially badly. The characteristics of the year were drought, abundance of sunshine and heat; day after day as the Rose exhibition season approached the skies were absolutely cloudless, and a brilliant semi-tropical sun shed its influence all around. What could, then, the small amateur with his few plants hope to do? It was no wonder that his exhibits generally were below the average, and that even the larger

amateurs had to confess that most of their flowers were not worthy of their reputation. There were, of course, the usual differences of opinion as to the effects of the season. While some suffered severely from aphides and orange fungus others were comparatively free. I did not see one of the former in my Rose garden, while others said their plants were smothered with them. Orange fungus, which has in some years almost denuded my trees in July, was but little seen, while mildew, which so disfigures the Rose garden if it does nothing else, did not appear until late, when its ill effects were comparatively trifling.

It was a year, however, in which the northern part of the kingdom had it all its own way. Messrs. Harkness & Son of Bedale, Yorkshire, again achieved what no other firm has ever done, namely the winning of the two challenge trophies in the same year. To the north, too, went the amateurs' challenge trophy, and it was won by a young amateur, Mr. A. Whitton, a near neighbour of Messrs. Harkness. Messrs. Mack of Catterick, Croll of Dundee, and Cocker & Sons of Aberdeen were also forward in the race, the fact being that while in the south we were pretty well frizzled, the north and Scotland had been enjoying refreshing rains and cooler weather. Although the Messrs. Harkness succeeded in carrying off the jubilee trophy at Worksop, they were run very hard by Messrs. Alex. Dickson & Sons of Newtownards, a remarkable feat when we recollect they had to bring their flowers some miles the other side of Belfast, across the Channel, and to take them a long railway cross country journey to Worksop-a striking example for those who think it necessary to postpone the cutting of their flowers to the very last moment. There was one very remarkable feature which has been already commented upon by my good friend "W. R. Raillem," who always writes instructively, and that was "W. R. Raillem," who always writes instructively, and that was the behaviour of the darker Roses in such a season. We have always been accustomed to regard continuous sunshine as seriously injurious to their beauty. The edges of the petals become disfigured, the colour is taken out of them, and they look as if scorched; indeed, we generally speak of them when in this condition as being burned. How came it, then, that when weeks of bright sunny days prevailed this calamity did not take place? Such flowers as Louis Van Houtte, Reynolds Hole, and Camille de Rohan, Prince Arthur, Duke of Edinburgh, Horace Vernet, and others were never cleaner or brighter than in the past season—I speak not of those which were carefully covered over, but of those growing in the open unshaded. There must be something else than sunlight to account for this! It may, indeed, have been said to have been a Horace Vernet year, for never was this grand flower more generally exhibited in good form than in this year, when its raiser was taken away from us. Neither, on the other hand, as we might have supposed, were the light Roses remarkably good. Her Majesty, for instance, which had been so well shown in 1892; Mrs. John Laing, the best of the late Mr. Henry Bennett's Roses; Mons. Noman, La France, and others were not conspicuous for their superior form, while the earlier flowering varieties were all over before the exhibition

Although three gold medals were awarded by the N.R.S. for new Roses, there never was a greater scarcity in this class; the foreign raisers seem to have expended all their energies in the varieties they have already given us, and neither in the class of Hybrid Perpetuals or Teas does there seem to be anything amongst the Roses of 1891 worth recording. Two Hybrid Teas have made their appearance, and one of them is highly spoken of as an exhibition Rose, and one (Caroline Testout) has been praised by such good authorities as the Rev. J. H. Pemberton and Mr. Ben Cant. The other (Gustave Regis) is a charming buttonhole Rose, in which its chief value consists. The two exhibition Roses to which the gold medals were awarded came from the North of Ireland, and there is every reason to believe that Marchioness of Londonderry (white) and Mrs. Sharman Crawford (bright pink, something of the shade of colour of Madame Gabriel Luizet) will keep up the reputation of the raisers, Messrs. Alex. Dickson & Son of Newtownards, who have already given to us such fine Roses as Earl of Dufferin, Margaret Dickson, Marchioness of Dufferin, and Ethel Brownlow. The other certificated Rose was Turner's Crimson Rambler, a garden Rose from Japan, and likely to be most valuable for decorative purposes. Charles Gater (Paul & Sons) is a red Rose of great brightness, but somewhat small to suit present tastes. Harkness' Merrie England, the best of all striped H.P.'s, was not shown in as good form as in 1892. It seems, however, to be tolerably constant, and if so will be a very great addition to our gardens.—D., Deal.

(To be continued.)

THE KEEPING OF APPLES.

WITH the exception of the real late keepers, Bramley's Seedling, Northern Greening, French Crab, and others of a hard nature, it seems doubtful whether any of our best varieties of Apples could this winter be induced to keep long. If the fruits, because of the long drought, have so marked a deficiency of juiciness or sap in them that they so soon become dry and woody it would be impossible by any method of keeping almost to replace what Nature has not furnished. But that our ordinary methods of keeping Apples through the winter are far from being the best there can be no doubt. We exhaust our fruits far too much by keeping them in a comparatively dry atmosphere, where all the surroundings are absorbent, and not infrequently the temperature varies from week to week fully several degrees. The practice of burying Apples in tubs in the earth is doubtless a good onc, but then fruit in such case is so difficult of access. On the other hand, the amount of exposure to moisture that Apples will beneficially endure is astonishing. Who that has been raking leaves beneath Apple trees some two months perhaps after the crop has been gathered has not found some fruit buried in the leafage that are as plump and fresh as if just gathered! How admirable do the surroundings seem to suit

Apples in such a case.

Has anyone ever tried the stacking of Apples in leaves outdoors? hard floor beneath trees is selected, a bed made up 10 inches high with solid pieces of turf, the floor thinly littered with clean Elm leaves, then on that a layer of Apples, then a layer of leaves very thin, further layers of fruit and leaves, keeping the top into ridge fashion, covering ail with 6 inches of leaves, and over all some straw mats to throw off the rain. Into such a pit no ordinary frost could enter, and during very severe weather a thick coating of litter laid over all would exclude the hardest Can anyone doubt but that from out of such a stack Apples would come as fresh as possible, even at the end of the winter, whilst the plan would cost next to nothing? Of course only picked fruits of good medium size should be so preserved.—A. D.

I HAVE read with interest Mr. Iggulden's article (page 437) as to the results of Apple culture this season, and I endorse most of what he says respecting the non-keeping of the fruit. Most varieties are over fully a month before their time, but it must be borne in mind that

they were ripe for quite that period before their usual time.

Our experience as to varieties seems to have been very similar to Mr. Iggulden's. Beauty of Kent, however, we do not expect to keep after the end of November in ordinary seasons, but Manks Codlin is still in good condition with us, and this variety I have noticed usually keeps longer from our heavy soil than from others. Welington (Dumelow's Seedling), Alfriston, and Lane's Prince Albert are also keeping well at present, as also are most of the late desserts. Amongst the midsean varieties King of Pippins is keeping well.

It was quite expected that fruit would not keep well owing to the great heat, and there were many cases of actual sunburn, the same as they experience in California. The dry hot period, being followed by a spell of wet immediately before the ripening, was undoubtedly the cause of the spots and the rapid decay of the fruit. I should think it probable that the sudden flow of sap when the fruit was almost ripe caused the rupture of some of the cellular tissues, thus setting

up fermentation and decay in the parts affected.

As to the American varieties, these have with us done better than ever we have known them before. Washington, Melon, Mother, and King of Tomkins County, have all done remarkably well. I cannot, however, speak of Newtown Pippin, as we long since gave up growing it as worthless in this country. It does not, however, at all follow that it would be wise to plant these varieties extensively; in fact I consider that it would be the greatest folly to do so, as probably another generation will pass before we experience a similar season. Therefore, let us not be alarmed by the exceptional circumstances of the past extraordinary summer, but continue to plant those varieties which experience of years has taught us to be the most reliable for giving an average crop.

I quite agree with Mr. Iggulden that we are now in some danger of running to the extreme of planting too few varieties. Unfavourable as the season has been, and probably disastrous to some growers, yet there are many others who have done well. I was looking over some plantations in our county (Sussex) the other day where bush Apples are grown in large numbers, and principally of early varieties, and the proprietor spoke of being well satisfied with the result of this year's operations. He sent his fruit to market early and realised good prices.—Joseph

CHEAL.

NEWTOWN PIPPIN, Sutton Beauty, Peck's Pleasant, Mother, Melon, Washington, King of Tomkins County, Buckingham, Monmouth Pippin, Winter Peach, Wagener are all in good condition, and seem likely to keep. English Apples are in very bad condition. -T. FRANCIS RIVERS.

FLORAL NOMENCLATURE - CURIOUS SPELLING OF NAMES.

I CANNOT quite understand on what grounds "S. W. F." (page 439) bases his criticism of my remarks on this subject (page 399). His first sentence implies that I had recommended gardeners to make themselves acquainted with Latin, Greek, and French, whereas I never even hinted at such a thing, knowing how utterly impossible the task would be. The greater number of the youths who take to gardening know little or nothing of these languages at the time of their leaving school, and when they get to work there is not much time left to devote to them after the more urgent studies have received attention, even had they inclination and capacity for acquiring them. This being so, pronunciation and spelling will, no doubt, remain faulty, as your correspondent remarks, and certainly will this be the case when either are required on the "spur of the moment;" but as writing labels for home use or to place on exhibits is, or ought to be, undertaken deliberately, I repeat there is no necessity whatever that the least mistake in spelling should occur, for the simple reason that the reliable guides named in my letter are easily procured.

With regard to my "list of errors," which it appears to "S. W. F. that most have arisen "from an endeavour to copy illegible labels," it is not quite clear whether he means that I or the exhibitors had

"endeavoured to copy." I, however, carefully copied the card or paper labels attached to the exhibits, which labels had doubtless been written for the occasion. The exhibitors ought to have copied a good cata-

I quite agree with your correspondent that the mastery of these long names is one of the gardener's hardest tasks, and being one of them, and not a classical scholar, I can speak from experience. join with him in respecting those who have overcome the attendant difficulties; but the gardener who exhibits such spelling as the specimens I gave at page 399 deserves—well, to have his attention drawn to it, for I am convinced that it arises from nothing else than negligence. The careful man who has a doubt will find ways and means to satisfy himself about it.—WEST ANGLIA.

FEEDING FRUIT TREES DURING AUTUMN AND WINTER.

I QUITE agree with Mr. Dunkin, page 349, that not nearly enough attention is paid to the roots of trees after the fruit has been gathered. Very often we experience a long spell of dry weather during September and October. How can the buds for next year's supply of fruit be in a fit condition to give a full crop of the finest fruit if the roots are not

supplied with the proper nutriment?

Directly the fruit is gathered from any kind of wall tree I have the soil for several feet away from the wall thoroughly soaked with clear water. All kinds of hardy fruit except Peaches, Nectarines, and Cherries receive much benefit from a copious supply of liquid manure during the winter. Several Apple trees fifteen years planted produce good crops of fruit now that hardly bore at all previous to the stimulant being given them. To no other cause do I attribute the improvement in these

trees, but it is right also to record a failure.

The soil here is heavy and retentive. The application of liquid manure to the roots of Warner's King Apple during the winter caused the fruit the following season to be hollow in the centre. Since we ceased giving the winter stimulant we have had no hollow fruit, though it is smaller. The fruit perhaps does not attain the same size as previously, but it is sound, and that is of more consequence. I do not say the same defect would be visible in light soil. If the weather of February is dry I usually well soak the soil about the trees then. To a tree of the age stated we give not less than 80 gallons of liquid manure direct from the farmyard tank. A mere surface watering does little if any good.— E. MOLYNEUX, Swanmore Park, Hants.

ROYAL METEOROLOGICAL SOCIETY.

THE first meeting of this Society for the present session was held on Wednesday evening the 15th inst., at the Institution of Civil Engineers, Great George Street, Westminster, Dr. C. Theodore Williams, President,

in the chair. Twenty-three new Fellows were elected.

Mr. F. J. Brodie, F.R.Met.Soc., read a paper on "The Drought of 1893, and its Attendant Meteorological Phenomena." anthor confined his investigation to the weather of the four months March to June, during which period the absence of rain was phenomenal; barometric pressure was greatly in excess of the average, temperature was high, with a large diurnal range, and the duration of sunshine was in many places the longest on record. The mean temperature over England was about 4° above the average. Along the south and southwest coasts the sunshine was between 50 and 60 per cent. of the possible duration. The rainfall was less than half the average amount over the southern and eastern parts of England, the extreme south of Ireland and a portion of Durham and Northumberland, while over the southern counties of England generally the fall amounted to less than one-third of the average. The smallest number of days with rain was at the North

Foreland, where there were only eighteen.
Mr. W. Marriott, F.R.Met.Soc., gave an account of the "Thunder and Hailstorms" which occurred over England and the south of Scotland on July 8th, 1893. Thunderstorms were very numerous on that day, and in many instances were accompanied by terrific hailstorms and squalls of wind. It was during one of these squalls that a pleasure boat was capsized off Skegness, twenty-nine persons being drowned. About noon a thunderstorm, accompanied by heavy hail and a violent squall of wind passed over Dumfries and along the valley of the Nith. Many of the hailstones measured from 1 inch to 1½ inch in length. At the same hour a similar storm occurred at Peterborough. From about 2 until 10 P.M. there was a succession of thunderstorms over the north-east of England and south-east of Scotland, and at many places it was reported that the thunderstorms were continuous for nine hours. Two storms were remarkable for the immense hailstones which fell during their prevalence over Harrogate and Richmond in Yorkshire. The hailstones were 4 and 5 inches in circumference, and some as much as 3 inches in diameter. Great damage was done by these storms, all windows and glass facing the direction from which the storm came being broken. It is computed that within a radius of five miles of Harrogate not less than 100,000 panes of glass were broken, the extent of the damage being estimated at about £3000. The thunderstorms in the northern part of the country travelled generally in a north-north-westerly direction at the rate of about twenty miles an hour. They appear to have taken the path of least resistance, and consequently passed over low ground and along river valleys and the seacoast. Several storms seem to have along river valleys and the seacoast. followed each other along the same track.



EVENTS OF THE WEEK.—Apart from the meeting of the Committees of the Royal Horticultural Society at the Drill Hall, James Street, S.W., on Tuesday, the 28th, but few events of horticultural interest will take place in the metropolis during the ensuing week. The Royal Botanic Society will hold a meeting at the Gardens, Regent's Park, on the 25th inst., and the annual dinner of the National Chrysanthemum Society is announced to take place at Anderton's Hotel, Fleet Street, on the 30th inst.

THE WEATHER IN LONDON.—Since publishing our last issue some stormy weather has been experienced in the metropolitan area, as in other parts of the country. A gale of wind, accompanied with rain and snow, occurred on Saturday night, snow continuing to fall more or less the greater part of Sunday. It soon disappeared, however, but much damage has been done in some localities. Monday was fine, and the same may be said of Tuesday. Wednesday opened dull but dry, and at the time of going to press it is rather cold.

WEATHER IN THE NORTH.—The beginning of the past week from the 14th was dull, with rain on the evening of the 16th and the following morning. The violent northerly gale of Saturday morning reached its height about 2 A.M. Roads and railway lines were blocked with fallen wood, and damage was done to buildings and farmyards. In the woods the havoc is terrific. The past two days have been cold and bright, and 9° of frost are registered this morning (21st), with dense hoar frost. In the Blair Drummond Policies the wreckage is almost indescribable. Grand old trees, which have more than a local name, lie in hundreds uprooted, or with their great stems snapped at various heights. Oaks, Beeches, Larch, and Spruce Firs seems to have suffered most, and the state of the fine old grounds is most lamentable. On the adjoining estate of Lanrick half the woods are said to be down.—B. D., Perthshire.

— ROYAL HORTICULTURAL SOCIETY.—The next fruit and floral meeting of the Society will take place in the Drill Hall, James Street, Victoria Street, Westminster, on Tuesday, November 28th, when special prizes will be offered for groups of Chrysanthemums naturally grown. At three o'clock Mr. T. Crasp, F.R.H.S., will deliver a lecture on "Latekeeping Grapes."

— HORTICULTURAL CLUB.—The usual monthly dinner and conversazione took place last week. There were present Messrs. John Lee, Harry J. Veitch, J. S. Cousen, C. T. Druery, George Paul, T. W. Girdleston, and others. The discussion was on Cannas, and was opened with a very able and instructive paper by Mr. George Paul, in which the history and the mode of culture were exhaustively stated. An animated and interesting discussion, in which most of the members present took part, followed, and a cordial vote of thanks was awarded to Mr. Paul. Mr. Charles Turner contributed some fine dishes of Apples and the Chrysanthemum blooms for the decoration of the table.

- RANUNCULUS LYALLI.—This is the beautiful New Zealand white-flowered Buttercup which has tantalised English horticulturists for the last twenty years at least. Those who have seen it growing wild on the mountains in New Zealand, and have cultivated it in the gardens there, are unable to understand how it can fail to thrive in English gardens. Roughly described, remarks Mr. W. Watson of Kew, in the "Garden and Forest," R. Lyalli is as effective and beautiful in flower as the white Anemone japonica, growing as high, flowering as freely, and behaving in the same satisfactory manner in New Zealand as that species does with us. In foliage it is even more effective than the Anemone, the leaves being peltate, rich deep green, and from 8 to 12 inches in diameter. The roots are tuberous. Failure with this plant in England is not due to cold, nor do I think excessive heat in summer hurts it. There is, however, some condition, some peculiar hitch which we cannot get over if we attempt to grow the plant out of doors. We have flowered it in pots in a cool Orchid house at Kew, but it was weak, and Mr. Moore of Glasnevin can grow it and flower it in a cold frame facing north, the plants being in pots, stood in shallow pans of water. At Reading, Mr. Bartholomew has grown it fairly well in an open

—— STEPHANOTIS FLORIBUNDA FRUITING.—Mr. Robt. Wastling, market gardener, Beverley, has a young plant of Stephanotis floribunda bearing a fine fruit. Should any persons in the neighbourhood be sufficiently interested to give a call, Mr. Wastling would, I am sure, be very pleased to allow them to see it.—George Swalles, Beverley, East Yorks.

— MAIZE MATURING IN WALES.—Mr. F. C. S. Brenton, Rose Cottage, Llantwit Vardre, Pontypridd, writes:—"It may be worthy of your notice that I have this year grown several stalks of Indian Corn with fully developed cobs. Some of the stalks were 8 feet, 9 feet, and 10 feet high. I am told that no similar growth of Indian Corn has ever been seen in this neighbourhood."

— THE NATIONAL AMATEUR GARDENERS' ASSOCIATION.—We understand that the annual dinner of this Association has been fixed to take place on Thursday, December 14th, 1893, in the Queen's Salon, Holborn Restaurant, at seven o'clock P.M. The medals, prizes, and certificates won during the year will be presented on this occasion. Mr. D.B. Crane, 4, Woodview Terrace, Archway Road, Highgate, N., is the Hon. Secretary.

— GARDENING APPOINTMENTS. — Mr. Walter Gibson leaves Steventon Manor Gardens, Whitchurch, Hants, on the 30th inst. for Sandown, Isle of Wight, as a grower of produce for market. Mr. W. Frost, gardener to W. Palmer, Esq, Westfield, Reading, has been appointed Mr. Gibson's successor at Steventon. Mr. J. C. Anderson, formerly of Metham Hall, Howden. has been appointed to the charge of the gardens at Saltmarshe Hall, Howden.

—— PUBLICATIONS RECEIVED. — We have to acknowledge the receipt of the following publications:—The second part of the "Transactions of the Massachusetts Horticultural Society" for the year 1892, from the press of the Society at Boston, U.S.A. The report of the Canadian Department of Agriculture regarding experiments on Grasses, conducted at their farm at Ottawa. The November number of the "Botanical Magazine," published by L. Reeve & Co., Henrietta Street Covent Garden.

TADCASTER PAXTON SOCIETY.—At the weekly meeting, held last Thursday evening, November 16th, a most excellent paper was read by Mr. Callum, B.A. The subject taken was "Efforts of Plants for Self-Prescrvation," illustrated by blackboard drawings. The essayist pourtrayed the hard battle many plants had to fight for existence; also described some of the peculiarities attending such plants as Sarracenias, Nepenthes, Venus' Flytrap, Sundew and others. A discussion followed in which many of the members took part. A hearty vote of thanks was passed to Mr. Callum for his most instructive paper. Mr. H. J. Clayton of Grimston Park will read a paper on "Hardy Fruit," this evening (Thursday), November 23rd.

—— CANKER IN FRUIT TREES.—This question now appears to be within measurable distance of solution. Is Nectria ditissima the cause or starting point of canker spots on the buds or spurs where it invariably commences? Or is it mites or insect life which cause the first rupture. This is the only point left in the discussion of interest to me. I have proved so far as my trees are concerned that I can cure canker by dressings of insecticides and lime, and so far as practical use is concerned that is all I care for, and leave others to enjoy their own opinions. I have now devoted about ten or twelve years to the subject, examining trees in all localities available, and my firm belief is still that insects start canker spots, and that fungus follows on the decaying wood.—

J. HIAM.

— Greenhouse Winter Flowers.—In a discussion that took place last week between members of the Kingston Gardeners' Association, it was pleaded by a member that numerous descriptions of what are very beautiful as well as most useful winter blooming plants, get very much put in the background, and are indeed comparatively neglected in some gardens, because so much of room and time is occupied with Chrysanthemums, the which are so easily grown. Double and single Chinese Primroses, Cyclamen, Bouvardias, Roman Hyacinths, Spiræas, Azaleas, Poinsettias, Zonal Pelargoniums, Heaths, Salvias, Deutzias, and Carnations, are but a few of the many plants which should be furnished in proper numbers in every good garden, whilst those more highly favoured should always have some Cypripediums and other easily grown Orchids. Even where there are no Chrysanthemums grown it was shown that with due attention to the needs of plants for forcing purposes a remarkable wealth of material was open to all.—D.

THE ROYAL CALEDONIAN HORTICULTURAL SOCIETY.—It is announced that the above Society will hold the shows for 1894 on April 4th and 5th, July 11th and 12th, and September 12th and 13th. Mr. Chas. Stewart is the Hon. Secretary.

THE WEATHER IN THE ISLE OF WIGHT.—Mr. C. Orchard, Bembridge, I.W., writes:—"Winter has set in here early. Saturday, the 18th inst., opened with a very cold north-west wind and a drizzling rain. Towards evening it increased to a gale of wind and a drifting snowstorm. The thermometer registered 32°, and on the morning of Sunday, the 19th, the whole island was covered with snow, some of the drifts being 3 and 4 feet deep. The strong wind continued all Sunday, but the temperature rose a little, causing the snow to disappear by Monday morning. With the temperature so low, and the strong wind blowing, played sad havoc with such plants as Veronicas, Laurustinus, Fuchsias, Hydrangeas, and others that usually keep green and gay with flowers here up till Christmas, to say nothing of Chrysanthemums and other border flowers which are quite destroyed."

- OUR COUNTRY'S CHARMS.-A lady tourist sends the following note. "We had a delightful outing in September-Leamington, Warwick, Kenilworth, Oxford, and Blenheim. Of all the sights that struck me most was Ampelopsis Veitchi on everything and everywhere. Warwick Castle is a marvel of loveliness, and the peacocks make such a gleam of colour against and on the branches of the old trees. Blenheim is overpowering in size; the forest and ornamental trees and the pleasant head gardener, Mr. Whillans, struck me most there, also the extreme neatness of everything and the small force of men-we saw just a few. A large house of tree Carnations, pink, white and Winter Cheer charmed us. There are thirty-four houses all full, yet last December over £7000 worth of plants were sold out. We had Blenheim Orange Apples in perfection. Those who have not seen Warwick, Blenheim, and the old college gardens of Oxford should see them. I had no idea there was such wealth of loveliness in England. Kenilworth is only a ruin, but such a ruin that 'Brother Jonathans' come over in swarms to see it."

- THE QUEEN'S COTTAGE, KEW.—Our excellent transatlantic contemporary the "Garden and Forest," in the issue for November 8th, contains a well executed illustration of the Queen's Cottage at Kew, which stands in the centre of some forty acres of enclosed land, and is thickly planted with trees, and from which the public are excluded. It stands on the south-west side of the Royal Gardens, between them and the Old Deer Park, Richmond, also Royal property. Portions of the cottage grounds have evidently been tastefully laid out many years ago and planted with choice shrubs and trees by some competent landscape gardener. Even now, although the trees and shrubs were until recently left entirely to themselves, the grounds are full of pretty effects and delightful glimpses such as please the artist and lover of Nature. The wilder part is crowded with Beech, Chestnut, Oak, Lime, and other trees which, in places, rise straight out of a turf formed entirely of Bluebells, a glorious picture in the springtime, while other parts show, in tangled profusion, masses of Blackberry bushes, Brake and other Ferns, Daffodils, Ragged Robin, and other dwellers in English woods. The cottage was supposed to have been built for Queen Caroline, wife of George III., "who resided at Kew during at least three months in every year, and made besides a stay of three days in every fortnight at this his favourite spot." The Queen, it appears, was an ardent gardener.

- PLANTING.—Although it does but seem to be reiterating ofttold warnings, yet it is frequently needful just as much as ever to protest against the too common practice of planting everything too deep. Use seems to be so much overlooked that whilst the natural tendency of rooters to strike downwards, the essentials of good culture render the keeping of them so near the surface as possible generally desirable. This is specially the case with fruit trees and bushes, but it applies to most things because we want, under modern conditions of culture, to feed roots from the surface, whilst naturally they are induced to strike deep down into the soil. There can be no greater error in planting under any conditions than in burying the roots too deeply, whilst the nearer the surface, relative to the capacity, to have the roots covered with fine soil, the sooner do they become attached to the ground, and the more healthful is the resultant growth. There are some cases, especially where the soil is shallow or on stiff clay, practically to plant on the surface, but it is difficult always to make our practice fit in with our knowledge of what is best .- A. D.

WOOLTON GARDENERS' SOCIETY.—A meeting of the members of the above Society was held in the Mechanics' Institute on Thursday last, Mr. Carling presiding. Mr. J. Storey, Allerton Tower, read an instructive paper on "The Culture of Muscat of Alexandria and Madresfield Court Grapes." The propagation, pruning, training, disbudding, thinning the fruit, temperature and ventilation at the different periods of growth, watering, together with the formation of borders and the most suitable structures in which they ought to be grown, are fully dealt with. At the close an interesting discussion took place.—R. P. R.

- AGATHÆA CŒLESTIS.-Blue flowers are proverbially scarce, and as Agathæa cœlestis yields these in large numbers, it is, remarks an American contemporary, well worth cultivation for this reason alone. It is sometimes called the Blue Marguerite, and the name is apt, for in shape the flowers bear a strong resemblance to those of the common Marguerite, or Parisian Daisy. But here the likeness ends, for the plants are quite distinct in other particulars. The Agathæa is dwarf and shrubby, seldom more than 12 inches high, and very neat and compact in growth. The numerous leaves are small, rough to the touch, and of a deep rich green. The flowers, proceeding singly from the base of the leaves, are held erect above the foliage on slender naked stalks, the outer florets bright blue, and the disc an intense yellow. The plant is almost constantly in bloom out of doors in summer and under glass in winter. Even when its flowers are not wanted in winter it still requires gentle greenhouse warmth, since 3° or 4° of frost will kill it. Cuttings from young branches root readily in spring, and when grown on in small pots until mild weather they may be successfully used for bedding; and, again, if taken up carefully and potted early in autumn the same plants will, as before remarked, continue to bloom all through the winter and spring in the greenhouse.

- BIRMINGHAM AND DISTRICT AMATEUR GARDENERS' ASSO-CIATION .- On Wednesday, the 15th inst., Mr. Herbert Stone, F.L.S., delivered an illustrated paper, on "Roots and their Functions," before the members of the above Association, assembled at the Temperance Institute, Corporation Street. The chair was occupied by Mr. Leonard Brierley, J.P. (one of the Vice-Presidents), who heartily congratulated the Society on the exceptional progress it had made during the short course of its existence. Mr. Stone described the parts of various roots, their methods of pushing themselves through the soil, and of absorbing nourishment from it; and of the extraordinary property of the roots to exude an acid which had the effect of rendering soluble inorganic matter not usually soluble in water. He gave by means of the limelight lantern specimens of the different classes of roots, and gave figures to show the extraordinary amount of moisture that the plants absorb in the course of their growing period. A vote of thanks to Mr. Stone for his excellent paper, and to Mr. Leonard Brierley for presiding, terminated the proceedings. Messrs. E. D. Clarke, Gosling, Chapman, W. B. Griffin, Rees, and W. H. Wilks exhibited Chrysanthemum blooms, and awards were made accordingly. Those of the two former were exceptionally fine. The next meeting will be held on December 6th, when the President (Alderman Wm. White, J.P.) will deliver his address.

- CACAO IN TRINIDAD .- Mr. J. H. Hart, the Superintendent of the Royal Botanic Gardens, Trinidad, has recently been successful in transporting to Nicaragua a selection of the best varieties of Trinidad "Cacao." Cacao seed soon loses its vitality, and can only be safely transported long distances by placing it in a suitable position to germinate and grow on the voyage. On April 25th of this year, we learn from "Nature," Mr. Hart left Trinidad with a number of specially prepared cases containing plants, and seeds planted on the day of departure. The boxes in which the seeds were sown had not glass roofs, but were strongly latticed and covered with a moveable sail-cloth cover, which could be easily and rapidly fastened or unfastened, to give light or to protect from wind, rain, and sun. A frame covered with wire netting was fastened inside each case, so as to press upon the surface of the soil to prevent it shifting and causing the seeds to be disturbed. The seeds germinated ten days after planting, and on June 10th Mr. Hart reached his destination with more than 26,000 healthy plants, which were successfully put out in nurseries. A number of Cacao seeds were sown at Nicaragua to develop during the return voyage, and upon arriving at Trinidad good healthy plants were obtained from 98 per cent. of the seeds planted. These plants included two species entirely new to Trinidad, and their introduction may eventually prove of great benefit to the colony.

- WE regret to have to announce the death of Monsieur Antoine Besson, of Marseilles, on the 15th of this month. Monsieur Besson was sixty-eight years of age. He was a Knight of the Legion of Honour, and Vice-President of the Society of Horticulture and Botany.

- THE GALE IN SCOTLAND.—Writing under date November 18th Mr. R. P. Brotherston, Tynninghame, Prestonkirk, N.B., says :- "We have a fearful gale raging here, and great damage done to trees, both deciduous and coniferous.

- THE EAST LONDON FLORICULTURAL SOCIETY, that has up to now had to seek hither and thither for halls in which to make displays, has at last found a habitat at the People's Palace, which ought to be permanent. The large establishment in the Mile End Road ought to make itself the natural centre for all the amenities as well as the realities of East London life. The flower shows are a move in the right direction.

THE ORIGINAL HESSLE PEAR TREE.

I PROMISED to send you an account of the old original Hessle Pear tree. As there has been so much dispute about the name of the Pear, whether it should be Hessle or Hazel, I think when you have read this note you will agree with me it should be the "Hessle."

The tree is situated close to my house, in the garden of Mr. Riplingham, the owner. Mr. Riplingham's father and I have had many a talk about the tree. The family has been in the village for several generations, some 300 years. From what I could gather from him it seems to be supposed that the tree in its young state was brought over here by the Flemings, people who came up the Humber for the purpose of trading some 300 or 400 years ago. I have always said the tree could not be less than 300 years old.

The old trunk, which was some 3 or 4 feet in diameter, blew down, or at least the greater part of it, on the 1st day of August, 1890. It was quite hollow and decayed, with a large wasp's nest inside; but about 16 inches from the old trunk there is a young tree which has sprung up, no doubt a sucker from the original This young tree, 3 feet from the ground, is 37 inches in circumference; 6 feet from the ground it is $34\frac{1}{2}$ inches. When the old tree bore fruit as well as the young one I compared the two, and could not tell one from the other. This proves

that the old tree must have been a seedling.

Some time ago I had a conversation with one of the oldest men in the village. I said to him, "Robert, do you know the old Pear tree?" "Old Pear tree?" he repeated; "I should think I do. Why, I was born close to it. I worked for Mr. Riplingham's grandfather. I can remember the top of the tree blowing off one stormy night, and that will be nearly eighty years ago. Why, it was an old tree then. Old tree! I should think I do," and the poor old man's eyes fairly glistened

with delight.

I have been trying to find out the period when the Flemings traded in this neighbourhood. I wrote to Alderman Symon, the antiquarian of Hull, and he says that in 1290, the eighteenth year of Edward I., Toricius, a Fleming of York, was appointed to price the wine imported into Hull and to gauge the same. I find the same also stated in the History of Hull. So the Flemings must have been here at that time. In the year 1300 King Edward I. crossed over the Humber from Barton in Lincolnshire to Hessle on his way to the north, there being no ferry to Hull at that time. The first ferry from Lincolnshire to Hull was begun in 1316. From these facts I should say that the Flemings would often land at Hessle, and it is quite feasible, that they might have brought the Hessle Pear. I cannot find out any more about the old tree. -EDWIN LORD, Hessle.

[We are obliged by this communication. Hessle is the name to which this useful hardy Pear is entitled. M. Decaisne, a French authority, thought the Pear was of German origin, and says he preferred using the German name Haselnuss (hazelnut) to the French translation—Noisette. The tree as a seedling fruited at Hessle is the Hessle Pear.]

ROYAL HORTICULTURAL SOCIETY.

NOVEMBER 14TH.

SCIENTIFIC COMMITTEE.—Present: Dr. M. T. Masters (in the chair); Mr. McLachlan, Dr. Bonavia, Rev. W. Wilks, Prof. Church, Mr. Veitch, Prof. Müller, Prof. Green, Mr. Michael, and Rev. G.

Henslow, Hon. Sec.

Onions Diseased.—Mr. Massee reported as follows upon the samples brought to the last meeting :- "The Onions are attacked by a Botrytis, the same species as the one described by Prof. Marshall H. Ward in 'A Lily Disease' (Ann. of Bot., vol. ii.). The bulbs cannot possibly be saved now, the fungus having spent its active period on the leaves; while the hypbæ are now passing into the bulb to form sclerotia. If the foliage had been sprayed with a fungicide the mischief would have been kept within bounds. The diseased Onions should be burnt and not thrown on to the manure heap."

Daffodil Bulb Diseased.—He also reported upon the specimen

brought by Mr. Wilks, that a saprophytic fungus was now present, which had followed a disease induced by some other unascertainable

Pears Diseased.—Mr. Massee sent the following additional remarks

upon the fruit reported upon at the last meeting:-"The fungus attacking the Pears first appears upon the leaves, and from thence it passes on to the fruit. The tree should have been sprayed with a fungicide previous to the appearance of bloom, and once or twice after the fruit had set. Bordeaux mixture has been proved effective." A unanimous vote of thanks was given to Mr. Massee for his interesting and valuable reports.

Job's Tears (Coix lachryma, L.).—Mr. McLachlan exhibited a specimen of this Grass, grown in Devonshire in the open air. It is remarkable for the stony involucres, often used as beads. Prof. Churchdrew attention to another species, C. gigantca, Roxb., which is cultivated in the Khasia hills, and elsewhere in Bengal. C. lachryma is not cultivated, though the grain of wild plants is eaten. Prof. Church's analysis of the grain of C. gigantea shows that it contains 16.8 albuminoids, and 59.9 starch, &c., so that its "nutrient value" is very high, being 90 per cent. ("Kew Bul.," 1888. p. 267.)

Sphæria Robertsii.—Mr. James Veitch exhibited specimens of this

well known parasitic fungus of New Zealand issuing from the neck of a large caterpillar (Hipialis virescens). It is called aweto or "vegetable caterpillar." The latter frequents particularly, if not quite exclusively, the Rata tree (Metrosideros robusta), and when the pupa burrows into the ground at the foot of the tree, the spores of the fungus attack it, the mycelium ramifying through the body, while the stem bearing the sporiferous asci issues erect from between the folds in the neck of the caterpillar.

Planorbis Shells Split.—Mr. Wilson sent specimens split transversely, with the following observations:—"The shells are deposited in large numbers on the bent-down rushes at the water's edge of one of our ponds at Oakwood, Wisley. There are no signs of rats near. I much wish to know what cuts them, whether beast or bird." It was suggested by Mr. Michael that if the shell lay half in water a severe frost might possibly have effected it; but they appeared to be quite fresh shells Mr. M'Lachlan suggested herons as having perhaps done The cause of the peculiarity, however, was recognised generally as obscure.

Winter Moth.—Mr. Wilson sent the following observations on this insect:—"On the 3rd of this month there were fifty-four females on the greased bands on our fruit trees at Oakwood. They do not usually appear so early with us. Great quantities of both females and males have been caught since the above date. Perhaps the wood and ponds are attractive to them. We have so few at Weybridge that it is not worth while to band the trees."

Clitoria Ternatea, peloric.—Dr. Bonavia showed photographs and a coloured drawing (by a native) of this plant from India, illustrating transitions from the normal "Pea-like" blossom to the regular or peloric condition, much resembling a Periwinkle. The colour is a bright blue.

It appears to be not uncommon in this species.

Casuarina dimorphic.—Dr. Masters exhibited a specimen received from Baron Von Müller, in which a portion had developed sharp-pointed leaves exactly similar to the pointed-leaved form of Juniperus, which is often dimorphic in the same way. Mr. Henslow mentioned that these changes are paralleled by the Thuja-leaved forms of Veronica, which grow at great altitudes in New Zealand, and observed that analogics seemed to suggest varying degrees of drought or moisture as likely to be the direct cause of the different kinds, respectively.

Wheat-eared Sweet William.—Dr. Masters also showed a specimen of this well-known malformation, in which while the flowers are suppressed, the small bracts at the base become multiplied excessively. Mr. Veitch observed that it is very common and difficult to eradicate.

No cause could be suggested for its occurrence.

Canna, Madame Crozy.—Dr. Masters observed that it has been stated that this variety of Canna was really a very old form, having been figured in Loddiges' Cabinet, No. 449; but, as he pointed out, though the colours were similar, the petals having a yellow rim, the size was very different, the modern form very probably having originated from that older variety.

Germinating Cocoa-nut.-Dr. Masters showed a drawing of the globular cotyledon developed within the cavity and applied against the edible endosperm. With reference to its power of secreting a ferment to digest the food, Prof. Green remarked that he had not succeeded in isolating the ferment: but the epidermis of the cotyledon was quite of the character suggesting the presence of one. He noticed a fatty acid present, apparently indicating reactions produced by some ferment.



PROTESTS AT SHOWS.

I THINK exhibitors in many cases do not properly understand on what grounds a protest can be successful. It is not intended as a means of securing a revision of the Judge's award in matters of mere opinion or pointing, but merely as a safeguard against fraud, non-compliance with the terms of the schedule, questions as to distinctness or otherwise of varieties, or anything of an unexpected nature not within the knowledge of the Judge. - SECRETARY.

CHRYSANTHEMUM LORD ROSEBERY.

New incurved Chrysanthemums are not so numerous as those of the Japanese type, and therefore when a variety of merit is brought forward it is generally welcomed. Mr. Robert Owen, Castle Hili Nursery, Maidenhead, has on many occasions raised and introduced some good incurved varieties, as well as others, and one of his latest is Lord Rosebery, figured in the illustration (fig. 68). It is an English-raised seedling. An award of merit was adjudged for it when exhibited by Mr. Owen at the meeting of the Royal Horticultural Society on November 14th. It has also been certificated at Birmingham. In colour the flower somewhat resembles Miss Violet Tomlin, being bright violet purple, passing to purplish rose with lilac tips; but it is much larger than the variety mentioned, and when well grown will prove a decided acquisition for exhibition purposes. The plant is a moderately vigorous grower, and has very distinct foliage. The bloom from which the engraving has been prepared was grown by Mr. Owen, who informs us that the variety will be distributed next year.

GRASSENDALE SHOW.

THE handsome silver cup, valued at 10 guineas, and presented by the President (A. L. Jones, Esq., Oatlands, Aigburth), to be won twice in succession or three times in all, has been secured, as last year, by Mr. Donald Forbes, gardener to Alfred Holt, Esq., Crofton, Aigburth, with twelve Japanese and twelve incurved. It will be remembered that Mr. Forbes won with forty-eight cut blooms a week ago, and singular to relate, was first in the same class last year.—R. P. R.

THE N.C.S. AND ITS CERTIFICATES.

ALTHOUGH up to the date of the Aquarium Show the Floral Committee of the N.C.S. had awarded twenty-six first-class certificates to exhibitors of Chrysanthemums, "A Mummer" (page 444) may rest assured that a very much larger number have narrowly escaped the distinction. Having been intimately connected with the Society from its commencement as a National one, and a frequent attendant at the meetings of the Floral Committee, I can confidently say that never has there been such a rigid system of selection as during the past year or two, and it really seems as if the standard now required could not be anyhow raised higher. The light anywhere in November, of course, is a disadvantage, but it is consoling to find in the R.H.S. report in last week's Journal that the Floral Committee of that venerable Society are also sometimes placed under a similar disadvantage at the Drill Hall.

CHRYSANTHEMUM CHARLES DAVIS.

As "Querist" (page 445) appears to know there are but few Chrysanthemums in which the colour can be termed fixed. A great deal depends upon the bud selected, the age of the bloom, and in many cases whether the plant is flowered in town or country. I have seen large numbers of this variety during the past few weeks in almost every shade of yellow, but its proper chromatic description is canary yellow suffused with a warm rosy bronze. It is the variety that should be certificated, not any particular tone of colour that the variety may assume; and therefore if presented by two different growers, one having small undeveloped blooms of orthodox hue, and the other large well grown examples in which the colour is less pronounced, the award must justly go to him whose flowers exhibit the greatest skill in cultivation.—P.

CHRYSANTHEMUM BEAUTY OF EXMOUTH.

This variety has not been seen this season in such magnificent form as shown last year. The cause is not far to seek. Beauty of Exmouth is a "wet season" variety, and the past hot weather ripened the wood too much. Most growers have overdone this variety by giving it the same treatment accorded to the majority of the exhibition kinds. The best blooms are produced from strong cuttings rooted in March and plants topped in May, and giving at least 10-inch pots (inside diameter). The object is to reduce the number of petals. The plants should be fed well, especially soon after the buds are taken. Every effort should be made to get what must be avoided in Mrs. Harman Payne and many others—viz., coarseness.—W. J. G.

WHITE VIVIAND MOREL.

I MUCH regret having to differ from those eminent authorities mentioned in last week's Journal (page 445), who considered it would be safe to exhibit blooms of white and pink Viviand Morel as distinct varieties. Last spring I obtained plants of Mrs. W. R. Wells rather late, and everyone gave fine, deep pink blooms. My ordinary stock gave pure white blooms from the earliest crown buds and pink blooms from terminals. If white and pink Viviand Morel can be exhibited as distinct varieties, then the yellow Chas. Davis could be exhibited as "Mrs. Brown," and the bronze as Chas. Davis. When a white sport from Brown," and the bronze as Chas. Davis. When a white sport from Vivand Morel is fixed, the same as "Mr. C. E. Shea." the yellow sport from Mdlle. Lacroix, or Chas. Davis from V. Morel, then, and not until then, should it be safe to show white and pink Viviand Morel as distinct varieties. varieties. Nearly all the pink varieties give (not invariably) pure white flowers from the early buds; as prominent examples I mention Etoile de Lyon and Duchess of Devonshire. The early buds of Louise produce pure white flowers, the later being pink. Mrs. E. G. Hill from crown buds is crimson bronze, from terminal a beautiful clear yellow. many of the Japanese vary not only in colour but in shape or form as well. It simply depends on the different times the buds are "taken."—W. J. GODFREY.

NEXT YEAR'S CHRYSANTHEMUM SHOWS.

THE Committee of the Kingston and Surbiton Chrysantbemum Society announce that their next year's Show will take place on November 13th and 14th. What is determined by the few larger Shows such as Kingston and the National of course materially governs the dates of the smaller Shows, of which there are so many within twenty miles of London, and none of whom wish, if it can be avoided, to conflict with the giants. If the National fixes upon the same dates as Kingston, and it will probably be so, it will at least leave ten days in November that may largely be utilised by the smaller Shows prior to the 13th, whilst very many may perhaps think that a week later—the 20th and following days—rather too late.

The fixing of dates is very much of a lottery so far as securing the best flowers is concerned; but there can be no doubt but that a little early gives better displays than a little late. The present year demonstrated that the Japs were never better than just at the time of the leading shows, and that was fully six days earlier than next year's chief exhibitions may be fixed for. Six days is almost an age in the keeping of fine blooms, especially if the weather be at all damp. Every grower knows that retarding flowers that have reached the maximum of development is far more difficult than is the pushing them on in gentle warmth, if found needful. Of course the coming year's dates will be exceptionally late if the Kingston selection be generally followed but they will productly account to the second of the secon lowed, but they will gradually come a date forward again for several years. Without doubt the 9th and 10th, literally the middle of the second week in November, seems to be about the best average dates. As the 6th and 7th would be too early, and the 13th and 14th rather late, the choice seems in favour of the former. We shall watch the results next year with exceeding interest, but still so much of these results must be contingent upon the nature of the next growing season.—D.

AT CHILWELL.

For a number of years Messrs. J. R. Pearson & Sons have been celebrated for their annual show of Chrysanthemums, and this is no Upwards of 2000 plants are arranged in a lofty structure about 90 feet long and 30 feet wide, and the plants look splendid. They are placed in one broad central bank with a narrow border round next the sides of the house. The collection is kept well up to date by Mr. C. E. Pearson who has this department under his control, all the latest introductions being represented. Owing to the earliness of the season the flowers at the time of my visit were commencing to fade, whereas in an ordinary year they would have been at the summit of their beauty. Though some few may have passed away there still remains a display rich in colour and grand flowers well worthy a long journey to see. Messrs. Pearson are to be congratulated on having such a fine house in which to show their plants are in which the rich that it is the state of which to show their plants, one in which the visitors can walk round in comfort and see every plant and every flower to the fullest advantage. I noted a few of the varieties which appeared to be the most praiseworthy, but doubtless several were missed, as my visit was unformatically being the companion of the c tunately a hurried one.

Particularly striking, immediately on entering, is a grand bright yellow Japanese, named Mons. Pankcoucke, the flower of which is of fine shape and build. Henri Jacotot fils is a chestnut-red-coloured fine shape and build. variety, the florets of which have a yellow reverse, which is extremely attractive. An excellent hairy petalled kind is found in Vancauson Testout. This is a well-formed flower, and is of a bright pink colour, which should make it popular. A grand bloom is Mons. Auguste Perrin, somewhat after the style of Viscountess Hambleden, but of a delicate pink shade. The flower is massive, and almost faultless in shape. Sarah Hill is a clear vallow, the broad florets of which are Sarah Hill is a clear yellow, the broad florets of which are lightly with lilac at their tips. The beautiful blooms of Primflushed slightly with lilac at their tips. rose League are now too well known to readers of the Journal to need any description from me, as also are Lord Brooke, Mrs. Falconer Jameson, Puritan, and Charles Davis, each of which was seen in superb condition. Two bright yellow coloured kinds of merit are Charles Blick and Golden Ball, the latter of which is grand for affording cut blooms. Growing only 2 feet high, it might with advantage be used for decorative purposes. For this latter purpose Ryecroft Glory, clear yellow, is perhaps unsurpassed; and Sydenham Terra Cotta is a kind which might be grown with advantage. Both are free blooming, and the former especially is one of the most useful for October flowering.

A charming variety is found in Mrs. Libbie Allen, and the enormous blooms of Mrs. C. Harman Payne attract universal attention and admiration. Many superb flowers of Miss Anna Hartshorn are to be seen, and also of Florence Davis, W. H. Lincoln, and Viviand Morel. The dwarf habit and brilliant colouration of G. W. Childs render it a variety of the utmost utility. Mrs. Robt. Craig is a good incurved of a delicate rose colour. The bloom is deep with somewhat pointed florets. A substantial flower is Miss Ada MacVicar, and the primrose yellow flowers of The Tribune last in good condition for an unusually long time. A kind which promises well is Miss Maud Pearson, delicate pink in colour, as also does The Queen, a white variety, the petals of which are splashed with purple. Amongst the numerous other varieties noticed were Colonel W. B. Smith, White Louis Boebmer, and Baron Hirsch.—NOMAD.

of the Society ten years ago has been

well maintained, the entries in almost all classes and divisions having increased in

NATIONAL CHRYSANTHEMUM SOCIETY.

THE General Committee of this Society held a meeting on Monday last at Anderton's Hotel, when Mr. R. Ballantine occupied the chair.
Most of the business was of a purely formal nature, and the correspondence read related to proposed alterations in various classes, all of which were referred to the Schedule sub-Committee for consideration. The awards made by the Arbitration Committee at the November Show were then submitted for confirmation, and comprised silver-gilt medals to Mr. Robert Owen, Mr. H. J. Jones, Messrs. Cutbush & Sons, and B. S. Williams and

Son; silver medals son; silver medals to Messrs. Shuttle-worth & Co., Mr. H. Berwick, Mr. Godfrey, Messrs. H. Cannell & Sons, and Messrs. J. Laing and Sons; bronze medals to Messrs Cannell and Messrs.Cannell and Mr. W. E. Boyce for their exhibits of flowers and vegetables. The Chairman announced that the Show was quite a success both as regards the attendance of the public and the quality of the exhibits.

The Secretary reported that income to the amount of £525 11s. 8d. had been received up to date, the principal items being £142 19s. 6d. for annual subscriptions, £13 13s. 6d. donations. £39 7s. affiliated societies' fees, £31 12s. 6d. for medals, and £4 4s. for sale of catalogues. On the subject of the shows for 1894 it was intimated that they will probably be the same as those for the present year, viz., one in September, held by the Aquarium Company, towards which the Society will contribute money prizes for Chrysanthemums; one in October, November, and December. Some dis-cussion thereupon ensued as to the advisability of finding a fresh place for the Society's shows, but the proposition was negatived.

The annual dinner, as already announced, will be held at Anderton's Hotel on the 30th inst., and all arrangements for it

have now been completed. Sir Edwin Saunders will occupy the chair. Twenty-four new members and Fellows were elected, making a total for the year of 150.

Mr. C. E. Shea was prevented by indisposition from reading his promised paper on "Judging," but had sent it for the Secretary to read if agreeable to the members. Mr. Beavan moved that the reading of it be deferred until Mr. Shea was well enough to attend personally, as the state of the fair to the

thought any discussion arising upon the subject would not be fair to the author, and this view received the support of the members present.

Questions were raised as to the advisability of ladies being invited to be present at the annual dinner, the extension of the radius in the metropolitan classes and the meeting closed at a rather earlier hour

metropolitan classes, and the meeting closed at a rather earlier hour than usual

CHRYSANTHEMUM SHOWS.

HULL.—NOVEMBER 15TH AND 16TH.

As briefly mentioned in our last issue, the annual Chrysanthemum Show of the Hull and East Riding Society was held in the Artillery Barracks at that town on the above dates. The Society is one of the most enterprising and at the same time one of the most successful in the country, and as regards quality no better exhibits can be seen anywhere. The advance which has been manifest every year since the formation

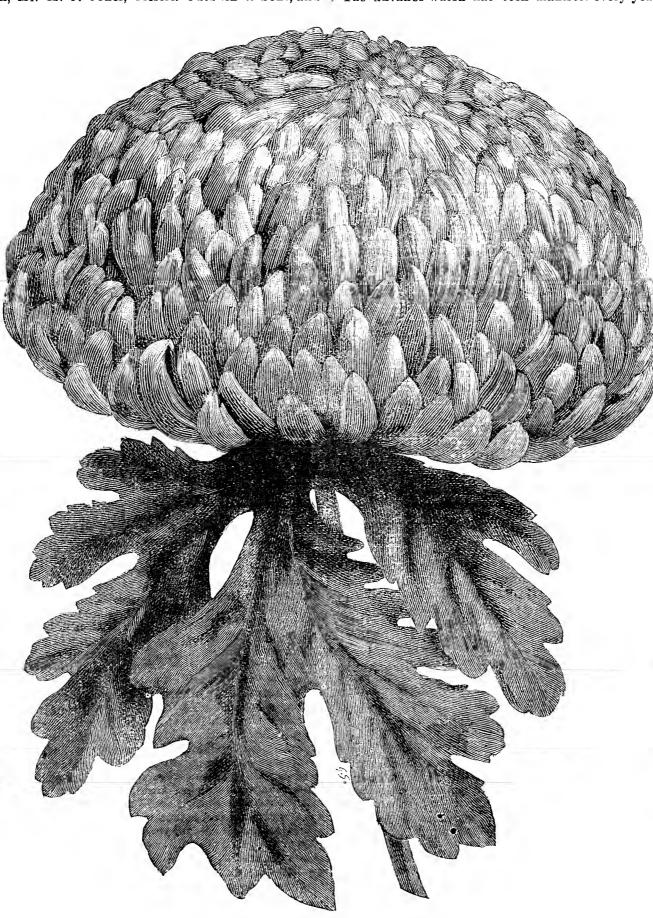


FIG. 68.—CHRYSANTHEMUM LORD ROSEBERY.

Another novelty introduced this year was a class for twenty-four blooms Japanese, distinct, to be arranged with or without foliage of any kind as the exhibitors chose. The object of this class was to introduce a less formal system of arrangement than that now in vogue, the merits of the flowers being primarily considered, but artistic staging was a necessary adjunct. The competitors numbered three, and the first prize stand left little to be desired either in quality of the flowers or in the exquisite taste displayed in arrangement. The prizes, which included several handsome vases and cups figured in the Journal of Horticulture for October 12th (page 339), amounted in value to appeared of \$200 in for October 12th (page 339), amounted in value to upwards of £200, in consideration of which it is by no means surprising that the entries should be so large, the quality so high and the competition so keen. The management of the Exhibition, in the hands of Mr. R. Falconer

number, totalling 430—the highest yet attained. The classes for lady competitors blowed a slight depreciation, but the quality was grandly upheld. The in-crease was most noticeable in the division for plants, once the weakest part of the show. The groups, for which the Hull Show has long been celebrated, were quite up to the usual standard, and that is a high one. An innovation, in the shape of a class for a group of foliage plants, arranged for effect, brought but two exhibits, both these peing magnificent examples. The section Japanese contained many superb blooms, and the incurved were amongst the very finest that have been staged at any show this season. As evidence of the advance made by this Society we give the number of entries in the classes for cut blooms this and last season:—Ex-hibits in 1892,151; in 1893, 194, an increase of 43. Number of blooms staged in 1892, 1947; in 1893, 2728, an advance of 781. In the plant section, exclusive of groups, the ex-hibits in 1892 were 55; in 1893, 88, an increase of 33; and the plants staged were, in 1892, 188, and in 1893, 293, an advance of 105.

Jameson, Chairman of the Society, Messrs. E. Harland and J. Dixon, the Honorary Secretaries, and the Committee were thoroughly carried out, and reflected much credit on all those concerned. Especially praiseworthy was the promptitude with which the Judges commenced their duties, an example which might well be followed by numerous other societies throughout the kingdom. We append a list of the prizewinners in the principal classes, space not allowing of the whole being mentioned.

Groups and Trained Plants.-In the class for a group of Chrysanthemums interspersed with foliage plants, arranged in a space not exceeding 100 square feet, and with the first prize of which went a silver challenge cup, which must he won three times before becoming the absolute property of anyone, there were four competitors, the premier award going to Mr. Coates, gardener to W. Wheatley, Esq., 7, Milton Terrace, Anlaby Road, Hull, for a charming arrangement. The Chrysanthemums were magnificent examples of high culture, and the foliage plants were intermingled in a highly artistic manner. Mr. G. Cottam, jun., Alma Gardens, Cottingham, was a good second, his blooms being scarcely so well finished as those of the above named. The third prize went to Mr. Murchison, gardener to F. B. Grotrian, Esq., J.P., West Hill House, Hessle, and the fourth to Douglas C. Joy, Esq., Wetton Hill, Brough. For a group of miscellaneous plants arranged for effect in a space of 100 square feet, Mr. J. Wilson, gardener to J. Reckitt, Esq, Swanland Manor, was deservedly placed first. The plants, which included amongst others Crotons, Calanthes, Cypripediums, Asparagus and Dracænas, were perfectly grown specimens, in the placing of which really exquisite taste had been displayed, the group producing a light and graceful effect which left nothing to he desired. Cottam's exhibit, which took the second prize, Chrysanthemums, Liliums, and Palms were most prominent, all being well grown, clean, healthy looking plants.

Mr. Hemming, gardener to E. Leetham, Esq., Beech Holme, Newland, was placed first for three trained specimen plants, exclusive of standards, with highly creditable examples of Mrs. G. Glenny, Mrs. Rundle, and Mrs. Dixon, each of which carried handsome blooms. Mr. Coates was a good second, and Mr. H. H. Taylor, Newland, third. For three standard trained plants Mr. Hemming was again first, staging precisely the same varieties as in the class previously named. Mr. Mason, gardener to Colonel A. K. Dibb, Kirk Ella, being second, and Mr. H. H. Taylor third. For three pyramid trained specimens the same exhibitor who took the premier position in the two classes above mentioned was first with good examples, the second position being again taken by Mr. Mason.

In the class for six plants, bush grown, not formally trained, Mr. W. Goodhill, 32, Stanley Street, Hull, was first with excellent examples of W. H. Lincoln, Val d'Andorre, Mons. Bernard, Viviand Morel, Avalanche, and Margot. Mr. H. H. Taylor was an excellent second; and Mr. T. Smith, Norwood Nursery, Beverley, a fair third. Mr. W. Goodhill was also first for three bush-grown plants with Val d'Andorre, Mons. Bernard, and Avalanche, all in very fine condition. The second and third prizes were accorded to Messrs. Hemming and H. H. Taylor in the order of their names. There were ten competitors in the class for six "cut-backs," any varieties, and the competition was close. Mr. H. H. Taylor gained the premier award, staging grand plants of Viviand Morel, Florence Davis, Sunflower, and Gloire du Rocher. Mr. Coates was second. Mr. Willey, gardener to C. J. Ringrose, Esq., Cottingham Grange, third.

The three classes next following were restricted to amateurs or those employing only one gardener, and the competition ran high. For three bush-grown plants, Mr. F. Pape, Butcher Row, Beverley, was first; Mr. Coates second; and A. Mayfield, Esq., Beverley Road, Hull, third. Mr. Coates was first for three trained specimens, A. Mayfield Esq., being second, and Mr. R. Thirsk, Grovehill Road, Beverley, third. In the class for one trained specimen, Mr. Thirsk took the premier position, A. Mayfield, Esq., being second, and Mr. Coates third.

In the class for twelve table plants in pots not exceeding 6 inches

In the class for twelve table plants in pots not exceeding 6 inches in diameter, Mr. J. Wilson was a splendid first, Mr. Leadbetter, gardener to A. Wilson, Esq., Tranby Croft, Hull, being second, and Mr. Hemming third. Mr. Hemming was first with six plants suitable for table decoration; Mr. Lawton, gardener to Colonel W. H. Harrison Broadhy, Welton House, was a very close second; and Mr. Cottam third.

Blooms.—As has been said this section of the Exhibition was represented by numerous superb examples. One of the principal classes was for twenty-four incurved in not less than eighteen varieties, and not more than two of any one kind. To the first prize a silver cup was added, and the competition between the seven stands staged was close, the premier position eventually being assigned to Mr. Lees, gardener to A. Bevan, Esq., Trent Park, New Barnet, who staged-Golden Empress of India, Lord Alcester, Hero of Stoke Newington, Golden Empress, Lord Wolseley, Princess of Wales, Hero of Stoke Newington, Lord Alcester. Middle row: Princess Teck, Violet Tomlin, Mrs. Coleman, Lady Dorothy, Miss M. A. Haggas, Lord Wolseley, Mrs. Coleman, and Lady Dorothy. Front row: Prince Alfred, Empress of India, Nil Desperandum, Jeanne d'Arc, Robt. Cannell, John Lambert, John Salter, and John Doughty. All these blooms were grand and perfectly finished. Mr. Shoesmith, gardener to M. Hodgson, Esq., Shirley, Croydon, was second with fine though somewhat flatter flowers. Mr. P. Blair, gardener to the Duke of Sutherland, Trentham, was third with flowers which lacked the finish so noticeable in the two previously named. There were five stands competing in the class for twelve incurved, distinct, the quality of the blooms being first rate throughout. Mr. Musk, gardener to Lord de Ramsey, Haveringland Hall, Norwich, was placed first with-back row: Princess of Wales, Violet Tomlin,

Guernsey Nugget, Camille Flammarion. Middle row: Miss M. A. Haggas, Novely, John Salter, Alfred Lyne. Front row: Mrs. Heale, Jeanne d'Arc, Empress of India, and Princess Teck. This was a superb exhibit in every way worthy of the high position accorded it. The second prize went to Mr. Leadbetter, gardener to A. Wilson, Esq., Tranby Croft, Hull, whose stand was but few points behind that of Mr. Musk, and the third to Mr. Blair with creditable blooms. For twenty-four Japanese, distinct, Mr. Shoesmith was accorded the highest position and took the silver cup given with the first prize. The flowers exhibited were perfect in finish and weighty. The following varieties were represented—back row: Viviand Morel, Mdlle. Marie Hoste, Edwin Molyneux, Mrs. E. D. Adams, Mrs. C. Harman Payne, Madame Calvat, Charles Shrimpton, Etoile de Lyon. Middle row: W. W. Coles, Gold en Wedding, Ruth Cleveland, Colonel W. B. Smith, Mrs. Wheeler, G. C. Schwabe, Mrs. E. W. Clarke, Mons. Bernard. Front row: Mdlle. Thesese Rey, J. Shrimpton, Lord Brooke, W. H. Atkinson, W. H. Lincoln, Le Verseau, Wm. Seward, and Sunflower. Mr. Heany, gardener to H. G. Schintz, Esq., Mossley House, Liverpool, was second with a heavy stand, Mr. Musk being a good third. Mr. Lees was first for twelve Japanese, staging splendid blooms. A fine second was found in Mr. Musk, the third position going to Mr. Shoesmith.

One of the novelties to which brief reference was made in the introduction was for twenty-four Japanese, arranged with any foliage, according to the taste of the exhibitor, on a table space not exceeding 6 feet in length by 2 feet 6 inches in width. The object of this class says the schedule was to introduce a more tasteful manner of staging highly developed blooms, therefore first quality blooms were indispensable. At the same time artistic arrangement was an essential, and was duly considered by the adjudicators. The first prizewinner (Mr. Musk) had grasped the full meaning of the schedule, and arranged a superb exhibit. From a groundwork of heautifully green Fern arose the splendid Chrysanthemums interspersed in a highly artistic manner with light and elegant foliaged Palms. Amongst the best of the varieties utilised were Sunflower, Viviand Morel, Florence Davis, G. C. Schwabe, Edwin Molyneux, and Avalanche. The second prize was awarded to Mr. Wilson with a highly creditable arrangement, and the third to Mr. Jarvis, gardener to B. Whitaker, Esq., Cliff House, Hessle. In the class for six bunches of incurved, Mrs. George Rundle, Mrs. Dixon, and George Glenny, two bunches of each, three blooms to constitute a bunch, Mr. Goodhill was a good first with clean, shapely examples; Mr. Waterhouse, gardener to H. Witty, Esq., The Wellingtonias, Cottingham, being second; and Mr. Wells, Earlswood Nurseries, Redhill, third. Mr. Blair was an excellent first in the class for six incurved, one variety, with handsome blooms of John Salter; Mr. Musk being second with Madame Darrier; and Mr. Pike, gardener to C. H. Wilson, Esq, M.P., Warter Priory, third with John Salter. There were ten competitors in the class for six Japanese, one variety, some magnificent flowers being Mr. Shoesmith, with superb Colonel W. B. Smith, was first; closely followed by Mr. Leadbetter, with charming, refined examples of Madame Baco; the third prize being awarded to Mr. J. W. Backhouse, Beverley, with highly creditable blooms of Avalanche. Mr. Mason, gardener to A. Smith, Esq., Woodleigh, Hessle, was first for twelve large Anemones, in not less than six varieties; Mr. Davidson, gardener to R. Jameson, Esq., J.P., East Ella, was a good second; and Mr. Burrows, gardener to Sir Henry Bennett, Westlands, Grimsby, third. Mr. Mason was again first in the class for twelve Japanese Anemones. Mr. Burrows was second. For twelve reflexed, in not less than six varieties, Mr. Davidson was first with excellent blooms. second and third prizes were awarded to Messrs. Heany and Burrows in the order of their names.

Mr. Walker, gardener to Colonel Stracey Clitherow, Hotham Hall, Brough, was accorded the premier position in the class for twelve sweet scented Chrysanthemums, Mr. Drewery, gardener to Edward Harland, Esq., The Sycamores, Cottingham, being second, and Mr. W. Wells third. For twelve hairy flowered varieties Mr. G. E. Smith, Floral Cottage, Paull, was first with charming blooms, and Mr. W. Wells second. Mr. Drewery was a good first for twelve bunches of Pompons, Mr. Hemming being second, and Mr. G. E. Smith third. For twelve bunches of singles with foliage as grown Mr. Drewery was first, Messrs. Walker, and G. E. Smith being second and third respectively. Mr. Crook, gardener to the Dowager Lady Hindlip, Hadsor House, Droitwich, was first in the class for three blooms of Beauty of Exmouth, showing creditable examples, Mr. Walker being second.

The only competitor in the class for a table of bouquets, wreaths, sprays and buttonholes, to be composed of Chrysanthemums and any kind of foliage, was Mr. H. H. Taylor, Newland, who was deservedly awarded the premier position for a charming and highly artistic exhibit. The same exhibitor was first for a hand bouquet with a beautiful example of taste and skill, Mr. Cottam being a good second, and Mr. Backhouse third.

The class for twelve incurved, distinct, for growers residing in Lincolnshire within twenty miles of Hull or anywhere in the East Riding of Yorkshire, brought seven stands, and the first prize was awarded to Mr. Burrows. Messrs. Jarvis and Pike were placed second and third as mentioned. In the class for twelve incurved, in not less than nine varieties or more than two blooms of one kind, subject to the same residential qualifications as the previous class, Mr. Davidson was first, Mr. J. Clark, Cromwell Road Nurseries, Grimsby, second, and Mr. Lawton third. For twelve Japanese, distinct, with the first prize of which went a silver cup, there were ten competitors, Mr. Burrows being eventually accorded the premier position. The second prize went to Mr. Walker with small refined flowers, and the third to Mr. Willey,

gardener to C. J. Ringrose, Esq., Cottingham Grange. In the class for twelve Japanese, in not less than ninc varieties or more than two blooms of any one kind, Mr. Willey was first, Mr. Walker second, and Mr. Jarvis third. The two following classes were only open to amateurs and those employing one gardener with no casual assistance whatever. For twelve incurved, in not less than six varieties, Miss Veal, Westland Corner, Bargate, Grimsby, was placed first, J. A. Hudson, Esq., Long-croft, Beverley, second, and Mr. Waterhouse third. Miss Veal was again first for twelve Japanese in not less than six varieties, Mr. Waterhouse being second, and J. A. Hudson, Esq., third.

The leading incurved bloom in the open classes was a superb example of Lord Alcester shown by Mr. Lees, and the premier Japanese a perfect flower of Chas. Davis, exhibited by Mr. Heany. In the amateurs' division the leading incurved was Jeanne d'Arc, in finc form, staged by Mr. Stanley, and the best Japanese a magnificent Stanstead White, shown

by Mr. Backhouse.

In the amateurs' classes for cut blooms the competition was remarkably keen, the blooms staged being highly creditable to their respective growers. For twelve incurved in six varieties, with the first prize of which was given a silver cup, Mr. A. W. Stanley, De-la-Pole Estate, Newington, Hull, was awarded the premier position. A silver cup also went with the first prize in the class for twelve Japanese in ninc varieties, Mr. W. H. Clarke taking the leading position. Plants in pots were also extensively shown in this section, and the greatest credit is due to the growers for the good quality of their exhibits. The number of exhibits in the classes for table decorations, bouquets, and sprays, open to ladies only, showed a slight decrease from those of last year; the quality, however, was excellent.

Miscellaneous exhibits were not very numerous, but the quality throughout was exceptional. The Hull Corporation arranged a grand group which would have gained a position had it been staged for competition, the Chrysanthemums being fine and the foliage plants clean and healthy. Table plants, in magnificent condition, were also staged by the Corporation. Messrs. E. P. Dixon, seed merchants, Hull, had a prominent stand of foliage plants and fruits. Mr. R. J. Woolton, New-Messrs. E. P. Dixon, seed merchants, Hull, had a land Toft Nursery, Hull, one of Chrysanthemums and Ferns; Mr. J. W. Wilson, F.R.H.S., South Cave, one of Orchids, Ferns, and Palms; the Rev. W. M. Bennett, M.A., Elloughton, one of Pompons, and Mr. Wm. Martin, seedsman, Market Place, Hull, one of bulbous roots.

BIRMINGHAM.—NOVEMBER 15TH AND 16TH.

A MAGNIFICENT exhibition was held in the Town Hall on the dates named. Birmingham has long been noted for its splendid autumn shows, but taking all the exhibits into consideration—Chrysanthemums, miscellaneous plants, fruit and vegetables-no finer exhibition has ever been held than the present one. Nowhere can keener competition be found in the cut bloom classes. The groups of Chrysanthemums in pots and the specimens made a fine display. Primulas were magnificent, and so were the Grapes as well as the hardy fruit. The arrangements were perfect, under the direction of Mr. Hughes, ably assisted by an efficient Committee.

Plants were numerously shown and in grand condition. For nine large flowered, Japanese excluded, £5 was offered as first prize. Mr. Dyer, gardener to Mrs. Marigold, Edgbaston, was an easy first with specimens not too formally trained, carrying about forty blooms each and splendid foliage; John Salter, Barbara, and Prince Alfred were especially noticeable. Mr. J. Maldrum, gardener to G. Cadbury, Esq, Selly Oak, was a good second, and Mr. A. Cryer, gardener to J. A. Kendrick, Esq., Edgbaston, third. Messrs. Dyer and Maldrum were placed in the same position for six large flowered with meritorious examples.

For three Japanese Mr. Dyer was again successful, having Florence Davis, W. H. Lincoln, and Viviand Morel in admirable condition. Mr. Maldrum was second. Messrs. Dyer, Maldrum and Cryer were placed in the order named for a single specimen, incurved variety. Mr. Dyer, with a grand plant of Florence Davis, won the premier award for single specimen Japanese, Mr. Maldrum following with Val d'Andorre. Mr. J. Maldrum won with three Pompons, showing freely flowered examples of Golden and White Cedo Nulli and Sœur Melanie. Mr.

Cryer was second.

Groups of Chrysanthemums were largely contributed. In the class for a group of 100 square feet area there were seven competitors; £10 was offered for first prizes with others of handsome proportion. Mr. W. Earp, gardener to the Right Hon. Joseph Chamberlain, M.P., Birming-ham, was an easy first with a magnificent group, mainly composed of Japanese varieties, the blooms being quite up to exhibition form. The plants were not too crowded, as is the case in many groups, but they displayed their individuality. A few well grown plants of Cocos Weddelliana were effectively arranged among the Chrysanthemums, thus relieving the surface of bloom. A neat edging of Ferns and Crotons completed an excellent group. Mr. Dyer was second with an admirable arrangement. Mr. P. H. Jones, gardener to F. Jenkins, Esq., Olton, was third with dwarfer plants, beautifully fresh, but they were a trifle grounded. trifle crowded. In a smaller group of Chrysanthemums, Ferns, and foliage plants there were seven competitors. Mr. J. Maldrum won premier honours rather easily with plants carrying grand flowers, well grown Cocos Weddelliana, with highly coloured Croton, Eulalias, and Ferns, all lightly arranged. Mr. W. Clements, gardener to Mrs. Horton, Moseley, was second; and Mr. S. Gibbs, gardener to J. B. Marley, Esq., Harborne, third, both showing well.

Cut blooms were staged in sufficient numbers to make a show in

themselves. Prizes of £10, £7 10s., £5, £2 10s., £1 10s., and £1 were

offered for twenty-four incurved blooms, distinct, which produced twelve Mr. Nevc, gardener to C. Van Raalte, Esq., Aldenham Abbey, Redleet, Herts, just managed to secure leading honours by the superior quality of his blooms, which were rather undersized but beautifully fresh and well finished. The varieties were—Back row: Golden Empress, Empress of India, Mons. R. Bahuant, Lord Alcester, Alfred Salter, Emily Dale, Robert Cannell, and Queen of England. Middle row: Madame Darrier, Camille Flammarion, Princess of Wales, Lord Wolseley, Jeanne d'Arc, Prince Alfred, Miss M. A. Haggas, and Violet Tomlin. Front row: Princess Beatrice, Mrs. Coleman, Hero of Stoke Newington, Princess Teck, Lady Dorothy, White Venus, Madame F. Mistral, and Golden Eagle. Mr. A. Haggart, gardener to Mr. J. J. Foster, Ludlow, was second. His blooms were heavier, but lacked the finish and quality of the first prize stand. Messrs. Ray & Co., Teynham, was third; Mr. C. Smith, gardener to W. Showell, Esq., Bellbroughton, fourth. superior quality of his blooms, which were rather undersized but

For eighteen incurved, distinct, five competed, Mr. C. Smith winning with medium-sized neat blooms. Mr. C. Crookes, gardener to Lady Hindlip, Droitwich, was second, and Mr. Haggart third. Mr. Crookes won with twelve incurved, distinct; Mr. Haggart second, and Mr. S. Bremmell, gardener to H. H. F. Hayhurst, Wellington, third, ten

competing.

Japanese blooms made a magnificent display, no less than twenty competing in the class for twenty-four, distinct, similar prizes being offered as for incurved. Mr. R. Parker, gardener to J. Corbett, Esq., offered as for incurved. Mr. R. Parker, gardener to J. Corbett, Esq., Impney Hall, Droitwich, succeeded in winning the coveted award with a stand of heavy biooms, well displayed. The varieties were—Back row: Etoile de Lyon (grand), Van den Heede, Florence Davis, Mrs. C. H. Payne, Colonel W. B. Smith (fine), Madame Octavie Mirbeau (charming), Boule d'Or, and Viviand Morel. Middle row: W. H. Lincoln, E. Molyneux, Lady Lawrence, G. C. Schwabe (good), Mdlle. Thérèse Rey, W. Seward, and Sunflower. Front row: Madame Isaac, President Borel, Le Verseau, C. Blick, G. Herrin, M. E. A. Carrère, and Mrs. F. Jameson. Mr. Haggart was a good second; Mr. W. Earp third: and Mr. Neve fourth. third; and Mr. Neve fourth.

Mr. Haggart won premier position in the class for eighteen, distinct, with grand blooms. Mr. C. Smith was second, and Mr. R. Parker a very close third. The competition in the class for twelve Japanese, distinct, was keen, but Mr. J. Austin, gardener to the Earl of Dudley, Witley Court, was ahead with grand blooms. Mr. Haggart was second, and Mr. Bremmell third. Mr. Hewitt, Solihull, staged the best Anemones, a fairly good stand. Mr. J. Justice, gardener to Sir G. Temple, Bart., Kempsey, was second. Miscellaneous plants were largely contributed, though space forbids full details being given.

Birmingham has always been notable for its Primulas. For twelve singles, Mr. F. Denning, Hall Green, vas no exception. Moseley, won with fine plants; Messrs, Thomson, Spark Hill Nurseries, second; and Messrs. Popc & Sons third. For six doubles Mr. Denning Six Fern-leaved, Messrs. Pope again won, Messrs. Thomson following. first, Messrs. Thomson second. In the classes set apart for gentlemen's gardeners only, Mr. P. H. Jones, gardener to F. Jenkins, Esq., Olton, won first honour for twelve, and also for six with magnificent examples, also securing the silver medal for excellence of culture. Mr. Coldecott, gardener to W. Matthews, Esq., Edgbaston, was second in the former class. Cyclamens were grandly shown by Mr. Earp in the classes for both twelve and six plants. Bouquets were a feature of the Show, Messrs. Perkins winning with a magnificent arrangement, mainly of Orchids, in

Fruit can only briefly be noticed. Mr. Goodacre won the premier award for six bunches of Grapes with grand examples of Gros Colman, Muscat of Alexandria, Alicante, White Tokay, and Gros Maroc. Mr. Bannerman, gardener to Lord Bagot, Rugeley, second. Mr. J. Bates, gardener to T. T. Harris, Esq., Stone, won for three bunches black Grapes with Fros Colman, among nine good exhibits; and also for one bunch black. For two bunches any white variety, Muscats excluded, Mr. J. Waldron won with White Nice. For three bunches of Muscats, Mr. W. Earp A magnificent collection of eight dishes of Pears won for Mr. Austin the first prize. They were grand fruits of Béurre Diel, Marie Louise, Durondeau, Bergamot Esperen, Josephine Gregoire, Glou Morçeau, Easter Beurré, and Beurré Rance. Mr. Austin also won first honours for one Pine, staging a good example of Smooth Cayenne.

RUGBY .-- NOVEMBER 15TH AND 16TH.

THE seventh annual Show of the Rugby Chrysanthemum Society was held in the Town Hall on the above dates. The arrangements, under the superintendance of the able Secretary, Mr. W. Bryant, were excellent in every way. There was a considerable increase in the number of entries this year, the total being 300, against 217 of the previous show.

The leading class was for thirty-six blooms, eighteen incurved and eighteen Japanesc, distinct, the first prize being £5 and a special prize value £1 Is., together with a certificate of the N.C.S. Mr. W. Pearce, gardener to S. Loder, Esq., Floorc House, Weedon, secured the premier position, having a grand stand of blooms, the Japanese being especially good in form and colour. The following were the varieties most worthy of recognition. Beauty of Castle Hill, Puritan, Bouquet des Dames, Edwin Molyneux, Mdlle. Marie Hoste, Louis Boehmer, J. Stanborough Dibben, Mrs. Falconer Jameson, W. H. Lincoln, Viviand Morel, Florence Davis, Comte de Germiny, Stanstead White, Mrs. E. W. Clarke, Avalanche, Etoile de Lyon, Boule d'Or, Mrs. E. W. Wheeler, Golden Empress of India, Robert Cannell, John Lambert, Refulgens, Alfred Lyne, Mrs. N. Davis, Lord Alcester, Jardin des Plantes, Lady Dorothy,

second.

Queen of England, Prince Alfred, and Lord Eversley. Mr. W. Tustin, gardener to Arthur James. Esq., Coton House, Rugby, was a good second, his best blooms being Miss M. A. Haggas, Empress of India, Lord Alcester, Ralph Brocklebank, and Condor. Mr. Harman, gardener to the Right Hon. Earl of Denbigh, was a creditable third with a stand of neat blooms. For the premier incurved bloom in the Show, Mr. Tustin was to the front, having a splendid example of Miss M. A. Haggas, and with a grand flower of Viviand Morel, Mr. Pearce secured the award for the premier Japanese.

In the class for twenty-four blooms (Japanese), Mr. Pearce was again first, his best varieties in this class being Viviand Morel, Mrs. C. W. Wheeler, Madame Clemence Audiguier, Thunberg, Mrs. E. W. Clark, Stanstead White, Florence Davis, Miss Lilian Bird, Mdlle, Marie Hoste, Mr. A. H. Neve. As in the previous class Mr. Tustin was a good second, the third prize going to Mr. Harman. For twenty-four incurved Mr. Harman succeeded in securing first honours with medium-sized but well-finished blooms. For twelve blooms, incurved, the first and second prizes fell to Mr. Pearce and Mr. Tustin in the order named, the third being awarded to Mr. Dunkley, gardener to S. Symington, Esq., J.P. Brooklands House, Market Harborough. For twelve Japanese Mr. Tustin was first, the second prize in this class going to Mr. F. J. Blake, gardener to G. Singer, Esq., Counden Court, Coventry. Mr. Tustin was again first for six incurved and six Japanese, distinct. Mr. J. Blakeway, gardener to P. A. Muntz, Esq., M.P., Dunsmore, Rugby, was a close second; and Mr. J. Newman, gardener to Mrs. Morgan, Moulsworth, Bilton Road, Rugby, third. For twelve blooms, incurved, Mr. Tustin was again to the front, Mr. J. Blakeway and Mr. J. Newman following in the order named. For twelve Japanese Mr. Blakeway was an easy first, Mr. Tustin second, and Mr. J. Newman third.

For a group of Chrysanthemums arranged in a space equal to 60 square feet, the number of varieties, quality of blooms, and general effect to be the leading feature, Mr. J. Blakeway was an easy first. Mr. A. J. Kilbourne, gardener to Miss Bridgman Simpson, Bilton Hall, Rugby, was second. For a special group, arranged in a space equal to 40 square feet, the leading honour went to Mr. J. Frost, James Street, Rugby; Mr. J. W. Morris, gardener to A. E. Donkin, Esq, Rugby, being placed second. Mr. J. Newman gained the first prize in the class for four trained specimen Chrysanthemums, Mr. J. Blakeway being

Fruit was extensively shown, and was of excellent quality. Two magnificent bunches of Muscat of Alexandra Grapes secured for Mr. Harman the premier award, Mr. J. Blakeway being second with some well finished bunches of Black Alicante. Apples were remarkable for their size and colour, Pears being also of an excellent quality. Amongst the chief prize winners may be mentioned Messrs. Pearce, Blakeway, Morris, and Newman. The display of vegetables exhibited this year totally eclipsed that of any previous occasion, but space precludes entering their good qualities here.

SOUTH SHIELDS .-- NOVEMBER 15TH AND 16TH.

"A SPLENDID Show" was the verdict pronounced by everyone who saw the South Shields and Northern Counties' Exhibition held in the Royal Assembly Hall of that town. The competition in nearly all the fifty-two classes was keen, and while the productions in the Chrysanthemum classes were of the very highest merit, the produce in both the Grape and vegetable classes were very superior.

For twenty-four Japanese, not less than twelve varieties, Mr. P. Blair, Trentham Gardens, Stoke-on-Trent, gained first honours with Puritan, Beauty of Castlewood, Viviand Morel, R. C. Kingston, M. Rivon, Sunflower, Etoile de Lyon, Beauty of Castlewood, Chas. Blick (very good), W. Shrimpton, Mrs. A. H. Neve, Viviand Morel, G. C. Schwabe, J. S. Dibben, Vice-President Audiguier, C. Blick, Mrs. E. W. Clark, Dorothea Shea, G. Atkinson, Etoile de Lyon, Puritan, Excelsior, Vice-President Audiguier, and John Dyer. Mr. Thos. Wheeler, gardener to C. Mitchell, Esq., Jesmond Towers, Newcastle, was second with fresh and massive blooms. Mr. James Coultas, gardener to Alderman Harding, J.P., Darlington, was placed third, and Mr. G. E. Smith, Floral Cottage, Paull, near Hull, fourth. Eight collections were staged.

In a corresponding class for twenty-four incurved, Mr. Blair was again to the front with a good collection, consisting of Lord Alcester, Violet Tomlin, Queen of England, Empress of India, Novelty, Lord Wolseley, Alfred Salter, Princess of Wales, Mrs. Heale, John Salter, John Doughty, Alfred Lyne, Baron Hirsch, Golden Empress, Prince of Wales, Camille Flammarion, Alfred Salter, Empress of India, John Lambert, and Madame Darrier. Mr. James Coultas was placed second, staging large but somewhat flat blooms, Queen of England, Jeanne d'Arc, and Nil Desperandum being his best flowers. Mr. Smith gained the third place, and Mr. G. W. Pinkney the fourth.

For eighteen Japanese, twelve varieties, there were seven competitors, first honours being secured by Mr. George Craig, gardener to Mrs. Barclay, Richmond. Mr. Wheeler was close second, and Mr. George Smith a good third. There were the same number of exhibits in the corresponding class for eighteen incurved, and Mr. Blair was well to the front, Messrs. Smith & Pinkney sharing the other prizes in the order of their names. There were nine collections of twelve Japanese, distinct, the best coming from Mr. Wheeler, Mr. Blair, and Mr. Craig, being placed second and third respectively. Mr. J. Corbett, gardener to the Marquis of Normanby, Mulgrave Castle, Whitby, was awarded the first position for twelve incurved distinct, while Mr. Coultas and Mr. Richardson shared the other awards as here given. Anemones were represented by six collections, the best coming from Mr. Wheeler,

Messrs. Smith & Blair being second and third respectively; reflexed and Pompons were also well represented, and shown in high order of cultivation. Hand bouquets, bridal bouquets, epergnes, lady's sprays and buttonholes were staged in profusion, and added immensely to the attractions of the Exhibition.

Groups of Chrysanthemums and other flowering and foliage plants were pleasingly arranged, and the class found nine competitors, Mr. J. Wood, Riverside Gardens, Morpeth, was a good first; Mr. H. Brown, gardener to Alderman Redhead, second; Mr. Richardson, third, and Mr. G. Burton, fourth. Table plants and Primulas are seldom seen better exhibited and in greater numbers than was staged here. Mr. Alex. Purvis was a strong exhibitor in the local plant class, and gained several prizes, while Mr. W. Partridge figured prominently in the local cut bloom classes.

Mr. Bernard Cowan and others laboured hard to further the interest of the Society's work, and their efforts were well rewarded by the excellence of the display and the large company of visitors who patronised the exhibition.

BRISTOL,-NOVEMBER 15TH AND 16TH.

A GRAND display of all kinds of flowers in season as well as Chrysanthemums generally was made at Bristol on this occasion. A delay occurred in getting the prize cards in position, and if prizewinners names are omitted in this report it is owing to these not being forthcoming in time to be taken down.

With six specimen plants of incurved varieties Mr. Ayres, gardener to Mr. Gibson, was well first. Mr. J. West, Clifton, was a good second, and Mr. G. Sutton, gardener to Mr. Todd, third. The first prize for six reflexed varieties also went to Mr. J. Ayres, Mr. H. Spry, gardener to Mr. D. Bain being second, and Mr. M. S. Blacker, gardener to Miss Charlet, third. The best three specimens of Japanese varieties were shown by Mr. J. Ayres, Mr. G. Sutton being second. Mr. J. Southard received a first prize and silver medal for a single specimen of incurved variety, showing a very fine plant of Mr. G. Rundle. The first prize for a Japanese variety went to Mr. J. Ayres. A first prize for a group of Chrysanthemums went to Mr. J. Marshall, who made a very imposing display. In another class for a group consisting of Chrysanthemums and fine foliaged plants Mr. G. Newbury, gardener to Mr. Joshua Saunders, was first. Mr. W. Bannister, gardener to Mr. H. St. Vincent Ames, was second, and Mr. J. Atwell, gardener Mr. D. Brain, third. Groups of miscellaneous plants were also good, and in this instance Mr. G. Newbury was first, and Mr. G. Shelton second. The principal winners in the other plant classes were Messrs. J. Kent, W. Bannister, A. Hancock, G. Shelton, W. Baston, G. Price, E. S. Cole & Son, F. Edwards, W. Marshall, and J. Ayres.

Cut blooms were grand, all the thirteen classes provided for them being well filled. The best twenty-four incurved varieties were shown by Mr. Aplin, gardener to Mr. W. Meath Baker, Gloucester, who had Lord Alcester, Princess of Teck, Mrs. Norman Davis, Richard Parker, Alfred Salter, Empress of India (2), Princess of Walesi(2), John Lambert, Empress Eugénie, Isabella Bett, Miss Haggas, Lady Dorothy, Jeanne d'Arc, Lord Eversley, Mrs. R. King, Lord Wolseley, Hero of Stoke Newington, and Barbara. Messrs. W. and G. Drover, Fareham, were second; and Mr. G. Runnacles third. In the corresponding class for Japanese varieties Messrs. W. and G. Drover were first, having massive well-coloured blooms of G. S. Schwabe, Viviand Morel, Miss A. Hartshorn, Mille. Marie Hoste, Mons. Bernard, Col. W. B. Smith, Sunflower, Mrs. E. W. Clarke, Mons. Pigny, Sarah Owen, Mrs. C. H. Wheeler, Vice-President Audiguier, William Seward, Gloriosum, Bessie Drover, Charles Davis, Mrs. C. H. Payne, Stanstead White, Florence Davis, W. H. Lincoln, Lilian S. Bird, Etoile de Lyon, Mrs. E. D. Adams, and John Shrimpton.

The best eighteen Japanese varieties were shown by Mr. W. Robinson, gardener to Lord Justice Lopes, Westbury. With twelve Japanese varieties Mr. Robinson was again first, showing fine blooms. The best eighteen incurved varieties were shown by Mr. Bishop, gardener to the Rev. F. C. Drake. The first prize for twelve incurved varieties was well won by Mr. G. Runnacles. For twelve blooms of Anemone-flowered Chrysanthemums, in not less than six varieties, Mr. W. Robinson was a good first. The same exhibitor took the lead with reflexed varieties.

Special prizes were offered for six new Japanese varieties, and once more Mr. Robinson was first, having good blooms of Mrs. C. H. Payne, Mrs. E. D. Adams, J. S. Dibben, Duke of York, Colonel W. B. Smith, and Robert Owen. A prize was also offered for a single bloom of any Japanese variety sent out in 1892 or 1893, and this was well won by Mr. W. Wells, Redhill, who had a perfect bloom of Lord Brooke. Bouquets, vases, and floral decorations generally were as they always are at the Bristol Shows numerous and good, Mr. C. Winstone, Clifton, being among the most successful of the exhibitors.

Fruit was extensively shown, and merits a fuller report than can be given of it. For a collection of six dishes, Mr. Nash, Badminton, was an easy first, Mr. Bannister being second, and Mr. H. Perkins, gardener to Mr. Drucker, third. Mr. Marshall was awarded a first for Black Hamburgh and also for Mrs. Pince's Muscat Grapes. Mr. Nash had a first for grand Gros Colman; while the premier award for Alicante went to Mr. F. Lewis. Very good also were the first prize Muscats, shown by Mr. J. Gibson, Draycot Manor; White Tokay, shown by Mr. E. Silk; and Lady Downe's and Gros Maroc, shown by Mr. Jones, Bath, the first prize being awarded in each instance. Apples and Pears were also remarkably good. Mr. W. Bannister was the winner of first prizes for both collections of the former, and also for six varieties of Pears. Mr. W. Nash gained the first prize for four varieties. Other successful

exhibitors in these and the single dish classes were Messrs. Virgo, E. Hall, Mogford, H. Dunn, W. March, R. Carver, and A. Drucker.

Non-competitive exhibits were fairly numerous and exceptionally good. Mr. J. Crispin, Bristol, had a charming bank of Orchids; Messrs. Cannell & Sons, Swanley, a really beautiful display of new Chrysanthemums and Zonal Pelargoniums with Ferns; while Messrs. Garraway and Co., Durdham Downs Nursery, Clifton, exhibited a grand collection of Apples.

WINCHESTER.—NOVEMBER 15TH AND 16TH.

A COMPACT Exhibition was that held in the Guildhall in this city on the dates named. If the exhibits were not numerous they possessed

quality, which is encouraging to all concerned.

The principal interest was centred in the cut bloom classes. The most important being that for forty-eight half Japanese, and the remainder incurved. The first prize was a silver cup value £15, presented by the ladies of Winchester in addition to a cash prize of £5. Mr. Neville, gardener to F. W. Flight, Esq., Twyford, Winchester, secured the premier award with even, neat blooms, tastefully arranged. The varieties were Col. Smith (2), Thomas Hewitt (2), Viviand Morel (2), W. H. Lincoln (2), Waban, Primrose League, Ruth Cleveland, Mr. B. Findiay (2), Lord Brooke, Mdlle. Marie Hoste, Mrs. Nesbit, Stanstead White, Golden Wedding, F. Davis, Paul Marguerite, R. Brocklebank, Miss A. Hartshorn, Vice-President Audiguier, and Le Verseau. Incurved: Lord Alcester (2), Alfred Salter (2), Baron Hirsch, Queen of England (2), J. Doughty, Mons. Bahuant, Miss M. A. Haggas, Prince Alfred, Princess of Wales (2), Empress of India, Lord Wolseley, Mrs. Heales, Pr lude, Mrs. Coleman, Hero of Stoke Newington, Golden Empress (2), Lady Dorothy, and Violet Tomlin. Mr. H. W. Brown, gardener to A. B. Welch Thornton. Esq., Beaurepaire Park, Basingstoke, was a close second. Mr. Agate, Havant, was a good third.

Mr. G. Trinder, gardener to Sir H. Mildmay, Dogmersfield Park, Winchfield, won for twenty-four Japanese with a good stand of blooms. Messrs. Brown & Agate followed in the order named. Mr. J. Hughes, gardener to W. Baring, Esq., Norman Court, Salisbury, won for twelve incurved; Mr. Neville, second; Mr. Brown, third. Mr. Hughes also won for twelve Japanese. For six blooms incurved, any one variety of the "Queen" family, Mr. Agate secured leading position with Lord Alcester in good form. For six blooms incurved, any variety excluding the "Queen" family Mr. Neville won with Princess of Wales. Mr. Brown with Mdlle. Marie Hoste won for six any white Japanese, Mr. Hughes second with Florence Davis. Mr. F. Smith, gardener to Lady E. Woodhouse, Mayfield, Winchester, won for six, any one coloured variety with Viviand Morel. For twelve Japanese, not less than eight varieties, Mr. G. Street, gardener to Dr. Fearon, The College, Winchester, was

easily first.

Chrysanthemums in pots made a good display. For eight trained specimens, Mr. Carr, gardener to W. A. Gillett, Esq., Fair Oak Lodge, Bishopstoke, won easily. Mr. E. Astridge was second. Mr. Carr had the best specimen in both the incurved and Japanese sections. In the latter he showed Madame B. Rendatler, having fully 300 expanded blooms. For the best group of Chrysanthemums, Mr. F. Broomer, Tower Street Nursery, Winchester, was ahead of Mr. G. Street for the premier position with dwarf plants, lightly arranged. A class was provided for plants in pots not larger than 9 inches, suitable for conservatory decoration, which produced good results. Mr. G. Adams, gardener to Col. F. A. Dickens, Blackbridge, Winchester, was first. Mr. Carr had the best group of miscellaneous plants arranged for effecta charming arrangement. Mr. T. Munt, gardener to Mrs. C. Warner, Northlands, Winchester, second. The Misses Flight, Webb, and Golding were the principal exhibitors in the classes for the best arranged stand of Chrysanthemums, and also that arranged with hardy shrubs, Ferns, and Grasses.

Fruit was well shown. Mr. E. Hillier, nurseryman, Winchester, had a group of miscellaneous plants, "not for competition." Mr. Molyneux, gardener to W. H. Myers, Esq., M.P., Swanmore Park, Bishop's Waltham, staged some splendid cut blooms, representing the incurved, Japanese, and single-flowered sections, and also two dozen bunches of freely flowered varieties, all of which tended to improve the Exhibition.

PARKSTONE.—November 15th and 16th.

THE newly formed Parkstone Chrysanthemum and Horticultural Society held its first Exhibition of plants, cut blooms, fruits, and vegetables in St. Peter's School Rooms, on the above dates, proved a success.

Groups of Chrysanthemums made a very good show, the plants being well grown, the flowers large and fresh, and the colours judiciously intermixed. Those arranged by Mr. W. Weeks, gardener to E. N. Blanchard, Esq., and Mr. T. Gould, gardener to Mrs. Dawson Damar, were decidedly the best. Good groups were arranged in the local classes by Messrs. J. Jackson and Bodger, both of Parkstone.

Mr. W. Taylor, gardener to Mrs. Elphinstone, Christchurch (the winner of the ten-guinea cup at Bournemouth last year), had the best stand of twelve Japanese, including excellent blooms of Viviand Morel, Mrs. Wheeler, and Florence Davis; Mr. G. Shave, gardener to W. W. Moore, Esq., Bournemouth, had the second best stand, and Mr. T. Gould the third best. In the corresponding class for incurved, Mr. Taylor was to the front again, Mr. Gould being second, both showing good all round blooms. Mr. G. Shave had the best stand of Ancmonce, also of reflexed; Mr. Bason, gardener to Mrs. D. M. Fox, being second in both classes.

Vegetables were shown in excellent condition. Mr. Taylor had the best collection of eight kinds. Mr. T. Gould was a creditable second.

Mr. Taylor was also first in the open class for two bunches of Grapes. In the local class, Mr. Gould, and Mr. House, gardener to J. Jackson, Esq., were respectively first and second for a like number of bunches, showing Lady Downe's. Mr. Hillier, gardener to Mr. Kilner, showed the best two dishes of dessert Apples, and was also first for cuinary Apples, and for Pears.

Mr. T. K. Ingram contributed a fine bank of grandly flowered Chrysanthemums, which, being effectively arranged commanded a good deal of attention, as also did an arrangement of choice cut flowers.

HEREFORD.—November 15th, 16th, and 17th.

THE Exhibition was held in the spacious Shire Hall, which was filled to overflowing, passages and corridors having to be utilised to stage the exhibits as the large halls would not contain them. The fruit was well worthy of the county, being large, splendidly coloured, and in great quantities. The improvement in the farmers' and cottagers' exhibits

prove the increased interest they now take in fruit culture.

Groups of Chrysanthemums were more numerous than last year, and of much better quality. Withs' Plant Food Co., Hereford, won the cup with well-grown plants and large blooms, edged with small Palms, Ferns, and Roman Hyacin'hs. Sir J. Pulley came second with a fine group, but lost the first position through a fault in arrangement. For twelve and for six plants C. Loder Gilbert, Esq, took chief honours in each case for plants profusely bloomed. For thirty-six cut blooms, eighteen incurved and eighteen Japanese, R. W. D. Harby, Esq., was first with massive blooms, Sir J. Pulley second with much smaller flowers. Mr. Harby was the most successful for twelve Japanese and for twelve incurved. In the classes open to Herefordshire only Withs' Plant Food Co. was first for thirty-six cut blooms, C. Lee Campbell, Esq., second, and J. Parkin, Esq., M.P., third, all staging good blooms. In the smaller classes Messrs. Greathead, Whitfield, and Sir J. Pulley took leading honours.

For 100 dishes of Apples, Messrs. Geo. Bunyard & Co., Maidstone, were first with a magnificent collection, the fruit fresh, large, and highly coloured. Mr. J. Watkins came second with fruit little if at all inferior to Messrs. Bunyard's, and the English Fruit and Rose Company, Hereford, third with clean fruit of good size. For twenty-four dishes of Pears, Mr. J. Watkins was an easy first with fruit of immense size and fine colour. This exhibitor was awarded first honours for the finest dish of Apples (Peasgood's Nonesuch), and the best dish of Pears (Glou Morçeau) in the Show out of the above collections; J. Rankin, Esq., M.P., took second position in the above Pear class. With thirty dishes of Apples C. Lee Campbell, Esq., Glewston Court, Ross, was first with a collection remarkable for size and colour, Mr. Evans, Moreton Court, Hereford, came second, and Lady Emily Foley, Stoke Edith Park, Hereford, third; the points in this class were very close. In the single dish classes, the English Fruit and Rose Company, Rev. Sir G. H. Cornewall, Rev. G. H. Davenport, Geo. Pewtress, Esq., Mrs. Evans, H. Hamer, Esq., C. Lee Campbell, Esq., and Rev. W. H. Lambert were the most successful competitors.

Amongst amateur growers W. E. King-King, Esq., was first with twenty-four dishes of Apples, Sir J. Pulley second. For twelve dishes of Apples, Mrs. Watkins, Wilcroft, secured first honours, and Mrs. Woodhouse, Burghhill Court, second. With nine dishes of dessert Apples, distinct, Mr. W. J. Grant, Bassaleg, Newport, Monmouthshire, was a very good first. The same exhibitor was also first for one dish of dessert Apples, and for six dishes of dessert Pears, all very finc.

For six dishes of dessert fruits, C. Lee Campbell, Esq., took leading honours with beautifully finished Muscat of Alexandria and Alicante Grapes, fine Blenheim Orange Apples, Beurié Diel Pears, Imperial Green Melon, and fine Medlars. Sir J. Pulley, was a good second, and J. Rankin, Esq., M.P., third; the same exhibitor taking most of the Grape prizes. Mrs. Evans and Sir J. Pulley took the Tomato prizes in the order named. For a collection of hardy fruits and nuts, Mr. J. Watkins was first with a highly interesting exhibit.

Special prizes were given for collections of Apples and Pears by Mr. J. Watkins and the English Fruit and Rose Co., which were won by Mr. W. J. Grant, Mrs. Evans, and Sir J. Pulley. It would occupy too much space to name the exhibitors in all the classes, but in every case the fruit was highly creditable, and proved conclusively what Herefordshire can do as a fruit-growing county. The Society are also extremely fortunate in having an excellent Secretary—viz., Mr. John Ough, who has worked hard to make the Show a success.

On the closing day of the Show a fruit conference was held in the Shire Hall, which was filled with a highly interested audience, and much information circulated on fruit culture. Papers were read on "Fruit Growing as a Commercial Industry," by Mr. J. Cranston. "The Gathering, Storing, and Marketing of Apples and Pears," by Mr. J. Watkins; and the "Cultivation of Grapes and Tomatoes," by Mr. S. T. Wright.

YORK.—NOVEMBER 15TH, 16TH, AND 17TH.

THE fourteenth annual Chrysanthemum Show, under the auspices of the Ancient Society of York Florists, was held in the Fine Art Exhibition buildings of the city. The number of entries showed a slight falling off from those of last year, more especially in the section devoted to cut blooms, but the customary high quality was ably maintained. Groups were a great feature, the whole of the floor of the central hall being reserved for their accommodation. Taken as a whole they were excellent, admirable taste having been displayed in the

arrangements. The Japanese blooms were very fine, and the incurved were of exceptional excellence. Bouquets of Chrysanthemums and baskets of the same flowers were largely staged. Superior taste was displayed in the arranging of the flowers, and the effect produced was consequently striking and highly beautiful. The management of the Show in the energetic hands of Mr. J. Lazenby, the Secretary, and the Committee were excellently carried out, and high praise must be accorded these gentlemen for their efforts. We append a list of the prizewinners in the principal classes, space not allowing us to give details of all.

In the class for a group of Chrysanthemums interspersed with foliage plants, Mr. G. Slater, gardener to Mr. Alderman Close, The Hollies, was first. The arrangement was excellent, Palms, Asparagus, and other plants having been utilised to much advantage. In addition to the first prize a handsome silver cup was given in this class. Mr. McIntosh, gardener to J. T. Kingstone, Esq., Clifton, York, was a close second with a highly creditable exhibit; Mr. J. R. Dawe, gardener to Dr. Bedford Pierce, The Retreat, York, being third; and Mr. Smallwood, gardener to H. Leetham, Esq., Burnholme, York, fourth. An extra prize was descreedly accorded to Mr. J. Sinclair, Blake Street, York. In the class for a group of Chrysanthemums, arranged for effect in a space not exceeding 80 square feet, Mr. E. Everard, gardener to Mrs. Gutch, Holgate Lodge, York, was first with an admirable exhibit. plants were carrying good flowers and stout healthy foliage. Mr. J. Hunt, gardener to J. Sinclair, Esq., York, was accorded the second position; Mr. S. Hardcastle, Huxley Road, York, being third; and Mr. J. Vear, gardener to Miss Steward, Bishopthorpe, York, fourth. Mr. R. Hudson, Acomb, York, was a splendid first for a group of Chrysanthemums, the class being open to amateurs within a five-mile radius of York. The plants were excellent examples of cultural skill, The second prize went to Mr. George Hudson, Lowther Street, York; the third to Mr. J. Pillmoor, 4, George Terrace, York; and the fourth to Mr. J. Emms. For four incurved plants, distinct, Mr. W. Dickenson, Gale Lane, Acomb, York, was awarded the premicr position and a silver medal, with handsome specimens of Mr. Bunn, Lord Wolseley, Mrs. G. Rundle, and Robt. Cannell. Mr. Everard took the second position, and the third to Mr. W. Dodd, gardener to the Hon. Claud Lambton, Grove Lodge, York.

For one incurved, distinct, Mr. Everard was first with Mrs. Dixon, Mr. Dickenson second with Mrs. G. Rundle, and Mr. Slater third with the same variety. Mr. Everard was a good first for four Japanese specimens, distinct, staging Mrs. Gutch, Val d'Andorre, Madame de Sevin, and Mdlle. Lacroix in fine form, Messrs. Vear and Slater being second and third in the order named. The first prize for a single specimen Japanese went to Mr. Everard for a grand example of Madame de Sevin, the second to Mr. Dickenson for Sarah Owen, and the third to Mr. Vear for Val d'Andorre. Mr. Vear was first in the class for four reflexed specimens, showing Golden, White, and Pink Christine, and Cullingfordi, all splendidly flowered. Mr. Everard was first for one reflexed with a grand plant of Golden Christine, Mr. Vear second with the same variety, and Mr. Dobbs third with Chevalier Domage. Mr. T. Smith, Norwood Nursery, Beverley, was first for four specimen Pompons, showing superb plants of White Cedo Nulli, Salamon, Golden Mdlle. Marthe, and Sœur Mélanie. The second and third prizes went to Messrs. Vear and Dawe respectively. Mr. Smith was again first for a single specimen Pompon with a superb example of White Cedo Nulli; Mr. Dickenson being second with Mdlle. Marthe, and Mr. Vear third with Mr. Astie. For a single specimen Anemone flowered plant Mr. Dickenson was first with Sœur Dorothé Souille, Mr. Everard second with the same kind, and Mr. Vear third with Margaret de St. Vallangossie. In the class for six Chrysanthemums, any varieties in 7-inch pots suitable for decorative purposes, Mr. Smith was a good first with Golden and White Cedo Nulli, Sœur Dorothé Souille, Salamon, Black Douglas, and Sœur Mélanie; Mr. Everard second with a charming exhibit.

The principal class in the cut bloom section was for thirty-six blooms, half to be Japanese, and the remainder incurved, not less than twelve distinct varieties of each to be staged. The premier prize went to Mr. Ritchings, gardener to Dr. Frankland, Red Hill, who staged superb examples, more especially amongst the incurved. The stand was composed -back row: Edwin Molyneux, Etoile de Lyon, Florence Davis, President Borel. W. H. Lincoln, Edwin Molyneux. Middle row: Viviand Morel, Robert Owen, Chas. Shrimpton, Princess Victoria, Mrs. Falconer Jameson, Viviand Morel. Front row: Robert Owen, Mons. Bernard. Lord Brooke, Etoile de Lyon, Mrs. Nevill, and Mrs. E. W. Clarke, Incurved—back row: Golden Empress, Empress of India, Lord Alcester Mrs. Robinson King, Empress of India, Golden Empress. Middle row: Jeanne d'Arc, Violet Tomlin, Queen of England, Lord Alcester, Queen of England, and Mrs. Robinson King. Front row: Miss M. A. Haggas, Princess of Wales, Madame Darrier, Princess Teck, Mrs. S. Coleman, and Jeanne d'Arc. The second prize went to Mr. G. Haigh, gardener to W. H. Tate, Esq., Woolton, Liverpool, whose exhibit was particularly strong in Japanese, the best of which were Mrs. C. Harman Payne, Chas. Davis. W. H. Lincoln, and Mrs. Falconer Jameson. The incurved were generally somewhat weak, Mons. R. Bahuant, Jeanne d'Arc, and Lord Wolseley being amongst the best. Mr. Folkard, gardener to Sir J. R. Walker, Bart., Sand Hutton, York, was a fair third. There were four competitors in this class, and the competition was remarkably keen. For twenty-four blooms, half incurved and half Japs, in distinct varieties, Mr. G. Anderson, gardener to A. Milnthorpe, Esq., Tower Hill, Cottall, was a good first, staging Japs—back row: Stanstead White, Etoile de Lyon, Puritan, and Boule d'Or. Middle row: Sarah Owen,

W. W. Coles, Belle Paule, Mdlle. Lacroix. Front row: Gloire du Rocher, Mont Blanc, Val d'Andorre, Sunflower. Incurved—back row: Violet Tomin, Mrs. Heale, Lord Wolseley, Empress of India. Middle row: Jeanne d'Arc, Baron Beust, White Beverley, Mr. Bunn. Front row: Mr. Brunlees, Princess of Wales, Cherub, and Princess Beatrice. Mr. Folkard was a good second, his Japanese especially being refined blooms. The third prize went to Messrs, G. Longster & Son, Malton, and the fourth to Messrs, J. Horsley & Sons, Malton. Mr. Folkard was first for twelve incurved, distinct, staging—back row: Jeanne d'Arc, Princess of Wales, Mons. R. Bahuant, Golden Empress. Middle row: Robert Cannell, Lord Alcester, Queen of England, Mrs. W. Shipman. Front row: Miss M. A. Haggas, Violet Tomlin, Cherub, and Mrs. S. Coleman, Messrs. Longster and Son being second.

Mr. J. Haigh was first for twelve Japanese, distinct, with handsome blooms of—back row: Chas. Davis, W. H. Lincoln, G. C. Schwabe, Mrs. C. Harman Payne. Middle row: Boule d'Or, Florence Davis, Etoile de Lyon, Mons. A. E. Carrière. Front row: Edwin Molyneux, Lord Brooke, Puritan, and Gloire du Rocher. Mr. D. Williams, gardener to the Earl of Feversham, Duncombe Hall, Helmsley, was second with a highly creditable exhibit; Mr. D. Dickenson, gardener to W. B. Richardson, Esq., Elm Bank, Hull, being third. For six Japanese, one variety, Mr. Anderson was first with Boule d'Or; Messrs. J. Horsley and Son second with Viviand Morel; and Mr. D. Williams third with W. H. Lincoln. Mr. Ketchell, gardener to C. H. Simpson, Esq., Moortop House, Ackworth, was first for twelve Anemone-flowered, in not less than six varieties, with Delaware, Nelson, Sabine, Mrs. J. Benedict, Jeanne Marty, Mrs. R. Owen, and Gladys Spaulding. Mr. Dickenson was second; and Mr. Keightley, gardener to G. Whitehead, Esq., Deighton Grove, York, third. For six reflexed blooms, distinct, Mr. J. Haigh was a grand first with Golden and White Christines, Dr. Sharp, King of Crimsons, Fred Hart, and Chevalier Domage. Messrs. Dickenson and Ketchell were second and third in the order of their names. Mr. Lunt, gardener to H. Stourton, Esq., Holme Hall, York, was accorded the premier position for six distinct singles, Mr. Ketchell being second, and Mr. S. Hardcastle third. In the class for eighteen blooms, distinct, with the first prize of which went the "citizens' challenge prize, to be competed for by growers residing within a five mile radius of York, Mr. Dickenson was first with Viviand Morel, Mdlle. Marie Hoste, Sunflower, Stanstead White, Puritan, W. H. Lincoln, Florence Davis, Gloire du Rocher, Mrs. Falconer Jameson, Avalanche, Edwin Molyneux, and Gloriosum Japs; Emily Dale, John Lambert, Golden Empress, Violet Tomlin, John Salter, and Jeanne d'Arc incurved. The second, third, and fourth prizes went to Messrs.

Miscellaneous exhibits included magnificent vegetables and fruit grown in the neighbourhood of York; a collection of Apples from Messrs. Backhouse & Sons, nurserymen, also a number of grand Conifers and Evergreens from the same firm; and Potatoes, Artichokes, Onions, and Beet in excellent condition from Messrs. Kent & Brydon, seedsmen,

Darlington.

CHUDLEIGH .- NOVEMBER 16TH.

THE fourth annual Show was quite the best of the series, and rivalled that of Exeter in point of merit. The competition was not

extensive, but the exhibits were good in quality.

The principal class for thirty-six cut blooms, distinct, half incurved and the remainder Japanese, for which a silver cup was offered by Lady Clifford, Mr. G. Foster, gardener to H. Hammond Spencer, Esq., Teignmouth, was an easy first with well developed blooms in both sections. Mr. Stiles, gardener to Miss Fripp, Teignmouth, second, and Mr. Veale, gardener to the Rev. A. H. Simms, The Rectory, Newton Abbot, third.

Mr. Stiles won the premier award for twelve Japanese, followed by Messrs. Foster and Veale. Mr. Foster was first for six Japanese, and also for six of any white variety. Mr. Stiles won in a similar class for six any yellow variety, Messrs. Foster and Veale following. Mr. Foster won for twelve incurved, Messrs. Stiles and Veale following in the order here given. The same order was maintained in the class for six incurved. Mr. Veale gained the premier award for six Anemone blooms with a creditable stand. Mr. J. Clack secured the principal prizes in the amaturs section with creditable exhibits.

Table decorations and sprays were a feature of the Show. In the former Miss Somerville was the most successful; Mrs. W. J. Colwill, Newton Abbot, easily outdistanced the other competitors.

Groups of Chrysanthemums as well as miscellaneous plants arranged for effect made a commendable display. Mr. E. Daw was the most successful in the former, while Mr. A. Abraham, gardener to the President, the Right Hon. Lord Clifford, Ugbrook Park, Chudleigh, was an easy winner in the latter class. The last named staged by far the

best vegetables in the various classes set apart for them.

MELTON MOWBRAY.—NOVEMBER 16TH AND 18TH.

THE first Exhibition of the Melton Mowbray Chrysanthemum Society was held on the above dates, and the Committee are to be congratulated on the success of their initiating efforts. The room in which the Show took place had a very bright and charming appearance. Two long tables were in the centre, containing the cut blooms, and at the sides were nine competitive and several non-competitive groups. Mr. Whait, gardener to W. Chaplin, Esq., was first with an excellently arranged group containing many good flowers, and was well finished with small Palms, Crotons, and Ferns. Mr. Bolton, gardener to W. Billson, Esq., was second, and Mr. Russell, gardener to Capt. Williams, third.

In the open class for twenty-four blooms, twelve Japanese and twelve incurved, Mr. J. Underwood, gardener to R. Walker, Esq., Enderhy Hall, was first with good hlooms of Viviand Morel, Condor, Mrs. Falconer Jameson, Mdlle. M. Hoste, Edward Molyneux, Sunflower, Mons. Bernard, Etoile de Lyon, Boule d'Or, Puritan, Col. W. B. Smith, and Florence Davis for the Japanese, and Empress of India, Mrs. Robinson King, Queen, Lord Alcester, Miss M. A. Haggas, Prince Alfred, Prince of Wales, Lord Wolseley, M. Darrier, Jeanne d'Arc, Mrs. Coleman, and Princess of Teck for the incurved. Mr. H. Rogers of Gipsy Lane Nursery, Leicester, was second, and Mr. Smith of Loughboro', third. In this class Mr. H. Dunkley, gardener to S. Syminton, Esq., Market Harboro', showed an excellent twelve incurved blooms—the best in the exhibition—but through the falling off in his Japanese he was not placed amongst the prizewinners. Here is a strong argument in favour of separate classes for incurved and Japanese for small shows. classes were well filled, but many of the exhibits were of a poor nature.

Fruit was good in quality, Grapes being excellent. The non-competitive exhibits were plentiful, and added much to the attractiveness of the Show. Mr. W. K. Woodcock exhibited a magnificent wreath, and was first for a hand bouquet of Chrysanthemums. A special feature was

the specimen plants which were numerous.

LINCOLN.—NOVEMBER 16TH AND 17TH.

THE eleventh annual autumn Exhibition was held in the Drill Hall, and was generally a success. The Shows of this Society have long been noted for the excellence of its groups of miscellaneous plants arranged for effect, this year they were even better than in the past. arrangements under the guidance of Mr. Holmes, the Secretary, were

satisfactory.

The principal class was for a group 12 feet square, composed of Chrysanthemums and other plants arranged for effect, and a grand Mr. C. Foster, display was made in the centre of the building. gardener to R. Dawson, Esq., Lincoln, won the coveted award with a magnificent group charmingly arranged. The base or groundwork of the group was composed of moss, from which rose well developed Crotons, single stems, beautifully coloured, intermixed with other choice plants all elegantly arranged. Mr. A. Wipf, gardener to W. C. Cockburn, Esq., Hartsholme Hall, Lincoln, was a good second, and Mr. W. Herring, The Nurseries, Lincoln, third. In the class for a Chrysanthemum group arranged for effect along with green foliage plants in a semicircle Messrs. Foster and Wipf occupied similar positions as in the former class. Mr. W. Mitchell, gardener to W. J. Warrener, Esq., Swallowbeck, Lincoln, third. The hest specimen Chrysanthemums were those staged by Mr. Wipf in the class for six, being freely flowered and not too formally trained. Mr. G. Temple, Lincoln, was second. These two exhibitors changed places in the class for three standards. Palms, Cycads, Ferns, table plants made a good display. In the three former classes Mr. Wipf was the most successful, Mr. Foster winning in the latter. Orchids were well shown by Messrs. Foster and Wipf.

Cut hlooms were of fairly good quality. In the principal classthat for lorty-eight, half incurved and the remainder Japanese, there were but three entries, Mr. F. Thornton, gardener to C. E. Marfleet, Esq., Lincoln, won the premier position by the superior quality of the incurved blooms, the best being Robt. Cannell, Princess of Wales, Golden Empress, J. Doughty, Lord Wolseley, and Princess Teck. The best of the Japanese were Sunflower, Avalanche, F. Davis, Miss A. Hartshorn, Mrs. C. Wheeler, Mrs. F. Jameson, and Vice-President Audiguier. Mr. Wipf was second, and Mr. J. Burrows, gardener to Sir H. Bennett, Lincoln, third. For twelve incurved, Mr. A. Wilcox, 52, London Road, Spalding, was first; Mr. Wipf second. In the class for six Japanese, six reflexed and six incurved, Messrs. Willcox, Wipf, and Mitchell were placed in the order here named. Mr. Wipf had the best of five stands of twelve reflexed, really good blooms. Mr. G. Burrows second. Messrs. Wipf and Wilcox shared the honours in the class for twelve Japanese, both showing good blooms. Anemone varieties were well represented by Mr. Wipf in the classes for Japanese and the ordinary show type. Mr. Burrows second in each class. Viviand Morel won for Mr. Wipf the premier award in the class for six, any one variety Japanese. Single-flowered varieties were well shown by Mr. J. Bugg, Lincoln. The premier incurved bloom in the Show was Princess of Wales from Mr. Wipf, and the premier Japanese was Viviand Morel from Mr. Thornton.

A room was specially set apart for table decoration to be shown under artificial light, and a very commendable display was made. Miss Ellison, The Manse, Bracebridge, Lincoln, won the first prize for the best laid out table for six persons, Chrysanthemums being the only flowers employed with any kind of foliage. Mr. Colebrook, Grimsby, second; and Mrs. F. E. Cole, Hundleby, Spilsby, third. Messrs. Perkins & Son, Coventry, was an easy first for a table of 12 feet by 3 feet filled with bouquets and wreaths. Mr. J. Illman, florist, Nettleham Road, Lincoln,

was a good second; and Mr. Colebrook, third.

SHEPTON MALLET.—November 16th and 17th.

THE third annual Exhibition of Chrysanthemums, fruit, and flowers was held in the Town Hall on the above dates, and was considered to be an improvement upon previous shows held in this place.

Groups were numerous and, for the most part, arranged with good tastc. Mr. J. Webb, gardener to Miss Davis, Oakhill, Shepton Mallet, was first in the principal class with a fine arrangement, Mr. H. Phillips, gardener to Dr. J. F. Fry, was second, and Mr. Mackenzie, gardener to A. T. Somerville, Esq., Dinder, Shepton Mallet, was a creditable third.

In the open class for three incurved and three Japanese plants, single stems, Mr. J. Webb was first, showing six grand plants nearly 6 feet over, in fine condition, and profusely flowered. Single and double flowered Primulas were well shown by Messrs. J. Allen, E. F. Hall, and J. Webb.

In the class for twenty - four blooms, twelve incurved and twelve Japanese, distinct varieties, four good stands were arranged. Mr. W. R. Williams, gardener to J. F. Hall, Esq., Dinder, Shepton Mallet, was first, Edwin Molyneux, Florence Davis, W. H. Smith, Madame John Laing, Waban, Puritan, Sunflower, Viviand Morel, John Salter, Lord Alcester, Miss M. A. Haggas, Golden Empress, and Queen of England (the best bloom in the Show) being the most prominent. Mr. Webb was a good second, and Mr. J. B. Payne, gardener to the Lord Bishop of Bath and Wells, The Palace, Wells, was a creditable third. Messrs. W. R. Williams and J. Webb had the two best stands of twelve blooms in that order.

Fruit was not shown very plentifully, but what was staged was of good quality. Messrs. Brown & Sons, Frome, secured premier position with very good bunches of Muscat of Alexandria, Mr. Payne being second with Black Alicante in good condition. Mr. Payne was first for hoth dessert and culinary Apples. Mr. J. Webb, obtained first place in a fairly good Pear competition with fine examples of Béurié Diel, Mr. R. Isgar, Wells, taking second place with fruits of Glou Morçeau.

Messrs. Browne & Sons, Priory Nurseries, Wells, contributed seventytwo dishes of Apples, eleven dishes of Pears and Medlars, all in fine

condition.

DUBLIN.-NOVEMBER 16TH AND 16TH.

THE Royal Horticultural Society of Ireland held their winter Exhibition in the spacious hall at Ball's Bridge, Dublin, on the 16th and 17th. Cut blooms were the leading feature, plants, as a rule, were getting a little past their best. Lord Ardilaun's prize for a group of thirty plants staged on a space of 14 feet by 7 feet was taken by Mr. Watt, gardener to Mrs. Pease of Willow Park, who was closely followed by Mr. Stewart with an exceedingly fresh and bright group not quite so large in the blooms; third F. A. Millar, Esq. In the separate classes of six each, incurved, Japanese, reflexed, and Anemone, Mrs. Pease took all before her, and also took first for a single specimen with a grand W. H. Lincoln.

In cut blooms the special class with 10-guinea cup and money added for thirty-six, half Japs, half incurved.—First, J. G. Nutting, Esq.; second, Viscountess Ashbrook; third, Earl of Clancarty. Mr. Nutting's special prize for thirty-six Japs in eighteen varieties brought out a strong competition with thirteen entries. Mrs. Pease again took first; second, Lady Bury; third, Earl of Clancarty. The prize added by Mr. Colchester of Ipswich to the Society's first prize for twenty-four incurved was awarded to J. G. Nutting, Esq.; second, Earl of Clancarty; third, Loyd Vaughan, Esq. For twelve incurved, Mrs. Pease again came to the front. For twenty-four reflexed.—First, R. de la Poer, Esq. For twelve reflexed.—First, J. L. Naper, Esq. While for the stand of twelve Japs, Lord Gough took first honours. In a general survey of cut blooms Colonel Smith, Lord Brooke, W. H. Lincoln, F. Davis, and Viviand Morel were very prominent, the latter perhaps too much so. Everyone grows it, everyone shows it, and, like its huge cousin Etoile de Lyon, it seems overdone.

EDINBURGH.—NOVEMBER 16TH, 17TH, AND 18TH.

A MOST successful Exhibition was held by the Scottish Horticultural Association in the Waverley Market on the above dates. The entries were more numerous than at any previous show, and the exhibits generally were quite as good. Lord Provost Russel opened the show on Propitious weather favoured the efforts of the promoters, the first day.

and the attendance of the public was very large.

There was a desirable improvement noticeable on the pot plants generally, those with which Mr. D. Caronagh, St. Edward's, Murrayfield, secured first prize for eight pots Japanese varieties, and for four pots of the same heing particularly good. With a fine Avalanche in the first named class this exhibitor won the silver medal for the best plant in the Mr. J. Holmes, gardener to Mrs. Hamilton, Ogilvie, Winton Castle, East Lothian, was first for four pots incurved varieties, and there were many other classes for Pompons, as well as specially named varieties. There were three groups of Chrysanthemums arranged for effect on the floor, each group to be not more than 15 feet in diameter. Mr. J. Petrie was first with a collection of plants with large blooms. Mr. D. Jardine, Ravelston, second; and Mr. Holmes third. In a similar class for Chrysanthemums and other plants Mr. Wood, gardener to J. Buchanan, Esq., Oswald House, was first. Among other plants shown were good Zonal Pelargoniums, Roman Hyacinths, Primulas, Ferns, and decorative plants. The cut flower section was well filled, the Japs specially being large, well coloured, and fine.

The chief class was the City of Edinburgh prize, open to all, for forty-eight hlooms Japanese, not less than thirty-six varieties; first, £20 cup; second, £10; third, £5. Mr. James Beisant, Castle Huntly, Longforgan, secured the cup with even blooms, including many of the hest of the newer sorts. The most noteworthy were Viviand Morel, C. S. Sharpe, G. C. Schwabe, Boule d'Or, Mdlle. M. Hoste, R. C. Kingston, W. K. Woodcock, Mrs. C. H. Payne, Colonel Smith, Chas. S. Shrimpton, Geo. Darrell, W. W. Coles, Avalanche, and Mme. Carrière, Mr. J. Machar, Broughty Ferry, second, with very good blooms. Third, Mr. Wm. Rushton, Corstorphine, and fourth, Mr. J. Carruthers, Corstorphine, and fourth, Mr. J. Carruthers, Corstorphine, and Mr. Wm. Rushton, Corstorphine, and fourth, Mr. J. Carruthers, Corstorphine. The next class was open to Scottish gardeners and amateurs only, the prize being the Scottish challenge cup, for thirty-six blooms. not less than twenty-four varieties. Mr. D. Nichol, Rossie, Forgan-

denny, secured this prize with a stand of very fine blooms, the second and third prize stands also being good. Mr. Nichols' stand included very fine blooms of Etoile de Lyon, Mr. E. W. Clark, Viscountess Hambleden, very fine Stanstead White, Viviand Morel, Edwin Molyneux, W. Tricker, W. H. Atkinson, Mons. Bernard, and J. S. Dibben. Mr. J. Kyles, Milburn Tower, Gogar, second, and Mr. W. Rushton third. For twenty-four Japanese, not less than twelve varieties, Mr. W. Rushton was first; second, Mr. J. Pirie, Sunderland Hall, Selkirk; third, Mr. P. Geddes, Knock Castle, Largs. For twelve Japanese, distinct, Mr. D. Alexander, Eaglescairnie, Haddington, was first with a very good dozen; second, Mr. Rushton, and third Mr. Pirie. Several classes were devoted to six blooms of one variety. Among these Avalanche (Mr. Geddes first), Viviand Morel (Mr. Alexander first), Sunflower (Mr. Beisant first), Edwin Molyneux (Mr. Nichol first), and Rouguet des Dames (Mr. Edwin Molyneux (Mr. Nichol first), and Bouquet des Dames (Mr. Rushton first) were extra fine.

The incurved and other section were far below the Japenese in ality. For twenty-four incurved, Mr. J. Clark, Bannerfield, Selkirk, quality. This stand included fine examples of Princess of Wales, Miss Haggas, Violet Tomlin (best bloom in Show). Mr. Clark was first also

for twelve incurved.

In the class open to nurserymen for forty-eight blooms, Mr. H. J. Jones, Lewisham, was easily first, securing also the prize for the best

Japanese. Messrs. R. B. Laird & Sons, Edinburgh, second.

Some good Grapes were shown. In the class for four distinct varieties, Mr. Leslie, Pitfour, Perth, was first, showing good clusters of Alicante, Gros Colman, Lady Downe's, and Muscat of Alexandria. Murray, Park Hall, Polmont, second; and third Mr. Caldwell, Ashley Bank, Langholm. Mr. McNiel, Priorsford, Peebles, had the two best Muscat of Alexandria, Mr. Leslie the best pair of Alicante, while Mr. Murray had the best Lady Downe's and the best Gros Colman. Two collections of fruit in twelve varieties were shown. Mr. McIntyr, The Glen, Peebles, first; and Mr. D. Murray, gardener to Marquis of Ailsa, Culzean, Ayr, second. Apples were a feature of the Show. The never been better coloured, though perhaps larger has been seen. They have competition was keen, with many entries for the prizes. Mr. Wilson Auchencrum, Ayr, was first for six dishes culinary; and Mr. Craw, West Foulden, for sixteen dessert. For eighteen varieties Apples and six varieties Pears, Mr. Campbell, Singleton, Wales, was first with beautifully coloured fruit; and for the same number fruit grown in Scotland Mr. Wilson was first.

Vegetables were particularly fine. Leeks, Cauliflowers, Brussels Sprouts, Celery, and Parsley were extensively shown, and mostly very

fine in quality.

Miscellaneous exhibits included a large number of cut Chrysanthemum blooms from Mr. Jones, Lewisham; Carnations from Mr. Campbell, High Blantyre. A table of plants and fine blooms from Messrs. Methven & Sons, Princes Street. Drawing-room decorations and bouquets from Todd & Co., Maitland Street. Some beautiful examples of artistic floral arrangements from Mr. John Dorner, Princes Street, and plants from Messrs. Laird & Sons, West Coates. To most of these special awards were made.

SHEFFIELD.-NOVEMBER 17TH AND 18TH.

A REALLY good Exhibition was that held in the Corn Exchange on the dates named. Cut blooms created the principal interest, the principal classes being for twenty-four incurved, not less than eighteen varieties, the same conditions governing the class for Japanesc.

Messrs. Drover succeeded in easily winning the premier award in both the above-mentioned classes. The incurved were not large, but were fresh and well finished. The varieties were Empress of India, Golden Empress, Lord Alcester, Emily Dale, Miss Drover, Mrs. R. King, Lord Wolseley, Alfred Salter, Mrs. Norman Davis, J. Doughty, Mrs. W. Shipman, Miss M. A. Haggas, Princess of Wales, Hero of Stoke Newington, Cherub, Princess Teck, Nil Desperandum, and Lady Dorothy. Mr. Jellicce, gardener to F. Gossage, Esq., Camp Hill, Woolton, Liverpool, second, with larger blooms, not so neatly finished. Mr. P. Blair, gardener to the Duke of Sutherland, Trentham, Stoke-on-Trent, third. The Japanese blooms were not of huge size, but possessed colour according to the varieties, being fresh, and well staged. The names were Etoilc de Lyon, Vice-President Audiguier, G. C. Schwabe, Mrs. E. D. Adams, Alberic Lunden, Viscountess Hambleden, C. Davis, Mrs. C. H. Payne, Mrs. C. Wheeler, W. H. Lincoln, W. Seward, Golden Wedding, Viviand Morel, Mdlle. Marie Hoste, Mrs. F. A. Spaulding, E. W. Clark, Princess Victoria, and Lord Brooke. Mr. Heany, gardener to H. G. Schintz, Esq, Mossley House, Liverpool, second with heavy blooms. Mr. Shoesmith, gardener to M. Hodgson, Esq., Croydon, was a close third.

Mr. Blair won the premier award for twelve incurved with medium sized fresh examples. Mr. Coombes, gardener to the Earl of Dudley, Himley Hall, was second; Mr. Jellicoe third. For six incurved Mr. Shoesmith was first, Mr. Jellicoe second, and Mr. Walker, Hull, third. Mr. Heany won with twelve Japanese, Mr. Jellicoe second. The last named won with six Japanese, and also for six reflexed. Mr. C. Scott, Sheffield, second in the latter class. Messrs. Scott and Redmill were the principal winners in the local classes. Mr. Broomhead, Leopold Street, Sheffield, won all the first prizes in the amateur classes, staging Street, Sheffield, won all the first prizes in the amateur classes, staging remarkably good blooms.

Groups of Chrysanthemums were of moderate quality, the best coming from Mr. W. Redmill, gardener to J. G. Lowood, Esq., Five Oaks, Sheffield. Mr. C. Green, gardener to Sir H. Watson, Shirecliffe Hall, Sheffield, was second. Mr. C. Scott, gardener to J. Colley, Esq., Sheffield, had the best specimen Japanese, Mr. E. Green the best

incurved, the various members of the Rundle family. Mr. G. Walker arranged a remarkably pretty group of miscellaneous plants in the amateurs' division, winning premier honours easily.

BOLTON.—NOVEMBER 17TH AND 18TH.

THE seventh annual Show of the above Society was held in the Albert Hall, and from every point of view was better than any previous exhibition seen in Bolton.

For twenty-four cut blooms, Japanese and incurved, six staged, Mr. R. Pinnington, gardener to Mrs. Banner, Blacklow House, Roby, near Liverpool, secured premier honours with fresh and well coloured blooms. Liverpool, secured premier honours with fresh and well coloured blooms. The Japanese were Chas. Davis, Etoile de Lyon, Florence Davis, Viviand Morel, Marie Hoste, Boule d'Or, G. C. Schwabe, E. Molyneux, Mrs. F. Jameson, Viscountess Hambleden, Excelsior, and Col. W. B. Smith, and the incurved Queen of England, Mons. R. Bahuant, John Lambert, Rt. Cannell, Baron Hirsch, Empress of India, Miss M. A. Haggas, Princess of Wales, John Salter, Mrs. Heale, Alfd. Salter, and Violet Tomlin. The second honours fell to Mr. J. Craig, gardener to A. Heine, Esq., Fallowfield, Manchester. Mr. P. Blair, gardener to the Duke of Sutherland, Trentham, third. In the corresponding number of miscellaneous blooms Mr. J. Craig was a good first. Mr. J. Bracegirdle. miscellaneous blooms Mr. J. Craig was a good first. Mr. J. Bracegirdle, gardener to W. H. Watts, Esq., Elm Hall, Wavertree, was second, and

Mr. R. Pinnington third.

For a stand of blooms arranged for effect Mr. J. Abbot, gardener to Jas. Musgrave, Esq., jun., first; Mr. W. Wainwright, gardener to Mrs. J. K. Cross, Fernclough, Heaton, second; and Mr. G. Rawson, gardener to John Heywood, Esq., J.P., The Pike, third. The latter had in the local class the premier incurved bloom with Empress of India, the prize for premier Japanese going to Mr. T. McGrigor, gardener to M. Howarth, Esq., jun., for Viviand Morel. In the local classes for twenty-four blooms a silver cup was presented by the President, R. K. Cross, Esq., and a spirited competition was the result, the prize being secured by Mr. J. Callon, gardener to John Harwood, Esq., Woodsleigh, for a very fine stand. Mr. Chas. Jones, gardener to Mrs. Shaw, Wellesley House, and who won a cup in this class last year, was a close second. The third position was taken by Mr. John Wainwright, gardener to Mrs. E. Cross. For twelve incurved Mr. Callow was again first, staging capital examples, Messrs. J. Wainwright and Chas. Jones following with good stands. For twelve Japanese Mr. T. McGrigor exhibited fine, well built flowers, Messrs. W. and J. Wainwright being second and third.

There were two groups of Chrysanthemum plants arranged, first prize, including silver medal of Royal Horticultural Society, being taken by Mr. J. Pownall, gardener to Martin Musgrave, Esq.; and the second by Mr. W. Wainwright. The miscellaneous groups, 10 feet diameter, The first prize carried with it the bronze medal of the were good. R.H.S., and this was won by Mr. Chas. Jones with an admirable arrangement, harmonising thoroughly in every way. The second was taken by Mr. J. Wainwright with a pretty group well arranged, but containing too much colour for the size of group; the third, also good, being taken

The trained and specimen plants were most creditable, the principal prizetakers being Messrs. H. Shone, gardener to J. W. Makaut, Esq.; Mr. J. Hicks, gardener to Mrs. Haslam, Ravenswood; J. Pownall, J. Wainwright. Primulas, Roman Hyacinths, and table plants were all in fine condition, the winners being Messrs. R. Allen, J. Callow, Geo. Cross, gardener to E. Thwaites, Esq.; and J. Pickthall, gardener to T. H. Thwaites, Esq. The ball and bridal bouquets were excellent. Mr. J. Moseley, Halliwell, securing both prizes, which were well deserved.

Black and white Grapes were fairly well shown, the winners being Messrs. Hicks and W. Wainwright. For vegetables the prizes went to Mr. G. Corbett (gardener to A. Knowles, Esq.), Mr. R. Fairhurst, Mr. J. Barnes, Mr. J. Fletcher, and Mr. R. Barlow.

Special prize for Roman Hyacinths, given by Messrs. Clibran, Altrincham, was taken by Mr. G. Cross. Messrs. Clibran & Sons staged four dozen blooms of Chrysanthemums, representing some of the newer varieties. Mr. James Oakes. Darley Hall Potteries, had a fine display varieties. Mr. James Oakes, Darley Hall Potteries, had a fine display of pottery. The prize for dinner-table for eight persons, arranged with fruit and flowers for effect, was taken by Mrs. H. Walmesley, Bradshawgate, Bolton.

HUYTON AND ROBY.—November 18th.

THE second annual Exhibition of the above Society was held on Saturday in the Huyton Park Hall, and was a great advance of what was held last season, the competition in the cut bloom classes being very keen. The principal prizetakers included Mr. Pinnington, gardener to Mrs. Banner, Blacklow House, Roby, who took first prizes for twenty-four-blooms, twelve incurved and twelve Japanese, twelve blooms reflexed and Anemone flowered, six incurved in three varieties and six Japanese in three varieties, two Palms, two Ferns, six pots Roman Hyacinths, three dishes and one dish Culinary Apples, three dishes and one dish of Pears, one dish dessert Apples; and seconds for twelve incurved, six Japanesc and six incurved, three dishes dessert Apples, and six table plants. The second in the twenty-four bloom class was capen of Thos. Eaton, gardener to Jno. Parrington, Esq., Roby Mount, Roby. The second in the twenty-four bloom class was taken by Mr. was also second for twelve Japanese and first for two splendidly coloured bunches of Lady Downe's Grapes. Mrs. Parrington taking the first prize for the best arranged Epergne with a pretty combination of Roman Hyacinths and Salvia splendens and Maidenhair Fern as foliage.

Mr. J. Rose, gardener to J. Kitchen, Esq., Fernwood, Huyton, secured honours with twelve Japanese and twelve incurved, also for trained plants, the award of merit being granted as well. For six Japanese and six incurved Mr. W. Wharton, gardener to Jos. Royston, Esq., Huyton,

was first, also for six Primulas and Poinsettias. The prizes for plants, incurved and Japanese, six of each, and group of plants, went to Mr. W. Lyon, gardener to A. M. Smith, Esq., Bolton Hey, Roby; and for white Grapes, one Orchid and three dishes dessert Apples, to Mr. W.

Oldham, gardener to Jos. Beecham, Esq., Ewanville, Huyton.

An effective group of plants and a choice one of Chrysanthemums was arranged (not for competition) by Mr. J. Wattie, gardener to J. A. Willcox, Esq., M.P., Parkside, Huyton; certificates granted. The trade were represented by the Liverpool Horticultural Co., Garston, for fine stand of Orchids and plants in variety, and to Mr. H. Middlehurst, seedsman, Manchester Street, Liverpool, for well berried Solanums and other plants.



FRUIT FORCING.

Peaches and Nectarines. - Earliest Forced House. - The trees having been started, they must have sufficient water at the roots, examining the border for ascertaining its condition, and if it is doubtful whether the soil be moist enough a good watering must be given, supplying liquid manure to weakly trees. Fire heat should only be employed at night to exclude frost, and by day to insure a temperature of 50°, above which ventilate freely. A close, vitiated atmosphere must be avoided after the buds commence swelling, syringing the trees in the morning and early afternoon of bright days until the buds begin to show colour; then maintain a suitable moisture by damping the paths and borders. Allow a little ventilation by the top openings of the house constantly. Aim at slow, gradual development in the growths to secure sturdy well expanded blossoms, with strong stamens and anthers well laden with pollen, and the pistils stout and perfect. This is essen-

tial to a good set of fruit.

Second Early Forced House .- The trees to be started for affording fruit in May or early in June, must now be kept as cool as possible. The lights having been removed, they may remain off until the weather sets in very severe or snow falls, when they should be replaced, after thoroughly cleansing, repairing, and, if need be, painting. The trees will require little pruning if they have received proper attention in disbudding, reserving only the growths needful for extension and next year's crop, and cutting out that which has borne fruit this year and is not required. If the trees have been affected with brown scale nothing assists in its destruction better than exposing the trees to frost. Where the lights are fixed the trees may be syringed with water at a temperature between 140° and 160°. This will bring off most of the scale, then the trees can be washed with a solution of softsoap, 3 or 4 ozs. to a gallon of water, using a brush to dislodge the scale, and being careful not to dislocate the buds. In bad cases it is advisable to go over the trees a second time before they are tied to the trellis. Plenty of space must be left in the ties for the swelling of the branches. Remove the remains of mulching and any inert surface soil; supply fresh turfy loam about 2 inches deep, chopped moderately small, and adding a 6-inch potful each of steamed bonemeal and Thomas's phosphate, with as much as of both of wood ashes to every 3 bushels, incorporating well. Ventilate to the fullest extent except when the weather is severe, and see that the soil is kept properly moist.

Third Forced House.—The trees in this structure will be started with the advent of February to ripen their fruit late in June or early in July, and they should now be subjected to the same treatment as advised for the trees in the second early house. It is a bad practice to leave houses and trees unattended after the leaves fall until the time of closing the structures, and favours insect pests immensely. can never be handled so safely, either for the needful cleaning and pruning or eradication of insects as when the buck are least active, which is as soon as the leaves have fallen, and the insects are reached before they are obliged by cold to make their retreat to safe quarters. Such pests as brown aphis live on the growths constantly. Any shoots infested should be cleansed with a brush dipped in tobacco water. It is a common practice to use houses of this kind for plants, especially Chrysanthemums; but it is fatal to that rest so essential to the success of Peach trees, and a primary cause of the buds subsequently dropping. The better plan is to let the water run out of the hot-water pipes, and

remove the roof lights.

Fourth House.—This can hardly be termed a forcing structure, yet there should be means of affording a genial heat when the trees are in blossom, and for accelerating the ripening of the fruit as may be necessary, also for maturing the wood in cold districts. It may be analogous to a Peach case or covered wall, against which the choicest midseason Peaches and Nectarines are planted and trained, but the trees do better on trellises about a foot from the glass. The house being closed early in March, the trees will ripen their fruit early in August and September if kept cool. They are now leafless, and should undergo the process advised for the second early forced trees in every particular. It is an old and excellent practice to empty the hot-water pipes and remove the lights, leaving them off until the blossoms begin showing colour, or admit air to the fullest extent in all weather, for no amount of frost will injure the wood provided it is thoroughly ripe.

Late House.—Cut out all the wood that has borne fruit if not otherwise required. Do not allow the soil to become dry, but give a thorough soaking of water if necessary. If the wood does not ripen well employ heat by day with moderate ventilation, and turn it off in the afternoon, so as to have the pipes cool before the night, and then open all the ventilators unless keen frost prevails. The house must otherwise be kept cool by free ventilation and the fallen leaves cleared away. Late Peaches are valuable, and when well grown good in quality. If any of the trees grow too luxuriantly root-pruning and lifting must be attended to without delay.

Unheated Houses.—The leaves of the trees in unheated houses against south walls are off except where the trees are unsatisfactory, and such should be lifted and the roots laid in fresh rather strong calcareous compost nearer the surface. With proper treatment the crop for next year will not be prejudiced. In lifting the trees do not manipulate the roots too much, and do not lift them before the wood becomes firm. If the drainage is defective it should be rectified, and soil of an unsuitable nature removed. It is, however, almost useless trying to patch up bad borders, and it would in most cases be more satisfactory to make new ones. A 4-inch tile drain should be at the base, with a proper fall and outlet to carry off superfluous water, with a foot of rubble over the bottom of the border and above the drain, and if the drainage is covered with a layer of old mortar rubbish it will insure the keeping of the rubble open and supply lime. About 24 inches depth of soil is ample, but it will need to be 30 inches at first to allow for settling.

Peaches and Nectarines like a firm soil. This should be strong, preferably a calcareous clay-loam—the top 3 inches of a pasture, and where the formation is limestone or chalk. If the soil is light add to it a fourth part of clay-marl, dried and pounded, incorporating well together. Soil of this character usually induces a stout short-jointed growth, and the fruit is large, high coloured, heavy, juicy, and full flavoured. The border need not be wider than a foot beyond the exten-

sion of the roots in the first instance, adding to it as the roots extend.

A narrow border is in many respects superior to a large one. The restriction of the roots entails more frequent supplies of water and liquid nourishment with top-dressings and surface mulching, but the results are better than in the wider border, as the food is supplied fresh, and the trees are completely under control. The wide border may have some part sour before the roots reach it, and in any case its freshness is gone, and roots never thrive so well in stale as in fresh loam. If any new trees are wanted they should be procured and planted without delay. In a Peach case fruit can be had from early July to the beginning of October by a proper selection of varieties—say, Waterloo, Hale's Early, Dr. Hogg, Crimson Galande, Dymond, Goshawk, Royal George, Alexandra Noblesse, Grosse Mignonne, Bellegarde. Gladstone, Sea Eagle, and Golden Eagle—excellent Peaches in every respect. Suitable Nectarines are Early Rivers, Lord Napier, Rivers' White, Elruge (some prefer Stanwick Elruge), Newton, Dryden, Pine Apple, Spencer, and Victoria.

THE KITCHEN GARDEN.

Globe Artichokes.—Frosts have reduced the leaves considerably, and it is now possible to take the requisite protective measures. either leaves covered with strawy manure to keep them from blowing about, litter or ashes are banked well up around the plants, the best of the crowns will be either killed or badly crippled during the coming winter. When the best crowns are damaged by frosts, the early growths are weak and the flowering stems feeble and late accordingly. As a rule only a very small per-centage of seedling Artichokes are worth saving, and if those of a worthless character have been duly marked, they may

well be rooted out, those reserved being protected.

Protecting Celery.—Unless Celery is well moulded up, it is a very difficult matter to afford proper protection against severe frosts. It is the stalks and coarser midribs that suffer most, and once they are badly frozen decay soon spreads. Instead of leaving the whole of the leaves exposed, the stalks only be covered with soil, the wiser plan is to bank up the soil sufficiently high to bury about one-half of them, and the rest, unless in very cold localities, may well be left unprotected. times experience very severe frosts early in December, and no time should be lost therefore before completing the earthing up. Comparative dryness of soil is essential, and the ridges should be well rounded. Fresh dry straw and bracken covered over the tops of Celery will ward off severe frost, but if in a wet state it may easily do more harm than good. If protection must be afforded, let it be in the shape of boards nailed together in the form of the letter V, and inverted over the rows whenever necessary, as being the least trouble and the most effective in

Celeriac .- The "bulbs" of Celeriac are far from being hardy. They may be protected against a moderately severe frost by drawing the soil up to them much as Potatoes are moulded up, but in order to be prepared for all emergencies some portion at least of the crop should be lifted, and after having the tops trimmed off be stored in a cool shed, enough fine soil or sand surrounding them to afford some protection from frosts, and also to prevent premature shrivelling. Celeriac may also be kept in a "clamp" or heap in the open, all being well covered with straw and banked over with soil.

The Broccoli Supply.—Autumn Cauliflowers have not held out nearly so well as usual, and autumn Broecoli have also been somewhat coarse as well as earlier than desirable. Late plants of Veitch's Autumn Protecting are doing good service, but even these commenced hearting prematurely. What are left should be taken care of. Very severe frosts may spoil them, merely covering the hearts with large old leaves being little avail against 10° or more of frost. They will pay

well for being lifted with a fairly large ball of soil about the roots, and then bedded in somewhat closely together in the pit of a cool vinery, or in a deep brick pit, turf pit, or wooden frame. Some of the oldest leaves may be removed, and if the tops do not smother each other, the hearts will keep fresh for several weeks. Lifting and either laying or suspending in either a cellar or shed will be the next best plan to pursue, especially in the case of those with hearts nearly or quite fully grown. If those with hearts only just commencing to form were also lifted and stored in a pit or vinery, the roots being firmly surrounded with rich soil kept constantly moist, these would soon recommence active growth, and a good supply of small hearts be had at midwinter and later. Snow's Winter White seldom hearts in before February or March, but this season there is a prospect of its being very much earlier. Some few hearts are already showing, and if a portion of the breadth of this variety were lifted and stored under glass, as advised in the case of late hearting Autumn Protecting, there is every likelihood of their well repaying for the trouble taken with them.

Successional and Late Broccoli.—In most cases the main crop and late Broccoli have grown very strongly. Frost have given the desired check to this late growth, but all the plants are so full of sap that they will not withstand a severe frost. It is the stems however that are the most susceptible of injury, and these should be protected. Heavily moulding up the stems without greatly damaging the outer leaves would be a desirable practice, but as a rule the rows are arranged far too closely together for this to be done. Heeling in or laying down Broccoli renders the plants hardier and assists in prolonging the supply.



APIARIAN NOTES.

THE WEATHER—FEEDING.

WITH the exception of Punics, which are still working, all the other bees have been very quiet during the past month of changeable weather. Frost has been frequent, but of short duration, the lowest temperature being 21° on several occasions. Up till November 13th the barometer was exceedingly high, standing at 30 40 for several weeks; on the 14th it began to move, and on the 17th it registered 28 10, with the thermometer at an early hour at 50° with a drizzling rain, and bees active on the wing. impossible to say what the coming winter will be, but judging from the actions of certain animals, I should not be surprised it will be of a mild noture.

If favourable weather prevails, the present is a good time to change floors, for when solid they will be more or less affected with damp, which is very injurious to both bees and hives. As I find the hives are much lighter than they were two months ago, it will be advisable to pay attention to the stores which the bees have, and if short, supplement them by feeding with a few pounds of syrup.

HINTS FOR BEGINNERS.

As there are numerous inquiries about the Lanarkshire storifying hive, and as it is the most fitting season for amateurs to be making preparations for the next summer, I have resolved to give instructions on my favourite hive, which I have used for well nigh half a century. In doing so I will not set forth the hive as one of an ornate character, but as one specially adapted for the preservation of bees, working them to their own and their owner's best advantage, both as a pastime and from a commercial point of view. It is many years since I abandoned the fancy apiary for one of utility; but for all that the Lanarkshire hive can be made as comely in appearance as any hive. At one time I used much fretwork, and otherwise adorned my hives with fancy painting; but I soon tired of such work. Having to move my hives long distances to the Heather in common conveyances by land and water taught that a hive to be suitable and profitable must be one of little compass, and which could not be easily damaged.

I have still to take my bees to the Heather at Leadhills, about fifty miles by road and by rail, and if our hives were but a little larger they would one year with another be a losing concern. I once started from home at three o'clock A.M. with ten hives and some other articles upon a barrow to catch the boat at the Braemielaw (about nine miles) at 7.20. On reaching Lamlash the tide was ebbing, and the captain deemed it unsafe to land us at the quay, so we had, with the assistance of those on board, our live cargo put afloat in a ferry boat; but as there was no landing place, and the tide being against us, we had no alternative but to wade into the sea and pull the bees ashore on the barrow. Another half or three-quarters of a mile further up the "brae" I had my bees safely set down and at work a little after two o'clock. The reader may consider whether there is another hive that could be transmitted the same distance, and in such a manner.—A LANARKSHIRE BEE-

TRADE CATALOGUES RECEIVED.

Hogg & Robertson, 22, Mary Street, Dublin.—Forest Trees, Conifers, Fruit Trees, and Roses.

Lévêque & Sons, Ivry-sur-Seine, Paris.—Roses, Chrysanthemums, Dahlias, and Other Plants.



*All correspondence should be directed either to "THE or to "THE PUBLISHER." Letters addressed to Dr. Hogg or members of the staff often remain unopened We request that no one will write privately unavoidably. to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Bee subjects, and should never send more than two or three questions at once. articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post, and we do not undertake to return rejected communications.

Books (W. F. G.).—Cooke's "Manual of Botanic Terms" is what we think you require. It is published by Mr. Hardwick, 192, Piccadilly London, and can be obtained through a local bookseller. It is inexpensive. (G. F.).—There is no book published of the exact nature you appear to require.

Letter (J. Taylor).—Your letter is received, and the enclosure has

been forwarded in accordance with your desire.

Aucuba japonica (W. M. B.).—The pollen-bearing form of this shrub was introduced by Mr. Fortune in 1850.

Cypripedium insigne (W. E. Tidy)—It is not very unusual for Cypripedium insigne to carry two flowers on one stalk under superior cultivation, and no doubt you have before grown the plant well.

Viviand Morel Sport (G. Marr).—The sport of which you send a bloom is of no value. There are many better, but all are more or less inconstant, and appear to refuse to be "fixed" for purposes of increase and cultivation.

Exhibiting Chrysanthemums (J. C. M.).—In a class for "twenty-four varieties (cut blooms) Japanese," a stand containing two blooms of any variety would be open to disqualification on the ground that only twenty-three varieties would be included.

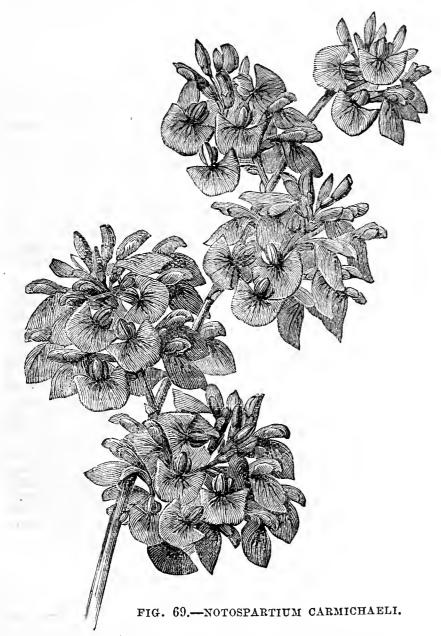
Exhibiting Chrysanthemums (A. T.).—You ask if an exhibitor would be disqualified by having an incurved Japanese amougst the incurved blooms in a class described as follows: "For the best twentyfour cut blooms, viz., twelve incurved and twelve Japanese, not less than twelve varieties, and more than three of any one variety." Such a class would admit twelve Japanese blooms, incurved or not, but admittedly Japanese, and twelve incurved blooms, not of Japanese origin; thirteen Japanese blooms would not be within the conditions, and would invite disqualification.

Bone Manures (F. J.).—The kind you have obtained is presumably the same as steamed bone flour. An analysis, showing the constituents of manures, should be supplied by vendors. Your mixture would be good for general use, but if trees or plants are too slow in growth they could be stimulated by a supplementary dressing of finely powdered nitrate of soda, at the rate of half an ounce or little more to the square yard in April, and as may be further needed; but the potassic and phosphatic manures must be in the soil as well for the best

permanent results to be forthcoming. Tuberous Fungus Found Under an Old Oak Tree $(A.\ S.)$.— The tubers are not those of the true edible Truffle (Tuber æstivum), nor belong to that genus, yet to the same order — Tuberacei. The true Truffle is black outside, and the flesh, so estemes for flavouring, is at first whitish and tender, but afterwards becomes powdery, and not unlike a Puff-ball, to which, however, it is not closely related. Your tubers are those of Elaphomyces variegatus (muricatus), Vitt., white outside and black inside, with white interlacing (variegated). This Truffle—all the Tuberacei are popularly termed Troffles—was formerly used in medicine, but is now discarded. Whether it is edible or not we have no experience, but field mice are extremely fond of the tubers, and are continually scratching about for them. The botanist is guided to where this Truffle is to be found by the appearance of a parasitic fungus (Torrubia ophioglossoides, Tul.), the spawn of which grows over a common moss (Mnium hornum, *Hedw*.), and is running in search of the Truffles (Elaphomyces variegatus), which usually grow from 4 to 5 inches beneath the surface. If there are no Elaphomyces in the soil, the mycelium of the Torrubia perishes, but in most woods where the moss grows the Truffles are generally found.

Weed on Tennis Lawn (J. R.) —There are several weeds called Gill-run-the-ground. Had you sent a portion we might have recognised it; but that is not material, as you do not wish to interfere with the ground, beyond applying something to the surface. If your employer does not object to the grass being browned a little, as it must be if the weeds are to be killed or prevented increasing, and the grass ultimately encouraged, you can try the following mixture:—Sulphate of ammonia, 3 cwt.; kainit, 2 cwt.; reduce to fine powder, mix thoroughly, and apply in dry weather—that is, with a prospect of no rain or snow falling for some time. The above amount is for an acre. About the middle of next February, or as soon after as the ground is thawed, you may apply 5 cwt. per acre of dissolved bones. The grass ought to be better next year and the weeds fewer.

Notospartium Carmichaeli (A. B. C.). - You are right in assuming that Notospartium Carmichaeli has been figured in the Journal of Horticulture, but as the plant is not well known we reproduce the illustration. Notospartium Carmichaeli is a New Zealand shrub of slender habit, with somewhat flattened leafless stems and branches, or with the leaves reduced to scale-like proportions. The neat pea-shaped rosy-purple flowers are borne in dense clusters on the stems as shown in the woodcut (fig. 69). In some districts this plant no doubt will be



found quite hardy, but in any case it should be worth a place in a greenhouse with other plants from the southern hemisphere, and requires the treatment accorded to hardwooded plants.

Cyclamen Roots Destroyed (Cycla) - The roots of your plants are being eaten by the larvæ of the destructive weevil Otiorhyncus sulcatus. These weevils feed at night, and with diligence and the aid of a lantern many of them may be caught. Plants having their roots eaten to such an extent that they can be "lifted out of the pot" should be taken out and immersed in a decoction of hellebore, made by placing 2 ozs. of the powder in a gallon of cold water, then steadily brought to the boil, and when cool enough the roots placed in it. The fresh soil should be charred over a fire and then properly moistened before being used.

Chemical Manures for Zonal Pelargoniums (Northants). There is no such thing outside the imagination and the chemists laboratory that favours any particular part of the plant or flower, for no one chemical substance is a manure in itself, but is dependant upon another for its efficacy. To enable a plant to produce fine trusses it must be stored with nutrient matter by food supplied to the roots and converted into the essential elements in stout, thick-textured, healthy, clean leaves. Here is a mixture for this purpose after the plants are well rooted in sweet firm soil :-- Three parts pure dissolved bones, two parts nitrate of potash powdered, one part sulphate of lime, ground; mix thoroughly, and keep in a dry place. Use a thimbleful on the surface of the soil in an 8-inch pot, other sizes in proportion, spreading evenly, and wash in. Repeat about every fortnight or three weeks, as growth is required. Grown in plenty of light and air the plants will throw up grand trusses. That is one of the great secrets, and when they are beginning to open out add half a part of sulphate of iron to the

mixture—that is, taking the proportional parts of the whole, and it will bring out the size and colours to perfection.

Names of Fruits.—Notice.—We have pleasure in naming good typical fruits (when the names are discoverable) for the convenience of regular subscribers, who are the growers of such fruit, and not collectors of specimens from non-subscribers. This latter procedure is wholly irregular, and we trust that none of our readers will allow themselves to be made the mediums in infringing our rules. Special attention is directed to the following decision, the object of which is to discourage the growth of inferior and promote the culture of superior varieties. In consequence of the large number of worthless Apples and Pears sent to this office to be named, it has been decided to name only specimens and varieties of approved merit, and to reject the inferior, which are not worth sending or growing. The names and addresses of senders of fruit to be named must in all cases be enclosed with the specimens, whether letters referring to the fruit are sent by post or specimens, whether letters referring to the fruit are sent by post or not. The names are not necessarily required for publication, initials sufficing for that. Only six specimens can be named at once, and any beyond that number cannot be preserved. They should be sent on the first indication of change towards ripening. Dessert Pears cannot be named in a hard green state. (Dr. Wallace).—1, Waltham Abbey Seedling; 2, Reinctte de Caux; 3, Cockle's Pippin; 4, not known, quite second-rate; 5, Scarlet Nonpareil; 6, probably a seedling of no value. (Coombe Park).—1, Vicar of Winkfield; 2-3, Scarlet Pearmain; 4, Lady Apple. (N. H. P.).—General Todleben. (J. H.).—Large Apple, Dutch Mignonne; small one is a local variety. (F. E.)—Rymer. (Hills).—The fruit resembles Golden Queen imperfectly ripened. (A. B.).—1, Norfolk Bearcr; 2, Local; 3, Golden Russet. (T. N. R.)—1, Grenadier; 2, Manks Codlin; 5, Greenup's Pippin; Pears, 3, Josephine de Malines. The others are all rotten. A parcel has been received from Hitchin without a letter or address. Hitchin without a letter or address.

Names of Plants.-We only undertake to name species of plants, not varieties that have originated from seed and termed florists' flowers. Flowering specimens are necessary of flowering plants, and Fern fronds should bear spores. Specimens should arrive in a fresh state in firm boxes. Slightly damp moss, soft green grass or leaves form the best packing, dry wool the worst. Not more than six specimens can be named at once, and the numbers should be visible without untying the ligatures, it being often difficult to separate them when the paper is damp. (H. M.).—Lycaste Skinneri. (M. D.).—1, Tecoma capensis; 2, Agave americana. (L. B.).—Veronica Andersoni variegata. (F. Geeson).— So far as we can judge from the imperfect dried specimen the Grass is Triticum repens. The other is apparently an Eryngium, but it is impossible to identify the species, the specimen being imperfect.

COVENT GARDEN MARKET .- NOVEMBER 22ND.

Cobs	
S. d. s. d. Mustard and Oress, punnet O O O O O O O O O	
Beans, Kidney, per lb. 0 3 to 0 4 Mustard and Oress, punnet 0 Beet, Red, dozeu 1 0	
Mushrooms, punnet 0 9 1 0 Turnips, bunch 0 Mushrooms, punnet 0 9 1 0	3 0 0 3 0 3 0 0 0 6 3 0 4 8 0 1 5 6 0 0 3 0 0 3 0 0 6 0 7

AVERAGE WHOLESALE PRICES .- OUT FLOWERS.

Orchid Blooms in variety. (Ohrysanthe:	mum blooms very plentiful this sea	ason, hence
s. c	d. s. d	q	d. s. d.
	0 to 5 0	Orchids, per dozen blcoms 3	0 to 12 0
		oronial, por assessment	0 9 0
tractice, donor sprengers	0 1 6	I clair golf carrolled	0 3 0
Bourtai ditte, sancia ii ii i	6 1 0	Pelargoniums, scarlet, doz.	0 6 0
Cuttonius, action of the	0 3 0	0440400 11 11 -	0 0 0
Curnitations, 22 Steeling	6 2 0	Primula (double), dozen	c 1 0
Ohrysanthemums, dozen		sprays 0	6 1 0
5420202	0 6 0	Pyrethrum, dozen bunches 2	0 4 0
	6 2 0	Roses (indoor), dozen 0	6 1 6
	0 6 0	"Tea, white, dozen I	0 2 0
	0 4 0	"Yellow, dozen 2	0 4 0
Lilac (French) per bunch 3	6 6 0	Tuberoses. 12 blooms 0	4 0 6
Lilium lancifolium, dozen		Violets, Parme (French),	
	0 3 0	per bunch 2	6 3 0
Lilium lougiflorum, perdoz. 6	0 9 0	Violets, Czar (French), per	
Maidenhair Fern, dozen		bunch 2	0 2 6
	0 6 0	Violets (English), dozen	
ouncires	0 4 0	bunches 1	6 2 0
Mignonette, 12 bunches	0 4 0	Bullette VI IV IV	
Mignonette, 12 bunches		IN POTS.	
	d. s. d.	S.	d. s. d.
	0 to 12 0	Ferns (small) per hundred 4	0 to 6 0
III DOL 1200 (Borney)		Figure elastica, each 1	0 7 6
Hopidibolo, per dones		Foliage plants, var., each 2	0 10 0
Mobile of the profit of profit of		Lilium Harrissi, per dozen 12	0 24 0
Onrysummentatio, per don -	0 9 0		0 4 0
,, ittige pittito, etteri 1	0 2 0	HJ 00 Podramo, per docer	0 12 0
Dracæna terminalis, per		2.2.0	0 . 9 0
donomic it is it is	0 42 0	Mignonette, per doz 6	
	0 24 0	Myrtles, dozen 6	0 9 0
	0 18 0	Palms, in var each 1	0 15 0
	0 18 0	" (specimens) 21	0 63 0
	0 24 0	Pelargoniums, scarlet, doz. 2	0 0 0
Ferns, in variety, dozen 4	0 18 0	Solanums, per dozen 9	0 12 0
=, (



PROFITABLE LIVE STOCK.

So important is the question of the best cow for the dairy farmer, and how to feed it, that we return to this subject this week, in view of touching a few more points of practice, with some facts bearing upon them.

If, as we hold, the keeping of an inferior cow is both foolish and wasteful, it is surely owing to want of thought, a failing to grasp this fact in its full significance, that such animals predominate everywhere. All the food that a cow consumes, beyond what is necessary to sustain life, should go to promote a fully sustained milk yield up to a given standard, both in quantity and quality. The average milk yield in the British Isles is 440 gallons per cow, which means the yield ranges from 300 gallons upwards to 1000 gallons or more. A cow yielding the lesser quantity is kept at a loss, at the greater quantity the profit is so high as to exceed the bounds of all ordinary calculations. Granted that 1000 gallons per cow is a yield so extraordinary and exceptional that only a few of such marvellously deep milkers are met with in our best herds, yet we can afford to fall from that high figure to a minimum of 500 gallons and still have profitable cows. But no sensible man can possibly rest contented even with such cows; the net profit upon them cannot be much more than £4, and the yield is in reality a very low one. Ten quarts daily for 200 days make up the sum of it, yet it falls below that. At the lowest computation a cow should be in milk quite 250 days out of the 365 days of the year, and we have often told of a small black Kerry cow which we had from Dr. Hogg's herd that gave 16 quarts of exceptionally rich milk daily. It was a mere pigmy beside a huge Shorthorn, which at best only gave 10 quarts daily—not by any means a fair equivalent for the food consumed by it. Such large animals must be deep milkers to be profitable. Extra outlay upon food only answers for well-bred cows, it is comparatively wasted on mongrel breeds.

According to a high authority an inferior cow costs £14 a year for its food, and yields a calf worth £1, and 400 gallons of milk, which at 8d. is £13 6s. 8d., or a total of £14 6s. 8d., profit 6s. 8d. A superior cow costs £17 a year for its food, yielding in return a calf worth £2, and 700 gallons of milk at 8d., or £23 6s. 8d —total, £25 6s. 8d.; profit, £8 6s. 8d. If the milk of both cows was used for butter or cheese making, the difference in the result would be much more in favour of the superior cow. It is also obvious that if the milk producer could dispose of it to the consumer at the present ordinary retail price of 4d. per quart his profits would be doubled. Truly a grand business is that of the retailer of milk! the eager competition, the headlong rush of a dozen or more milk carts along every suburban street or road of the metropolis twice daily is not to be wondered at, even if new milk only was sold. But there is no doubt that much separated milk is mixed with it and sold as new, and police court reports often tell of an addition of 30 or 40 per cent. of water.

For the production of cheese or butter, quality is a prime factor, dependent both on food and breeding. For example, the milk of a Jersey cow yields 25 per cent. of cream, and when we have such richness in combination with the desirable average of 700 gallons the result is certainly satisfactory. Cows of this breed frequently yield much more than this; the famous Jersey cow "Luna's" yield for three consecutive years was 876, 898, and 816 gallons, an average milk yield per year of slightly over

863 gallons, or almost double the ordinary annual average yield. For the home farmer a herd of Jerseys is highly desirable, though we must confess to a preference for the larger and more robust Guernseys. Certainly for rich milk, for deep milking, and for a well sustained yield the Guernsey ranks very high.

For the ordinary dairy farmer we give preference to our favourites the Red Polled Suffolk cows, in which we have in admirable combination deep milking and beef production. The milk is rich, and the square fleshy frames are easily fattened. Some of the best cows yield upwards of a thousand gallons yearly, and the steers are equally remarkable for early maturity. In the Whitlingham herd of this breed—a very large one especial care has been given to the selection of both males and females from famous milking dams, with results so remarkably in favour of an increased milk yield as to carry conviction of the value of selection both for milk and for beef.

WORK ON THE HOME FARM.

During the present and three following months butter difficulties are wont to crop up, and all possible care must be exercised to guard against them. For the daily churning avoid the milk from stale cows. Under good management there is a fresh cow or two coming in every month, and it is from their milk that cream for the daily churning should be taken. Correct any tendency to the acridity that so often renders butter unpalatable in winter by using a small teaspoonful of finely should be taken. powdered saltpetre to three gallons of cream; a small pinch between finger and thumb is sufficient for the daily churning. Just a modicum of salt in the form of brine helps the flavour, but this requires a careful hand, as the order which so frequently comes from head quarters of "no salt in the butter" can only be ignored with advantage by a really skilful butter-maker. It is just a question of palate tickling worthy of best efforts, and a compliment upon good butter at midwinter is certainly worth trying for.

Look well to the churning, have no bewitched cream, at which one after another tries their hand for hours without bringing the butter. Temperature must have attention; 65° is the best temperature for cream when it is put in the churn during winter. This is easily and best managed by placing the cream jar in water slightly above that tempera-Warm the churn with water at about 70°, which let run out just before putting in the cream. There should then be no difficulty in getting the butter quickly. The churning may be done more briskly in winter than in summer, but there must be no violent or abrupt clashing about of the cream at any time. Begin slowly, gradually increase the speed, and when the butter grains appear gradually reduce the speed.

Never break the grain in churning, or the butter will not keep sweet. Equal care must be taken with the cows and their food. We m We must have a clean cow house, clean hands for milking, and clean milk pails. For food use the best meadow hay, Carrots, bran, crushed oats, Cabbage, or Thousand-headed Kale. The bulk of food is in the hay, with from a gallon to a peck of bran, and half that quantity of oats at milking time. A little Palm-nut meal may be added with advantage, but care must be taken not to use enough Cabbage to affect the flavour of the milk.

METEOROLOGICAL OBSERVATIONS. OAMDEN SQUARE, LONDON. Lat.51° 32' 40" N.; Loug. 0° 8/0" W.; Altitude, 111 feet.

DATE.			9 A.M	•	IN THE DAY.					
Barometer at 32°, and Sea Level.		Hygrometer.		Direc- tion of	Temp. of soil at		Tem- ture.		ation rature	Rain,
November.	Barc at 32 Sea	Dry.	Wet.	Wind.	1 foot.	Max.	Min.	In Sun.	On Grass.	
Sunday 12 Monday 13 Tuesday 14 Wednesday 15 Thursday 16 Friday 17 Saturday 18	Inchs. 30·386 30·126 29·876 29·751 29·935 29·190 29.068	deg. 42·5 33·4 36·9 40·1 45·2 55·2 39·7	deg. 39.3 32.9 36.9 39.9 44.3 54.0 38.9	N.E. N.E. S.E. N.E. S.E. S.W.	deg. 43°4 42°0 40°9 41°2 42°1 43°6 44°4	deg. 45.6 43.1 42.0 45.7 55.4 58.0 42.4	deg. 37·0 30·0 31·3 36·4 38·4 43·0 37·8	deg. 69·1 65·4 42·6 49·6 56·9 72·9 49·0	deg. 32·3 24·4 27·8 37·2 33·2 39·6 35·4	0 010 0 594 0 023 0 031 0 154 0 277

REMARKS.

12th.-Almost cloudless throughout.

13th.—Slight fog till 10 A.M., but almost cloudless throughout.
14th.—Very wet fog all day; slight showers in afternoon; steady heavy rain from 6.15 P.M.

Continuous heavy rain till 4 A.M., then overcast and dull; continuous drizzle from 11.30 A.M. to 3 P.M.; fair evening.

Overcast morning; fair afternoon with gleams of sun; cloudy evening and rain at midnight.

rain at midnight.

17th.—Slight showers early; overcast from 8.30 A.M.; frequent sunshine from noon to 3 P.M. but a very slight shower about 1 P.M.; overcast after, with high wind and heavy rain between 5 and 7 P.M.

18th.—Rain from 3 to 7 A.M., then overcast and rain from 1.30 P.M., changing to snow about 3 P.M., which continued till after midnight, with a violent gale.

Temperature below the average, rainfall considerably above it. The total rainfall this year, 16.85 in., is very nearly as much as fell in the whole of the year 1864. It is therefore clear that 1893 cannot be unprecedentedly dry.—G. J. SYMONS.



I AM very sorry to be so late in bringing out this analysis, but having missed my opportunity early in the year through press of other work, I have delayed completing it until the show time came round again, thinking it would then be of more interest than during the summer or early autumn months. At the Exhibition held by the National Chrysanthemum Society at the Royal Aquarium, Westminster, in November, 1892, the display of incurved cut blooms was the smallest of which I have any record. There were, however, rather more Japanese than at the previous Show.

The following short statement gives the number of cut blooms staged in the incurved and Japanese sections at the eight exhibitions. The flowers shown in the classes for six blooms of any one variety were not tabulated for the analysis, and therefore have not been included in the totals.

	1885	1886	1887	1888	1889	1890	1891	1892
Incurved Japanese								
о шриново						2004		1000
	1674	2106	2185	2906	1604	3431	1802	1642

Now that I have a complete set of records for eight years to deal with, I am in a position to adopt a similar system of analysis to that so successfully employed when dealing with the last Rose and Dahlia analysis. This system I have endeavoured to explain at page 358. The steady going incurved Chrysanthemums will not be found in any way seriously affected by this improved methodindeed, the relative positions of nearly all the leading kinds remain practically as in the previous analysis. The table of the headstrong Japanese has, however, become greatly changed, and I trust improved since the last version of it appeared. I have gone most carefully into the places accorded these Japanese varieties, and endeavoured to give each its proper relative position in the list; but the changes in this section are so rapid, and there is such a large accession of new sorts every year, that I have in many cases only the records for a few years to guide me in placing them -indeed, the careers of many of these Japs are so brilliant, and yet at the same time so fleeting, as to make them in these respects more resemble butterflies than well regulated florists' flowers. However trying to the analyst these startling changes may be, they indicate, I must confess, very substantial progress. In order to give some idea of the extent of the changes referred to, and at the same time show how greatly the flowers themselves have improved, I may mention that only five out of the first twenty-four varieties in the table published only six years ago are now considered worthy of places among the first twenty-four in the present analysis. Of these five, Madame C. Audiguier has fallen since then from its position as the premier flower to No. 19, Jeanne Delaux from No. 3 to No. 10, and Val d'Andorre from No. 5 to No. 9. Boule d'Or stands pretty well the same in both tables, and Mr. Ralph Brocklebank, then quite a novelty, will be found at No. 16. If the advance made during the short space of six years has been so considerable as these alterations indicate, what glorious possibilities may there not be in store for us during say the next decade. Already there are not wanting indications in the comparative tables before me of the speedy downfall of many varieties at the present time in much request. Not only are the flowers of many of the modern varieties improvements on those of their predecessors, but the plants themselves, particularly as regards their heights and constitutions, show a decided advance as well.

Empress of India once more heads the table of incurved varieties, and deservedly so, as it appears to be a most reliable Chrysanthemum. In certain seasons Queen of England, Lord Alcester, and Golden Empress of India have not been far behind the premier flower, and have each at a single show been staged rather more frequently, but their records from year to year being more unequal, they do not seem to have any chance of seriously threatening its position. Lord Wolseley, Princess of Wales, Golden Queen of England, and Novelty have never before been better represented than they were last year. On the other hand Alfred Salter, Prince Alfred, Barbara, Jardin des Plantes, Hero of Stoke Newington, and Cherub at none of the preceding seven shows have been as seldom staged in competition. Miss M. A. Haggas and Violet Tomlin were also poorly represented.

In this section the newer varieties in the table, those dating from 1889 and after, are eight in number. Of the 1889 incurved Mrs. S. Coleman, No. 14, and John Doughty, No. 15, were equally as well shown as at the previous Exhibition; while Camille B. Flammarion has improved on its performance in that year. Madame Darier and Monsieur R. Bahuant, sent out in 1890, appear for the first time in the table, and both at No. 23, while Ami Hoste of the same year takes up a position at No. 37. The still newer kinds, Mrs. Robinson King and Robert Cannell, only introduced in 1891, will be found at Nos. 35 and 36 respectively.

Turning now to the table of Japanese varieties, as I said before I have done all in my power to deal with them as fairly and accurately as the data at my disposal will allow. The results generally can never, however, be considered quite satisfactory while this section remains in such a state of rapid transition. That grand Jap., Edwin Molyneux, it will be noticed, is for the time being the leading flower, closely followed by the snow white Avalanche. The following established kinds, if they can be so called, were less frequently shown than at any previous exhibition: -Mr. Ralph Brocklebank, Jeanne Delaux, Madame Baco, Madame J. Laing, Sarah Owen, Meg Merrilies, Carew Underwood, Mdlle. Lacroix, Baronne de Prailly, Belle Paule, Mrs. C. H. Wheeler, Mr. H. Cannell, Fair Maid of Guernsey, Criterion, Marguerite Marrouch, Thunberg, Lady T. Lawrence, Yellow Dragon, Mrs. J. Wright, Monsieur J. M. Pigny, Mrs. H. Cannell, Comtesse de Beauregard, and four others. This is a goodly list, and clearly shows how quickly many of the older favourites are retreating before the advance of the new comers, although, of course, this does not necessarily apply to every variety included in it, as the disastrous effects of certain seasons upon particular sorts is well known. But the question may naturally be asked, "On the other hand, what 'established' Japs. were last year staged oftener than at any previous show?" I answer, only two! Avalanche and Sunflower, the first an 1887 and the other an 1888 variety.

No fewer than twenty-one Japanese Chrysanthemums which have been sent out since 1888 already find places, and a fair proportion of them excellent places too, in the analysis. Looking carefully down the table we first come to Viviand Morel (No. 4), the sensation flower at the 1892 exhibition. This fine variety, although only sent out the year before, appeared in more stands than any other with the exception of Edwin Molyneux, Avalanche and Sunflower, which are from three to five years older. Except as regards its variability in colour it is indeed a sterling acquisition in every way. Next comes Gloire du Rocher, sent out only in 1891 at No. 6. W. H. Lincoln (No. 6), an 1890 Jap., was also last year surprisingly well shown. Florence Davis (1891) likewise made its mark, and is pretty sure this year to rise even higher than its present honourable position at No. 15. Louis Boehmer (No. 15)

of the same year was also equally well represented. This is an easily grown hirsute variety, but owing to its dull purple colour is not, I think, likely to advance in popular favour. Mr. A. H. Neve (1890) takes up a good place at No. 15. William Tricker (No. 27) also introduced in 1891, stands well considering that this is its first appearance in the analysis. Miss Anna Hartshorn (No. 31), first sent out in 1889, was shown last year three times as frequently as at the previous exhibition. We then reach an 1891 variety, Mdlle. Marie Hoste, which, although new to the analysis, already stands at No. 33. Mr. E. Beckett (1892) a still newer candidate for honours will be found at No. 39. Then lower down follow Coronet (1889) at No. 42, Alberic Lunden (1890) at No. 44, Mrs. Alpheus Hardy, that delicately constituted white variety with hairy petals which all growers are so proud to stage in good condition, also at No. 44, M. E. A. Carrière (1889) at No. 46, Beauty of Castlewood (1892) at No. 48, Pink Lacroix (1889) also at No. 48, Lilian B. Bird (1890) at No. 50, Cesare Costa (1890) at No. 52, Mrs. Irving Clark (1889) at No. 52, Eynsford White (1889) at No. 57, and lastly, Vice-President Audiguier (1890) also at No. 57.

The above new varieties are placed in the list according to the number of times they were staged at the Royal Aquarium Show last year, in order to give them every possible chance of competing with their more established brethren. There is, however, one disturbing cause affecting the very newest sorts in the table, but these only, for which I am unable to apply any correction, and yet which must in exceptional cases have considerable influence on the positions they are assigned, for I am told that in some instances it is impossible for a new variety to be well represented on its first appearance, owing to the limited number of plants available for distribution when it is first sent out.

The contrast between the incurved and Japanese sections is very marked, whether we take the average ages of the leading varieties or the changes from year to year. For instance, taking the first twenty-four sorts in each case we find the average age of the former to be twenty-one years, whereas the first twenty-four Japanese average only six years. As I have already stated, only five Japanese varieties which were classed among the first twenty-four kinds six years ago are now to be found in the same number of leading flowers. Treating the incurved varieties in (see p. 486)

INCURVED VARIETIES.

			INCURVE	O VALU.	III III O.	
Position in Present Analysis.	Average Number of Times Shown.	No. of Times Shown in 1892 in True Relative Propor- tion to the Average.	Name	Date of Introduction.	Raiser's or Introducer's Name.	Colour.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 23 24 25 26 26 27 28 29 30 31 33 34 35 36 36 36 36 36 36 36 36 36 36 36 36 36	56·3 51·6 49·6 46·3 44·0 42·5 40·3 37·1 36·0 33·3 32·2 30·5 30·0 27·0 23·7 23·6 23·3 21·9 21·7 21·3 19·0 17·2 15·0 13·7 13·7 13·3 13·2 13·0 12·6 12·4 11·0 10·3 10·0 9·0 8·5 8·0 7·5 7·1 7·0 6·6 6·4	56 53 50 38 34 50 34 50 44 17 20 16 30 30 24 20 24 6 20 13 14 19 6 8 8 11 6 11 13 11 11 18 5 6 8 8 11 11 11 11 11 11 11 11	Empress of India Lord Alcester Queen of England Golden Empress of India Miss M. A. Haggas Miss Violet Tomlin Golden Queen of England Jeanne d'Arc. Princess of Wales. Lord Wolseley John Salter Alfred Salter. Prince Alfred Mrs. S. Coleman John Doughty Nil Desperandum Lady Hardinge. Mrs. Heale Barbara Mrs. W. Shipman Jardin des Plantes Princess of Teck Madame Darier. Monsieur R. Bahuant Hero of Stoke Newington Cherub Empress Eugénie Refulgens Mr. Brunlees Mr. Brunn Camille B. Flammarion Princess Beatrice Prince of Wales Alfred Lyne Lady Dorothy White Venus Mrs. Robinson King Venus Robert Cannell Ami Hoste Mrs. Norman Davis Novelty. Charles Gibson Beverley.	1861 1882 1847 1877 1888 1888 1859 1881 1865 1863 1866 1863 1889 1862 1861 1867 1869 1878 1869 1878 1869 1878 1868 1878 1868 1878 1868 1873 1866 1873 1884 1881 1889 1868 1873 1868 1878 1868 1868 1878 1868 1878	Downie, Laird & Laing Freemantle J. Salter Loader Hayes Doughty J. Salter Lacroix Davis Orchard J. Salter J. Salter J. Salter J. Salter Davis Russell Doughty Smith Clark Heale J Salter Shipman J. Salter Pethers Sautel Hoste Forsyth Smith Pethers Hock Smith Bunn Sautel Wyness Davis Lyne Buss Shrimpton Hotham J. Salter Cannell Sautel Mizen Clark Mizen Smith Mizen Smith	Pure white Pale primrose Delicate rose blush Pale yellow Soft bright yellow Bright violet purple Pale straw colour Blush white, tipped purple Blush, tinted rose Bronzy red Cinnamon, orange centre Clear lilac pink Rose carmine, shaded purple Bright rose, shaded yellow Bronze fawn, suffused rose Dark orange red Silvery rose Pure white Bright amber, shaded orange Fawn colour Deep golden yellow White, suffused pink Yellow, shaded purple Rose purple Rose pink Orange, tinted rose bronze Rosy lilac Rich purple maroon Indian red, tipped gold Bright golden yellow Dark violet Delicate rosy pink Purple Rose lilac Cinnamon buff, suffused rose Pure white Rich yellow Lilac, suffused pink Crimson and golden bronze Buff yellow, striped carmine Rich golden yellow Blush Bronze red, centre fawn Cream white
43 44 45 46	5.6 5.4 5.1 5.0	5 0 5 0	Golden Eagle Baron Beust Mabel Ward Eve Bronze Queen of England	1863 1868 1882 1865 1886	Davis Pethers Ward Smith Carter	Reddish bronze, tipped orange Chestnut red, shaded yellow Buff yellow Cream white Bronze brown, tinted rose

			JAPANES	SE VAF	RIETIES.	
Position in Present Analysis.	Average Number of Times Shown.	No. of Times Shown in 1892 in True Relative Propor- tion to the Average.	Name.	Date of Introduction.	Raiser's or Introducer's Namc	Colour
1 2 3 4 5 6 6 7 8 9 10 11 2 13 14 15 15 16 17 18 19 20 1 22 23 24 25 6 27 7 28 29 30 12 23 33 34 35 36 37 8 39 40 14 24 34 44 44 44 44 44 44 44 44 44 44 44 44	AV 57.5 57.3 54.0 53.0 44.0 38.0 36.7 35.9 30.7 30.0 29.3 29.2 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28	Solution Soluti	Edwin Molyneux Avalanche Etoile de Lyon Viviand Morel Sunflower Gloire du Rocher W. H. Lincoln Stanstead White Monsieur Bernard Val d'Andorre Jeanne Délaux Mrs. Falconer Jameson Madame Baco Madame John Laing Sarah Owen Florence Davis Louis Boehmer Mr. A. H. Neve. Mr. Ralph Brocklebank Condor Puritan Madame C. Audiguier Boule d'Or W. W. Coles Meg Merrilies Gloriosum Carew Underwood Mdlle. Lacroix Japonais Baronne de Prailly William Tricker Belle Paule Stanstead Surprise Mrs. C. H. Wheeler Miss A. Hartshorn Mr. H. Cannell Mdlle. Marie Hoste Fair Maid of Guernsey Criterion Maiden's Blush Marguerite Marrouch Thunberg Lady T. Lawrence Mr. E. Beckett Yellow Dragon La Triomphante Coronet Mrs. J. Wright Alberic Lunden Duchess of Albany Monsieur J. M. Pigny Mrs. Alpheus Hardy Mrs. E. W. Clarke Mrs. H. Cannell Monsieur J. M. Pigny Mrs. E. W. Clarke Mrs. H. Cannell Monsieur J. M. Pigny Mrs. E. W. Clarke Mrs. H. Cannell Monsieur J. M. Pigny Mrs. E. W. Clarke Mrs. H. Cannell Monsieur J. M. Pigny Mrs. E. W. Clarke Mrs. H. Cannell Monsieur J. M. Pigny Mrs. E. W. Clarke Mrs. H. Cannell Monsieur J. M. Pigny Mrs. E. W. Clarke Mrs. H. Cannell Monsieur J. M. Pigny Mrs. E. W. Clarke Mrs. H. Cannell Monsieur J. M. Pigny Mrs. E. W. Clarke Mrs. H. Cannell Monsieur J. M. Pigny Mrs. E. W. Clarke Mrs. H. Carrière Elaine Beauty of Castlewood Pink Lacroix Comtesse de Beauregard Comte de Germiny Lillian B. Bird George Daniels Album Fimbriatum	1886 1887 1888 1891 1888 1891 1886 1887 1886 1883 1882 1886 1885 1887 1891 1890 1886 1887 1879 1886 1887 1887 1888 1887 1888 1887 1888 1887 1888 1887 1888 1887 1888 1887 1888 1887 1888 1887 1888 1888 1889 1886 1886	Cannell Cannell Boucharlat Lacroix Cannell Gibson Fewkes Laing Laing Pertuzes Délaux Cannell Davis Délaux Owen Davis Henderson Owen Winkworth Boucharlat Waterer Marrouch Bernard Craig J. Salter Waterer Beckett Lacroix Délaux J. Salter Marrouch Laing Waterer Cannell Lacroix Délaux J. Salter Marrouch Laing Waterer Cannell Lacroix Downton J. Salter Stevens Marrouch Veitch Cannell Davis Salter Reydellet Thorpe Laing Délaux Jackson Audiguier Craig Cannell Délaux Jackson Audiguier Craig Cannell Délaux Downton Spaulding J. Salter Veitch Fewkes Boucharlat Laing	Chestnut crimson, golden reverse Snow white Rosy purple Rose, striped white Rich golden yellow Orange amber, flushed crimson Deep yellow Pure white Rosy purple Orange red Dark crimson maroon Orange bronze Deep rose Creamy white, tingcd rose Golden bronze, shaded rose Pure white, greenish white centre Deep purplish rose, lighter reverse Silvery blush, purplish centre Yellow White White, flushed lilac Deep mauve Rich yellow, tipped bronze Bright terra-cotta Sulphur white Orange to golden yellow Bronze White Bronze yellow Pale rose Rich light pink White, edged rosy purple Reddish purple Chestnut crimson, golden reverse White, slightly tinted pink Deep lemon yellow White, slightly tinted pink Deep lemon yellow White, slightly tinted blush Crimson, edged yellow Soft golden yellow Soft golden yellow White Rich deep yellow Bright golden yellow White, suffused purplish rose Clear yellow Pure white Purple crimson Orange buff White Creamy white, tinted blush Pure white Creamy white, tinted blush Pure white Creamy white Amaranth Pure white Creamy white, tinted blush Pure white Creamy white, tinted blush Pure white Crimson and old gold Delicate rose pink Rosy lilac Nankeen, striped crimson brown White, tinted pink Pale pink Pure white
52 52 52 52 53 54 55 56 57 57 57 57 58 59	7 0 7 0 7 0 7 0 7 0 6 · 8 6 · 5 6 · 3 6 · 0 6 · 0 6 · 0 5 · 4 5 · 2	7 4 2 5 1 4 0 1 1 6 0 1 6 0 2	Cesare Costa Monsieur Freeman Monsieur J. Laing Mrs. Irving Clark Soliel Levant Marsa Volunteer L'Adorable Triomphe de la Rue des Châlets Eynsford White Mdlle. Blanche Pigny Monsieur Brunet Vice-President Audiguier Monsieur H. Elliott Florence Percy	1890 1885 1884 1889 1874 1886 1888 1885 1881 1889 1885 1879 1890 1886 1886	Hoste Délaux Délaux Craig Reydellet Henderson Délaux Pertuzes Cannell Audiguier Lacroix Lacroix Délaux Allen	Poppy red Purplish rose, white centre Reddish brown, golden reverse Delicate peach Delicate yellow Purple, white centre Bright flesh pink, tinted rose Canary yellow, tipped purple Reddish salmon Ivory white White Lilac mauve Rosc and white Salmon buff, tinted rose Creamy white

the same way, there are, on the contrary, only five varieties which are not to be found in both analyses.

The relative positions of the different varieties in the following lists are dependent upon their average performances at the last five or less exhibitions as the case may be.

Reflexed.—Cullingfordi, King of Crimsons, White Christine, Cloth of Gold, Pink Christine, Golden Christine, Peach Christine, Chevalier Domage, Dr. Sharpe, Mrs. M. Sullivan, and Phidias.

Large Anemones.—Mrs. Judge Benedict, W. and G. Drover, Lady Margaret, Gluck, Empress, Miss Annie Lowe, J. Thorpe, jun., Gladys Spaulding, Grand Alvéole, Georges Sand, Acquisition, Fleur de Marie, and Nouvelle Alvéole.

Japanese Anemones. — Mons. C. Lebocqz, Jeanne Marty, Rodolpho Ragioniere, Fabian de Mediana, Nelson, Le Deuil, Madame Robert Owen, M. Dupanloup, Sœur Dorothée Souillé, Duchess of Westminster, Marguerite Solleville, and Sabine.

Pompons.—Black Douglas, Mdlle. Elise Dordan, Golden Mdlle. Marthe, Mdlle. Marthe, Prince of Orange, Marabout, President, Pygmalion, William Westlake, Rubrum Perfectum, St. Michael, and Cendrillon.

Pompon Anemones.—Antonius, Perle, Astria, Rose Marguerite, Madame Montels, Marie Stuart, Mr. Astie, Regulus, and Calliope.

NATIONAL CHRYSANTHEMUM SOCIETY'S SHOW, HELD NOVEMBER 7TH, 1893.

This was one of the largest exhibitions the Society has yet held; in fact, the number of Japanese Chrysanthemums staged in competition exceeded that at any previous show, with the exception of the Centenary Exhibition in 1890.

As it may be some weeks before my next Chrysanthemum analysis is ready for publication, it may be of interest if I give here the relative positions the following new varieties are likely to occupy in that analysis when it appears. Those new sorts only are mentioned which are not to be found in the foregoing tables.

Incurved.—Baron Hirsch, Madame Frederic Mistral, Brookleigh Gem.

Japanese.—Colonel W. B. Smith (the champion new variety of the Show), G. C. Schwabe, Charles Davis, Mrs. C. Harman Payne, Excelsior, Lord Brooke, William Seward, John Shrimpton, Violet Rose, R. C. Kingston, Amos Perry, Mr. Charles Blick, J. Stanborough Dibbens, Miss Dorothy Shea.

It only now remains to thank Mr. C. Harman Payne, Secretary of the Catalogue Committee of the National Chrysanthemum Society, for again kindly supplying the dates and raisers' names of some of the newer varieties in the tables.—E. M., Berkhamsted.

WANDERINGS IN WICKLOW.

THE county of Wicklow, if equalled in its splendid scenery by more remote parts of the west of Ireland, can scarcely be surpassed, and joining as it does to county Dublin, is of easy access from "the car-drivingest city" in the world. This might be considered a doubtful advantage resulting in an invasion of Nature's privacy, but such is not the case, for though many persons go to Bray, which may be aptly called the gate to Wicklow, few continue the journey beyond.

Bray, the so-called Brighton of Ireland, is singularly unlike the fashionable English resort. The ocean dashes against the fine esplanade unaccompanied in its solo by either hand organs or Ethiopian minstrels. True, the soft mournful notes of the Irish pipes, tuned by a blind musician, fall on the ear, but harmoniously so, though the missing link may perhaps be found in specimens of the Edie Ochiltree type, who pour out voluble blessings for prospective baksheesh; or mayhap the jaunting car driver has beguiled "yer honour" into patronising him, and you, though on pleasure bent, retain the frugal mind by omitting the pour boire, his look without words is as expressive as the verbiage of his brother over the water.

On leaving the station visitors cannot fail to be impressed by the bold front of Bray head, sharply outlined against the sky and backed up by the mountains, of which the Sugarloaf stands out pre-eminent. Striking off inland through the picturesque Alpinelike village of Enniskerry, where Fuchsia gracilis hangs gracefully round some cottage windows and Lobelia fulgens grows luxuriantly below, a few miles drive brings one to Powerscourt, a place of note in the gardening world, unrivalled in its setting amidst the mountains. An extensive range of glass on a plateau near the mansion is described and illustrated in "Thompson's Gardener's Assistant," and some fine groups of statuary embellish the terraced gardens, but a Scotch mist marred an all too brief visit, prohibiting any attempt to see the waterfall, one of the features of Lord Powerscourt's noted demesne. Time has wrought changes since I saw Powerscourt on an autumn day, and a detailed account of a visit then might be misleading now; yet the glorious panorama of lights and shadows on the eternal hills disclosed by the rifting clouds is changeless though ever changing. Mr. Crombie, who now wields the bâton over the gardens, is a Chrysanthemum man and a past exhibitor, when his huge blooms have given other competitors some anxiety. Other seats in the neighbourhood are those of Lord Monck and the Earl of Meath.

Starting again from Bray the rail winds round the head on a narrow rocky shelf, so narrow that one looks down a sheer descent of many feet into the clear blue water, curling its white crests round detached fragments of the rock, on by the village of Greystones, still skirting the sea till entering the Vale of Ovoca, of which Moore, the sad sweet poet of Ireland says—

"There is not in the wide world a valley so sweet
As the vale on whose bosom the wild waters meet."

From Rathnew Station via the village of Ashford, Ballycurry, the seat of Col. Tottenham is reached, this demesne of 1500 acres it is needless to say embraces much that is naturally beautiful, the chief point of interest being the Devil's Glen, a mountain gorge of several miles embosoming the tumbling and leaping river Vartry, happy in escaping the reservoir at Roundwood, the head of the glen, where the "City Fathers" have impounded it for the use of Dublin and the townships. Passes obtainable at the hotel at Ashford at a nominal charge, admit visitors to this enchanting piece of nature.

Near the mansion are the quaint old-fashioned gardens, on entering which one steps back a century at least, a labyrinth of narrow walks, low walls, crowded with numerous sweet smelling flowers, creepers and climbers, and memories of the past. Well cared for are some ancient Figs spreading their branches horizontally afar, and Peaches are a picture without framing or glazing, bearing freely and ripening too in the open, but the especial pride of the Colonel is a huge Benthamia fragifera near the mansion, so large that in describing it to my old friend "F. B." he said it was something else, but it is not, and unfortunately I had not taken the height and breadth thereof.

I must not omit to mention a charming spot I had passed in the morning near Ashford, situated in what appeared the fork of a river—Tritomas, Pampas plumes, Virginian Creeper, and all the glories of autumn seemed concentrated here. I learned afterwards it is the residence of Mr. Walpole, a gentleman noted for his love of hardy plants, and in no sweeter nook could he have gathered together his choice collection. The name of this place I do not know, but Eden or Paradise suggest themselves to a gardener's mind.

The climate of Wicklow is a favoured one, though the pleasant walk of six miles in the quiet September morning contrasted painfully with the lonely tramp back in the dark of night under weeping skies, and to wanderers in Wicklow a waterproof is indispensable. On another autumn day, which we gardeners seem to favour for a brief holiday, and enjoy the more when the hurry and rush of the season is over, the writer and another (the unbeliever in the huge Benthamia) set off at an early hour from the plains of Kildare on a special invite to see the gardens of Glenart Castle, the Irish seat of Lord Carysfort, situated on the right bank of the Ovoca, far down "that valley so sweet," and near the fishing town of Arklow. Detraining at Woodenbridge, we come to terms with a native car driver, who dashes us along some two miles of a good road to the entrance gates, where pride gets a fall from the guardian angel of the lodge, vigorously declaiming through the bars that one shall come in, the other shall not; to admit one, "them's her orders," but after some cajolings on our part, and protest on hers, we enter one of the best kept demesnes I have yet seen—a perfect road, with channelled sides, hard as a steam roller then in constant use on the estate could make it, winding round and up a hill to the garden entrance under a lofty clock tower. Terrace after terrace falls away to the south, and just beyond the handsome castle, surrounded by its velvet lawns, all in perfect keeping. The glass department is commodious, two houses of Pines were in grand form, as were also late Grapes— Gros Colman, huge in its berries, and of fine colour. A corkcovered door clothed with Ficus repens at the back of a central conservatory opening into the office was a novelty, the secret being a box on the inner side of the door through which the Ficus stem

was brought. Retracing our steps we climb the tower, where the keen sharp air brings forcibly to our mind that we had an early breakfast, and our worthy guide, Mr. Wilmett, trots us off to his creeper-clad cottage, where two hungry gardeners lighten the larder, and afterwards feast our eyes outside on the glowing mass of Ampelopsis Veitchi clothing the gardener's house and the outside of the garden walls.

On the left bank of the river, immediately opposite, is Shelton Abbey, the home of the Earl of Wicklow, laying low in the valley, distinct in its character from Glenart, but equally beautiful. The nearest bridge is miles away, and boating is not possible at any time. To-day water is scarce, at other times too plentiful, coming down with a rush from the mountains; but friend Wilmett, though not an energetic man, is equal to this emergency, and orders his heavy cart, in which, cushioned on straw, we navigate through broad shoals of gravel, and catch Mr. Tyler at home, from which I think Irish gardeners are seldom absent. Huge Bay Laurels and many shrubs, but semi-hardy in less favoured localities, flourish here. All looks well in the houses. Again more Pines, but little inferior to those of Glenart; but a limited staff of hands cannot result in the high keeping which obtains across the river. Another noted place a few miles from here is Coollattin Park, the seat of Earl Fitzwilliam, as yet to me a terra incognita.

Nearer to Dublin is the ruins of the seven churches in the

Nearer to Dublin is the ruins of the seven churches in the valley of Glendalough, and nearer still to the busy hum of the great city is the Scalp, a gigantic freak of Nature in rockwork building, huge boulders of many tons weight piled high up on each side of the high road. The Scalp being but some nine miles by road from Dublin is a popular resort of those on pleasure bent, and sundry remains in the shape of bottles bearing the name of Guiness or Jamieson give silent evidence of modern Celts patronising Irish manufacture; but among the mountains of Wicklow, the lover of Nature can, undisturbed, hold communion with her visible forms, and easier understand how strong is that feeling of amor patriæ in the breast of the poor emigrant, so many of whom go to seek their fortunes in the great land of the West, and so few of whom return to see again the loved hills and

valleys of dear Ireland.

Sparsely populated, each census telling the tale of decreasing numbers, the few one meets with are quiet and thoughtful looking, greeting the stranger in soft and pleasing accents, so different to the awful brogue some English papers are pleased to give us specimens of. Warm-hearted, generous to a fault. Some years since the rector of the parish I was then situated in was lending a sympathetic ear to my tale of difficulties—I, a newly imported gardener, experienced with a large staff of workmen; but years have rolled by, and hours of trial have come that few escape, and I have experienced that generous warm-hearted sympathy ungrudgingly given to me, an alien in race and creed, that I can now endorse the remark he then concluded with—" with all their faults I love them still." I venture to touch but lightly on a subject which may at first sight appear out of place in the Journal. on consideration, it cannot be an unimportant one to the English gardener settled in Ireland; and to those who are not, it may serve to remove one at least of many erroneous impressions that time and experience have eliminated from the mind of-E. K.



ORCHIDS FOR FLOWERING AT CHRISTMAS. (Continued from page 464.)

A SELECTION of Orchids for flowering at Christmas would be incomplete without that easily managed and useful species Cypripedium insigne, which, with its varieties, can be depended upon, with greater certainty and less trouble than any other, to produce its flowers in December, and retain them in good condition into January, or later if desired. As a matter of experiment we have grown this Cypripedium in many different soils and under varying conditions, and though it has not been always equally satisfactory, it has never absolutely failed. If potted soon after flowering in a compost of equal parts fibrous loam and peat, with the addition of a small proportion of old decomposed cow or horse manure, it has a long season of growth, a vinery being a capital place for it, supplying water and syringing freely in warm weather. At the present time a conservatory, warm greenhouse, or the cool end of an Orchid house is suitable—in fact, any position where it can be

protected from draughts of cold air, and where the temperature does not fall below 45°, diminishing the application of water as the flowers show, but giving enough to prevent their suffering or being checked. When in flower plants can be placed in a room, or the flowers if cut and arranged in vessels of water will last for weeks. The varieties are now numerous, ranging from a pale yellow or nearly white tint to a rich polish bronzy brown, with purple or violet spots, or tinting in dorsal sepal, which also varies in size and in the breadth of the white margin. One of the best still is, however, C. insigne Maulei.

For richness of colouring and gracefulness of habit Lælia anceps and its charming varieties are unsurpassed for winter, and their flowers can be as readily ensured at Christmas as the old Cypripedium just named. They can be grown in a warm conservatory or in the warm end of a cool Orchid house, but from now until the flowers are fully expanded they are better in rather dry quarters, as the presence of much moisture in the air is apt to injure the flowers. Only sufficient water is required to keep them fresh and prevent the plants suffering, and it may be taken as a general rule for Orchids in flower during winter that the smallest quantity of water with which they can be supplied consistent with the health of the plants is the most likely to ensure the long lasting of the flowers. The ordinary varieties of L. anceps, with rosy purple sepals and petals and rich crimson lip, are all beautiful and useful for general cultivation, but there are scores of other forms differing greatly in richness or delicacy of colouring, some, as Barkeriana and Dawsoni, possessing strongly marked characters.

A most useful winter Orchid is Zygopetalum Mackayi, which produces its purple-veined flowers naturally in the dull season, and the plants being managed without any great difficulty it is deservedly a favourite. It makes its growth best in an intermediate house, a warm conservatory, or the coolest part of a stove. When in flower it is preferably, however, transferred to drier quarters like most of the others mentioned. The well-known Dendrobium nobile can be added to the list, for if the plants have been duly prepared it is easy to have some in flower at the middle or end of December. D. Wardianum can also be occasionally had in flower at the same time, but both must have been thoroughly matured in a sunny warm position, and be bought on very gradually. D. nobile is especially valuable, as its flowers are useful for cutting to be employed in buttonholes or bouquets. Vanda cœrulea will help materially if it can be secured, and its pale blue flowers can easily be had if the plants are arranged in a cool house and carefully watered during the present and the next month. The small flowered but fragrant Vanda Amesiana is another charming Orchid for this season, its white rose and purple-tinted flowers being much appreciated. Like the last, it is best in a cooler position while flowering. The diverse-flowered Dendrobium Phalænopsis var. Schræderianum is in excellent condition during November and part of December, some plants frequently continuing attractive over Christmas. An intermediate temperature suits very well, but it can be arranged with any of those named in a warm conservatory. The true autumn-flowering Cattleya labiata may be grown under similar conditions, and its flowers prolonged into January. This, and its varieties under whatever names they are grown are most valuable for the Christmas list.—Orchidist.

(To be continued.)

THE PREMATURE DECAY OF APPLES.

I was much interested in reading Mr. Iggulden's letter on page 437, November 16th, and, like him, should be glad to have a satisfactory explanation of the premature deeay of our early Apples this season. Every agriculturist knows full well that when Turnips have been checked in their growth by hot dry weather, and their skin has become "hide bound," they will after a soaking rain, start to grow again, and the skin being tough will frequently crack at the shoulder, the Turnip putting out fresh tops at the neck, and subsequently keeping very badly. This would seem to support Mr. Iggulden's theory that the late rains, which came before the fruit was ripened, coming after the long dry spell, had by causing the fruit to swell rapidly occasioned the mischief complained of; but this theory is difficult to maintain in the face of the fact that the same varieties when grown in pots under glass, and had never suffered from lack of food or moisture, spotted and eracked quite as badly as their fellows in the open air. Many of the best fruits after being carefully gathered and stored swelled and cracked like a baked Apple, Ecklinville, Alexander, Lord Suffield, Lord Grosvenor, and New Hawthornden, were amongst the worst offenders, whilst Cox's Pomona, a variety which I think much under-rated, Domino and Bismarek have stood the trial better.

Of the American varieties I cannot say much, as they are unsuited for our climate in the Midlands. Newtown Pippin we discarded year

ago, as the fruit was little larger than Crabs, and most of the Americans seem too tender for us; King of Tomkins County is an exception

perhaps, but has proved so far a shy bearer.

Of the later kinds we have not much to complain, and although they ripened early they seem to be keeping well; with such varieties as Newton Wonder, New Northern Greening, Alfriston, Beauty of Kent, and Bramley's Seedling as sheet anchors, there should be no dearth of late cooking Apples; whilst King of the Pippins, Cox's Orange and Scarlet Nonpareil are keeping very well so far. Cornish Aromatic has done well this season, and Sturmer Pippin seems to be in great force; everyone has a crop.

Approve of prices I was grieved to bear of Cornish. everyone has a crop. Apropos of prices I was grieved to hear of Cox's Orange being sold in Somersetshire at 6d. a peck; when I was at the Market Growers' Show in Maidstone last month I saw a two peck basket of this variety sold for 20s., these must surely be extremes.

The conclusion that we came to here was that the cause of our fruit keeping badly was the heat of the fruit room, which, although built with hollow walls, is exposed to the full sun, and it seemed beyond our power to keep it cool. I saw on my visit to Kent a fruit room thatched with reeds on the roof and sides, which contained a collection of fruit calculated to arouse the envy of any grower; doubtless the owner will

tell us how it has kept .- A. H. PEARSON, Chilwell, Notts.

MR. IGGULDEN (page 437) has done well to draw attention to a not improbable scarcity of Apples in several places later in the season. The past summer produced splendid crops with me, and so far as I can foresee the supply here will last till June. The Apple crop of 1892, especially late kinds, was fairly good; those in use from January onwards were the following: Kirke's Incomparable, an old free bearing gott. Northern Groning Lander Pinnin Manage Political onwards were the following: Kirke's Incomparable, an old free bearing sort; Northern Greening, Leyden Pippin, Mère de Ménage, Bedfordshire Foundling, Norfolk Beefing, Striped Beefing, and Baldwin. Norfolk Beefing was the last for use in May, when the Gooseberries came in. Of dessert kinds, King of Pippins, Adams' Pearmain, and Old Nonpareil kept well till late in the spring. The Baldwin Apple in March, April, and May is good for either culinary or dessert, the reddest and best

looking being picked out for the latter purpose.

As regards the supply for next spring, which with myself I am glad to say is more plentiful than last year, the following kinds may be named, none of them may perhaps be termed large showy Apples like some of the autumn varieties, still they are worth cultivating. the largest are Mère de Ménage, Alfriston, and Striped Beefing. last named is an excellent cropper, a pruned bush of it 7 feet high and as much through produced three bushels of large Apples, many of which are more than a foot round. One of the most abundant croppers, and moreover of best cooking quality, is the old Northern Greening. There are a number of orchard trees in this neighbourhood, possibly planted by our great-grandfathers, that were crowded with fruit. From an old standard in this garden seven bushels were picked, and then a large number were left on through not being easy to reach. Although so old a sort, where one is wanted for culinary purposes in the new year this may well be planted. If the new Northern Greening is as good a cropper it will be an acquisition to our modern kinds. Neither should Norfolk Beefing and the Striped Beefing be omitted, the last named I find is the largest and most constant cropper, taking one season with another. As regards the black and brown spots so much observed this year, I have noticed it with several kinds, and particularly the Ribston Pippin. My impression is that it was caused by a severe hailstorm that occurred here about the end of June. The weather was very hot at the time; but it was a singular sight to see all the fields with an half inch covering of hail. It was a curious spectacle, a midwinter scene in mid-summer; but in half an hour it had all disappeared, and the afternoon being hot and sultry.

I see by Mr. Iggulden's article that he would like some information as regards American varieties of Apples doing well in this country. Out of nearly fifty kinds grown here, there is only one that I know of that is American, and that is the Baldwin. Of its fruiting and good keeping qualities I cannot speak too highly. keeping qualities I cannot speak too highly. As I said before, it is good either for kitchen or table purposes from March to May or June; whether it will keep this season so long is a matter I can only speak of later on, when the time comes. Seventeen years ago two dwarf bushes were planted here, and being a vigorous kind grew freely. The soil I may state is a stiffish loam about 3 feet deep resting on gravel. After three or four years they commenced bearing, and have done so ever since, some years more than others. The best of the two bushes is now 8 feet high, and as much through; in fact, they have been kept pruned to that height the last ten years. Pruning, if possible, is usually performed in August; it admits the light in to help colour the fruit, and is beneficial for the next season's buds. But it is not only as a pruned oush that it can be recommended, for it is as an unpruned tree that it has done so well. Eleven years ago I was induced to insert grafts of it in an old apparently worn out tree of Wellington, through an odd circumstance. It so happened that a bed of Parsley was growing beneath the pruned bushes of Baldwia, and in March of that year (1882) three Apples were found beneath the Parsley leaves in a perfectly sound condition, having passed through the winter's rain, frost, and snow uninjured. evidently fell and lay unnoticed or hidden since the previous October. I cut one of them, and although it was not quite ripe the flavour was very good, and the thought occurred to me that it was an Apple worth looking after. Eight grafts were placed on the sawn-off Wellington; four of them grew well, and now form the head of a tree nearly 30 feet high. The largest of the grafts at the present time measures 23 inches round. The circumference of the main stem or stock at 6 inches from

the ground is 5 feet 6 inches. The first year after grafting, the young shoots, some of them a yard in length, were shortened about one-half. Since then no pruning has been done. The crop from it this year has been three-and-a-half barrels of 10 stones each barrel. Last year about a bushel was produced, and in 1891 two barrels, or about six bushels. So much for its vigour and fruitfulness. The shelves in the fruit-room being all occupied with other kinds, and as our American friends put them in barrels for several weeks, or may be months, I thought I would do the same, and stand them on the brick floor of the fruit-room. In 1891 they were taken out of the barrels three months after picking in a perfectly sound condition, not half a peck being bad. The other day, two months since they were picked, having now more room on the shelves, about 20 stones were taken off the top of the barrels, and out of that quantity only twelve bad Apples were found.

From the two pruned bushes and the grafted tree between 50 and

60 stones of fruit of good size have been picked this year. In September last year I examined the branches when in full leaf, and could see that it was likely to have a large crop of blossom, so two barrowfuls of dry wood ashes and four of good manure were placed over the roots of the grafted tree, a covering of about 4 inches deep, and left for the autumn and winter rains to wash in. No doubt this dressing left its

mark on the excellent weight of the crop. Another point in favour of this Apple is this: It has been my lot on many occasions a few years back to buy and unpack barrels of American and Canadian Apples—Newtown Pippin, Baldwin, and Northern Spy, and as a general rule I found that the Baldwin always came out less damaged than either of the others. Although both of them are excellent sorts, yet the skin appears thin and liable to injury. Many times I have emptied a Baldwin barrel, and only a dozen Apples or so have been damaged, whereas of the other two kinds a bushel has often been unfit for use. Fruit from the north side and shaded parts of the trees are green, but those fully exposed to sunshine are a bright red. I have rather enlarged upon this much-imported Apple; but as it has done so well it is a pleasure to recommend it to others. It certainly is not so ripe here in January as those sent from America at that time. It would be of interest to know how it has fared with others who have cultivated it for any

length of time.—A. HARDING, Orton Hall, Peterborough.

In common with others I have found Apples to keep very badly this season. Ribston Pippin and Blenheim Orange have been the worst offenders with me. It is really sad to see such fine specimens going so fast. The late Apples, Lane's Prince Albert, Alfriston, and Wellington, are not so bad at present; but every inspection shows a few more decayed fruit. Beauty of Kent and the Pearmains have done very well with me

at present, and so have both the Hawthordens.

What "A. D." (page 465) says on the preservative power of dead leaves is, I believe, as true as it is interesting. They are Nature's own covering; not only her bed clothes for the winter sleep of her tender plants, but also her means for the conservation of her produce and fruits for her creatures who are meant to eat them. I have found them the

best of the many materials I have tried for the protection of the dwarf Tea Roses against severe frost.—W. R. RAILLEM.

1 HAVE heard numerous complaints of Apples keeping badly, but the state of matters indicated by Mr. Iggulden at page 437 is more serious than I had imagined. Personally, I cannot say much about the earlier Apples, as I sold all when they were ready. Late kinds are keeping quite as well as usual. A few fruits keep decaying, but these without exception have been pecked or otherwise damaged. While that is the exception have been pecked or otherwise damaged. While that is the case here, I hear of others who have lost most of their best fruit. But I know that this had been gathered much too soon.

The autumn was perfect, and many gardeners seem to have been tempted by the appearance of the fruit to pick it much earlier than usual, some crops having been gathered and stored before the end of September. Then, the practice of keeping Apple rooms shut close is, I am certain, prejudicial to the keeping qualities of the fruit. Judging by the manner fruit left out of doors keeps, it is apparent that free ventilation is not inimical to the fruit. I keep our Apple store freely ventilated, except in frosty and damp weather, and believe it to be

beneficial.

With regard to the fruit of Duchess of Oldenburg decaying it is quite a common occurrence for it to do so. It is the only fault I have against this beautiful variety. The decay begins at the core and spreads outwards.-B.

FROM the reports of your various correspondents it is evident that the price of Apples must eventually go up when there comes a scarcity of home-grown produce. I find that Emperor Alexander, Warner's King, Peasgood's Nonesuch, and Wellington are showing signs of deterioration, whereas Bramley's Seedling, Manks Codlin, and Lane's Prince Albert are in the best of condition. I have them stored in an airy room, which is not over-dry, and which I can ventilate by a window 18 inches square.

As to the cause of this rapid decay I agree with Mr. Cheal (page 466) that it is the sudden and superabundant flow of sap through the trees after the fruits have begun to ripen that has ruptured the cellular tissues which connect the fruit to the tree, and which we are told by scientists become gradually sealed up as the Apples develop, so that when the fruit is beginning to ripen there is really no connection for the flow of sap. This would greatly interfere with the ripening process, which has evidently been the case this year. Perhaps it would be of service to your readers if our large growers of fruit would state the kind of soil upon which their trees are grown, and also whether the fruits produced upon dry soil are keeping better than those grown upon that of a heavy wet nature.—S. H.

A GOOD CROP.

CAN you oblige me by giving the name of the Apple, of which I send you sample herewith? A tree from which they were gathered is growing in the garden of a neighbour of mine. It is an old standard of considerable spread of growth, and always bears well; but this year it has excelled itself in the production of over 19 cwt of fair sound fruit. Many of them are much larger than those sent, and they keep well until April and May, and cook splendidly. I trust this note may be of interest to you, and shall be glad to know if instances of single trees yielding a ton of fruit in a season are at all frequent.—JNO. BATEMAN, Highgate, N.

[The Apple closely resembles Rymer, a useful culinary variety. Nearly a ton of sound fruit, such as the samples sent, from one tree is a remarkable crop of a good orchard Apple.]

APPLES LOSING FLAVOUR.

ALTHOUGH much has been written on the best means of preserving Apples I have not recently observed anything upon the absorbing powers of materials employed in the packing of Apples. Lately I was cutting up a number of barrels in which Apples had been imported, the wood being of red and white pine. Some of these barrels had been exposed a long time to the influence of the weather. Yet the fragrance of the Apples was very pronounced, being greatest in the red pine, and the Apples in the barrels must have lost much of their flavour after they were gathered.

My reply to "A. D.'s" query (page 465), "Has anyone ever tried the stacking of Apples in leaves outdoors?" is that I have frequently come across Apples buried amongst leaves by boys or animals, quite fresh in spring, as were isolated ones beneath the natural fallen leaves, when Apples from the same trees, stored inside were not in the same sound condition. The hedgehog has sometimes collected heaps of Apples, and this autumn I found a large number of Pears in a heap beneath some Ferns, the animal perhaps instinctively knowing the decaying fronds would afford ample protection.—T.

PRIMULA FORBESI.

At the meeting of the Royal Horticultural Society on Tuesday, November 14th, much interest was centred on a basket of plants of Primula Forbesi, staged by Sir Trevor Lawrence, Bart., Burford Lodge, Dorking. The plants were covered with small lilac flowers, having yellow centres, the whole forming a pretty mass of bloom. P. Forbesi is a native of Yunnan, China, and was introduced in 1891, but apparently it is not yet included in other than choice collections. It may be termed a half-hardy species, thriving best in a greenhouse or frame, under the same conditions as P. obconica, and it usually flowers in November. The illustration (fig. 70), which indicates the character of this charming Primula, has been prepared from a sketch of the plants exhibited on the above occasion, and for which a first-class certificate was awarded. It is stated to be a biennial plant, and can be readily raised from seed.

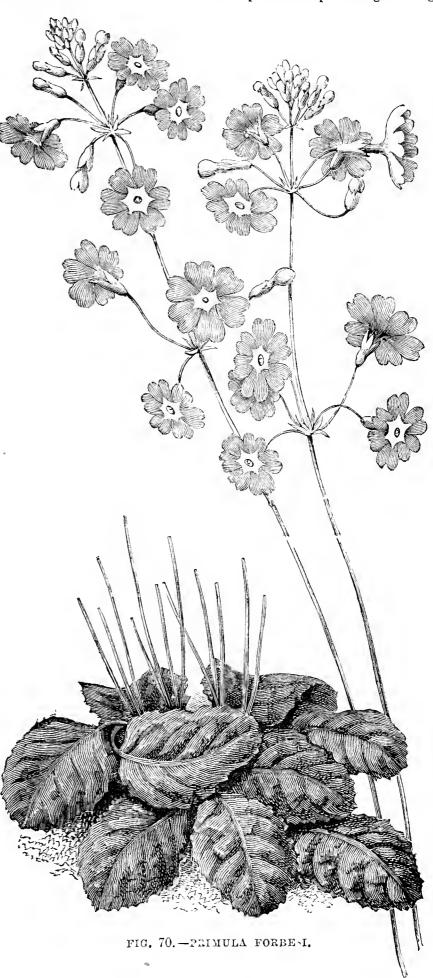
NOTES BY THE WAY.

A GREAT VEGETABLE GROWER AND HIS WORK.

In a series of retrospective reflections it is impossible to avoid depressing contrasts. Winter thoughts or summer wanderings bring back many a pleasant scene. A beautiful spot is recalled in some country garden, and at once eyes are filled with summer sunshine and ears with the song of birds, for with the one recollection comes back a host of others closely associated with it. But a nor' easter whistles around the windows, showers of sleet are driven against the panes, and bare soil instead of flowers rewards the outward glance. It is natural that the æsthetic soul should indulge in a sympathetic shiver and retire within itself, indulging in a kind of dormouse existence until the spring comes again. The contrast is too great to be realised without a sense of emptiness and depression, and so it is shrunk from and avoided.

Gardeners as a body are by no means devoid of sensibility, or dead to every artistic influence, but for all that they do not usually share to any great extent in the feeling to which reference has just been made. The explanation, of course is, that although floral aspects play a part in a gardener's work, and have no small share in his happiness, they do not fill his life. There are trees, for example, and these, as a writer has has said, are "silent friends, remaining with us always." A collection of fine Conifers, such as those referred to in my notes on page 464, is a source of perennial pleasure. They have not the charms when bending under ripping winds, and dripping with cold rain, that they possess in the spring time, but they are there, solid and visible, affording subject for admiration, conversation and discussion. Truly trees are friends, and if they are silent ones then all the more reason why we should blow their trumpet for them.

And, again, if the flower beds and borders are empty the kitchen garden is not. The most advanced eathetic must eat, and surely there is much food for interest in comments and observations on vegetables. It is sheer affectation and pedantry to look down upon a Cabbage or a Parsnip just because it ministers to our physical wants instead of to our artistic ones. Let us be sensible and study both, then when the flowers have gone we can find consolation in the more practical aspects of gardening.



Probably there are not many cultivators who will deny that there is as much interest, if not as much beauty, in a well stocked and well managed kitchen garden as there is in a series of flower beds. There is a variety of method and varying degrees of skill in the one just as there is in the other. In one garden a particular crop or variety does better than in another, and in one instance there is a good system of cropping and great productiveness, while in a second the plan of action is imperfect and the crops moderate or poor.

Great vegetable growers are as much entitled to respect from the fraternity generally as, let us say, great Chrysanthemum growers, and their methods are as well worthy of study. They do not always get it so far as the general public are concerned, for what casual visitor at a

show will pause to discuss and admire a Dell's Beet when there is a Viviand Morel not far away? But in the inner circles the leading kitchen gardens of the country do not pass unthought of, and for that reason I think it probable that a few remarks on one of the best-known cultivators and his work may have at least a vestige of interest. What gardener reading the reports of the principal vegetable competitions does not know the name of Mr. C. J. Waite? He is not a triton amongst the minnows, swooping down on small shows and bringing confusion to minor cultivators, but one who loves to meet foemen worthy of his steel. This is the sort of fighter that Britons respect most. The warrior who shirks from contests with others of his own calibre in order to have easy victories against opponents a long way below him is a poor sort of creature. Better be beaten by a good man than earn a creditless victory against one of a minor grade.

Glenhurst lies somewhat off the main road from London in a quiet, retired corner of the pleasant Surrey townlet of Esher, but it is within comfortable walking distance of the station of that name. It is not what would be called a large place as that term is usually understood amongst the craft. The kitchen garden, which is in more than one part, mounts up to about $2\frac{3}{4}$ acres in all, which means a fair but not great extent of ground. And the pleasure part is about in proportion, also the glass. This does not point to extraordinary provision for securing exceptional crops, and as a matter of fact a visit shows at once that the exceptionally good results secured are the result of the best cultural methods combined with incessant work. A man of wonderful energy is Mr. Waite. He is a worker to the finger tips, getting through as much as two ordinary men. Active and alert, brisk in every movement, he is a thoroughly good type of the English gardener. Should anyone think that the place is purely a "show" one, where everthing is sacrificed to securing fine samples for exhibition, he should go and let his own eyes teach him a lesson of the error he has made. The amount of produce which is grown in the Glenhurst gardens will, I venture to think, set all such hasty criticism at naught.

My call was paid in the height of the hot summer weather, and I found the presiding genius of the garden hard at work with the foreman—another of the go-ahead brigade—pouring sewage on to a Vine border. The dark, rich-looking liquid was being applied in scores of gallons, and the Vines seemed to appreciate it, for they were in splendid health and carrying fine crops. The wood is too strong to be tied till it comes down with the weight of the bunches. Foster's Seedling, Muscat of Alexandria, Black Hamburgh, Mrs. Pearson, Buckland Sweetwater, Black Alicante and Lady Downe's were all finely represented, being particularly noteworthy for size of berry.

That the Glenhurst gardener is an admirable fruit as well as vegctable grower, the Peaches and Nectarines also serve to prove. The collection in pots was particularly striking, quite reminding one of Mr. Rivers' wonderful trees. Pine Apple had given 158 fruits, and a bush of Princess of Wales was almost breaking down with its burden. Two other sorts, which give excellent crops are Bellegarde and Crimson Galande. To summarise, seven trees had given 700 fruits, and when it is borne in mind that bushes in pots have produced this result, it will be accepted as highly creditable. The trees are repotted every year, and plunged in leaves out of doors when at rest. Beyond shortening a few leading shoots of a straggling character little pruning is done. The trees bear most of their fruit on short natural spurs. Trained Peaches planted out under glass were equally fine in their way.

Yet another excellent fruit crop was Melons. Few such crops are met with in gardens as that which Mr. Waite had to show. The plants had been planted in a span-roofed pit, which had been used for propagating in the spring. It has six lights, and eighteen plants were put in 14 inches apart. On these 100 fruits were set and swelling, presenting a tempting picture. The plants were in the best of health, and evenly trained, not a tangled mass of interlacing growths. Mr. Waite is no believer in keeping a dry atmosphere at ripening time, and does not practise the system. The special favourite is one he raised himself, called Perfection, and which Messrs. Sutton are, I believe, sending out. It is a Melon uniting delicious flavour with other good qualities.

One of the secrets of the Esher exhibitor's wonderful series of successes with vegetables is deep cultivation. When he started operations he found a thin, half-worked soil, and he set to work to trench, doing a good deal of the work with his own hands. In the original garden there is now a depth of about 3 feet of pulverised, aërated, crumbly soil, well sweetened by the air and enriched with more solid substances. This deep root medium results in magnificent crops, particularly of roots. Take Parsnips for instance. At a time when most people's crops were half a failure from the drought Mr. Waite could draw and show me a clean, straight, whip-like root nearly 18 inches long, and which would have developed into a grand example in due course. This grower sets himself up ideals in vegetables as others do in flowers, and one of his great feats is to produce Parsnips which, root and top growth included, are as tall as himself. This is not bad work. Native guano helps him. He uses six or seven tons of this useful fertiliser every season.

But it is not Parsnips alone. Carrots were a picture for such a season, not looking parched and miserable, but healthy laxuriant and flourishing. Onions are another speciality. Early sowing supplemented by deep

rich soil give the 2½ lb. bulbs which add so materially to the strength of the Glenhurst collections. Some Mammoth Silverskins were 18 inches in circumference. These were striking individually, and as a crop it would be difficult to imagine anything finer than a large piece of autumn sown in the new kitchen garden. Celery, too, is splendidly grown. The early crop is taken off the outside Vine border, and Mr. Waite argues that the Vines benefit rather than suffer by the system, inasmuch as they get the advantage of the manurial applications given to the Celery. The sticks are blanched with brown paper. The later crops are grown in the new gardens, and such crops are rarely met with.

Lettuces and Leeks are also blanched with paper. An early crop of the former is taken, and then the ground is planted with Cauliflowers. To refer to the merits of every crop would be merely a repetition of adjectives, for there was no exception to the rule of fine produce and full land. Even Peas, so bad in most gardens, were good, Magnum Bonum in particular being full of excellent pods. Potatoes come out large, shapely and clean, because the land is worked until it is as friable as so much potting soil, crumbling soft as silk beneath the fingers.

Few cultivators work their land as hard as Mr. Waite. He has much to provide, besides what is wanted for the exhibition table, and he packs the ground with grand produce. But consider how his soil has been studied! He enlarged the plant larder until its capacity was increased threefold, and then stored it with good things. Alike in its mechanical condition and in its fertility has been improved year by year until it is like a mass of potting compost, rich, porous and friable. He has made corresponding provision for his vegetables to that which a Chrysanthemum champion makes for his plants when potting. The work is a monument to his industry and an example to all who aspire to be what all must admit him to be—a credit to British gardening.—W. P. W.



EVENTS OF THE WEEK.—But few events of horticultural interest will take place in the metropolis during the ensuing week. An Exhibition will be held, under the auspices of the National Chrysanthemum Society, at the Royal Aquarium on December 5th, 6th, and 7th. The annual meeting of the National Rose Society will be held at the Hotel Windsor, Victoria Street, S.W., on the 7th prox., when the Rev. W. Wilks will occupy the chair. The members of the Society will hold their annual dinner during the evening of the day mentioned, and at the same place. A few auction sales will be held, as usual, at the various rooms, the particulars of which will be found in the advertisement pages.

- THE WEATHER IN LONDON.—The past week has been characterised by some changeable weather. On Sunday it rained more or less for the greater part of the day in the metropolis, but cleared at night, and a severe frost occurred early on Monday morning. Towards evening on the latter day it became mild, similar weather continuing on Tuesday. Wednesday opened dull but fine, and at the time of going to press it is very mild for the time of year.
- WEATHER IN THE NORTH.—There were slight frosts for a morning or two at the beginning of the past week, but the weather has generally been open and unsettled, with an occasional wet evening. On the morning of the 27th 4° frost were recorded, and this morning (28th) the thermometer registered 52°.—B. D., S. Perthshire.
- ROYAL GARDENERS' ORPHAN FUND. An entertainment, under the patronage of Lord Egerton of Tatton, Coningsby Disraeli, Esq., M.P., J. W. Sidebottom, Esq., M.P., and other distinguished persons, will be held in the Literary Institute, Altrincham, on Wednesday evening, December 6th. Mr. William Plant, the active Secretary of the Local Committee, hopes that the present effort to strengthen the Fund will be even more successful than a previous one, when £20 were realised.
- A MEETING of the Committee of the ROYAL GARDENERS' ORPHAN FUND was held on Friday last at the Hotel Windsor, Westminster, W. Marshall, Esq., presiding. The receipts for the month were considered satisfactory, one amount of £21, the proceeds from a concert organised by W. Furze, Esq., Mr. A. Dean, and others, for which a special vote of thanks was accorded. Various other amounts had been received from the sale of flowers at Chrysanthemum Shows, collecting cards and boxes, and from Ketton Hall Gardens, Stamford,

and The Grange Gardens, Wallington, where Chrysanthemums had been on public view. It was decided to elect five more orphans at the annual meeting. Forms of application can be obtained of Mr. A. F. Barron, Hon. Sec., Royal Horticultural Gardens, Chiswick, and must be returned on or before December 27th, 1893.

- DEATH OF ALEXANDER STEPHEN WILSON.—With regret we announce the death of Mr. A. S. Wilson of North Kinmundy, Aberdeenshire, which took place in Aberdeen on the 16th inst. Mr. Wilson, who was in the sixty-seventh year of his age, took a great interest in botany and agriculture, and was the author of several scientific and philosophical works.
- DEATH OF MR. BAILEY DENTON.—We regret to hear of the death of Mr. J. Bailey Denton, which took place on Sunday, 19th inst. Mr. Denton was in his eightieth year, and for a long time had made agriculture his hobby. Of late years Mr. Denton took much interest in the cultivation of Orchids at his country residence at Stevenage in Hertfordshire.
- NORTH OF SCOTLAND HORTICULTURAL AND ARBORICULTURAL ASSOCIATION.—The members of this Association held their monthly meeting at Aberdeen on Wednesday, 15th inst. There was a good attendance, and Mr. John Munro, Polmuir Nurseries, occupied the chair. An Exhibition of flowers, fruit, and vegetables was held. Cultural certificates were awarded to Mr. J. Crighton and Mr. Ross, Cranford, for Chrysanthemums and Orchids.
- THE AGRICULTURAL EXHIBIT of Sir John Lawes and Sir Henry Gilbert at Chicago appears to have been much appreciated by the Americans. According to "Nature," the Association of American Agricultural Colleges and Experiment Stations have passed a special resolution expressing the value they attach to the exhibit, and the Director-General of the Exposition has forwarded the same to England, with the added thanks of the Exposition, for "the great benefit done to American agriculture by this excellent and instructive exhibit."
- A WILD FLOWER CARNIVAL.—An Australian paper gives an account of a "wild flower carnival" which the residents of York made an absolute success. From its inception the idea of a wild flower show in "the garden of the colony" "caught on," and a keen amount of friendly rivalry was shown, which resulted in a display which, for uniqueness of arrangement and variety of design, made the task of judging the various exhibits a difficult one. On entering the hall, it is stated, one was first impressed with the artistic taste displayed in the various decorations, and the care and attention which was shown in the arrangement of the exhibits, so that everything should be seen to the best advantage, and for this the ladies, who are always willing workers on such occasions, deserve the warmest thanks.
- BRUSSELS SPROUTS.—It is exceedingly instructive to find that whilst a good deal of complaint has been made as to the unsatisfactory products of Brussels Sprouts in many private gardens, they are so good in fields where grown on harder soil, and are more exposed to the weather. It would be well if some gardeners who complain so much of the coarse and inferior sprouts their plants produce from their rich loose soils, would dibble out plants on to hard soil early in June, such as had carried during the winter a crop of Spinach, or some other winter produce, other, of course, than Brassica. To give full effect to the virtues of firmness the soil should not be dug, only deeply hoed over, then the Brussels plants put out and left to take their chance. That is the way to induce the production of very hard woody stems and firm well-formed sprouts. Especially are such plants valuable for late winter cropping.—D.
- White Earwigs.—Our old friend "Lanarkshire Bee-keeper" (page 458) asks what are they? and as no one has replied, perhaps I can throw a little light on the subject. I have frequently met with specimens in various stages of growth, and my impression is that they have very recently cast the brown skin or moulted, and that in a few days at most they regain their usual brown colour. I have no doubt that "L. B. K." has frequently found the sloughs under quilts on bee hives. Respecting earwigs being "more the friends of the gardener than his enemy," I expect it will take a vast amount of ocular demonstration to persuade some of us to entertain the idea after our experience in Dahlia, Rose, and fruit growing, not to mention smaller matters, whatever may be their counteracting uses to bee-keepers, which I have yet to learn from observation. I once killed about 2750 earwigs at one round of my garden and orchard, and I certainly have no wish to renew the stock.—J. HIAM.

- —— CANKER IN FRUIT TREES—I see (page 467) that Mr. J. Hiam is satisfied he "can cure canker by dressings of insecticides and lime." Will he explain his methods? also how he induces his men to apply the lime?—B. D. K.
- PROFESSOR MARSHALL WARD.—We learn that a Royal medal has been awarded by the President and Council of the Royal Society to Professor Marshall Ward in recognition of the merit of his researches into the life history of fungi.
- —— DEATH OF MR. ROBERT FRASER.—We regret to learn of the death, which took place recently, at the age of seventy-one years, of Mr. Robert Fraser, senior partner in the firm of Messrs. Cunningham, Fraser, & Co., nurserymen, Comely Bank, Edinburgh.
- ALLOTMENT GARDENS IN BUSHY PARK.—A letter was read at a recent meeting of the Hampton Wick Local Board stating that the Chief Commissioner of Works was willing, subject to the sanction of the Treasury, to grant the Board 14 acres of land in Bushy Park for allotment gardens at a rental of 70s. per acre per annum.
- MR. SWAILES in your issue of the 23rd inst. (page 467), speaks of STEPHANOTIS FRUITING. I had two fine fruits on a plant two years ago, one I cut off, and the other I saved; in due course the fruit ripened, and the seed sown from which I have fine young plants.—ARTHUR SHAMBROOK, Gardener, Sutton Hall, Derby.
- DEATH OF MR. DUNCAN WALSH.—On November 19th, Mr. Duncan Walsh, for thirty-four years head gardener to the Earl of Pembroke, Mount Merrion, near Dublin, passed away at the age of sixty-four. Retiring from active life but last June, he returned to his native county, Ayrshire. His many friends will learn with regret that he has not been longer spared to enjoy his well-earned rest. Though not an exhibitor, he for many years assisted in judging at the shows of the Royal Horticultural Society of Ireland. As a plant grower his name is associated with the finest specimen of Darlingtonia californica ever grown, and as a man he was esteemed by all who were privileged to know him.
- EDINBURGH BOTANICAL SOCIETY.—At a recent meeting of this Society, Dr. Christison in the chair, it was arranged that Mr-R. Lindsay of the Botanic Gardens should submit an obituary notice of the late Mr. Jenner at the next meeting. Professor Bayley Balfour intimated that Mr. George William Trail had presented his valuable collection of British Algæ, and a series of microscopic sections of the same, to the Society; also that Dr. Watt had given the Society a herbarium of Indian plants, both donors stipulating that the collections be kept intact during their lifetime. The Rev. Mr. Paul gave a report of the Scottish Alpine Botanical Club's excursion to Clova, and Mr. Lindsay reported on the weather for October. Professor Bower was elected President of the Society for the current year.
- —At the monthly meeting of this Society a few days ago, Mr. Mark Longhurst, the Secretary, gave some figures bearing on the success of the recent Chrysanthemum Show in that town. On the first day, he said, 3019 people paid for admission, and 5560 on the second day. The takings at the doors amounted to £76 8s. the first afternoon, £78 17s. the first evening, £77 17s. 6d. the second afternoon, and £102 4s. 6d. the second evening. Up to the present time, apart from the ticket money, their receipts throughout the year come to £1047, and probably, when everything was settled up, their total takings for the year will be found to be about £1060, and their expenses under £1000. The expenses of the Spring Show were £233, and of the late Autumn Show £418 5s., so that they had already paid out £656.
- Onions and the Maggot.—Having regard to the absolute freedom from the maggot of Onion plants raised from autumn sowings, it seems a pity that it was not the rule, more than it now is, to sow in the autumn some of the best keeping varieties rather than White Lisbon, Rocca, and Tripolis. The ordinary spring-sown varieties are just as hardy, and certainly would keep very much longer. Such varieties as Cocoa-nut, Sutton's Globe, Southport Red, and Crimson Globe, all the best of keepers, would prove of great value if grown from autumn sowings. The Tripoli types are mature to-day, useless to-morrow whilst the sorts I have named will keep till Christmas. A sowing made early in April under glass would give strong plants to go out at the end of May, and these would escape the maggot also. How easy then is it to circumvent this pest which has done so much harm in our Onion breadths. Surely these little experiments are well worth trying.—D.

CEDRELA AUSTRALIS.—The most valuable tree produced in New South Wales is the so-called Red Cedar, Cedrela australis, which owes its common name to the sweet smell of its wood. It is much lighter in weight than mahogany, although it bears considerable resemblance to that wood and is used for the same purposes, that is, for cabinet work and furniture in general, and for the fittings of buildings, where the cost is not too great. Where it is kept dry it is, says a colonial contemporary, very durable. Naturally of a pleasing red, it turns to a deeper and richer colour with age, and some trees have a beautiful grain. It is stated that extensive plantations of young Cedar are being made every year and are flourishing finely.

DEATH OF MR. ISAAC DIXON. — We regret to learn of the death and burial of this well-known manager at Feltham, Middlesex, to Messrs. C. Lee & Sons, the old nursery firm. The deceased had been in the firm's service as manager some twenty-five years, and also undertook business journeys, so that he was very widely known. He was endowed with great energy, and no doubt proved a valuable servant. We learn that his very unexpected death is attributed to his having slept in a damp bed at Ashford in Kent recently, as he returned home very weak, and afflicted with great pain. The cause of death seems to have been intermittent fever and ague. His death occurred on November 18th, and his funeral on the 25th. This took place amidst great demonstrations of respect, a large number of Freemasons, of which body he was an active member, also attending.

- THE ROYAL HORTICULTURAL SOCIETY AND SOUTH KENSINGTON.-In consequence of a leakage from the Council of the Royal Horticultural Society a rumour was circulated about a fortnight ago of a proposal that the Society should emigrate to the old region of South Kensington, but under the circumstances we did not think it appropriate to make public reference to the subject. As the proposal was, however, freely spoken about in the Westminster Drill Hall last Tuesday there are no grounds for refraining from stating that it is understood that the question for making the Imperial Institute the headquarters of the Society is under consideration. It would perhaps be considered premature to discuss the matter in the absence of authoritative information; but it may be remarked that in the opinion of many persons the Society has of late become more consolidated, and what may be termed a settling down policy has been adopted with a gratifying measure of success. In consequence of this there are not wanting among its supporters those who look with a good deal of concern to anything of a disturbing nature occurring through a project of a speculative character. Is not the Imperial Institute itself essentially speculative? Is it sufficiently consolidated to justify a move in the direction indicated? and will it be safe to place the Society under the wing of a body of South Kensingtonian speculators? These questions are mooted as needing, what we may expect they will receive, the gravest consideration before any change that may be of a momentous character is finally decided upon. It is tolerably well known that the often dingy Drill Hall has no special charms for us, but we are bound to say that horticulturists have adapted themselves to it almost better than we could have anticipated, and there are several we suspect who at the present moment think it safer in this reference to "endure the ills we have than fly to others that we know not of." Possibly the Council of the Royal Horticultural Society in view of the disquieting rumours may think it desirable to make an official statement on the important subject, and show that if a change is intended there are reasons in its favour so strong as to be practically irresistible. N.B.-Since the foregoing was in type we are informed on the best authority that proposals emanating from the authorities of the Imperial Institute have been made to the Council with a view to the removal of the headquarters of the Society to South Kensington; a proposal which we have the satisfaction of announcing was not considered desirable in the interests of the Society.

NOTHING PAYS—A WAIL.

WE often read glowing accounts of the profits and benefits to be derived from fruit growing and market gardening. Personally I believe there are some, but not to so large an extent as some persons may imagine. A market grower from the west of England called here at the early part of this week. He gave an exceedingly doleful account of the work. His Apples and Pears were not worth gathering, price being so low, and bushels were spoiling; the same with Plums and bush fruits. He is of opinion that London is one of the worst markets

we have. I note a few wholesale prices in a western town. Peaches, large ones, 10d. per dozen; Grapes, 8d. per pound on the 18th November (Gros Colman); Tomatoes, 3d. per pound; Cabbages, 3d. per dozen; Celery, 6d. per dozen.

What conclusion can anyone come to after reading the prices realised with those given in horticultural papers, and those charged by the retailer? Is it the middleman or excessive railway rates that prevent the better distribution of vegetables and fruits about the country? The grower above referred to called at some London retail shops, offering to send to them direct, but they preferred going to the market. There is no doubt that the prices published from time to time are misleading. We need some re-arrangement, so that we can get something more authentic. I cannot but think that if the working classes and others would spendamore on vegetables and fruits, and less in other questionable ways, they and the country would be better for it. I may add that this west of England grower does not find Mushrooms a paying crop. I send his wail to the Journal of Horticulture.—A. J. BROWN, School of Handicraft, Chertsey.

The west of England grower is either in an unsuitable locality, has unfavourable soil, or in some way is lacking in the requisites which enable so many growers of vegetables and fruit to pay £5 an acre for the land and live, through their good judgment and effective work, in comfortable if not affluent circumstances. Some men are so satisfied with growing first-class garden produce for sale that they are, as far as is practicable, extending their operations. We are intimately acquainted with one market gardener who has been working 100 acres of land at a rent of £5 an acre, who has just taken twice the extent of land; also, we are in touch with a working man who commenced with less than an acre, who is now seizing all the vacant plots in his district at 1s. a rod, or £8 an acre. He does not trouble himself about published prices, but grows the best "stuff" he possibly can, has it ready as early as others (a little earlier if possible), and sells only first-class samples, taking his chance about prices. There are thousands of tons of garden produce for which there are no prices, and it cannot therefore pay for growing and sending to market.]

CROTON RUSSELLI.

As will be seen by referring to the accompanying illustration (fig. 71), this is a distinct Croton, and one that will probably be included in most collections. The plant from which the engraving has been prepared was exhibited by Messrs. Hugh Low & Co., Clapton, at a meeting of the Royal Horticultural Society on November 14th, a first-class certificate being awarded for it. When well developed the leaves are large and the upper surface is bronzy green, richly spotted and veined with yellow and red. The under surface is bronzy red. The plant appears to be of a dwarf habit, and will be useful for decorative purposes.

PRIZES AT THE FORESTRY EXHIBITION.

ALLOW me as one of the "unfortunate" prizewinners at the late Earl's Court Exhibition, to add a few remarks to "Exhibitor's" note, page 444. I wrote some two months ago to Mr. H. Milner, asking that the prize money due to me should be paid, and a few days later received a reply that my letter should be attended to in due course, and although in the schedule it stated that all prizes would be paid within a month of the Exhibition I have up to this date received neither money nor other reply. Like "Exhibitor" I thought such names as Mr. H. Turner and Mr. Milner were sufficient guarantee of proper civility and respect being shown to everyone. I know of one exhibitor whose expenses were considerably over £10, and who has all along looked forward to about as much prize money to repay him for expenses incurred. No reply whatever has been received by him to his application for the amount which he won.

As "Exhibitor" states, if anyone has received prize money it would be as well to at once say so, if not I think all should fall in with his suggestion and take the matter to court. I will willingly give my mite towards the cost, for I feel confident that exhibitors are fully entitled to the prize money due to them.

I was painfully surprised to learn from "Exhibitor's" letter that the donations promised to the gardeners' charities have not yet been paid, and I am sure it will come as a like surprise to a great many more, as I, with many friends, had often spoken of it as a most benevolent action and one deserving of the warmest praise.

Surely Mr. H. Turner, as the head of a most respected firm, and whose name has often adorned the pages of the Journal, will give us some explanation. If the Exhibition has been a failure, what have the officials to lose by at once saying so? If, on the other hand, they really intend paying, why not at once state the cause of the delay, and so settle

the matter? No one wishes to be unfair, and a few lines from either Mr. H. Turner or Mr. Milner would suffice.—Another Exhibitor.

[We had pleasure in giving publicity to whatever might be calculated to contribute to the success of the Earl's Court Exhibition, and have now, therefore, the less hesitation, in common fairness to exhibitors, to allow them to draw public attention to the position they are in. The letter of our correspondent, it will be conceded, is a temperate one, and we agree with him that an explanation is due, and we trust may be forthcoming under the very unusual circumstances now existing.]

A CALL AT CHILWELL.

In the last issue of the Journal at page 470 brief reference was made to Messrs. J. R. Pearson & Sons' Chrysanthemums, which are, however,

attention is being directed to the fruit, it must not be thought that the remainder is being neglected, for such is by no means the case. Each department is under the personal supervision of one or other member of the firm, cleanliness and good order prevailing throughout.

GENERAL PLANTS.

As the Chrysanthemums were mentioned last week attention will now be turned to general plants, which are grown in finely built structures erected by the well-remembered father of the present firm Mr. J. R. Pearson. Good as are the houses they are in no way superior to their contents, the plants throughout being in perfect health and free from any signs of insect pests. For Zonal Pelargoniums the firm has been renowned for many years, and is likely to be maintained if those now in bloom may be taken as a criterion. The plants have been flowering for months, and appear likely to continue doing so, for they are furnished with an abundance of buds. The plants are mostly of



FIG 71.—CROTON RUSSELLI.

only one of the many excellent features of this old established firm. It is my intention in these notes to refer to the plant houses and the extensive fruit tree nursery, each of which departments is in admirable order and replete with good things. A visit to Chilwell must always be full of interest, for at all times there is much to see. During the spring months the Narcissi, in which Mr. Duncan Pearson is taking such an interest, present a magnificent sight, as also do the fruit trees when they are bearing their delicately tinted flowers. Later the greenhouses will afford sufficient pleasure to repay a journey. Again, when fruit is hanging on the trees one could not do better than pay a call, and at planting time, when fruit trees are being sent away to all parts of the country, a spectacle of life and activity is presented such as will not perhaps be seen at any other season of the year. It was at this time when my visit was paid. So successful have Messrs. Pearson been with fruit trees that they are devoting every yard of available land to this department of their business; but though such a vast amount of

dwarf habit, and the blooms of much substance, with pips of perfect form and heavy trusses, which stand boldly out from the foliage.

On the back wall of the Pelargonium house, which is a lean-to structure, is growing Asparagus plumosus. That the position is admirably suited to this plant is evident by the luxuriant growths it is making, and which afford numberless fronds for decorative purposes at all times, but more especially during the early months of the year, when Maidenhair Fern is somewhat on the wane. Notwithstanding the freedom with which the Asparagus grows, Messrs. Pearson find it difficult to meet the demands, their cut-flower trade having developed to an extraordinary extent during the past few years. Eucharises, too, are largely grown, and are now affording an abundance of their chastely beautiful blossoms, which perhaps have no equal, and certainly no superior in many phases of decorative work. As a berried plant for the embellishment of rooms Adisia crenulata is splendid. The berries are brightly coloured, and the foliage of a dccp glossy green. With reasonable care and attention

these plants will last in a room in perfect condition for a long time, and it is surprising that they are not more popular. The stock at Chilwell is an extensive one, all the plants bearing the impress of careful attention and good health. On the roof of one of the intermediate houses Stephanotis floribunda is growing wonderfully, and must present when in full flower a perfect picture. I trust that on my next visit to Chilwell it will be in this condition, for I would much like to see it. Maréchal Niel Roses are evidently a speciality, and are largely grown. The plants are most noteworthy for the extraordinary growth and the admirable manner in which the shoots are ripened. Most assuredly they will produce an abundance of fine blooms. The plants are, however, grown for sale, and one would think that there were enough to supply all the growers in England, so great is the number. An unusual sight is seen in the two enormous banks of Adiantum, formed of huge, healthy looking plants, some of the fronds of which are of great size and substance.

The collection of Orchids cannot be called an extensive one, but if lacking somewhat in quantity it makes up in quality. Cattleyas, Odontoglossums, and Cypripediums are represented by beautiful plants, all of which are remarkable for their healthy appearance; but amongst the Orchids the Cœlogyne cristata must be accorded the premier position. The plump pseudo-bulbs and stout green leaves denote the way the plants are grown, and the condition they are in at present. They will give a number of beautiful flowers. This does not by any means exhaust the list of plants grown, and that well, at Chilwell; but mention must now be made of the fruit trees. Mr. C. E. Pearson, who takes charge of the plant and flower department, must be accorded a word of praise for the excellent condition of his charge, in which it need scarcely be said he takes the most intense interest.

FRUIT TREES.

The fruit tree department is under the active supervision of Mr. Alfred Pearson, and the state of the trees and the ground throughout is a striking evidence of his ability and intelligence. As in the other divisions of the firm, cleanliness and good quality appear to be the objects striven after, and but a glance suffices to prove how admirably these are achieved. At this season of the year the fruit department encroaches on that of the plants, inasmuch as one of the largest houses is devoted entirely to a show of Apples and Pears, arranged in dishes on a huge centre table. And a sight they present! All the popular varieties are represented, but the place of honour, both in the house and in the hearts of the members of the firm, is accorded to Newton Wonder. It is certainly a handsome Apple, and combines with its good appearance other high qualities rarely found in one variety. The tree is a splendid cropper, and the fruits colouring well are in great demand in markets. The flavour leaves nothing to be desired, and as it possesses exceptional keeping qualities, it is an Apple which cannot fail to be more largely grown than it is at present. Thinking so highly of it, the Chilwell firm has a grand stock. Young and old, trained and untrained trees are there in abundance, ready to be sent to their customers, and practically certain to give them satisfaction. Amongst the other Apples to be seen in the house were Wellington (Dumelow's Seedling), Potts' Seedling, the Apple par excellence for town gardens; King of the Pippins, Blenheim Orange, in superb condition; and Bramley's Seedling, in splendid form. Pears did not perhaps show to such exceptional advantage, but this may be accounted for by the visitor still having those beautiful Apples in his eye. However, some grand examples of the leading varieties are noticeable, and the Potatoes with which the end of the house is occupied would be a credit to any exhibition. Clean shapely tubers—some large, others small, but all firm and good—are there in abundance.

From the show of fruit a walk of ten or fifteen minutes brings us to the fruit tree nursery, and here on every side are seen the signs of a busy time. Thousands of trees have been taken up, and yet thousands remain. The stock of trees is a very extensive one. Upwards of thirty acres are entirely devoted to them, and the trees throughout are in splendid condition. Horizontally trained trees are a great feature at Chilwell, and as all are trained to a uniform measure, it will readily be imagined that their appearance is first-rate. Trained trees are there in all sizes, from the smallest up to the giant which is ready to fill a blank in the garden and commence cropping at once. No fear need be felt as to the advisability of buying such large specimens, for they have been regularly transplanted, and will lift with an abundance of those healthy fibrous roots which are so essential. The

trees are beautifully trained, and present an excellent appearance. Plums are represented by the thousand, and are carrying splendid wood, rich in promise of future crops. This is in fact applicable to all the trees in the nursery, for the shoots throughout are stout and perfectly ripened. The standards are magnificent trees and cover some acres of ground. The stems are straight, clean and sturdy, every one having had a stake attached to it. This will readily be recognised as a stupendous task, but it is only following what appears to be a rule of the firm—do everything well. Damsons, Apples, Pears and Plums, all are worth going to Chilwell to see. It would, of course, be impossible to particularise the varieties of fruits grown at Chilwell, their name is legion. No variety possessing good qualities is omitted from the collection, all receiving alike the same excellent and thorough culture. Grown on thoroughly prepared soil, better specimens could not be wished for. I spent a delightful time at Chilwell, for there is much to see and much to learn, and the hearty welcome accorded makes one feel at home at once. Let all readers of the Journal who can possibly do so visit Chilwell, they will be courteously received and see much which cannot fail to be of benefit to them in the future.—Nomad.



THE ROSE IN 1893. (Concluded from page 465.)

As I said last week, 1893 was not an amateur's year, and, therefore, we have no such record of success as that of the Rev. J. H. Pemberton some years ago, when from the beginning to the end of the season he carried all before him. But it was different with the professional growers. Messrs. Harkness & Sons, besides the challenge trophies already alluded to, carried off every first prize for seventy-twos in the kingdom, a record unique in itself and of which they may be justly proud. prowess of the northern growers was kept up to the very last, and at the Show at the Agricultural Hall at the end of August Messrs. Cocker & Sons of Aberdeen staged a remarkably fine collection of blooms, remarkable for their substance and brightness of colour. The Tea Roses were, as might have been expected, exhibited well, but the glory of the victory had passed from west to east, and while Somerset and Hereford were out of it East Anglia carried all before it and the flowers of the Revs. Foster Melliar and H. A. Berners will not be soon forgotten. Some of the Teas were exceptionally fine; never have Marie Van Houtte and Madame Cusin been exhibited as they were this year. The bloom of the latter shown by Rev. Foster Melliar at the National was certainly never equalled in any exhibition on this side of the Channel.

Madame Hoste has fully justified the expectations of those who thought that it only required time to win its way. A doubt still hangs over Ernest Metz as to whether it has got that constancy which exhibitors look for; of its beauty there can be no question. Whilst writing about Teas one cannot forbear alluding to the excellent manner in which Mr. Geo. Mount of Canterbury has exhibited this year. In a season when so early and so warm a place as Canterbury must have severely tried him, he has brought forward his Teas from the very earliest to the latest shows; his blooms have been always fresh and of good substance, and his stands have always contained the best leading varieties. Two other nurserymen who have occupied a more prominent place than beretofore are Messrs. Merryweather of Southwell and Messrs. Prior & Son of Colchester.

Passing away now from this rapid review of the season's Roses as far as exhibition varieties are concerned, let us ask in what way it has influenced what are ordinarily termed garden Roses. These comprising Hybrid Chinas, Hybrid Bourbons, Gallicas, and most single Roses, were over long before the exhibition season commenced, and consequently the display of them at our shows was in most cases deficient. Some very beautiful stands it is true were shown, but not in the quantity that one would have desired. And in truth the Rose season in our gardens was a very short one, but what we lost in July has been largely made up for us by the profusion and excellent quality of the flowers in September and October. I have seen Hybrid Perpetuals which have equalled the July flowers, while of Teas the display has been marvellous. The excellence of the flowers could not have been surpassed even in their normal blooming season, and the same account reached me from all quarters. And even as late as October 25th I could gather fresh coloured and good sized blooms from my own small collection.

Perhaps the most noticeable fact with regard to the excellence and number of Roses in October was furnished by the Oyster Feast at Colchester, when the tables were decorated by upwards of 4000 blooms, and although I was not there to see, being obliged to refuse the invitation, yet I am told that the flowers were exceptionally good, and the effect very striking. Colchester, too, possesses in Mrs. Orpen one whose taste in decoration has been proved so frequently, and I believe she helped not a little to carry out the arrangements; at least I am told it was her hand which made the buttonhole bouquets with which each guest was furnished.

In one respect the dry season has been propitious. Most of the shows have been held under favourable circumstances as regards weather with the somewhat unfortunate exception of the day on which the provincial Show of the N.R.S. was held at Worksop, and yet with all that I hear ominous sounds with regard to the probable endurance of many of them. It will be a matter I am sure of the sincerest regret if the contemplated breaking up of the Reigate Association takes place. I have been told by several who have attended many of the exhibitions that Reigate stood easily this year in front of all. Sad that it should be the last note of the dying swan. How many pleasant days have we spent there, and what a home of thoroughly good rosarians it was. Can one ever forget the pleasant meetings at the late Mr. Baker's, and after his death the gatherings round Mr. Hayward's hospitable board? But times are altered. Mr. Baker passed away some years ago, Mr. Waterlow's beautiful place at Great Doods is in the market, Mr. John Pawle has left Reigate, Mr. Sargent and Mr. West have pretty well given up exhibiting, Mr. Wollaston has long since retired, and when such defections as these take place we all know how difficult it is to revive an interest. On the other hand, new societies spring up. The enthusiasm for the Rose does not seem to diminish; as some of the veterans fall out of the ranks young and active recruits take their place, and yet one asks with some degree of misgiving, Where are the successors of the giants to come from? Ever and

anon we hear of some new amateur going largely in for Roses, as in the case of Mr. Tate of Leatherhead and Mr. Machin at Worksop, and we can only hope that many more of the same character may come forward, and that the Rose amateurs of the future may be worthy successors of the Jowetts and Bakers, the Halls and Whitwells of former days.— D., Deal.

PEARS IN 1893,

THE late summer and autumn fruits are nearly over, but it is no wonder after such a summer of agreeable sunshine. Take Pears for instance. With us Doyenné d'Eté, Beurré Giffard, and Jargonelle, three of the earliest, were all ripe in July. Williams' Bon Chrêtien, usually a late August and September Pear, was on a south wall fit to gather the end of July, and fit to eat the first week in August; but trees of it in the open, and on a wall with a north aspect, kept the supply on till the middle of September. This deservedly popular variety should be planted in this latter position, if there is space to spare. Louis Bonne of Jersey, Beurré Bosc, and Marie Louise were good, and suitable for use a month before the usual time, so also was Duchesse d'Angoulêmc.

I saw some fine French Duchesses in a fruiterer's shop in August' General Todleben, Forelle, Beurré Diel, Doyenné du Comice, and Brown Beurré were all good, but they are over now; and Glou Morceau is in use, when it has usually come in at Christmas time. The same may be said of Joséphine de Malines, a splendid Pear when grown against south walls. Beurré Rance is not ripe yet, and will prove serviceable. The free-bearing Nec Plus Meuris is not a very large Pear, but the quality is likely to be good this year. Many of them will be ripe in December, and possibly will last through January. There was no crop on Crasanne this year, when there is I have found it good for January.

A large bush of Nec Plus Meuris this year produced 3 bushels of clean it. Bergamotte Esperen, the latest of all kinds with me, planted as an orchard standard produced nearly 4 bushels, half of which, if they finish in the fruit room, will be fit for dessert, the rest will be rather small. These two last kinds should be in every collection of Pears for a late supply, although it is not every year that we have so favourable for Pears.

A free-bearing, medium-sized Pear for kitchen purposes I find in Bellissime d'Hiver, and will remain in use for a long time. comes very even and clean as an orchard tree, none very large, and no very small ones.—A. HARDING.

THOUGH I have no complaint to register with regard to Apples, and I hope to have a sufficient supply as long as usual, in the case of Pears I am not so sanguine. Not that the fruit is keeping worse than usual, for unless in the case of those that have been pecked by birds it is keeping very well; but the fruit is ripening so abnormally early that there is no likelihood of there being a supply to the usual time. For instance, our Marie Louise is now over, and in former years there was no difficulty in keeping it till Christmas. Winter Nelis, a variety which was wont to be in use during January and part of February, is now ripening, and I sent in the first dish on November 21st. Van Mons Léon Leclerc is quite ripe; Easter Beurré and Beurré Rance are softening. There is one redeeming feature however, and that is the splendid flavour most varieties developed. I do not remember Pears ever to have been so richly flavoured before, sorts that were only fit for stewing in most seasons being this year really well-flavoured.—B.

PEARS versus PEACHES.

THE article on Pears versus Peaches by "C.," in the Journal of Horticulture, September 21st (page 259), has brought out some different opinions. It may interest readers to learn that I had occasion to buy Peaches the first week in September. There were a great number that could not be sold at any price owing to the glut. I paid from 1s. to 3s. per dozen. They were of splendid colour and of good flavour. This was at Doncaster during the races; a week previous they could be bought at any price.

I had a good crop of Pitmaston Duchess Pear, which I gathered a week or two after, and sold them all in the trade to sell again at 10s. per dozen. There was not a fruit under a pound weight; the heaviest weighed over 1½ lb. My employer was rather interested in them when growing, as he thought such large Pears would be useless to eat, but after tasting one he said it was one of the best flavoured Pears

he had ever tasted.

I was surprised when I read "E. M.'s" (page 373) remarks anent Beurré Diel being of no flavour. In Yorkshire it is perfect in flavour. We have some grand fruit of it this year. Clapp's Favourite, which is condemned by some as having no flavour, is very good with us. It must be the soil, as we never water our trees. The past season has just suited the land, which is on the magnesian limestone. Durondeau, Winter Nelis, and Doyenné du Comice are now in perfect condition, but Thompson's and Duchesse d'Angoulême are no better than a Turnip.-Northerner.

THE HESSLE PEAR.

REFERRING to the interesting note respecting this popular Pear from Mr. Lord (page 469), I draw attention to the fact that all round London in numerous old orchards it was evidently the one Pear for market growth and sale. Nearly all the old trees we still see standing about in the suburbs are of the Hessle, and young trees are still largely planted. The market men persist in calling the variety "Hazel," but as the calling things by other than correct appellations is a very common as the calling things by other than correct appellations is a very common

feature in the market trade, it rather than otherwise supports Mr. Lord's The tree is a very handsome grower, presenting in standard form the most perfect of pyramidal heads, the young growth wearing a drooping aspect. It is one of the hardiest of Pears, and should make an excellent secondary stock for double working. It is also an almost constant fruiter, and although the fruits are smallish and of very poor quality, yet because they can be gathered early, and are abundantly produced, seems to be profitable, and that is all the market grower troubles about.—A. D.

ROYAL HORTICULTURAL SOCIETY.

NOVEMBER 28TH.

THE meeting on this occasion was a comparatively small one, and but few exhibits were forthcoming. Some Orchids were staged, whilst Zonal Pelargoniums and Chrysanthemums made a fair display. Fruit was only moderately represented.

FRUIT COMMITTEE .- Present: Philip Crowley, Esq. (in the chair), Rev. W. Wilks, Dr. Hogg, T. F. Rivers, H. J. Pearson, Harrison Weir, J. Cheal, G. Goldsmith, G. Bunyard, W. Warren, A. Dean, A. H. Pearson, F. Q. Lane, H. Balderson, J. Hudson, G. Wythes, A. J. Laing, G. T. Miles, and J. Wright.

The duties of the Committee were the reverse of heavy, but interesting and well-grown specimens were submitted for examination. The English Fruit Growing Company, Hereford, sent a dish of very fine Apples, named Byford Beauty. The fruit was quite as large as Warner's King, yet distinct from it, being firmer and heavier. were said to have been borne by an orchard tree, described as an excellent grower and free bearer. Mr. J. Watkins, Pomona Nurseries, Hereford, also despatched fruits, but they had not arrived. This is not a new Apple, but is grown in the neighbourhood of Hcreford, and there

esteemed. An award of merit was voted unanimously. At a meeting in September an award of merit was granted to Messrs. W. Brown & Sons, The Nurseries, Wells, for Bartlett's Glory Apple, the fruits of good size and attractively coloured. They were taken to Chiswick for testing their keeping, but on being examined now were found to be partially decayed, and consequently no advance was made on the September award. Mr. Bunyard sent fruits of Christmas Pearmain, a good sized conical fruit with a tender flesh and pleasant flavour, but over-ripe; also highly coloured medium sized fruits of Foster's Scarlet Prolific of the Cellini type; and Messrs. J. Peed & Sons sent a dish of Ouseley's King of the Valley Apple, being in appearance intermediate between Queen Caroline and Golden Noble. No awards were made for the varieties mentioned. Mr. T. Arnall, Brookside, Headington Hill, Oxford, sent remarkably large specimens of Uvedale's St. Germain Pears. Twelve of the fruits grown by Mr. Arnall weighed 27 lbs. 6 ozs., the heaviest Pear being 3 lbs. 8 ozs. in weight. Eleven out of the twelve fruits were placed on the table, and a bronze Banksian medal was unanimously recommended.

The Liverpool Horticultural Company sent bunches of the Hamburgh Colman Grape. The variety originated with Mr. E. H. Woodhall, St. Michael's, Scarborough, and was said to ripen a month earlier than Gros Colman and flourish in cool vineries. The best bunches exhibited were produced from a Vine inarched on another variety (not named) at Allerton, Liverpool; but the Grapes were described as the most tasteless ever tasted by the Committee. Some berries from the original stock were better, but their appearance, through injury in transit, the

reverse of tempting, and no award could be made.

A large and well-grown cluster of Bananas (Musa Cavendishi) was sent by Mr. J. Quarterman, gardener to C. E. Smith, Esq., Silvermere, Cobham, and a cultural commendation promptly awarded. Chantrier Frères, Mortefontaine, France, sent fruits of the Persimmon, Diospyros Kaki, but they were not in good condition, and it is very rare indeed, if ever, that Persimmons are placed before the Committee in satisfactory condition.

Mr. G. Goldsmith, gardener to Sir E. G. Loder, Bart., Leonardslee, Horsham, exhibited a very fine collection of thirty dishes of Apples and twelve of Pears, all of first-class exhibition quality. The Pears were fine and the Apples beautifully coloured, Barnack Beauty was perhaps never seen in richer crimson garb. It would have gladdened the eyes of Mr. Richard Gilbert, who, we think, "discovered" this variety in the neighbourhood of Stamford. A silver Knightian medal was unanimously recommended for this most creditable collection of fruit.

FLORAL COMMITTEE.—Present: W. Marshall, Esq. (in the chair); Messrs. R. Owen, Chas. F. Druery, H. Herbst, R. Dean, G. Stevens, C. F. Bause, C. J. Salter, Geo. Gordon, J. D. Pawle, C. Jeffries, Jas. Walker, C. E. Shea, T. Baines, C. Noble, H. Cannell, and Peter Barr.

Messrs. Hugh Low & Co., Bush Hill Park Nurseries, Enfield, staged a collection of Cyclamens, the plants in which were sturdy and finely flowered. Greenhouse plants were also staged by the same firm (silver Banksian medal). Messrs. Henry Cannell & Sons, Swanley, arranged a collection of Zonal Pelargoniums, conspicuous alike for the perfect contour of pips and large size of the trusses. Amongst the most prominent were Etoile de Lyon, Launcclot, Lucrece, Madame de Bondeville, King of the Purples, W. P. Wright, and Albion. Chrysanthemums were also staged by Messrs. Cannell. The blooms were of fine shape and substance. Robt. Flowerday, C. Westland, Judge Hoit (award of merit, see below), Golden Wedding, Mrs. C. Harman Payne, Golden Ga'e (award of merit, see below), Mdlle. Thérèse Rey, Robert Owen, and Madame Ad. Girard were the most noticeable (silver Banksian medal).

Mr. Robert Owen, Maidenhead, showed some handsome Chrysanthemums, including Mrs. John Gardiner (award of merit), Mrs. J. Mitchell (award of merit), Sir Titus, Walter Surman, E. L. Jamieson, H. M. Pollett (award of merit), John Noble, H. L. Sunderbruck, Elsie Walker (award of merit), Little Pet and Le Prince du Bois (award of merit). Mr. C. Blick, The Warren, Hayes, showed blooms of Chrysanthemum Helen Crawford. Mr. Salter, gardener to T. B. Haywood, Esq., Woodhatch Lodge, Reigate, showed magnificent flowers of Lord Brooke, Elmer d'Smith (award of merit). Chrysanthemum Eric was shown by Mr. Duncan, gardener to C. J. Lucas, Esq., Wareham Court, Horsham. Mr. J. Rcynolds, Netley Castle, exhibited Chrysanthemum Lady Emma. A cultural commendation was accorded to Mr. Blandford, gardener to Mrs. Haselfoot, Moorhill, Southampton, for pots of yellow Chrysanthemums. Begonia Madame Lebourg was shown by Mr. H. B. May, Dyson's Lane Nurseries, Upper Edmonton, and it appears to be a variety of much promise. A first-class certificate was accorded to Mr. May for Acalypha Macafeena, which is described elsewhere. A handsome piece of Aglaomorpha (Polypodium) Meyeniana was also shown by Mr. May, and awarded a first-class certificate (see below). Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, showed a small collection of plants, and received a vote of thanks. Lachenalia pendula, Leontice Leontopetalum, and Narcissus monophyllus were represented. Blooms of Lilium nepalense were shown by Messrs. H. Low & Co.

The group of foliage and flowering plants arranged by Mr. G. Wythes improved what was otherwise a sparse meeting. Calanthe Veitchi superba, Cypripedium insigne, Poinsettia pulcherrima, Palms, Crotons, Dracænas, and Ferns were all of exceptional merit, and well deserved the silver Flora medal which was awarded. Sterculia nobilis in fruit was shown by Mr. Wythes, and received a vote of thanks. A cultural commendation was accorded to Mr. Latham, Botanic Gardens, Birming-

ham, for splendid piece of Callicarpa purpurea.

Prizes were offered for groups of Chrysanthemums, the first being awarded to Mr. E. Vince, gardener, Highgate Cemetery. The plants were well grown and flowered, and included amongst others, Mons. Bernard, Florence Percy, Viviand Morel, and Val d'Andorre; Mr. Wythes, gardener to the Duke of Northumberland, Syon House, Brentford, being accorded the second position.

ORCHID COMMITTEE.—Present: H. J. Veitch, Esq. (in the chair); Dr. Masters, Messrs. Jas. O'Brien, H. M. Pollett, Thos. Statter, W. H. White, E. Hill, Jas. Douglas, T. B. Haywood, and F. Sander.

Messrs. F. Sander & Co., St. Albans, sent some choice Cypripediums, including C. Lynchianum (C. Spicerianum × C. selligerum majus),

C. Pyrorianum, Calanthe Sandhurstiana, a bright rosy red flower, and a basket of Calanthe Victoria Regina, tastefully arranged with Asparagus plumosus nanus. An award of merit was adjudged for this Orchid, which is described elsewhere. Mrs. Haselfoot, Moorhill, Southampton (gardener, Mr. N. Blandford), sent a dozen grand spikes of Cattleya labiata, and a vote of thanks was accorded. W. R. Lee, Esq., Beech Lawn, Audenshaw, Manchester (gardener, Mr. J. Billington), sent Cypripedium Leeanum superbum and C. Mary Lee (award of merit). Messrs. B. S. Williams & Son, Upper Holloway, procured an award of merit for Calanthe Mylesi, which is described below. Walter Cobb, Esq., Dulcote, Tunbridge Wells (gardener, Mr. J. Howes) sent Cypripedium & Cobbianum. Tunbridge Wells (gardener, Mr. J. Howes) sent Cypripedium × Cobbianum. T. Statter, Esq., Stand Hall, Manchester, had Cypripedium Fairiano-Lawrencianum (award of merit), and Lælia anceps Amesiana. A firstclass certificate was awarded for the last-named plant, and a description of it is given elsewhere.

Messrs. J. Veitch & Sons, Royal Exotic Nursery, Chelsea, sent a small collection of choice Orchids. These included Catasetum Darwinianum and Cypripedium Minos, for which awards of merit were adjudged. The same firm had a plant of Habenaria ciliaris, and a botanical certificate was awarded for this. R. J. Measures, Esq., Cambridge Lodge, Camberwell, secured an award of merit for Cypripedium insigne var. Illustre, a distinct form. Messrs. Hugh Low & Co., Clapton, had a few Cypripediums and a plant of Vanda Sanderiana.

CERTIFICATES AND AWARDS OF MERIT.

Acalypha Macafeeana (J. Veitch & Sons).—This is a splendid foliage plant. The largest leaves on the plant exhibited were nearly a foot in length and 8 inches wide. The upper surface is bright red blotched brown, the under part being also red (first-class certificate).

Aglaomorpha (Polypodium) Meyeniana (H. B. May).—This is a splendid Fern from the Philippine Islands. The fronds are more than 2 feet in length and a graceful habit. It is conservable a good Fern for

2 feet in length, and a graceful habit. It is apparently a good Fern for

growing in a basket (first-class certificate).

Calanthe Mylesi (B. S. Williams & Son). — A charming white Calanthe, the result of a cross between C. nivalis and C. Veitchi (award of merit).

Calanthe Vietoria Regina (F. Sander & Co.).—This is an exceedingly pretty form, and was raised by Sir Trevor Lawrence, Bart. A card on the plant exhibited stated "it was probably from C. Veitchi and Limatodes rosea." The flowers are large, blush pink, with a faint

tinge of yellow in the throat (award of merit).

Catasetum Darwinianum (J. Veitch & Sons)—A very fine species from British Guiana. The flowers are a curious mixture of brown,

green, and creamy white (award of merit).

Chrysanthemum Le Prince du Bois (R. Owen).— A splendid Japanese variety of a bright yellow shade (award of merit).

Chrysanthemum Little Pet (R. Owen).—A pretty English-raised Pompon, brownish red in colour (award of merit).

Chrysanthemum Elise Walker (R. Owen).—A brick red Pompon

edged with yellow (award of merit).

Chrysanthemum H. M. Pollett (R. Owen).—An English-raised seedling of Viviand Morel type, fine flower, rich rosy pink (award of merit).

Chrysanthemum Mrs. J. Mitchell (R. Owen).—An incurved sport from Empress Eugénie. Flower medium sized, and of a golden amber creamy shade faintly suffused with rose (award of merit).

Chrysanthemum Mrs. John Gardiner (R. Owen).—An incurved

variety, clear yellow, good shape.

Chrysanthemum Elmer d' Smith (T. B. Haywood, Esq.).—A large Japanese, dull crimson, silvery reverse (award of merit).

Chrysanthemum Golden Gate (H. Cannell & Sons).—A fine reflexed

Japanese, broad florets, clear yellow (award of merit).

Chrysanthemum Judge Hoit (H. Cannell & Sons). — A large
Japanese Anemone, soft rose colour (award of merit).

Cypripedium Mary Lee (W. R. Lee, Esq.). — This is the result
of a cross between C. Leeanum and C. Arthurianum. The dorsal sepal is large with a deep white margin, spotted violet purple. The base is green, spotted brown. The petals and lip are green, shaded brown (award of merit).

Cypripedium Fairiano-Lawreneianum (T. Statter, Esq.).—A distinct hybrid, being the result of a cross between C. Fairieanum and C. Lawrencianum. The dorsal sepal is white and green, heavily veined with purple. The lip is bronzy green, while the petals, which droop, are green spotted and margined purple (award of merit).

Cypripedium Minus (J. Veitch & Sons).—This is a beautiful hybrid.

It is the result of a cross between C. Anthurianum and C. Spiceranum.

The dorsal sepal is large, the greater portion white, densely spotted crimson. The lip is dark shining brown, and the petals are yellowish green, veined brown (award of merit).

Cypripedium insigne var. Illustre (R. J. Measures, Esq.).—A very fine form of the well known type. The dorsal sepal is yellowish green, covered with large brown spots, and a distinct white tip. The lip is a bright brown, tinged with yellow, as are the petals (award of merit)

Lælia anceps Amesiana (T. Statter, Esq.).—This is a beautiful form of L. anceps. The sepals and petals are white, tinted rosy purple. The front portion of the lip is very richly coloured, purplish magenta, the throat being veined crimson and yellow (first class certificate).

VIOLAS.

I HAVE read with much interest "W. D.'s" contribution (page 438) on new Violas. As I cultivated, very successfully for the most part, during last summer the great majority of the beautiful varieties which he so expressively characterises, I am perhaps in a position to endorse his remarks. I may state that the following are my favourite Violas, which I can strongly recommend to cultivators of this interesting flower—Countess of Wharncliffe, Duchess of Fife, Bridesmaid, Lemon Queen, Edina, Countess of Kintore, H. M. Stanley, White Duchess, White Flag, Violetta, Sylvia, and Countess of Hopetoun. Of these the most charming are Countess of Wharncliffe, delicate satiny white; Violetta, the most graceful and highly perfumed of Dr. Stuart's miniature Violas, and Duchess of Fife. I think the last mentioned is superior to White Duchess, which, unless in complexion, it resembles very much. It is perhaps heroic as well as conservative to make this assertion, after being assured by Mr. Wm. Cuthbertson of Rothesay, for whose opinion, nevertheless, I have the greatest respect, that White Duchess, which is the latest production of Mr. Baxter of Daldowie in Perthshire, is "the sweetest Viola in cultivation."

Edina, justly eulogised by Mr. Wm. Dean of Birmingham (who has practically written the Viola into its present popularity), is, I understand, a sport or variation from Countess of Kintore. During last September, after keeping stationary in aspect for several months, it began to be eccentric, and produced, to my gratification, several flowers entirely distinct from the original "Edina," of much darker colour and velvety hue.—DAVID R. WILLIAMSON.

FLORAL NOMENCLATURE - CURIOUS SPELLING OF NAMES.

I HAVE read with interest the paragraphs which have appeared in the Journal of Horticulture from time to time on the above subject. We all agree, I think, that gardeners are not expected to be versed in Latin, Greek, German, and French; but I think the exhibits at our shows ought to be correctly labelled for the benefit of the visitors. If the exhibitor cannot do it, surely the Secretary or some official connected with the arranging of exhibits could.

In visiting some of the recent Chrysanthemum shows I have noticed the following, amongst others, inaccurately spelt, in addition to the writing being illegible: For Miss Haggas, "Miss Hageas;" for Etoile de Lyon, "Etole de Loyn;" for Nil Desperandum, "Nil Desperande;" for Audiguier, "Audeger;" for Bahuant, "Bahant," and similar errors which could easily have been avoided by copying the names from a catalogue. I hope gardeners will avail themselves of the apportunities catalogue. I hope gardeners will avail themselves of the opportunities now offered by the County Councils, whereby we can improve our knowledge in subjects pertaining to gardening.—S. H.

I MUST disclaim any desire to make "West Anglia" (page 466) appear responsible for the advocacy of a classical training for gardeners.

My point was, that if one is to be satisfied with nothing short of perfection in the spelling and pronunciation of foreign languages, such training is indispensable. I had no intention of charging "West Anglia" with inability to correctly decipher the mis-spell labels to which he referred. Whilst allowing that the exhibitor was in fault, I suggested that some of the mistakes read as if the words were copied from labels on which but a few legible letters remained. Of course a gardener should see that his labels are always readable; but somehow, especially where single-handed gardeners are employed, labels have a way of becoming periodically obliterated, and the gardener, whose time is entirely occupied in the culture of his charges, finds on the eve of the exhibition that a few isolated letters represent the name. Then comes an attempt to copy the words as near as may be. This I know from experience is what not infrequently occurs, and I have, happily, been sometimes able to help exhibitors to rectify their errors before the advent of the judge. However, as "West Anglia" says, this is negligence, and while not defending the delinquents, I ask for a lenient judgment.-S. W. F.



HULL CHRYSANTHEMUM SHOW, 1894.

WE learn that the annual Exhibition of the Hull and East Riding Chrysanthemum Society will next year be held on November 14th and Messrs. G. Gordon, E. Molyneux, and J. Wright have been invited to act as judges.

MR. MOLYNEUX IN IRELAND.

I SPENT two hours with Mr. Molyneux yesterday (21st inst.) and they were two valuable hours to me, but I am sadly disappointed that his first impressions of Ireland cannot be favourable to us. are humiliating; brought over as he has been to an amateur society at a small place where two rival shows are held. I feel rather strongly on this matter, for I was anxious that poor Ireland should be seen at its best, not at its worst, and I do not consider that the remains of the Chrysanthemum feast that have been set before the "Chrysanthemum king" have been a dish worthy of him or of us.—PADDY.

INCURVED JAPANESE CHRYSANTHEMUMS.

MAY I ask some of your correspondents if Léon Frache and Mdlle. Marie Hoste belong to the incurved Japanese section? At the Reading Chrysanthemum Show the Society asked for twelve Japanese incurved, distinct, and the stand that was placed first had the above mentioned varieties in the twelve. I did not know they belonged to that section, nor can I find them in the N.C.S. catalogue as such, and the Reading Chrysanthemum Society is affiliated with the National.—BEGINNER.

[If "Beginner" refers to our instructions to correspondents on page 500 he will find these words: "All articles intended for insertion should be written on one side of the paper only."]

AN AMATEUR'S CHRYSANTHEMUMS.

It is a well-known fact that Chrysanthemums are now grown nearly as well by amateur cultivators as by most professional gardeners, and, in the majority of cases, the former are well represented at exhibitions. Around the metropolis thousands of amateurs take a keen interest in Chrysanthemums, and amongst others that have come under our notice, the collection brought together by Mr. A. Barrett, Alexandra Road, Hornsey, is deserving of mention. Although not an exhibitor, this gentleman is an enthusiastic grower, and considering his comparatively brief experience in the matter, he has managed to produce some remarkably fine blooms of the leading varieties. The plants are principally grown for decorative purposes and for some weeks past Mr. Barrett has had a charming display in the conservatory at his suburban residence.

CHRYSANTHEMUM CHAS. DAVIS.

I THANK "P." (page 470) for his reply, but I do not consider his answer a very satisfactory one. The introducer of Chas. Davis describes the colour as "clear rosy bronze," and as such I have seen many blooms this season. The certificate was awarded to blooms of a pale yellow slightly tinged with bronze on the outer florets. From "P.'s" remarks I gather that small undeveloped blooms of the orthodox hue would be passed over for large blooms of much less colour. If he will refer to my query he will notice that I stated the blooms which were passed over were "perfect in shape, fresh and equal in size" to the faded blooms to which the certificate was awarded. I have always understood that fair-sized, fresh, highly coloured blooms of Etoile de Lyon, Mons. Bernard, Viviand Morel, and many others counted many points more than larger paler blooms of the same varieties. I know they are much more difficult to grow. Surely size is not the standard of the N.C.S. Floral Committee.—QUERIST.

THE N.C.S. AND ITS CERTIFICATES.

"P." (page 470), in answer to my complaint of the bad light, points to the Drill Hall, and comforts himself with the idea that the

R.H.S. arc no better off in this respect than the N.C.S. As I think I have already seen quoted in the Journal, "two wrongs do not make one right." But I cannot allow that the Floral Committee of the Royal Horticultural Society sit in anything like such darkness as the Floral Committee of the National Chrysanthemum Society did on the 8th inst. What is more, the R.H.S. meet at midday and the N.C.S. at a later hour. When the last-named Committee rose on the 8th it was near four o'clock, and hardly possible for those sitting at the head of the table to distinguish those at the bottom. I find the R.H.S. are more lavish than the N.C.S. with their certificates; will the latter follow the Royal in this? I hope not; but according to "P.'s" argument they should. It may be a comfort to the N.C.S. that the R.H.S. are no better off for light, but it will not console those who send blooms for certificates .-A MUMMER.

CHICAGO CHRYSANTHEMUM SHOW.

A PRIVATE correspondent in Chicago has sent me a note concerning the great Show recently held at the World's Fair, Chicago, which he says is the largest they have ever held there. The admission fee was fifty cents., and the takings at the doors amounted to about £1800 (9000 dollars). In the "American Florist" is a long report of the proceedings, by which it appears that there were exhibits from twentyone different States including Canada, and that, exclusive of seedlings and undistributed kinds, about 110 varieties were staged. As may be imagined most of these were of American origin, but it is gratifying to find that our Yankee friends do not wholly rely upon native-raised varieties, and that there was a fair number of novelties from the Old World growers. The best of these were Mons. R. Bahuant, Chas. Davis, H. Cannell, Jeanne Delaux, Domination, Bertha Flight, L'Enfant des Deux Mondes, Kate Mursell, Robert Owen, Mdlle. Thérèse Rey, William Seward, Source d'Or, and Viviand Morel.

Most of the cut blooms appear to have been set up in vases, sometimes fifty in each, and illustrations are given of the collections staged

by the leading prizewinners.—P.

CERTIFICATED CHRYSANTHEMUMS.

On Wednesday, the 22nd inst., the Floral Committee of the National Chrysanthemum Society held a meeting at the Royal Aquarium, when Mr. Geo. Gordon occupied the chair. There were some remarkably fine exhibits submitted for adjudication, and the principal awards were as follows:—A silver medal to Mr. Robert Owen of Maidenhead for an excellent collection of novelties, principally English seedlings. A silver medal to M. Ernest Calvat for an interesting collection of his seedlings raised this year, and which, in spite of the long journey from Grenoble, had arrived in very much better condition than some of the previous ones sent. A bronze medal to Messrs. H. Cannell & Sons for a collection of cut Chrysanthemums, in which were some attractive novelties.

First-class certificates were granted to the following:-

William Tunnington (R. Owen).—A very large incurved flower, colour deep golden bronze and crimson.

Mrs. T. Denne (R. Owen).—An American raised incurved Japanese variety of good size and substance. Colour a deep rosy purple.

Prince du Bois (R. Owen).—This is a large globular Japanese flower,

with narrow, curly florets of pure yellow.

Golden Gate (R. Owen).—A Japanese with spreading florets, a large bloom, colour deep bronzy yellow, and the petals of considerable length. Cevil Ray (E. Beckett).—An English raised variety. A fine Japanese flower with long, flat florets, colour pure yellow.

Mdlle. Carnot (E. Calvat).—This variety is one of the largest French seedlings we have seen. The florets are pure white, rather grooved and

curly, and the bloom very full.

Professor Lackman (E. Calvat.)—An incurved Japanese. Colour

purple amaranth, with a rosy reverse.

There were many other large and attractive flowers, but unfortunately they were inclined to be somewhat rough and coarse. Le Colosse Grenoblois was simply gigantic, but its condition precluded the Committee from dealing with it beyond expressing a wish to see it again. Deuil des Jules Ferry, a rosy amaranth Japanese, and President Leon Say, a golden and chestnut bronze flower, were commended, both being in M. Calvat's collection with the one previously mentioned. Celtic, an attractive Anemone, colour rosy chocolate. President W. R. Smith, a pale blush incurved Japanese; Niveus, a white American Japanese; E. L. Jamieson, a bright crimson Japanese; Elsie Walker, a pretty orange bronze Pompon, all in Mr. Owen's collection, were also commended. Wm. Kendall, a reflexed Pompon, rosy mauve and white, was another.

Some fine looking incurved blooms were staged, the best being Mrs. J. Gardiner, which the Committee thought too closely resembled Mrs. Coleman. Lord Rosebery, a large purple bloom of good size, was considered to approach too pearly to Violet Tomlin.

CHRYSANTHEMUM SHOWS.

CHESTER PAXTON SOCIETY .- November 21st and 22nd

THIS Exhibition, held in the Town Hall on the 21st and 22nd inst., was one of the best the Society has brought together. The exhibits from point of numbers and quality exceeded anything that had been seen in the old city before. This is all the more creditable from the fact that the Society started in a comparatively small way four years ago at the Grosvenor Museum, and also when it is remembered that such fine

shows of fruit and Chrysanthemums are held so near as Liverpool. The groups of Chrysanthemums arranged for effect were very good, there being a lightness and graceful blending of colours about them, the want of which often mars more pretentious groups.

The competition in the cut bloom classes was very keen, there being some fine blooms of Princess of Wales, Violet Tomlin, Lord Wolseley, Mrs. Heale, and Golden Empress among the incurved, and Viviand Morel, E. Molyncux, Lord Brooke, Sunflower, Etoile de Lyon, and Colonel

W. B. Smith among the Japanese.

Apples, which are usually well grown in Cheshire, were exhibited in grand form. The County Council through its lecturers (four of which by the way are leading members of the Paxton Society) are doing all they can to encourage this branch of fruit culture. In the classes for Pears the effects of the past summer, and the now general complaint of fruit not keeping well, were very manifest by the absence of some of the best dessert varieties.

The Society's silver medal for the best fifty dishes of Apples brought two fine exhibits, one from Mr. J. Watkins, Pomona Farm, Hereford, and the other from Mr. Bunyard, Kent, which for size, quality, and finish would be difficult to beat, and it is very doubtful if a finer table of Apples has been exhibited anywhere this season than these made. The former, however, won the medal by a few points in colour.

In the evening a Fruit Conference was held, the ex-Mayor presiding, when papers was read by Mr. E. S. Baillie, F.L.S., on "Fruit and Fruit Growing." Mr. Watkins followed with one on "Gathering, Storing, and Marketing Apples and Pears," after which Mr. Newstead gave the results of "Recent Investigation on the Currant Bud Mite."-M. F. B., Eaton.

SUTTON COLDFIELD.—November 22nd.

THE Sutton Coldfield Gardeners' Association is an offshoot from the Birmingham Gardeners' Association, and was formed because of the inconvenience to many in going to Birmingham to the meetings. It is an admirably worked affair, and many young men engaged in gardening have joined. As the Chrysanthemum has "caught on" at Sutton and in the district, an annual Exhibition takes place, and there has been such a marked improvement in the cultivation of them, that a small but excellent show was produced on the 22nd inst. in the Town Hall of Sutton Coldfield.

Four excellent groups were arranged, the first prize going to Mr. J. G. Pears, gardener to J. D. Rippingille, Esq.; second, Mr. R. Popnell, gardener to W. H. Tonks, Esq.; third, Mr. James Padbury, gardener to R. H. Bunn, Esq.; fourth, Mr. Albert Jeffs, gardener to H. E. Yates, Esq. In the class for smaller groups where only one gardener is kept, Mr. H. Warren, gardener to J. H. Lloyd, Esq., was first.

A few well grown plants in pots were staged, cut back, bushy, and well cultivated, averaging from 2 to 3 feet through, a marked improvement on the old tying down system, and the Japanese varieties grown in this natural style were very effective. Mr. Peace was first in the classes for these.

The cut blooms were not numerous, but some fine ones were staged, and here again Mr. Pease was first for twelve Japanese blooms; second, Mr. A. Jenkins, gardener to A. W. Wills, Esq., J.P.; third, Mr. A. T. Bath, gardener to C. H. Pugh, Esq. In the class for twenty-four blooms, twelve incurved and twelve Japanese, Mr. Hughes, gardener to W. L. Hodgkinson, Esq., was first; second, A. W. Wills, Esq.

Some good Primulas, specimen stove or greenhouse plants and table plants were staged for prizes, in another class of members, where only one gardener is employed. Mr. Popnell was first; Mr. George, gardener

to E. T. Shannon, Esq., second; and Mr. Clark, third.

Mr. A. W. Wills, who has been an Orchid cultivator for years, sent a group, not for competition, including some Cypripediums and Dendrobiums, and Phalænopsis; and Mr. Groves, the Hon. Secretary, sent from his nurseries a large group of Chrysanthemums and cut blooms.

The vegetables were a striking feature of the Exhibition, many of them being of exceptional quality. Collections in the open class for members were both numerous and of excellent quality. Mr. T. Garland, gardener to C. Rhodes, Esq., was first; Mr. Popnell second; Mr. T.

Huxley third.

Still another class for six varieties of vegetables, for members who Still another class for six varieties of vegetables, for members who have no greenhouse, and some excellent exhibits were staged. Mr. J. Deville, Mancy, Sutton Coldfield, was first; second, Mr. Joseph Horton; third, Mr. George Gibbs. Mr. Deville was first for six Parsnips of great size and finish; also first with the finest Leeks in the Exhibition, and of great weight. Mr. W. Halford, the Royal Hotel, Sutton Coldfield, was first for six dishes of Potatoes, good clean tubers of Interior, and the six dishes of Potatoes, good clean tubers of Interior. national, Vicar of Laleham, Sutton's Abundance, Paragon, Mr. Breesee, and Prizetaker.

Each year prizes are offered for collections of fungi, and this season two somewhat extensive collections were staged. First, Mr. George Gibbs; second, Mr. A. Horton, both working men employed on the railway. Botany is encouraged by the Committee of the Association, and Mr. Groves is a thoroughly good leader as well as Secretary, and the adjacent park and woods of about 1800 acres, rather rich in choice British plants, afford a good hunting ground for the members. The Association possesses a small but very useful library of gardening books, and only members are allowed to exhibit for prizes at the November Show.

BARFORD.—NOVEMBER 23RD AND 24TH.

THE second annual Chrysanthemum Show, which was held at Barford Hill, was a decided improvement on that of last year and

there is every reason to believe that the Show which will rapidly increase in importance has been successfully inaugurated. Financial difficulties which so many young societies encounter are entirely absent in this instance, thanks to the liberality of Mr. and Mrs. Smith-Ryland, who also evince great personal interest in the arrangements, which are admirably carried out by Mr. J. Gourlay, the energetic Secretary.

Chief interest was centred in the cut bloom classes in which Mr. H. Dunkin, gardener to the Earl of Warwick, Castle Gardens, Warwick, secured the premier position for both twelve incurved, and also for the same number of Japanese in distinct varieties. The competition in the latter class was particularly close, each exhibitor having excellent stands of blooms. Mr. Finch, gardener to W. R. Mann, Esq., Leamington, was second, and Mr. H. Liney, gardener to W. M. Low, Esq., Willesbourne House, third. For six incurved distinct, Mr. Finch was first, Mr. Dunkin, second, and Mr. Liney, third. For a similar number of Japanese, Mr. Dunkin was again to the front, followed by Mr. Liney and Mr. Skelcher, gardener to E. K. Little, Esq., Newbold Pacey, Warwick, each exhibitor having excellent blooms. Mr. F. Williams was first for a group of Chrysanthemums. Mr. Finch occupied a similar position for bouquet of Chrysanthemums, and Mr. Skelcher for a cross.

Table plants were well shown, the first prize going to Mr. J. Simpson, gardener to W. M. Smythe, Esq., The Lawn, Warwick, the same exhibitor securing first honours for three dishes of dessert Apples, and second for black Grapes, an equal second being also awarded to Mr. Liney. Mr. Finch was placed first for both black and white Grapes and culinary Apples (three dishes), while for the same number of Pears Mr.

L. Skelcher occupied the post of honour.

Non-competing exhibits made a fine display. Foremost among them must be noticed the numerous stands of splendid Japanese flowers staged by Mr. R. Jones, gardener to C. A. Smith-Ryland, Esq., Barford Hill, which made an imposing display. Two grand bunches of perfectly coloured Gros Colman Grapes and two of Alicante were staged by Mr. J. Ketly, Castle Nursery, Warwick, who also exhibited a fine dish of Tomatoes, culture of the highest excellence being apparent in each exhibit. Mr. F. Perkins of Leamington arranged an attractive group in good style.

ECCLES, PATRICROFT, PENDLETON, AND DISTRICT. NOVEMBER 24TH AND 25TH.

THE seventh annual Exhibition of the above Society was held in the Drill Hall, Patricroft, on the above dates, and the exhibits were remarkably good. The groups of Chrysanthemums were much superior to anything seen in the neighbourhood this season.

Taking the open section first, the plants and groups were really excellent, more particularly the first prize group, arranged for effect, by Mr. J. Horrocks, gardener to J. C. Chorlton, Esq., and which secured, in addition to the money prize, the silver medal of N.C.S. It was a credit to Mr. Horrocks. The second and third prize taken by Messrs. R. Lovell and W. Russell, both of Swinton. For six plants of Japanese and six incurved varieties Mr. E. Pollitt, gardener to J. Wynne, Esq., Eccles, was the prizewinner. For three Pompons Mr. Wm. Powell, Eccles, was placed first. The groups of miscellaneous plants did not call for particular comment, a pretty arrangement securing Mr. W. Elkin, gardener to Mrs. T. Agnew, Eccles, the first award. The second went to Mr. A. Towe, gardener to Mrs. Winterbotham, Pendleton. Mr. R. Lovell was third. Tables plants and Primulas were very moderate, but Roman Hyacinths were good, the prizes going to Messrs. J. Wilson, D. Livsey, J. Horrocks, D. Firkins, and A. Towe in the order named. Bouquets and sprays were exceptionally good, Mr. J. Mosley, Halliwell, taking honours with three bouquets and one epergne and three buttonhole flowers, the remaining one of six sprays of Chrysanthemums going to Mr. J. Wilson.

In the cut bloom classes the competition was very close indeed. For twenty-four distinct Japanese and incurved the silver cup was given by W. T. Lewis, Esq., in addition to a handsome money prize. contest resulted in the judges awarding the cup to Mr. T. Carling, gardener to Mrs. Cope, Dove Park, Woolton, for an excellent stand, the best Japanese being Etoile de Lyon (fine), Boule d'Or, Beauty of Castle-wood (superb), Lord Brooke, Mrs. Walter Cutting, and Viviand Morel. Incurved: Violet Tomlin, Empress Eugénie, John Salter, and Lady Dorothy. Mr. Goodacre, gardener to the Earl of Harrington, Elvaston Castle, Derby, was second, staging amongst others a grand Lord Alcester, which was the premier bloom in the Show. Mr. Cragg, gardener to A. Heine, Esq., Fallowfield, was third. For twenty-four miscellaneous blooms Mr. Carling was again successful, staging Colonel W. B. Smith, Beauty of Castlewood, John Salter, Empress, and Anemones, La Dieul and Annie Lowe in splendid condition. An excellent second stand was contributed by Mr. R. Pinnington, gardener to Mrs. Banner, Blacklow House, Roby; Mr. J. Roberts, gardener to H. Lightbown, Esq., Weaste Hall, being third.

For twelve incurved Mr. Cragg first, Mr. Pinnington second, and Mr. G. F. Brothcrston, gardener to Mrs. Titus Salt, Bingley, third. For twelve Japanese Mr. R. Pinnington was an easy first, staging bright coloured and fresh flowers. Mr. Brotherston was second with fine coloured flowers not fully developed, and Mr. Craggs third. For six incurved and six Japanese Mr. Cragg, Mr. Wainwright, and Mr. Pinnington took the prizes.

The amateurs classes were well filled, but space prevents a detailed report. Mr. Huber was first for six Anemones (two classes), twelve miscellaneous (three classes), whilst for twelve Japanese, twelve

incurved, and six Japanese and six incurved Messrs. J. Gibson and P. Eckersley were the successful exhibitors. For three Japanese and three incurved plants Mr. H. Huber was first. Mr. A. B. Wimpory, second; the latter winning with three plants and four Primulas. Mr. Huber also won prizes in other classes, and secured the silver medal of the N.C.S. as well as a certificate for the best incurved bloom in this section. Mr. Wm. Crawshaw scored with six Japanese and six bunches of Pompones. For six incurved, Mr. Wm. Eckersley, Little Hulton, took first honours. Mr. Jas. Smethurst, Winton, was first with eighteen blooms arranged for effect with Asparagus and Maidenhair Fern. Mr. Huber was second. The silver cup in the amateurs' section was given for twelve blooms, incurved and Japanese. This was won by Mr. Thos. Morton for a very fine stand. Mr. J. Benjamin Wroe, Patricroft, was second.

Messrs. Clibran & Sons, Altrincham, staged eight dozen cut blooms which showed to advantage. Other trade exhibitors were Messrs. Dickson and Robinson, and Dickson, Brown & Tait. Miscellaneous plants very good and choice.

GRASSENDALE AND AIGBURTH.

THE third annual Exhibition was held in the Parish Room, Grassendale, and was again a success. Owing to the great storm which was raging at the time many gardeners did not bring exhibits, but nevertheless there were sufficient to make a good display. The exhibits numbered 176, and as regards quality were far in advance of those

staged last year.

The leading feature in the Show was the class for twenty-four cut blooms, and in which four competed. As remarked in last week's issue (page 470), the prize was won for the second year in succession by Mr. Donald Forbes, gardener to A. Holt, Esq., Crofton, Aigburth, and is now his property. He also won in three other classes for cut blooms. Mr. J. Bounds, gardener to A. L. Jones, Esq., Oaklands, Aigburth, won in this group, staging, amongst others, very fine plants of Viviand Morel. A feature of the Show was the magnificent specimen plant of Etoile de Lyon, carrying over fifty choice blooms, and which was exhibited by Mr. Wm. McKevitt, gardener to H. Hornby, Esq., J.P. Orchids were splendid in quality, Mr. P. Green, gardener to L. H. Macintyre, Esq., Aigburth, being first.

The principal prizewinners in other classes were Mr. J. Bounds, for Black Alicante Grapes; Mr. J. Kelly, gardener to R. Singlehurst, Esq., fruit; Mr. J. Grant, gardener to W. S. Gladstone, Esq., cut blooms; Mr. Keightley, gardener to Major Larnor, Garston Hall Road, cut blooms, plants, and fruit; Mr. T. Ankers, cut blooms, fruit, and plants; Mr. J. Agnew, gardener to Mrs. Watts, Grassendale Park, same kind of arbibits: Mr. G. Leadbester, gardener to W. J. Davey, Esq. Holm. exhibits; Mr. G. Leadbeater, gardener to W. J. Davey, Esq., Holmleigh, plants, fruit, and cut blooms; Mr. J. Harrison, gardener to Mrs. W. G. Bateson, Elmhurst, Aigburth, cut blooms and other exhibits.

—R. P. R.



HARDY FRUIT GARDEN.

Pruning and Nailing Wall Trees .- During mild, open weather forward this work at every opportunity, commencing with Pears, Plums, and Cherries, leaving Apricots, Peaches, and Nectarines, until the spring, the latter if nailed too early being liable to be brought into flower sooner than is requisite for the welfare of the crop. All the summer pruned shoots on the branches of upright and diagonal cordons, horizontally and fan-trained trees, must now be shortened back to the plump basal buds, which will be sooner or later the fruit buds. and crowded spurs may be thinned out, also dead portions of wood, which can easily be detected as each branch is examined.

The thin disposal of the main branches must not be overlooked. This is important with most wall trees, but especially in the case of Plums and Cherries, which admit of young wood being trained in between the main branches, these growths when two years old producing fruit. A fair selection of such growths may now be nailed in, the foreright shoots stopped in summer on the main branches being shortened to form spurs, which also bear fruit. There are great advantages in this combination. The branches can be periodically renewed if any decline in vigour or die. Closely stopped Plum and Cherry treees are liable to attacks of gumming. A freer system of training mitigates this evil to some extent. In nailing make the branches and shoots secure with as few shreds as possible, not fastening too tightly, so that their natural swelling is arrested.

Morello Cherries.—The finest crops of fruit are obtained from trees that have all the best placed young wood retained and trained in to the wall or trellis. They produce fruit on the spur system of training, but not nearly so freely as by the annual replenishment of wood, cutting away the fruit bearing shoots after the crop has been gathered. The shoots then have sufficient time to ripen before the winter, when they should be neatly trained, removing the weakest and most crowded. If insects have attacked the trees during the summer, or any are present now, a washing with an effective insecticide will act beneficially.

Surface Dressing Wall Tree Borders.-One of the requirements necessary to insure the continued production of good crops of fruit from the various kinds of trees cultivated thereon is to encourage the presence and multiplication of abundance of fibrous roots near the surface. This can be done by placing good substantial food within their reach, whereby they will be attracted to it, and absorb it readily. The result is short-jointed fruitful growths which mature properly. On the result is short-jointed fruitful growths which mature properly. On the contrary, when the surface soil is never enriched, either with compost or moisture in the shape of stimulants at proper times, roots descend into the subsoil, and then their character is entirely the opposite of those prevailing in the upper layers being long, strong, and sappy, the wood growth above also partaking of the same characteristics, the inevitable result being unfruitfulness. This may not have been caused entirely by inattention to the roots, errors in the management of the branches often being the first cause of roots going wrong. It will be seen, therefore, that it is little or no use improving the surface when the roots are out of reach. In that case they must be lifted. But when not too far descended much may be done to attract some of the fibrous ones into better feeding ground.

Applying the Dressing.—This operation is often deferred until the

pruning, regulating, and cleansing of the trees have been completed, and in cases where these details require extra attention it will be well to postpone the application, thus avoiding the continual treading on the ground until those necessary matters have been completed. The first essential then following is to ascertain the whereabouts of the roots. Fork over the surface for a distance from the wall of $2\frac{1}{2}$ or 3 feet, and if roots are not found throw the loose soil conveniently out of the way. Treat the next layer of soil similarly, where roots will almost certainly be found. If ascertained to be fairly numerous do not disturb either them or the soil much, but remove that which is loose, so that the fresh material can be placed in contact with them to the depth of 2 or

3 inches.

Material for Surface Dressing. -Surface dressing being generally practised in order to recoup the energies of trees and encourage roots to the surface, the constituents of the compost must as a rule be fairly rich and substantial. As a main ingredient nothing is better than turfy loam for all kinds of fruit trees, but whether this should be further enriched by adding partially decomposed manure depends on the vigour apparent in the trees. If growing fairly strong omit it. In place of organic manure the material from a garden smother used fresh and dry mixed with the soil is beneficial. Bone meal and kainit at the rate of 4 ozs. to the square yard are good for sustaining vigour and rendering assistance in the following season when growth recommences. An application may be given now, sprinkling the mixture on the surface under the trees. Both these manures decomposing slowly, their qualities will not be appropriated by the trees until next season.

Enriching the Roots of Trees on Grass.—Old fruit trees growing on turf, if they are subject to much close stopping, will need assistance to enable them to continue healthy and in a bearing condition. Liquid manure is the best enricher for trees thus situated. In order that it may reach the lower roots it is a good plan to make holes with a crowbar at intervals of 18 inches under the spread of the branches, and to fill them repeatedly with strong liquid manure consisting of drainings from cowsheds and stables, soap suds and urine mixed. A good soaking may also be applied to the surface, preferably when the ground is moist. The holes should afterwards be filled with good loam and manure, making the mixture firm.

FRUIT FORCING.

Figs.—Earliest Trees in Pots.—To have ripe fruit at the end of April or early in May the trees, if not started, must be again dressed with an insecticide, but do not rub off the young fruit. The varieties with an insecticide, but do not rub off the young fruit. The varieties most suitable for early forcing are Early Violet, a small dark fruit; St. John's, a greenish yellow, and good Fig; White Marseilles, and Brown Turkey. Place the trees in a mild bottom heat, the pots being stood on pillars of loose brickwork, so that they will not settle with the fermenting material. The heat about the pots must not exceed 65° until the trees are fairly in growth, while the top heat may be 50° to 55° at night, and 65° by day, the trees and house being damped in the morning of fine days, and again early in the afternoon, but it must be done sufficiently early to allow of the trees getting fairly dry before night. Supply water at the roots to keep the soil moist, and always at the same temperature as the bed.

Earliest Forced Planted-out Trees.—If trees are not grown in pots for an early supply, and fruit is required ripe in May, the house should now be closed. Apply tepid water to the roots at frequent intervals to moisten the soil. Commence with a temperature of 50° at night, 55° by day, and 65° from sun heat, syringing the trees and every available surface in the morning and early afternoon, unless the weather be dull and cold, when the morning syringing only should be practised. air moderately when the weather is mild, closing the house with sun Where there is a house of early-forced trees in pots the heat at 65°.

planted out trees need not be started until the new year.

Succession Houses .- When the foliage has fallen the trees should be pruned. Shoots that have attained to the limits of the trellis may be cut back to where successional ones start, in order that they may occupy their places in the ensuing reason. Cut away entirely all elongated spurs, reserving, however, as may be desirable a few of those which are chort-jointed and fruitful. The trees after pruning should be loosened from the trellis, and after thoroughly cleansing the woodwork and glass, and limewashing the walls, wash the trees with soapy water with a brush, and afterwards with some insecticide, avoiding pigments that leave a thick deposit upon the shoots. When this is completed tie the shoots to the trellis, not too tightly. If the trees have not been lifted lightly point over the border, removing the loose soil, and apply a top-dressing about a couple of inches thick of good fibrous loam and manure. The houses can hardly be too freely ventilated, and only when frost prevails they should be closed.

Cherry House.—The pruning must now have attention. grown trees regularly stopped during growth will however require very little pruning. Any shoots that have grown considerably should be cut back to about an inch from the base of the current year's growth, and the worn out or decayed spurs ought to be removed. The terminal shoots in the case of trees not full sized must not be shortened unless the extremity of the trellis is reached, and the central shoots of young trees will require to be cut back as may be necessary to originate those for filling the space regularly. The fan mode of training is the most suitable, and is more particularly applicable to the Cherry, as it admits of replacing any branch that may fall a prey to gumming. The house should have a thorough cleansing, the trees being washed with soapy water, about 3 ounces to a gallon, and then dressed with some approved insecticide, applying it with a brush, but do not injure the buds. The house must be thoroughly ventilated until the time arrives for starting the trees, but it is better if the roof lights are off.

Vines.—Houses to Afford Grapes in May.—The Vines intended to afford ripe Grapes at the time stated must be started without delay. -The Vines intended to The outside border should have the needful protection from cold rains If fermenting materials are employed two thirds of leaves to one of stable litter afford a less violent heat but more lasting than all manure; but unless the materials can be replenished from time to time it is better to dispense with the heat. In that case the outside borders must be covered with bracken, straw or litter so as to throw off the wet. We find about 6 inches thickness of dry leaves and a little litter over them answers remarkably well. If the roots are entirely outside then it is necessary to use fermenting material. The inside border should be brought into a moist condition by applying water, and in the case of weak Vines give tepid liquid manure. Start with a night temperature of 50° in severe weather, 55° in mild weather, and 65° by day, except the weather be severe, when 50° will suffice, not exceeding these figures until the growth commences. Maintain a moist atmosphere by spring until the growth commences. Maintain a moist atmosphere by syringing occasionally, but excessive moisture excites the emission of aërial roots from the rods. Depress the rods of young Vines to the horizontal line or below to ensure the regular breaking of the buds.

Houses Started Early in November. — Whether the Vines are in pots or are planted in borders the temperature will need to be increased to 60° at night in mild weather, 58° in severe weather after the buds break and gradually increasing so as to have it 60° had a reducible increasing so a so to have it 60° had a reducible increasing so a reducible increasing so

the buds break, and gradually increasing so as to have it 60° by day in severe weather, and 70° to 75° in mild weather with moderate ventila-Tie the Vines in position as soon as growth has well commenced, and before the shoots are so long as to be damaged in the process. Sprinkle the paths in the house two or three times a day in clear weather, but avoiding a very moist or dry atmosphere. Disbudding should not be practised until the fruit shows in the points of the shoots.

Midseason Houses.—When the Grapes have been cut the Vines should be pruned. It is decidedly advantageous to do this work directly the leaves have fallen, the Grapes having been cut with the requisite amount of wood and placed in bottles of clear rain water. Early pruning is the best safeguard against bleeding, and the Vines enjoy a longer season of rest. The Vines will in all probability give sufficiently large bunches if pruned to one or at most two eyes. If larger bunches are wanted, or the Vines from weakness do not afford bunches so large as desired, leave more growth, only select sound, round fully developed buds on firm well ripened wood. If the roots are in firm soil and favourable for rooting then the wood will be stout and short-jointed, and the buds at their base will be round, plump, and well matured. Let the Vines be dressed, the house thoroughly cleaned, and everything put into order, so that there need be no hurry to put things straight.

Keep the temperature as cool as possible so as to insure complete rest.

Late Houses.—Every precaution should be taken against damp.

The most prolific cause of Grapes not hanging well is bad construction of the houses, water hanging in the laps of the glass and blown over the Grapes. Remove all leaves as they become decayed, and afford only sufficient fire heat to expel damp and to exclude frost, keeping at 40° to 45°. Close the house in wet most here. Close the house in wet weather, and seek to insure a dry, cool,

and equable temperature.



APIARIAN NOTES.

PRACTICAL HINTS.

ALL our queens are youthful and the bees quite strong enough for the stocks to stand any protracted winter we are likely to experi-Although the stocks were left ample food for the winter much late breeding reduces it and necessitates feeding with 3 or 4 lbs. of syrup to each hive. All sugars are not alike in quality, nor in the proportion of water required. I place some sugar in the vessel in which it is to be dissolved, then pour cold water on it sufficient to cover the sugar 2 inches for every 7 lbs. of sugar.

For various and obvious reasons I have discarded all top-feeding, unless in a few cases of nuclei. The bees will, at times, carry up syrup when they will not touch it if above. When feeding from below all uncovering and covering hives and the cooling of them are avoided. When the hives are warm and cosy keep them so, and do not cool them by uncovering. The simplest and best feeder I use is a fountain having a neck or thimble into which a cork is fitted having a hole through the centre. Into this I put a saw handle screw, broad end up, which acts as a valve to shut or open when the lower end touches or leaves the trough. When filling draw the cork, and when full replace inverted; insert the neck into the hole and let it rest on stage or platform, which should be of such a height as to allow the thimble or neck to be oneeighth of an inch lower than the upper edge of the trough, which is three-eighths deep and covered with wide mesh wire cloth to keep the bees clean and out of the feeder. Wire cloth is much to be preferred to perforated metals or floats, the latter preventing the bees getting beneath it, and when refilling being killed.

Hives having ventilating floors require no attention, but already hives will have absorbed a considerable amount of dampness fatal to bees during the winter. These damp boards should be removed and dried, or a dry one substituted. The absence of damp in any hives during the winter is the reason disease is never present, and at no time are many dead bees to be seen. My hives arranged, prepared, and the bees fed as directed, having not more than 1 inch entrances unless on a chance fine day, when the bees are airing, they will be widened in the morning and contracted at dusk. They will require no more attention till the May flowers are profuse and hives increased in strength.—A LANARKSHIRE BEE-

KEEPER.

BEES IN YORKSHIRE.

AT the meeting of the Wakefield Paxton Society held on the 18th inst. Mr. J. Eastwood read a paper on "Bee-keeping." The essayist remarked that bee-keeping was a hobby that yielded profit, pleasure, and instruction. It would be well if every labourer were the fortunate possessor of a hive. Watching these industrious insects accumulating a store for a rainy day would, he thought, suggest thrift to the owner. After speaking of the important work of bees in hybridisation, Mr. Eastwood said he believed bees had increased the yield of his Strawberry crop one quarter. A neighbour of his had gathered 40 stones of honey this season, which, at 1s. per 1b., was worth £28. In Scotland he had heard that 7 cwt. had been yielded by six hives. A man in Westmoreland had eighty hives, and realised 50s. from each, or £200. It was important to catch the honey flow, by shifting hives into the vicinity of Clover and Bean fields, by which astonishing results were secured. The method of managing skep hives and bar-frame hives was clearly explained, and also the securing of swarms and the driving of bees in order to take the produce without destroying them. Many interesting and amusing narratives of his experiences in bee-keeping were related by Mr. Eastwood, who, in conclusion, said that with successful management and fairly good seasons everyone might follow this hobby of beekeeping with great satisfaction and profit.



•All correspondence should be directed either to "THE EDITOR" or to "THE PUBLISHER." Letters addressed to Dr. Hogg or members of the staff often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Bee subjects, and should never send more than two or three questions at once. All articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post, and we do not undertake to return rejected communications.

Books (R. P.).—We have had another inquiry of the same purport as yours, and to which a reply has been sent by post.

Book on Grafting (A. Shandbrook).—Baltet's work, published at 37, Southampton Street, will afford you the desired information.

Carnations (J. Hughes).—The flowers to hand are apparently as good as Mrs. Leopold de Rothschild Carnation in general appearance, so far as we can remember of the latter variety. Comparison, however, is necessary to decide definitely on that point. The variety is well worth preserving.

White Viviand Morel Chrysanthemum (Walter Barnes).— We have seen similar examples to yours of two white blooms and one deep pink one on the same plant, each bloom having developed from a terminal bud.

Parsnips (T. W. 1.).—We have no doubt about 1 and 2 being identical in variety, and we should not like to say they have not both been grown in the same bed. No. 3 may have been so grown also from the same packet of seed, seminal variations of the nature displayed in the samples not being in the least uncommon. It is impossible to judge positively on all the roots being grown together because the soil particles have been washed from two of them, but there is nothing to indicate their being grown in different soils.

Pear Bergamotte Hertrich (Amateur). — You wish to know whether this Pear "is worth growing, and would like to see an illustration of it." It is a delicious Pear, usually ripe at Christmas, and will keep till May. The following description of the Bergamotte Hertrich Pear is taken from the "Fruit Manual"—"Fruit rather below medium size, 2 inches high, and $2\frac{1}{2}$ inches wide; Bergamot-shaped, inclining to roundish turbinate, even in its outline, except at the stalk, where it is furrowed. Skin very much covered with ashy grey russet, through which the grass green ground is visible; on the side next the sun there is a brownish tinge, and there is a patch of pale brown russet surrounding the stalk and the eye. Eye with narrow incurved segments set in a shallow and furrowed basin. Stalk three-quarters of an inch long,

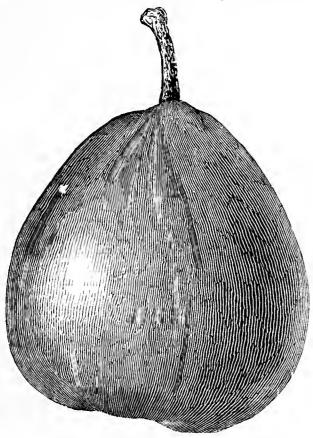


FIG. 72.—PEAR BERGAMOTTE HERTRICH.

inserted in a narrow cavity. Flesh yellowish, with a greenish tinge under the skin, melting and juicy, with a rich flavour and fine aroma, somewhat resembling the Swan's Egg." When grown under favourable circumstances this Pear usually produces a good crop of fruit.

Cucumber and Tomato Roots Infested with Eelworms (F. A. B.).—The small fragments of roots are infested with eelworms, for the most part dead, through the drying of the roots in transit. The mite which is associated with eelworm attack in Cucumbers was also dead. Nevertheless, we found some live eelworms both on the Tomato and Cucumber roots, and these having left the cysts were feeding on the roots destitute of nodules, and would have spread upwards until they killed the plants. Soot water did not destroy the eelworms, the active creatures seem to enjoy it, though it is far more beneficial to the plants than many manures that are employed. The only accepted remedy is to destroy the plants, clear out the old soil, and start again with fresh plants and soil. The discase has been established on the plants several weeks or months.

Manure for Tomatoes (Enquirer).—You ask, "What is the best artificial manure for Tomatoes in the open ground?" No one can answer the question without knowing what any particular soil contains and what it lacks in the way of essential elements for the growth of Tomatoes. A simple mixture of two parts bonemeal and one part kainit is generally good, applied early in the spring at the rate of 2 ozs. to 3 ozs. per square yard, according to the state of the soil. A supplementary dressing of nitrate of soda of less than an ounce to the square yard when the plants are growing will have a stimulating effect, but this is most needed after the fruits set, as the over-excitement of the plants in their early stages favours soft tissues and their vulnerability to disease.

Names of Fruits.—Notice.—We have pleasure in naming good typical fruits (when the names are discoverable) for the convenience of regular subscribers, who are the growers of such fruit, and not collectors of specimens from non-subscribers. This latter procedure is

wholly irregular, and we trust that nonc of our readers will allow themselves to be made the mediums in infringing our rules. Special attention is directed to the following decision, the object of which is to discourage the growth of inferior and promote the culture of superior varieties. In consequence of the large number of worthless Apples and Pears sent to this office to be named, it has been decided to name only specimens and varieties of approved merit, and to reject the inferior, which are not worth sending or growing. The names and addresses of senders of fruit to be named must in all cases be enclosed with the specimens, whether letters referring to the fruit are sent by post or The names are not necessarily required for publication, initials sufficing for that. Only six specimens can be named at once, and any beyond that number cannot be preserved. They should be sent on the first indication of change towards ripening. Dessert Pears cannot be named in a hard green state. (G. J. M., Nottingham.).—Winter Greening. (R. G. L. B.).—5, Beurré Bosc. 6, Knight's Monarch. 9, Minchall Crab. 10, Beauty of Kent. (W. Seal).—1, Rymer; 3. Scarlet Pearmain; 4, Beauty of Hants; 5, Aromatic Russet; 6, Uvedale's St. Germain. (T. S. N. P.).—5, Easter Beurré; 6, Hacon's Incomparable; 7, Calabasse; 8, Marie Louise; 9, Golden Noble. (T. N. R.).—We are sorry we cannot name any of your fruit. The Apples are —We are sorry we cannot name any of your fruit. The Apples are evidently local, and the Pears are imperfect. (C. E. M.).—1, Greenup's Pippin; 3, Peasgood's Nonesuch; 4, American Mother; 5, Golden Pearmain; 6, Lord Derby.

Names of Plants.—We only undertake to name species of plants, not varieties that have originated from seed and termed florists' flowers. Flowering specimens are necessary of flowering plants, and Fern fronds should bear spores. Specimens should arrive in a fresh state in firm boxes. Slightly damp moss, soft green grass or leaves form the best packing, dry wool the worst. Not more than six specimens can be named at once, and the numbers should be visible without untying the ligatures, it being often difficult to separate them when the paper is damp. (W. E. T.).—The flowers you sent are distinctly florists' varieties, and which, as you will see by our conditions, we do not undertake to name. A grower of a large number of plants might possibly name the varieties on comparing them with others in his collection. (H. B.).—Dracæna indivisa. (L. M. H.).—1, Ficus repens; 2, Adiantum cuneatum. (Amateur).—1, Aralia Veitchi; 2, Bertolonia guttata; 3, Asparagus deflexus.

TRADE CATALOGUE RECEIVED.

Harlan P. Kelsey, Highlands Nursery, Linville, North Carolina, U.S.A.—North American Ornamental Plants.

OOVENT GARDEN MARKET .-- NOVEMBER 29TH.

1	TRADE very quiet.	FRUIT.					
	Apples, per bushel 2 Cobs	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	es, per doz	0	0 to	0	đ 0 0
		VEGETABLES.					
	Beans, Kidney, per lb. 0 Beet, Red, dozen 1 Carrots, bunch 0 Cauliflowers, dozen 2 Celery, bundle 1 Coleworts, dozen bunches 2 Oucumbers, dozen 1 Endive, dozen 1 Herbs, bunch 0 Leeks, bunch 0 Lettuce, dozen 0	0 0 0 Onions 4 0 6 Parsley 0 3 0 Parsley 0 1 3 Potato 0 4 0 Salsafy 0 3 6 Scorzo 1 6 Shallot 8 0 0 Spinac 2 0 0 Tomate	rd and Cress, punuet to, bunch to, dozen bunches to, dozen bunches to, dozen to, dozen to, dozen to, dozen to, dozen to, dozen to, bundle to, bundle to, to, per lb. to, bushcl to, bushcl to, bunches to, per lb. to, bushcl to, bushc	0 : 0 : 0 : 1 : 0 : 1 : 0 : 1 : 0 : 0 :	0 0 0 0 6 3	0	6 5 0 0

AVERAGE WHOLESALE PRICES.—OUT FLOWERS.

Orchid Blooms in variety. Chrysanthemum blooms very plentiful this seasou, heuce he price is very low.

the price is very low.		_			-				
•	8.	d.	g.	d	I.	8.	d.	s.	d.
Arum Lilies, 12 blooms					Orchids, per dozen blcoms	3	0 to	12	0
Azalea, dozen sprays			1		Pelargoniums, 12 bunches		0	9	U
Bouvardias, bunch			ī	Õ	Pelargoniums, scarlet, doz.				
Camellias, dozen blooms			3	Õ	bunches		0	6	0
Carnations, 12 blooms		6	2	Õ	Primula (double), dozen				
Chrysanthemums, dozen	-	-	-	-	sprays	0	6	1	0
bunches	3	0	6	0	Pyrethrum, dozen buuches	2	0	4	0
Chrysanthemums, doz. bls.		6	2	0	Roses (indoor), dozen		6	1	6
Eucharis, dozen	4	0	6	0	" Tea, white, dozen	1	0	2	C
Gardenias, per dozen		0	4	0	"Yellow, dozen	2	0	4	()
Lilac (French) per bunch		6	6	0	Tuberoses, 12 blooms		4	0	6
Lilium lancifolium, dozen					Violets, Parme (French),				
blooms	1	0	3	0	per bunch	2	6	3	0
Lilium longiflorum, perdoz.		0	9	0	Violets, Czar (French), per				
Maidenhair Fern, dozeu					bunch	2	0	2	6
bunches	4	0	6	0	Violets (English), dozen				
Marguerites, 12 bunches		0	4	0	bunches	1	6	2	0
Mignonette, 12 bunehes		0	4	0					
,		-		ma	TIT DOMG				

PLANTS IN POTS.

	s.	d.	s.	d.		s.	d.	s.	d.
Arbor Vitæ (golden) dozen	6	0 t	o 12	0	Ferus (small) per hundred	4	0	to 6	0
Aspidistra, per dozen 18			36	0	Ficus elastica, cach	1	0	7	6
Aspidistra, specimen plant			10	6	Foliage plants, var., each	2	0	10	0
Ohrvsanthemums, per doz.			9	0	Lilium Harrissi, per dozen	12	0	24	0
" large plants, each	1	0	2	0	Lycopodiums, per dozen	3	0	4	0
Dracæna terminalis, per					Marguerite Daisy, dozen	6	0	12	0
dozen 18	3	0	42	0	Mignonettc, per doz	6	0	9	Û
Dracæna viridis, dozen S			24	0	Myrtles, dozen	6	0	9	0
		0	18	0	Palms, in var., each		0	15	0
Euonymus, var., dozen 6	3	0	18	0	" (specimens)	21	0	63	0
Evergreens. in var., dozen	6	0	24	0	Pelargoniums, scarlet, doz.		0	0	0
Ferns, in variety, dozen 4	4	0	18	0	Solauums, per dozen	9	0	12	0



PROFITABLE LIVE STOCK.

HOPEFULLY do we write about the possible improvement of stock, because it is so obviously in the interest of farmers that we are working. It is for them to consider ways and means, to proceed with caution—yet by all means to proceed to bring about a reform; to shake off the heedless, aimless, buying and breeding of inferior animals; to give full recognition to the value of stock upon which some profit is always possible, by having only such stock upon their hands.

Given then of such high class animals, dairy cows whose annual milk average is well up to the 700 gallons which we know to be so entirely possible, there must also be sound practice in feeding and housing them. The difficulty here is in the conception of what sound practice really is. We may define it as a combination of gentle kindly treatment, with wholesome nutritious food, thorough shelter, and cleanliness. Brutality, and the hurried driving of cows, has spoiled many a batch of cheese and butter, as well as checked the flow of milk. It is a well-known fact that when cows, frantic from attacks of gadflies, rush about pasture for hours, the milk yield falls off very much; it is also known that when cows are driven to the milking hurriedly, or are knocked about in the cow house, the quick souring of the milk shows how much it has been injured. Avoid extremes in feeding; nothing can be worse than the state of semi-starvation in which cows are so frequently kept during the dry or non-milking period, which on cheese farms often extends for three or four months. The fact that cows require more rather than less nourishment during gestation is apparently ignored; they are kept out on pasture to clear off the fog which really affords very little nourishment, in addition to which a scanty bite of hay is thrown out to them on the pasture. They must always be hungry; they fall off woefully in condition; can we wonder that the calves are weakly, and enfeebled from the emaciated dams? It is ridiculous to talk to the brutal, foolish owners of such cows about selection, breeding, or any detail of management. They positively court failure, and then cry to Jupiter, in the guise of their landlord, for aid in the form of rent reduction!

It is the landlord who is to be pitied, and not the tenant in such a case. To those who have so mismanaged their cows in pure ignorance and thoughtlessness, and who would do better if they knew how, we say, Keep up condition in your cows, and economise food in winter by the provision of thorough shelter. The poor animals ask you for it plainly enough, by seeking such shelter as can be had from tree clumps or hedgerows when they are left out at night. Even that is better than some hovels known to us. So many of them are too narrow, more are so badly constructed as to be almost useless. For all open hovels— $i\ e.$, having the side-facing a yard open, the correct width is 18 feet, for close hovels 15 feet is sufficient. We know, a long hovel at a certain midland dairy farm, which has a brick side and ends, the other side having faggots set on ends. They do not reach to the eaves, and as there is an open space between the top of the wall and the eaves on the other side, the hovel is draughty and cold. This is bad enough, but as the whole of the land is in pasture there is no straw, the cows lie upon the bare floor, which would not matter if it were dry and clean, but it is worn into holes, filth is suffered to accumulate upon it, so that at turning out time in the spring the cows are in a disgustingly filthy condition. It is impossible that the milk can come from such a building, or animals so dirty, untainted. There is often

trouble of another kind with winter milk, which goes straight from the cowhouse to the separator, and that is the clogging of the separator by foreign matter in the milk. It is patent to everyone that when the milker comes to milk cows with their coats full of dry filth, into which he butts his head during the milking the friction causes much "foreign matter" to fall into the pail, to which dirty hands often contribute. The fact is not pleasant to write about, but there can be no doubt that cleanliness of the cow itself, of its food, and of its surroundings, has not a tithe of the attention it ought to have. We would have the curry comb and brush in daily use among cows during winter just as much as for horses, the cowhouse should rival the stable in keeping, the cowman be as clean as his milk pails—all matters of detail worthy of our best attention.

WORK ON THE HOME FARM.

Are the roots all in clamp or heaps yet? If not, all large roots may now be spoiled by a cold snap of very brief duration. Since writing our last notes we have seen a field of fine Swedes on the borders of Yorkshire being pulled and trimmed while it was freezing sharply, with This was not good management, nor was the occasional snowstorms. apparent waste of the Swede tops this season in the eyes of a southern farmer. For a month or more the fresh green growth upon them which come so freely in the moist warm autumn has been in use for the cows, and though to eke out the tops as long as possible the clearance of roots

was prolonged, it was got through in time to be safe from severe frost.

As active work on the land is brought to a close till spring go carefully over all implements, have necessary repairs done at once, and let the whole of them be well cleaned and painted before being put away. Any that are worn out or useless should be got rid of; there is no more objectionable sight about a homestead than old implements mouldering and rusty, unless it be useful implements left about in the open just as if they were worthless. It is a good rule to have them brought in and housed at once, and we like them to be painted afresh every year. Everything about the homestead should now be especially neat, trim, Suffer no accumulation of and in good order. Look well to drains. water in yards. See that there is scrupulous cleanliness in stable, cowhouse, and poultry houses, also that all are free from draughts. There is nothing better for such buildings than roof louvres with three or four openings, as then ventilation is assured. Poultry houses especially must be snug and warm now if we would have winter eggs. have often found harm caused in them by cold cutting winds entering along the eaves right upon the fowls on the perches. Now is the time to guage the egg supply and to ascertain if any alteration or improvement is possible or is required in view of doing better another winter. The matter is simply one of timely pullet selection in sufficient numbers to afford a full supply, no light matter for a large household, but just one of those things which denote good management.

EXTRAORDINARY WEIGHT OF SWEDES. - Messrs. Webb & Sons inform us that their stands at the Birmingham and London Cattle Shows include some extraordinary specimens of Webbs' Imperial Swede grown by Mr. W. Maxwell, Sparnel Bank, Galston; 124 of these roots, which have been photographed, scaled the enormous weight of 1 ton 2 lbs., or an average of over 18 lbs. each. Messrs. Webb believe that this return beats all record, and the weight has been attested by reliable witnesses.

METEOROLOGICAL OBSERVATIONS. CAMDEN SQUARE, LONDON. Lat. 51° 32′ 40″ N.: Long. 0° 8′ 0″ W.; Altitude. 111 feet

DATE.			9 A.M	•	IN THE DAY.					
1893.	Barometer at 32°, and Sea Level.	Hygrometer.		tion of of soil				Rain.		
November.	Barc at 32 Sea	Dry.	Wet.	Wind.	at 1 foot.	Max.	Min.	In Sun.	On Grass.	
Sunday 19 Monday 20 Tuesday 21 Wednesday 22 Thursday 23 Friday Saturday	Inchs. 29.602 29.976 30.444 30.189 30.060 30.135 29.914 30.046	deg. 31.8 41.9 39.7 39.1 30.4 35.0 45.2	deg. 30·8 37·7 37·0 36·7 28·3 33·9 44·0	N. N.E. N.E. S.W. N. S.W.	deg. 42·7 41·9 41·3 42·0 40·9 39·3 40·0	deg. 42.7 43.3 45.0 45.0 38.4 45.8 50.7	deg. 29·4 31·2 37·2 37·4 29·0 28·5 34·9	deg. 49·7 56·2 70·9 58·0 63·7 51·8 66·1 59·5	deg. 31.4 30.3 32.2 35.1 27.0 25.4 33.3	Inchs. 0 067 - 0 010 0 382 0 459

REMARKS.

19th.—Snowing till about 5 A.M., occasional flakes in morning, and also with spots of rain in afternoon, and a heavy shower between 6 and 7 P.M. Violent squalls of

rain in afternoon, and a heavy shower between 6 and 7 P.M. Violent squalls of wind throughout.

20th.—Bright sun at times in morning; overcast after, with spots of rain.

21st.—Bright sunshine almost all morning; generally overcast in afternoon.

22nd.—Bright sunshine generally, but overcast at times, and a squall of rain and wind at 3 P.M.; brilliant night.

23rd.—Almost cloudless till 1 P.M.; generally overcast from 2.30 P.M. to 4 P.M., but clear again after, and brilliant night.

24th.—Generally overcast, but occasional sunshine in afternoon; very slight showers about 9.30 A.M. and 3.30 P M.

25th.—Fine, with frequent sun in morning; overcast afternoon with occasional drizzle; steady rain from 7 P.M.

Temperature rather below the average, but by no means exceptionally so.—G. J. SYMONS.



TE always expect to hear of a number of complaints about errors in judging during and at the close of the Chrysanthemum season. Far more complaints have been sent to us this year than could possibly be published, even if they had possessed more than local interest, which the majority did not. Moreover, some of them were evidently of a personal character, as emanations from exhibitors who were surprised and annoyed by the verdicts recorded, or from their friends who were doubtless honestly convinced that the judges were wrong in their decisions. Most of the complaints were of a general character, no definite or tangible evidence being forthcoming in support of the opinions expressed, and in more than one instance the remarks contravening the justice of the awards were founded on an inspection of the exhibits on the second day, or twenty-four hours or more after the judging was completed. Also we have had the verdicts that were recorded it may be presumed, by experienced men, overturned with the greatest ease by self-appointed censors, who, however competent have not yet been chosen by societies to officiate at important shows. It could not be supposed that the public would be greatly interested in narratives of what may be termed second-hand judging under the circumstances indicated, and possibly the narrators of the alleged delinquencies, in some cases at least, were glad rather than otherwise that their criticisms were not published.

We do not imply that in all the instances which have been brought to our notice of alleged errors that the official adjudicators were of necessity right in every case, and that their censors had nothing whatever to complain about. That is not the question. The point is this. In nine out of ten complaints of the verdicts at shows the matter as it is presented simply amounts to a divergence of opinion between officially appointed adjudicators and self-constituted revisers, the latter frequently condemning the former for not judging by points; while the complainants fail to send figures of their own as affording evidence that they have themselves tested the accuracy of the awards carefully and systematically. In some cases we know they have not. Conclusions have often been arrived at in five minutes quite opposite to those of the adjudicators, who after infinite pains have estimated the value of every bloom, and recorded the results in their pocketbooks. It is desirable when allegations are made of the negligence or incapacity of judges that evidence should be submitted to show that protests are well founded, or at least presented in a manner in which their value can be tested. They should then receive the attention of officials, and if transmitted in temperate language, as all protests should be, are not likely to be ignored by the Press, as accuracy in the awards at exhibitions is a matter of great public importance.

A case to hand, and a very remarkable one it seems to be, enables us to show that the Journal of Horticulture will not deny publicity to a clearly presented instance of alleged errors in apportioning prizes at shows. If the writer of the following letter has made no mistake, we have a case of judging the judges, such as is altogether uncommon, and a verdict of guilty of incapacity entered against them by the secretary of the society as authorised by its committee of management. After approving generally of the remarks of "Secretary," on page 469 last week, our correspondent proceeds as follows:—

Perhaps you will permit me to give an instance of misjudgment, which you will agree must be hard for certain exhibitors to bear. In a

northern show a silver cup, valued at £20, given by the city, was offered as a first prize for forty-eight blooms of Japanese Chrysanthemums in at least thirty-six varieties. After the awards were allotted to the different stands, two of the competitors handed in a written protest to the Secretary of the Show against what they considered misjudgment. The Committee so far entertained the protest as to appoint a competent expert to "point" the different stands, and he gave his verdict as below:—

First prize collection 150 points. Second , , 126 ,, Third ,, ,, 159 ,, Fourth ,, 157 ,,

The Secretary afterwards told the "protesters" that the Committee acknowledged the misjudgment, but owing to a clause in the rules—namely, "The decision of the Judges is final," nothing could be done in the matter. When such cases as these happen is it not a duty to bring them before the public? And if societies will have such a decisive rule in their schedules, ought not they to make sure that the judges appointed are competent men in whom competitors can repose confidence? I consider one of the most important matters, as affecting the success of any society, rests in the ability and integrity of its judges. I would also suggest that the Judges wherever the contest is close be asked to hand to the Secretary the number of "points" recorded for the different entries, and not to be satisfied with verdicts arrived at from a bird's-eye view of the exhibits.

It will be conceded that the case, as it stands, is a remarkable one. Our correspondent sends us his name and address, and is evidently convinced of the accuracy of his statements. the officials of the Show have a different version of the case to place before the public remains to be seen. Our pages are open to any counter statement or explanation, and if neither is forthcoming the public will naturally conclude that the above record is substantially correct. What does it mean? It means undoubtedly that the Judges are found guilty of incompetence; but that is not all, for the Committee in condemning the Judges condemn themselves, as they are responsible for the appointment of adjudicators and the justice of their awards. The existence of the rule, behind which it is said they (the Committee) have sought shelter, is, in effect, a declaration that the Judges are so competent that they are empowered to act for the Committee on a determinate point. They are, in fact, delegates of the Committee, entrusted with carrying out its object of doing justice to "The decision of the Judges shall be final," means that it is the decision of the Committee recorded by men they have appointed for that definite purpose. If committees are not satisfied with the work of their judges, they can there and then supersede them and appoint others, the verdicts of the former being declared null and void if this is done, and the prize cards withdrawn before the public are admitted to a show. If the awards are "published," as they are when disclosed to the public at the appointed time for admittance, then we think those to whom the prizes have been awarded can claim them, even if the judgments are wrong; but there is no claim on the judges, but only on the committee, and the members of a committee are personally and severally responsible to exhibitors for errors committed by their delegates. This, we believe, represents both the law and equity of the whole matter.

In the extraordinary case in question the Committee is said to have appointed a "competent expert" to point the blooms, and it is implied that his figures were accepted as correct. He, therefore, was the final judge. But what about the judges first appointed? Were they not competent experts? It seems to be admitted by the Secretary they were not. Why, then, were they appointed? If the figures above published are those which the Committee accepted as correct when admitting the misjudgment, then indeed is injustice done to two exhibitors, for we have this strange anomaly:—

A, Third prize with 159 points. B, Fourth ,, ,, 157 ,, C, First ,, ,, 150 ,, D, Second ,, ,, 126 ,,

This anomaly is only explainable by remembering that the positions of the competitors were determined by the appointed

judges, while the pointing is the work of the revising "expert!" Was not he the final judge appointed by the Committee? It would seem as if the proceedings had ended in an imbroglio as peculiar as it is rare.

It is undoubtedly a matter of paramount importance that judges of proved competence should be secured, and so much are committees of societies whose shows have achieved almost worldwide fame alive to the fact that they choose and secure the judges nearly a year in advance, and already men are booked for several shows to be held next November.

No experienced judges would have the least objection to handing to the secretary the number of points recorded. Why should they? This is in fact often done, but a secretary would not be likely to disclose the points to exhibitors as soon as the work was completed—at least not more than once, as a dozen or score of persons, competent and otherwise, would soon be testing them and disputing over them in a manner that would not add to the comfort, or increase the freedom of movement of visitors to the exhibition. We suspect there are not many judges of repute who would hasten to accept invitations from committees who would repudiate their verdict on the authority of an "expert." Should not this supervisor be the sole judge next year? The Committee referred to by our correspondent have only themselves to blame for the not very enviable position they are in through pronouncing their own appointed judges guilty of incompetence, yet feeling bound to accept their verdicts, though founded on "acknowledged misjudgment." The case should be historical.

ST. BRIGID'S ANEMONES.

(ANEMONE CORONARIA SEMI-PLENA.)

I HAVE been frequently asked by many people as to the origin and history of these now highly popular garden flowers, and so I have briefly set down all I know about them for the information of your readers, and all interested in Anemones and their culture. They came into notice about twenty years ago; one of the first to appreciate and cultivate them outside the garden of the lady who founded the strain, and initiated the best system or method of culture, being the late Dr. David Moore of the Royal Botanical Gardens at Glasnevin, near Dublin. It was at Glasnevin that I first saw a bed of these splendid seedling flowers blooming profusely in October or November some twelve or thirteen years ago. I had never seen such a sight in my life, and Mr. Thos. Smith of Newry, who is no novice in the world of flowers, who also saw them with me, said at once that the germ of a new idea lay in the fact that these splendid blossoms could be so easily and readily grown as annuals from carefully selected seeds sown every spring.

On November the 4th, 1881, I think it was, I had the honour of a visit from the lady whose nom de plume of St. Brigid is now so intimately associated with these flowers. It was a dull, foggy, November day, with roads aslush, and things generally seemed inimical to "the flowers that bloom in the spring;" but on entering inimical to "the flowers that bloom in the spring;" but on entering my room the owner unfolded from a parcel in her hand some of the brightest and most charming Anemone blooms I ever saw even in April or May. Chrysanthemum flowers looked absolutely pale and dull and lifeless beside them, and life seemed brighter and more enjoyable for their sunny presence in the smoky town. Of course I made all kinds of inquiries, and found out their history as far as it could be known; but I subsequently discovered that the Editor of the Journal of Horticulture had been long before me in admiring these flowers, and in stamping them with his imprimatur. On turning over a file of this paper I find a short article on "Anemones and their Culture," by "L. L.," in the number for April 15th, 1875, and as this is the very first published allusion to these flowers, and really contains the germ of all that has since been written or said of them, I may be excused for quoting it bere.

"When I look at the lovely beds of semi-double Anemones now in blossom in my garden, the intensest brilliance side by side with the softest harmony of colour, I think how much those lovers of spring flowers miss who do not treat these beautiful blossoms with somewhat more care than is usual. Besides their beauty of form and exceeding richness and variety of tint, which I scarcely dare to dwell on lest it should seem exaggerated, the Anemones possess the great charm of producing blossoms all through the dark days of winter, to which their brightness forms such a cheering contrast. The bed I now speak of has supplied me with continuous bouquets from last October up to the present day,

the size of the flowers of course increasing with the advance of spring, which is the meridian season of their beauty; but if there is a midwinter open-air bouquet more charming than a flat vase filled with scarlet Anemones along with blossoms of the large Christmas Rose white

as a snowdrift, I can only say I have never seen it.

"Observing so many spring flowers praised in your Journal I have often wished to say a word for the Anemones, but the old saying "No Irish need apply," has hitherto deterred me. However, last week having shown my flowers to several florists, their hearty exclamation that they had never before seen such beautiful Anemones, tempts me now to give my mode of treating them, in the hope that others may have equal

enjoyment in their blossoming.

"Having saved the seed the preceding May, in March or in April I select a piece of good ground in a warm situation. I have it well dug and made fine, and then over the surface I have spread a layer of fresh cow droppings collected from the pasture; this is dug in from 5 to 6 inches deep, and then some well-decayed leaf mould is mixed with the upper 2 inches of the bed; it is raked fine, and all is ready for sowing. I then take the seed and mix it with my fingers in some sand that has a little moisture—just enough to make it adhere to the seeds, and thus separate them. I next sprinkle the seed thus prepared over the bed, not too thickly; and having ready some fine mould, I with the hand shake enough over the bed to cover the seeds, but not bury them.

"Whenever weeds appear they should be pulled up while they are yet so small that their removal will not disturb the Anemone seedlings, which are tardy in appearing and slow in their first growth; but by August they should be sending up flower-stems, a few only at first, but increasing every week, until by the end of October the bed is well filled with blossoms, to continue so all winter until spring adds fresh vigour to its splendour. I enclose some blossoms pulled to-day, so that they may speak for themselves.—L. L."

We never saw more beautiful specimens of the semi-double Anemone.—EDS.]

The paragraph on their culture from seed is especially valuable and practical, and it but very rarely happens that so few words have ever proved so rich in beautiful results to all who have followed them out to the letter in their gardens. Of course I do not mean to imply that "St. Brigid" actually inaugurated or originated the rearing of Anemones from seed. That had been done by all the early English florists from the days of Gerard and Parkinson to the days of Hogg and Tyso, but what "St. Brigid" really did was to revive this good old practice, and to start a renaissance as it were in seedling Anemone culture, in place of planting the dried and comparatively worthless roots at too late a season in the year.

Now, some people have asked what are "St. Brigid's Anenes?" Well, they are simply carefully selected seedlings from the common A. coronaria as so largely grown in Brittany and in Normandy, near Caen and elsewhere. But then the seed was carefully selected for years from the finest and brightest blooms only, all weedy forms and bad colours being ruthlessly torn up and cast out on the first opening of their flowers, to prevent their pollen infecting the finer kinds. By a systematic course of culture from seed aided by selection of this kind "St. Brigid" actually developed from the so-called French or Crown Anemone a new and vigorous

race, hence the name so appropriately bestowed upon them.

But why does "L. L." call herself "St. Brigid?" someone is sure to ask, indeed the question has been asked hundreds of times already. To make a long story a short one, I may say that the lady owns an estate in County Kildare (cill = church, dare = Oak tree), where in bygone days St. Brigid, the Patroness Saint of Ireland in the days of St. Patrick, founded a nunnery and oratory under a spreading Oak tree, just as the old monks at Fountain's Abbey sheltered under the spreading Yew trees there existing while they reared the first walls of their celebrated abbey. It was in a quaint old garden near the site of St. Brigid's Church or Oratory that Mrs. L. Lawrenson first grew the Anemones in the way described, and from thence she sent the flowers which drew forth your editorial commendation at the end of her article, reprinted above. But something else had happened soon after sending you the letter and the flowers. Your comments had excited the interest of a wide circle of readers twenty years ago, just as they do to-day, and so letters by the dozen reached "L. L." through your office and in other ways, asking for roots or for seeds, or for advice of one sort or another as to the rearing and after management of these flowers. To avoid as far as possible any further personal publicity, the oseudonym of "St. Brigid" taken merely as an additional safeguard, and it has proved to be a tolerably efficient one, though no one can really "hide a light under a bushel," and so Mrs. Lawrenson has found that in spite of her desire for privacy her flowers have forced a sort of floral fame upon her whether she would or no.

But it is not merely Anemones that have occupied all "St. Brigid's "cultural care, for she has many very fine seedling Narcissi and a splendid new series of seedling varieties of Christmas Roses or Helleborus niger, mostly seedlings from the large pure white

variety which bears her name, crossed with pollen of H. maximus, and others of the best kinds. But after all the rich variety, the vigour of growth, the brilliancy of colouring, and the perpetual flowering habit of "St. Brigid's" race of Anemones will long serve to perpetuate her contribution of loving labour to our gardens, and so to the greater happiness and contentment of our lives, for has not her fair hand enriched the earth, and made its fruits more fair than they were before?—F. W. Burbidge.

[Well do we remember those brilliant and beautiful flowers sent nearly twenty years ago — flowers that will not fade from the memory, and glad are we to know that the sender of them still engages in the work she loves, in "the quaint old garden" in Co. Kildare.]



LÆLIA ANCEPS AMESIANA.

At the meeting of the Royal Horticultural Society, on November 30th, T. Statter, Esq., Stand Hall, Manchester, exhibited a plant of Lælia anceps Amesiana, and for which a first-class certificate was awarded. It is obviously a very fine form. The sepals and petals are white, tinted rosy purple at the tips and base. The lip is medium sized, but of deep purplish crimson, and the throat is richly veined. Fig. 73 represents this beautiful Orchid.

CATTLEYA CITRINA.

I have understood that in order to grow Cattleya citrina successfully the plant should be so placed that the apices of the pseudo-bulbs point downwards, and I do not remember to have seen a plant in any other position until to-day (November 30th), when I received three plants from a noted firm for Orchids placed upright in pans with peat fibre and sphagnum, but evidently potted very recently. This circumstance reminds me of having read in the Journal a year or more since that (according to the correspondent's view) the downward position is unnecessary. I shall feel much obliged if Orchid growers will kindly give their opinions on this point.—C.

ORCHIDS FOR FLOWERING AT CHRISTMAS. (Concluded from page 487.)

THOUGH less durable, yet for beauty and softness of tints in the lightly poised flowers, the Calanthes of the vestita group are admirable for flowering in December and January, their long scapes adapting them for arranging with other plants, such as Ferns and small Palms. Calanthes require very liberal treatment to insure their success, and though it is too late now to correct any errors of the past season, we may give a hint or two for present guidance, and to provide for better results another year. If well grown the pseudo-bulbs should be now plump and mature, the foliage turning yellow as its work is performed. The supply of water should be gradually decreased, and the only care needed is to watch the scapes closely as they expand to avoid any injury to them, and to give just sufficient water to keep them steadily advancing; but it will not be necessary to saturate the soil frequently unless the leaves are still fresh and active. This must be followed up while the plants are in flower, then allow them to become quite dry for a few weeks, repotting in succession early in January or February, according to convenience. Remove old roots and place the plants in a compost of equal parts good fibrous loam and peat, with a little old manure and sand. Then allot them a light position in a stove, Cucumber house, or any similar house where a fairly high temperature is maintained with abundance of moisture, the roots supplies to be increased as the growth advances, and frequent syringings. The varieties of Calanthe vestita are numerous, differing in the size and colouring of the flowers, rubrooculata having a deep red centre, being an effective form. C. vestita Turneri and Regnieri are useful as flowering some weeks later than the ordinary varieties of C. vestita, thus extending into January and February in natural succession.

That most useful winter-flowering Orchid, Calanthe Veitchi, merits a special paragraph, for though it naturally flowers, under the same treatment as C. vestita, in November, yet with a succession of plants potted and started at intervals of a week it is possible to have some in flower over Christmas, or until the later forms of the C. vestita group are attractive. Those in flower now may be kept in good condition for some time if they are placed in as cool a house as is safe, and water is not allowed to settle on their flowers;

while those showing spikes may be retarded if care is exercised to avoid sudden check, a warm conservatory being a suitable position. With liberal culture this Orchid makes wonderfully strong pseudobulbs, and if these are properly matured fine spikes are to be expected, and when these can be secured 4 feet in length there is every reason for satisfaction. Few hybrid Orchids have obtained a popularity approaching Calanthe Veitchi, which has also without a doubt been more extensively increased by propagation in the thirty-seven years of its existence than any Orchid introduced within that period. It was one of the late Mr. Dominy's early successes; but it is not generally known that this hybridiser also raised the white variety, which has been since obtained by several amateurs in recent times, and if memory serves correctly, Mr. Dominy once told us that it was from the same sowing of seed, but was sold before it flowered, being supposed to be the same as the ordinary type. The cross was effected between Calanthe vestita and Limatodes (now known as Calanthe) rosea, the flowers

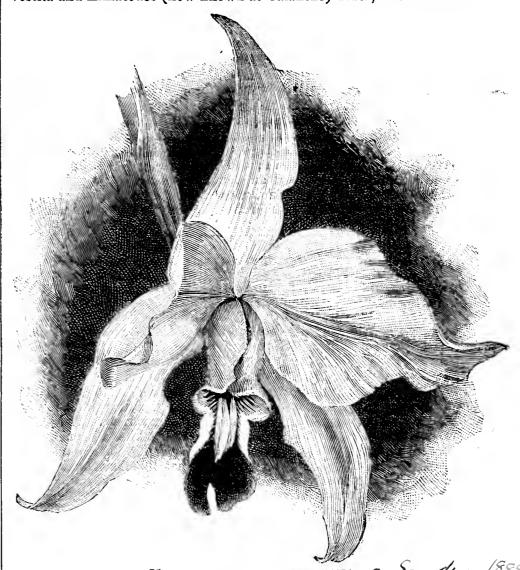


FIG. 73.—LÆLIA ANCEPS AMESIANA.

showing an interesting combination of characters, with the rich rosy crimson colour of the Limatodes rather improved, and the vigorous floriferous habit which characterises so many hybrids.

One of the most delightful little Orchids for December flowering is that known popularly as "Indian Crocus," botanically as Cælogyne præcox, and more familiarly in gardens as Pleione præcox. We have a trio of beautiful miniature plants in Pleione lagenaria which can be had in November, P. præcox for December, and P. humilis for January flowering. That first mentioned in this paragraph will shortly be showing its rosy purple flowers, and is better in a cool position where moisture is not too abundant, either in a conservatory, warm greenhouse, cool house, or any other convenient place if the temperature can be prevented falling below 45°, giving only sufficient water to keep the flowers fresh, and sphagnum also with which the surface of the soil should be covered. As these little plants flower without leaves, a few small Ferns dotted amongst them look well and also afford a means of testing if the supply of water is right. Shortly after flowering they can be repotted, placing them in shallow pans, using a compost of one-half peat, one-fourth loam, and one-fourth sphagnum, sand, and old manure. A place on a shelf in a warm house can then be found for them, watering them freely when growth is advancing vigorously.

Angræcum eburneum is rather too large a plant for small collections, but it has a very telling appearance when bearing its tall

racemes of flowers, the green sepals and petals being contrasted with the broad, heart-shaped white lip. It needs a warm house, and abundance of water during growth.

Amongst Orchids that usually flower in October or November, but which can frequently be prolonged to a later period, the following may be named—Dendrobiums bigibbum and superbiens; Odontoglossums bictoniense, gloriosum, and Insleayi; Cattleyas Bowringiana and luteola; Lælias autumnalis, Perrini, and peduncularis; Angræcum Scottianum, Barkeri, Skinneri, and Pholidota imbricata. Of those flowering in January and February, but which may be occasionally had earlier, we can note Dendrobium aureum, crassinode, Devonianum, and primulinum; Lælias elegans and superbiens; Phalænopsis Schilleriana, amabilis, and grandiflora; Pilumna fragrans; Maxillaria aromatica; Odontoglossums constrictum, maculatum, pulchellum, and Edwardi; Oncidium varicosum, and ornithorhyncum.

In the third list—those which flower continuously or at different seasons—we have Cypripedium Edeni; Odontoglossums grande, crispum, and Rossi majus; Oncidiums Forbesi and flexuosum, usually autumn flowers; several of the Masdevallias, Vanda suavis, and numbers of others which cannot be enumerated here. It will be seen, however, from the foregoing that there need be no lack of Orchid flowers at Christmas as far as regards the plants that can be selected to produce them at that period. If through mismanagement or the unavoidable fogs the plants fail to satisfy us, we have to take heart, try again, and hope for a better future. In some seasons we have had an Orchid display that would be considered satisfactory at a much more favourable time of the year, and then we have had the reward for all disappointments.-ORCHIDIST.

SELF-FERTILISING PEARS.

"ACCORDING to Prof. Waite of the American Agricultural Department, the varieties of Pears which are self-fertilising are Doyenné, Le Conte, Kieffer, Buffum, Flemish Beauty, Seckel, and Tyson; the following are not, and must be near some staminate variety to be fruitful: Bartlett, Anjou, Clapp's Favourite, Clairgeau, Sheldon, Mt. Vernon, Lawrence, Howell, Louise Bonne, Souvenir du Congrès, Winter Nelis, Bosc, Easter, and Superfin.

"Not more than three rows of, say, one variety should be planted together, and they should be separated from the next three rows of

the same variety by at least one row of another variety. Probably it would be still better to plant two rows of one kind and one row of

another kind alternately.

"In a majority of cases it was found that the fruit produced by self-fertilisation was quite different from that produced by cross-fertilisation. Occasional specimens of self-fertilised Bartletts were invariably smoother and slimmer, the cross-fertilised ones rougher and broader. This difference was so constant as to be striking.

"A still greater difference was shown in the seeds. Self-fertilised fruits had but few seeds, and these seldom perfect. The crossfertilised specimens showed the regular number of perfect seeds. Buffum, self-fertilised, almost without exception had imperfect seeds. The self-fertilised fruits are not the normal ones, and would not pass

as typical specimens.

"Fruit growing in ordinary mixed orchards, under ordinary conditions, show by their shape, &c., that they are the result of crossfertilisation. With Apples the results were less decided. Pollen taken from other trees of the same variety usually acts in the same way as that taken from the same tree. The different trees all came from the same seed, and are really one and the same so far as the character of flowers and pollen is concerned.

"Many plants procure fertilisation by the aid of the wind. Not so the Pear. This depends altogether on insects for the transfer of the pollen. A great many varieties of insects visit Apple and Pear blossoms—flies, beetles, bees, &c. The honey bee is the most regular and persistent visitor, and on account of its great activity, the most important. During rains, strong winds, or in cold weather these insects do not come out, and flowers may fail to get properly fertilised."

The foregoing has been sent to Mr. Abbey from a colonial paper, and has suggested the following comments from our able correspondent:-

The broaching of this subject at the present time is not inopportune, for a large number of fruit trees yet remain to be planted, and on their selection and arrangement success or failure in a great measure

Every adviser (and they are about as plentiful as Blackberries in September) on fruit-growing for profit is emphatic in restricting the varieties of the several fruits to as few as possible, consistent with a

full supply of produce from the earliest to the latest period of their respective seasons. To this no objection can be taken, but when varieties are enumerated which are incapable of self-fertilisation to the extent of producing full crops of the finest fruit, a few words of caution against their exclusive planting are imperative, for some varieties are not inherently fruitful, but owe their fertility to crossfertilisation by the pollen of another or several varieties.

The incapability of self-fertilisation in some varieties of cultivated plants was first pointed out by the illustrious Darwin in his "Origin of Species," and the soundness of his views and deductions have been verified in the American orchards, where the trees on the dwarf or low standard system are planted in blocks—a number of acres of one variety exclusively. This method is fast becoming the established practice on this side of the Atlantic, therefore it is necessary to point

out its evils as well as its advantages.

By our system of mixed orchards—a great number of varieties and pernicious planting, or a row of one variety and another of a -those incompetent of self-fertilisation would be fertilised by the pollen of other trees in the row adjoining through the agency of the wind, bees, or other insects. A variety absolutely sterile as regards the pollen on its own blossom may be and generally is rendered fertile by the pollen from another variety, and the result is heavier and more constant crops of finer fruit. Instead, therefore, of planting an acre or more of a self-fertilising variety by itself the non-self-fertilising kinds should be planted with it in alternating rows, still keeping the early, medium, and late flowering varieties as much together as possible, for to be of service the blossoming of varieties for cross-fertilisation must be simultaneous. No record of the time of blossoming of Pears has, so far as I am aware, been made, but such would be of great value, not only as showing the difference in the hardiness of the blossoms of different varieties, but as an aid in planting, so that those which expand about the same time might be placed favourably for cross-fertilisation.

The excellent record kept by Mr. W. Paul, and given a few years ago in the Journal of Horticulture, of the blossoming dates of several varieties of Apples, might advantageously be imitated in respect of other-indeed all hardy fruits, for such records are not only interesting but suggestive of the importance of careful observation, and of the great benefit calculated to be conferred on succeeding genera-

tions, who will see in them guidance in their culture.

In the Journal of Horticulture, June 1st, 1893, page 437, I had the pleasure of making some remarks on Prof. Waite's observations on the self-fertilising properties or otherwise of certain-fruits and their varieties, and I now proceed to make further comments on the above excerpt from an American paper with special reference to Pears as coming under my personal observation.

Self-fertilising Varieties.—Summer Doyenné (Doyenné d'Eté) invariably sets its fruits well, the blossom being bold and perfect anthers laden with pollen. (Beurré Giffard has grand flowers, but sets its fruits sometimes indifferently, fertilised with Summer Doyenné it sets splendidly). Le Comte and Kieffer I had from the late Mr. T. Laxton, Bedford, and they proved very floriferous, remarkably hardy in blossom, and set fruit enormously; but their fruit was as "hard as nails," and about as flavourless as Hawthorn twigs, very inferior to our second-rate Pears. Buffum is an October fruit, an American variety, originated in Rhode Island, and however good it may be there it is seldom passable in this country. Flemish Beauty has a grand blossom. Seckle and Tyson are both American Pears. The first has a very pretty and hardy blossom, sets its fruit well, and its fruit is one of the sweetest. It succeeds as a standard in the North of England, and bears fruit when many others have the blossom destroyed by frost. The last is seldom good in this country. This completes Prof. Waite's list of self-fertilising Pears.

Crawford and Lammas are pictures of beauty when in blossom, usually "swarming" with bees, and generally bear heavy crops. Both are better in quality than many newer varieties. Beacon certainly must be classed as a self-fertilising variety, its bold stamens and pollen-laden anthers attest this. Madame Treyve cannot be beaten for a free-bearing kind, the fruit being large and good. Fertility fertilises itself and every non-fertilising variety. Some trees of Passe Colmar that fruited erratically borne constantly when Fertility was introduced near them. Hessle is good for itself, and for fertilising Williams' Bon Chrêtien, Clapp's Favourite, and Jargonelle, as opposite varieties to Hessle as can well be. Bees appear to delight in the free-bearing varieties, and have great partiality for Comte de Lamy, so have I for its fruit—the best of all Pears. Its blossoms are very hardy, and it carried heavy crops in seasons when no other varieties in the open had any fruit worth naming. Jules d'Airolles is another self-fertiliser, and it is far better in cold districts than Louise Bonne of Jersey. Beurré Bachelier is highly commended for free-bearing and good quality in cold districts. Beurré Capiaumont sets its fruit when many sorts fail to crop, but the quality satisfies few. Bishop's Thumb must be included in the

self-fertilising list, and its fruit is not bad eating. General Todleben is very free, also Beurré Diel and Beurré Langelier. The latter is a good Pear, but I cannot recommend the General owing to its grittiness, and Beurré Diel cracks seriously in the open in wet seasons, but is excellent from a wall. Marie Louise d'Uccle is also a self-fertiliser, and bears heavy crops of not very juicy fruit. Van Mons Leon le Clerc has a fine blossom, but tender, yet sets well in warm situations. It bears large, handsome fruits when trained to a south wall. Jean de Witte can hardly forbear setting good crops on itself and others near it, besides it runs Winter Nelis hard for quality. Bergamotte Esperen seldom fails to set full crops, and the fruit attains better size, acquires more colour, and is freer from grit when grown against a south wall. For a specimen of self-fertilisation none excel Passe Crasanne, it will blossom and set even on the current year's wood.

Non self-fertilising varieties.—Let us first take Prof. Waite's list. Bartlett (Williams' Bon Chrêtien) a sad but true indictment. (Dr. Jules Guyot is better as a cropper and in appearance. Its blossom is hardy and self-fertilising, and being good for market might be planted along with Williams' Bon Chrêtien to mutual advantage, for the Dr. has not the quality of Williams' nor anything like it). Beurré d'Anjou, one of the finest Pears, has a tender blossom, and Clapp's Favourite is subject to shrunken pollenless anthers. As to Beurré Clairgeau it is usually well provided with the essential fertilisation organs. Sheldon, a medium sized, high flavoured variety, of Mt. Vernon I cannot find a reference, and Lawrence, medium size, lemon yellow, rich flesh, and grown for shipment, are American varieties of which I know nothing only from report. Howell also is an American variety, said to be rather large, juicy, brisk and vinous. Louise Bonne of Jersey certainly has a tender blossom, but I cannot exactly admit its incapability of self-fertilisation. Souvenir du Congrès blossom is tender, and, like Clapp's Favourite and Williams' Bon Chrêtien, the fruit is liable to scab fungus. Winter Nelis has a poor blossom anything but hardy, also Beurré Bosc, but it bears grandly near Jean de Witte, and is a very fine Pear, while of Easter Beurré I cannot say that its blossom is not self-fertilising, but of its fruit I have nothing good to say except long keeping. Beurré Superfin, my second favourite Pear, the impeachment is only too true as regards its requiring aid in setting the fruit.

Jargonelle and Windsor are apt to produce a number of antherless blossoms, and these usually drop, for the bees are not particularly fond of the flowers of either variety, yet the perfect blossoms set the fruit well. Beurré d'Amanlis, usually fertile, I have quite sterile, its handsome blossoms being devoid of pollen in the anthers. Seedlings from it, as Backhouse's Beurré, are remarkably fertile, and in some cases the variety bears constantly. These changes are mere vagaries. Princess certainly is more self-fertilising than Louise Bonne of Jersey, for it is hardier as a tree, as well as in blossom. Thompson's—my third favourite Pear—and Marie Louise have tender blossoms, and in many cases the pistillate as well as the staminate organs are defective, and they set the fruit better placed near varieties that afford pollen abundantly. Beurré Hardy is the worst setter I am acquainted with—plenty of blossom and only a fruit here and there—qualities making everyone long for more. Jersey Gratioli seems incapable of self-fertilisation, and Hacon's Incomparable bears erratically—sometimes enormously, and then forgets to produce a decent blossom, much less fruit. Knight's Monarch, unsurpassed for musky flavour, holds its fruit better if cross-fertilised and well thinned and supported at the roots.

Glou Morçeau has less deformed fruits if the blossoms are crossfertilised. Beurré Sterckmans appears to have a tender blossom, but it and Ne Plus Meuris do well in company against a wall. Brown Beurré sometimes sets its fruit well, and at others has very defective blossoms and only a sprinkling of fruit. Duchesse d'Angoulême is not nearly so free bearing as Pitmaston Duchess—a very much overpraised Pear, for it is coarse in looks and in quality—not as good as Duchesse d'Angoulême for the shops. These are a few varieties that occur to my mind as requiring aid in fertilising, either by planting varieties near them for bees to transfer the pollen, or by using a camel's hair brush—an interesting and useful occupation.

Some of the best for affording pollen are Belle Julie, Colmar d'Ete, Doyenné du Comice, Durondeau, Eyewood, Emile d'Heyst, Fondante d'Automne, Josephine de Malines, Triomphe de Vienne, besides the others specially referred to.—G. Abbey.

THOUGHTS ON SHRUBS.

THE management of shrubs as a part of a gardener's duty does not receive so much attention as it ought to do. Generally the first serious thought a young gardener devotes to shrubs or shrubberies is when he is brought face to face with some problem on their treatment, and he discovers that he has to rely on an uninstructed judgment for a solution. But young gardeners are

not solely to blame for being largely ignorant of this department of ornamental gardening, as on too many estates shrubs are not properly cultivated. Apart from this, however, one does not find young men very keen of taking advantage of any opportunities that occur for benefiting themselves by a little insight. On the surface, the cultivation of fruit and of flowers forms a more alluring occupation. One sees results in these instances, within a short space of time, but with shrubs and trees there always intervenes a period of waiting. While such is the case it must not be too hastily conceived that no pleasure is to be extracted from shrub culture. There is indeed a great amount of gratification, and personally I am quite as pleased to see these plants do well as others in departments more closely connected with the garden.

In open situations and with soil of fairly good quality shrub cultivation presents no difficulties, but when one is called upon to form living screens, with sand and gravel as a rooting medium, or, even worse, to plant underneath overshadowing trees in soil interlaced with roots, we experience some difficulty. In neither case, so far as my experience goes, is it possible to achieve success without incurring expense, or without more than usual labour. Few plants take kindly to gravel, and even fewer thrive on the fragments left by century-old trees; nor do they appreciate the continued shade. I have seen much money wasted in trying to get shrubs to grow under such circumstances without first preparing the ground and by indiscriminately planting anything that came to hand without taking into consideration adaptability as to position. The best shrub for growing under trees is the Holly, the common sort being excellent; but both Ilex Hodginsi and I. maderiensis nigra are good, and much bolder in effect than common seedlings. Yews and Portugal Laurels do fairly well, and where the shade is only slight Rhododendrons succeed, as also do common Laurels. Small plants of any of these are of no use, but strong, vigorous, well rooted specimens, which in those estates where shrubs are looked after are always to be had, ought alone to be employed.

The plants there ought to be protected against dryness, and the roots of the trees among which they are planted. I go to work in this way in order to circumvent the intruders. First of all a hole large enough to hold the ball of the plant with an extra allowance of 6 inches all round for new soil is made. The plant is then put in, the new soil, in our case generally decaying compost, is added, and made firm, and then at a distance of 9 inches or so from the outer limit of the hole a circle is cut with the spade. This keeps the roots of the trees in check until the newly planted shrub becomes established. Another important matter is to apply water even at this season, that is to say if there appears any dryness about the site. During the following spring and summer, water will in all probability be required by the plants at short intervals. The care taken in this respect during the first year is amply compensated for, as apart from the plants being kept in good health there will be no further need to go over the work another year, as I have seen happen more than once in similar circumstances. An occasional dressing of manure, or of soil put on about this time of year, will keep them in vigorous health.

The method I have adopted with success where the soil is very gravelly consists in selecting strong plants with fibrous roots, in making the hole for the same double the size necessary to hold the ball, and in filling in with good soil or compost. Dryness during the spring and summer must not be allowed, and repeated mulchings of short grass, or of manure if it can be spared, are most helpful. The importance of the latter is very great, and shrubs or trees ought not to be neglected in that respect. If a shrub or a tree is growing in impoverished soil neither will be ornamental, and the ordinary grass would be more pleasing to the eye. Along with other Conifers, I had an Abies Nordmanni to plant, the latter securing perhaps the most gravelly site. As a matter, of course, it did not grow very well; but a barrowful of cow manure applied one autumn made a difference for the better. More the next year, worked a still further improvement, and at present this specimen looks very flourishing indeed. I have during the past week used about three tons of animal excreta all applied to shrubs. Upon the roots of Rhododenrons growing in poor soil these surfacings of good manure act like magic. Old worn out these surfacings of good manure act like magic. stumps become quite energetic, produce strong growths, and in due course flower as well as those which have much better chances. Variegated plants such as Hollies, Yews, Retinosporas and others, when surface dressed with manure or soil of rich quality have better colouring than when left to grow without any manurial

A common error in planting is in placing the roots too deep. Two years ago I recommended to a gentleman some hedging plants the same as I had myself. In the spring he complained they were looking badly, and "Would I see what I thought was wrong?"

Every one had been planted with its stem 6 inches below the surface, and the plants died. Only last autumn I had to overhaul a recently planted shrubbery in which the plants were making no progress, and in this case also deep planting was the fault. A plant with the main roots showing on the surface, if staked and watered, will hardly die, and it is certain to make progress when once it is established. A plant with a buried stem, on the other hand, will never do well.—B.

DEEPLY PLANTED CELERY.

There are no doubt advantages as well as disadvantages attending the use of deep trenches for the growth of Celery, but it is doubtful if the value of deep planting was ever more fully exemplified than in the present season, when shortness of water was a more common complaint than ever before experienced. Shallow trenches this year, with a restricted supply of water, must have seriously affected this valuable winter crop, and especially in soils of a light sandy or gravelly nature. I have never before practised such deep planting as this year, one reason in particular being that the depth of soil available did not allow of it being adopted, but had I resorted to the usual depth of trench our Celery crop must have been a very indifferent one. As it is I think it will bear very favourable comparison with that obtained in seasons of greater rainfall.

Beyond a light watering given at planting time no water could be spared for the Celery. Under ordinary circumstances the plants would have been flagging continuously for want of water, but deep trenches with a high bank of soil on each side afforded a good means of protection from direct sunshine on the surface soil and roots. As much moist and decayed manure was worked into the trenches in the early spring, and these being of a sufficient width for planting two rows of Celery were better able to sustain moisture than a narrower one could do. After the plants had advanced well into growth the foliage completely filled the width of each trench, and this acted as good as a non-conductor to the drying

winds and sunshine in a marked manner.

In a wet summer possibly the chances of obtaining good Celery from such deep planting would not be so favourable; but if the ground is well drained even then I do not see any objection to the system of deep planting, because with ample foliage much of the rain is transmitted to the sides from off the surface of the overhanging leaves, and the roots are thus not in receipt of the whole of the rainfall. In double rows and deep trenches there is a natural gain of length of stem, and this more easily blanched than is the case when the opposite course is followed. Earthing or moulding-up is a simple matter in the one case, when in the other, as less wide spaces are allowed between the trenches, it is difficult to keep the soil up; especially is this so with sandy textured garden soil. There would seem to be a very general prejudice against the planting of double rows of plants in one trench, for it is observable that in the majority of gardens the single row is the one most commonly adopted. The idea is that it is more difficult to earth-up the plants in the autumn, or if not more difficult there is great risk of doing injury through the soil getting into the hearts in the course of "banking" up. I held this view of the matter, and abstained from adopting the double row system for several years; but I find there is no more difficulty in the one case than in the other, and certainly it economises space very considerably, and quite as good material might be grown in double as in single One advantage is gained in wide trenches by the greater height of the sides brought about by the breadth of soil removed. This makes the trenches appear deeper than is actually the case. Ours are two spades in depth, and the loose "crumbs" serve to cover the manure for planting in.—W. S., Rood Ashton.

THE FRUIT KEEPING QUESTION.

Not only as to "the premature decay of Apples," but also as to the keeping of Pears, is the question raised by Mr. Iggulden (page 437), a most interesting one, but it has been all through this autumn season a very anxious one. When a gardener's supply is reduced, he is called upon for a reason for the reduction, and the reason I have given is precisely the one suggested by Mr. Iggulden and supported by Mr. Cheal, and partly supported, but widened, by my neighbour, Mr. A. H. Pearson of Chilwell (page 487), "that the rains which came after the long spell of dry weather filled to overflowing the sap vessels of the fruit; these being dried up and narrowed by the dry weather were not able to bear the strain, and that the after season was not long enough to elaborate and assimilate that rush of sap; hence, immatureness and premature decay."

In some such form as that I have endeavoured to explain when asked, "How do you account for this excessive decaying of fruit?" I cannot say that our late Apples are keeping very badly. We gave them as long a time as we could before gathering, seeing that they had so much to do after the rains came, and now that they are stored away in our airy fruit chamber, they are keeping, what I may say, fairly well. Caldwells or Rymers, with Normanton Wonders, are two of our most reliable long keeping Apples, and we lay by a good store of these. The early Apples, as Early Julyan, Duchess of Oldenburg, and even Keswicks and Potts' Seedling, we only retain sufficient for present consumption, putting the others into the market; and the "Summerings," with their strong, penetrative smell, we never keep by us at all.

Pears, the early ones, have been the greatest trial. Gathered one day they seemed to be decayed the next, and it was most difficult to keep up a daily supply. Doyenné d'Eté, Jargonelle, Clapp's Favourite (a very useful Pear this), and Williams' Bon Chrêtien we were obliged to gather in sections, a basketful or so at a time. By so doing we prolonged our season very materially. Beurré d'Amanlis kept better, though, having trees in different positions, and gathering them at various times, a few at a time, may account for our longer time of consumption. Pitmaston Duchess fruited well, but I cannot join "Northerner," who writes so glowingly of it on page 495 in his estimate; for though we get plenty of fruit, and on the walls of good size, too, we do not get that high table quality which makes people ask for it. Indeed, when I say that we stewed the bulk of ours it will be understood how it stands in our estimation, those at least which did not decay, for this was one this

season which you could almost stand and see decay.

Some of the Pears which are invariably good with me have this season been conspicuously uncertain. One favourite, Fondante de Charneu, was little better than a good young Turnip; usually it is asked for more than any other in its season. To set against that Vicar of Winkfield is this year singularly good. We are using it now with much acceptance. Louise Bonne of Jersey were very good in quality, but smaller than usual, and kept the best of all save one, and that is a December Pear, not in much cultivation, Epine du Mas. It is a prolific bearer, of good quality, the fruit keeps well, and comes in at a most acceptable time. We have just finished them, and are now using Winter Nelis, always a welcome fruit in the dining-room. Josephine de Malines and Easter Beurré are keeping fairly well, and will be in very soon. Nec Plus Meuris and Glou Morçeau did not fruit very well this year, but are keeping well, though in each of these varieties their season is about a month earlier than usual, and the Pear consumption will therefore be limited by that amount of time. Beurré Sterckmans did so badly in ripening out that I headed them down, and worked other varieties upon them.

I must go back a little and say that I have only words of unstinted praise for such Pears as Doyenné Boussoch, Doyenné du Comice, Marie Louise d'Uccle, Maréchal de Cour, and Emile d'Heyst, as well as Fondante d'Automne, but as for Beurré de Capiaumont, Beurré Clairgeau, Beurré Bosc, Beurré Van Mons, and Fertility, the less said about them the better. The last-mentioned Pear is unquestionably a heavy and constant bearer, much more so than the old Hessle, but its table quality is very low. That is as I have proved it; it may do differently elsewhere. That fact, by the way, is a truth which a long experience has given me, that a fruit, or vegetable indifferent in one place may be quite the opposite in another, and therefore I find it wise not to dogmatically condemn anything in the fruit and vegetable line, but just chronicle my own personal experience. Fertility has had, however, one feature this year, and that is to die off, as to its leaves, in ruddy glory, as red almost as that of a Virginian Creeper. These fruit experiences are very interesting reading to me, and so I venture to send this small contribution.—N. H. P., Notts.

THE CRYSTAL PALACE COMPANY'S SEPTEMBER FRUIT SHOW.

THE present appears to me to be an opportune time to express a hope that the Crystal Palace Company may next year resume the holding of an exhibition of choice and other fruit in conjunction with the National Dahlia Show the first week in September. This unfortunately has been discontinued the last two years, owing, I suppose, to the fact that a fruit Show embodying all the fruit classed included in the "Palace schedule" was to be held at Earl's Court, London, in 1892, and a series of little fruit shows held in the same place during the past summer, and which latter shows appear, judging from recent correspondence in the Journal, not to have given the same satisfaction to prizewinners that resulted from the management of the International Fruit Show held in the same place last year.

held in the same place last year.

I think it would be a great pity—not to say a pomological calamity—that there should exist any cause or causes to prevent the Crystal Palace

Company holding its great Fruit Show the first week in September, as in former years (excepting 1892 and 1893). As an exhibitor for several years past in all the principal classes at the Show in question, as well as at many leading shows in the provinces, I am in a position to say that the Crystal Palace September Fruit Show has been looked upon, and justly so, as the great show of the season—in fact, the National Fruit Show of the country.

The Palace, as far as my experience goes, is quite unique as a place for holding horticultural exhibitions, and the details of the exhibitions held there have always been admirably arranged; and last, though by no means least, the prize money has always been forthcoming soon after it had been won. I am sure that in thus writing I am only expressing the sentiments of the numerous fruit growers who used to annually compete in the fruit classes at the Crystal Palace Show, and who looked forward with much pleasure to meeting one another in friendly contest early in September every year. Permit me to express a hope that the Crystal Palace Company may give us—its old and regular exhibitors—an opportunity of doing so again in 1894, as the Shows in question gave a great impetus to the movement of high-class and profitable fruit culture.—H. W. W.

THE ROYAL HORTICULTURAL SOCIETY AND SOUTH KENSINGTON.

You state in an article on page 492 in your last issue that "in consequence of a leakage from the Council of the R.H.S.," proposals as to the removal of the meetings of the Society to the Imperial Institute are known to be under consideration. I made careful inquiries at a late meeting of the Council whether any member had communicated with the horticultural Press, directly or indirectly, on this subject, and was assured that no member had done so. I think this contradiction should be published, because at the time you name the proposal had not even been submitted to the Council, and it is therefore a somewhat severe, and I believe unjust, imputation on a member or members of that body.—HENRY J. PEARSON.

We publish the above correction with very great pleasure, but at the same time we think Mr. Pearson will have no difficulty in admitting that his inquiries at a late meeting of the Council were not made in consequence of anything that appeared in the Journal of Horticulture. We did not say the proposals were "known" to be under consideration, but that there was a "rumour" of the nature indicated. This was quite true. It also appears to be equally true that the rumour was not groundless, as proposals were admittedly made by the authorities of the Imperial Institute for the removal of the headquarters of the Royal Horticultural Society to South Kensington. "Rumour" is quite liable to be at fault relative to the origin of a leakage, but that there was an "escape" in this case from somewhere appears self-evident, or there could have been no occasion for any gentleman to make "careful inquiries" on the subject at a Council meeting held prior to the publication of our remarks last week. We unhesitatingly accept Mr. Pearson's assurance that no disclosures whatever were made by any members of the Council, and we include in this assurance all attendant officials.]

A RETROSPECT.

TIME has been given me to look back over the last fourteen years or so, during which my heart has been wrapped up in matters horticultural. Although the love I have borne and bear still for everything connected with a garden has never been a means of supplying my daily wants, but has, on the other hand, impoverished me, I cannot even now say that I regret it.

During this period I have seen horticulture advance by giant strides, and gardeners become in their best representatives a body of scientific well read men. The pages of the *Journal of Horticulture* bear testimony to this.

I have also seen of late years the culture of fruit brought to the front, and the old rough and ready ways of planting any variety the nurseryman sent abolished. Dr. Hogg's "Fruit Manual" and Mr. Wright's "Prize Essay" have been of inestimable worth to our young planters.

Many changes have happened of late years; we seem to have lost an unusual number of first-class gardeners, and when Mr. Laxton (whose helpful letters to me were a source of great comfort at a trying time) went over to the majority I felt a blow I shall never forget.

How much knowledge and pleasure I have gained by the perusal of "our Journal" I know not. This I know, that there was always something fresh to learn, always something to add to the pleasure of reading. I owe very many thanks to the contributors to "our Journal," many of whom have been most courteous and kind to me. I heartily return my thanks to one and all. If I might single one out I should say that any contribution with "D., Deal," underscribed has been a lasting pleasure to me.

And now, starting as I am on a long journey from which I shall not return, I desire to thank our kind Editor and each contributor for the

knowledge, pleasure, and profit I have ever received from them.— H. S. EASTY, Ashdene, Hill Lane, Southampton.

[It is with profound regret, in which our readers will share, that the painful malady from which Mr. Easty has long suffered has at last been pronounced mortal. Mr. Easty is a gentleman by birth, and has devoted his means to acquiring information by travels abroad and experiments at home, until those means are, we believe, exhausted, and we fear he has difficulty in obtaining simple home comforts. Under these circumstances the calm trustfulness of his pathetic letter cannot but evoke admiration, and impart a suggestive lesson on a subject of a momentous character.]



ABERDEEN ROSES.

WITH a view to keep things right, may we ask you to kindly insert the following remarks, by way of correcting a mistake in "D., Deal's," very interesting article on "The Rose in 1893," which appeared in your issue of the 30th ult. (page 494)? We observe he credits Messrs. Harkness & Sons with carrying off every first prize for "seventy-two's" in the kingdom.

We only staged in two "seventy-two's" during last season in England, and had the satisfaction of winning them both. The first was at Tibshelf (Derbyshire), on July 25th, and we understand that this was the best and keenest contested "seventy-two" of the season, there being six exhibits staged, Messrs. Harkness coming in second. The second was at Elland (Yorkshire) on August 15th, where we also won the first prize.

We do not wish by any means to detract from the Messrs. Harknes,' splendid record, but we take this opportunity of pointing out that we met the above-mentioned firm eighteen times in England during the season, commencing July 20th, with the following result—viz., Messrs. Harkness & Sons two first prizes, Cocker & Sons fifteen first prizes and one equal.—James Cocker & Sons, Aberdeen.

THE NATIONAL ROSE SOCIETY AND THE FUTURE OF EXHIBITING.

I TAKE advantage of some remarks made by "D., Deal," in his article on "The Rose in 1893," page 494 of the Journal of Horticulture last week, to say a few words as to the future of the Society as they occur to me, both in regard to its membership and the advantages which are now offered, and those which, I think, should be offered to new rosarians. "D., Deal"—than whom there are few more experienced, whether as men of the world or as "past masters" in Rose matters—says, in regard to the annual recruiting of rosarians for the Rose shows of the future, "one asks, with some degree of misgiving, where are the successors of the past" [why not present?] "giants to come from?" This question may be one fraught with consequences of the first magnitude to rosarians, and is of vital importance to the N.R.S., therefore it is one which, having been put forth by a leading official at what is apparently a propitious moment, might be discussed with advantage at the annual meeting of the N.R.S., which coincides with the date of the next issue of the Journal.

It is of vital importance to the Society that its membership should be materially increased, as there are many members who, when it first started in December, 1876, were the mainstay of its exhibitions, and who now either from age or disinclination have dropped out of the fray. Future exhibitions and the Society itself must sooner or later depend for support from those who are now becoming interested in Rose growing, and it is with the object of sounding a note of warning to the N.R.S. executive that I write this letter.

I have for some years been a persistent advocate for the encouragement of new members and small growers amongst rosarians, and unless the Society offers more inducement in the future than it now does to "young" rosarians, it will find it a matter of difficulty to keep up its roll; death and desertion will soon outnumber the yearly recruiting, and the number inscribed on the roll-call will then be found a diminishing quantity.

I do not write this letter as a pessimist, but in the present day a society or a business must either advance or retrograde, you cannot stand still and succeed; and I say that when I find there are forty-eight local secretaries of the N.R.S., and through that body of supposed active workers only thirty-four recruits (not counting those I myself brought in this year) were obtained in 1893, the Society is in a perilous state, especially if its schedules are to be maintained at a satisfactory level. I have worked fairly hard and not unsuccessfully in getting in new members; but I confess that the question often asked me, "What do I gain or obtain by becoming a member of your Society?" frequently finds a reply difficult, and at times I have been puzzled to find a suitable one, but the question being a proper one there should be a satisfactory reply ready to hand. I therefore appeal to those now responsible for the Society's working to offer next year advantages to new members—do away with useless classes in the prize schedules, such for instance as the one for residents within an eight-mile radius (which is practically a monopoly to a very small coterie), and in the place of those eliminated

classes substitute several new ones for rosarians who have joined the Society within say three years, or those who have never won a prize at its exhibitions. By adopting this plan a nursery will soon be formed, and thus the babes of the present may become the giants of the future, and probably not unworthy to be compared with their predecessors.—CHARLES J. GRAHAME, Croydon.

MANURING AND TRANSPLANTING ROSES.

AUTUMN and winter are the best times in the whole year for applying a liberal dressing of solid manure to the soil devoted to the growth of the queen of garden flowers. Where good manure is plentiful and is largely used for the purpose the difficulties of Rose growing are reduced to a minimum. No mere sprinkling of this necessary fare will suffice to keep such gross feeders in health and vigour. A coating of from 3 to 6 inches in thickness should be spread evenly over the whole surface of the bed, and as the work proceeds be packed closely around the stems of standards or the stools of bushes. The manure then answers the two-fold purpose of protecting the roots from severe frosts and of supplying them with abundant nutriment, as the rains and snow convey its most powerful constituents to the soil. This layer of manure should remain upon the surface of the soil till the Roses are pruned in the spring, when it is necessary to fork the beds over to a sufficient depth to admit of covering the manure. Deep digging around Rose bushes should at all times be avoided, as it is most inimical to their well being, by driving the roots deeper into the soil, when the aim of the cultivator should be to keep them near the surface.

On light hungry soils I believe cow manure to be unsurpassed for Roses, for it is not only extremely rich in easily assimilated plant food, but being also close in texture helps to make the soil more retentive of moisture, an object not easily accomplished when ordinary farmyard manure containing a good percentage of straw is employed unless very much decayed, in which condition its manurial properties are considerably lessened. On the other hand, when dealing with a heavy soil fresh horse manure containing a good amount of strawy matter is of great utility in keeping the soil open so that the action of the weather may

pulverise it.

I find it an excellent plan to lift and transplant bush Roses every three or four years; this is especially the case with those on their own roots, as by continually throwing up suckers in various directions the centre of the stool is often left bare. In addition to the advantage accruing from this point of view, the bushes are undoubtedly kept healthy and vigorous, without producing such exceptionally strong shoots as undisturbed bushes do when pruned closely to secure large blooms. The reason why periodically lifted Roses give such satisfactory result is, I doubt not, in consequence of the number of fibry roots produced under this system of management, which also gives opportunities of frequently trenching the soil and incorporating manure with it throughout its entire depth. Ample food being thus within easy reach of the roots they show no inclination to wander away in search of it, making in their course long fibreless lengths, which all cultivators dislike to see.

November is perhaps the best time to take in hand the work of

November is perhaps the best time to take in hand the work of lifting or planting the hardier kinds of Roses, and those enthusiastic rosarians whose Roses are the most important feature in their gardens, will doubtless have managed to carry out the work; but gardeners who have extensive charges in each department to attend to must perforce fit in this kind of work whenever opportunities arise and the weather is favourable. November is a busy month with most of us, as with the leaves from numerous trees falling fast (which if not quickly collected are swept by the wind in all directions, only to give additional labour) and other alterations also in progress, planting must necessarily be delayed; however, by choosing an open spell of weather when the ground is fairly dry, we have hitherto been able to perform this kind of work with the best results, and contemplate undertaking it again at various times during the next three months.

Our plan of procedure is to take up the Roses, carefully cut away any old fibreless parts or stools from which the younger portions have extended, and at the same time making a clean cut at the ends of all other roots, so that they are in readiness for replanting. They are then laid upon the ground and covered with mats while the beds are being prepared for their reception. This preparation consists in double-digging, at the same time giving a heavy dressing of manure, which is well incorporated with the soil as the work proceeds, and a little of the subsoil is mixed with the upper strata. When the digging is completed the Roses are at once planted, spreading the roots evenly in all directions, and keeping them near the surface. Any plants which have become leggy ought to be planted obliquely. Light soils should be trod firmly; but when dealing with heavy ones the fork or spade should take the place of the foot in pressing down the soil. A couple of inches of rough manure must in all instances be placed upon the surface to complete the work.—A Lover of Roses.

AUTUMN AND WINTER FLOWERS.

Not often is a finer display seen than I found on a recent visit to Norman Court, the residence of W. Baring, Esq., as provided by the able gardener, Mr. J. Hughes. Apart from Chrysanthemums, which were admirably represented, Salvia splendens was very striking. The plants were grown from cuttings rooted in March and planted out in the open, afterwards taken up and established in 10-inch pots, the soil used being loam and leaf mould, no sand. Well-grown Zonal

Pelargoniums intermixed with Mignonette and Heliotropes formed an effective combination, and Primulas were very fine indeed.

The stage on the south side of the Rose house was filled with Miss Jolliffe Carnations (the improved strain), the blooms being not in hundreds but thousands, and well worth a long journey to see. Mr. Hughes may be justly proud of his success in the culture of these plants, and it seems a pity it should not be convenient to place them before the Royal Horticultural Society's Committee, where I have no doubt they would receive the recognition they deserve. There are 200 plants, in 7-inch and 9-inch pots. The cuttings were rooted about the middle of February in slight bottom heat, the plants being eventually potted and grown in a cold frame. The final potting was done in July, the compost then used being good maiden loam, charred soil, leaf mould, with a little bonemeal and sand added. Some of the best plants had twelve spikes, carrying from forty to fifty blooms. The house is kept cool with plenty of air, and the plants, which are sturdy in growth, are kept free from insects. On the north stage of the same house was a collection of dwarf German Scabious. These plants were kept growing through the summer, but all flower spikes as they appeared were pinched off until a few weeks ago. At the present time they are in full bloom, affording a pleasing variety of colour, in 32-size pots, some of the plants carrying from fifty to sixty trusses of flowers.

Other winter-flowering plants are not forgotten. Cyclamens, Marie Louise Violets, and Cinerarias are grown in pits, as are Bouvardias, these being planted out, and will no doubt prove of great service. I hope these few stray notes may show what can be done with perseverance: Such good work merits appreciation, and Mr. Hughes is to be congratulated on what he has accomplished so well.—W. PALMER, F.R.H.S.



EVENTS OF THE WEEK,—Comparatively few events of horticultural interest will take place in the metropolis during the ensuing week. The Royal Botanic Society will hold a meeting in the Gardens, Regent's Park, on Saturday, December 9th, and the Committees of the Royal Horticultural Society will meet at the Drill Hall, James Street, S.W., on Tuesday, the 12th inst.

THE WEATHER IN LONDON.—Various changes in the weather have taken place during the past week. On Sunday morning a severe frost prevailed, 12° being registered in some suburban districts. Towards evening on that day it became milder, and a little rain fell during the night. Monday was mild and dull, Tuesday being colder and foggy in the morning. Wednesday opened dull, but at the time of going to press it is clearing.

WEATHER IN THE NORTH.—The weather has been changeable for the last eight days, with occasional high winds and drizzling showers. On the morning of the 30th ult. the ground was white with snow, and heavy falls were reported from the northern counties. December opened with frost, 7° in the morning of the 1st, and 14° on Saturday morning. By evening it rained heavily, and till Tucsday morning the weather has been fresh and generally fine for the season.—B. D., S. Perthshire.

— EARL'S COURT EXHIBITION. — My attention having been drawn to the remarks of one or two correspondents (pages 444 and 493) who have exhibited at Earl's Court, and not received their prize money, I regret to say that the delay has occurred through the illness of the Financial Director, who has been, and is now suffering from influenza. As soon as he is able to attend to business the prizewinners will receive their awards.—HARRY TURNER, The Royal Nurseries, Slough.

ROYAL HORTICULTURAL SOCIETY.—The last meeting of the Royal Horticultural Society for the year 1893 will take place in the Drill Hall, James Street, Victoria Street, Westminster, on Tuesday, December 12th. The Fruit, Floral, and Orchid Committees will assemble at twelve o'clock, and new Fellows will be elected at three o'clock.

— GARDENERS' ROYAL BENEVOLENT INSTITUTION.—Mr. G. J. Ingram, Secretary, 50, Parliament Street, London, S.W., writes:—I have been requested to acknowledge the following sums received in aid of the funds of the Gardeners' Royal Benevolent Institution: Mr. Bailey Wadds of Birdsall, York, £2 11s.; and the Reigate and District Chrysanthemum Society, £31 10s.

— CHANGES IN THE LONDON PARKS. — After many years' service in the London Parks Mr. Gibson retires through failing health from the position as Superintendent of Victoria Park, and his friends hope he will enjoy his pension for many years. Mr. J. W. Moorman (Dulwich Park) succeeds Mr. Gibson at Victoria Park, Mr. Bailey goes from Southwark to Dulwich, Mr. Curle from Waterlow to Southwark, Mr. Pallett from Myatt's Fields to Waterlow, while the propagator at Victoria Park goes as Superintendent to Myatt's Fields. Mr. Moorman's advancement, from the smallest garden (Myatt's Fields) to the largest park under the London County Council, within a period of five years, affords high testimony to his energy and ability, and the other superintendents have won their promotion by the excellence of their work. The London parks were never better cared for by the authorities than at the present time.

Memorial Hall, Farringdon Street, E.C., on Tuesday evening last, Dr. A. B. Griffiths gave a lecture on artificial manures. Mr. T. W. Sanders presided, and there was a good attendance. The lecturer dealt at length with the physiology of plants, and described the manner in which the roots absorbed the necessary nourishment from the soil. Formulæ of special manures for various plants and soils were also detailed and apparently appreciated by the audience. An interesting discussion followed, during which numerous questions were put to the lecturer. In addition to the customary vote of thanks, it was unanimously resolved to award Dr. Griffiths a bronze medal for his able lecture.

DEATH OF MR. H. G. QUILTER.—Many of our older readers will learn with regret of the death of Mr. H. G. Quilter, which took place on November 23rd, at Felixstowe. Mr. Quilter was seventy years of age, and was at one time a very prominent figure in horticultural matters. Some years ago he organised a most successful exhibition under the auspices of the Royal Horticultural Society at the Aston Lower Grounds, Birmingham.

- WHITE EARWIGS.—I regret that I missed the query made by "Lanarkshire Bee-keeper" at page 458, and may now endorse Mr. Hiam's explanation. After the final ecdysis, or cast of skin, which brings the earwig to its perfect condition, the insect is white or pale in colour for a time, as is also the familiar cockroach of our kitchens. It has been found by experiment that a cockroach, after this moult, is white for several days, even if exposed to the light, and an earwig may take as long to acquire its usual colour, only it is probable that it remains usually in hiding, from prudential motives, till it has both darkened and hardened. If any friend has undeniable testimonials in favour of the earwig I should be glad to see them; at present, it must be owned, the insect has anything but a creditable character. One thing that much surprised myself and other observers of earwigs this summer was the plump and well-to-do condition of most of the individuals; evidently, somehow or other, the long drought had not hurt them .- J. R. S. CLIFFORD.

"A LANARKSHIRE BEE-KEEPER" writes:—"While I am obliged to Mr. J. Hiam (page 491) for his explanation of the above, I must say, without any contradictory spirit, I am not satisfied with it. We ought, however, at all times to give due deference to others' opinions and observations, as well as never to put a misconstruction upon what is said. It was gardeners' friends, and not 'bee-keepers',' I said on page 458. I have watched over and over again the carnivorous habits of earwigs amongst the larvæ and pupæ of 'gardeners' enemies,' just as many of the spiders are."

CURIOUS SPELLING OF NAMES.—I fancy "S. H." (496) has not had much experience of the duties appertaining to the post of Secretary to an autumn Exhibition, or he would not suggest the examination of the names by this official to correct those mis-spelt. I often pity the Secretary when perhaps half a dozen exhibitors are asking him questions as to the position of their exhibits, inquiries for class cards, and making appeals for admission tickets. Where from 1000 to 2000 cut blooms are staged I imagine those officials would not thank "S. H." for the suggestion of examining the names. I am aware that the manner in which some names are mangled in spelling is deplorable, but I fear the remedy lies only in the hands of exhibitors themselves. It is not always that catalogues agree either in the proper spelling of the names. Where this occurs of doctors differing, who shall decide?—E. M

— MR. H. CANNELL.—We learn from a Kentish paper that Mr. Henry Cannell, head of the firm of Messrs. Cannell & Sons, seedsmen and horticulturists, of Swanley and Eynsford, has been awarded by the Council of the Academy (Industrial) of Science and Arts, Brussels, with the diploma of that Institution, and the free membership of the same, the honour having been conferred for useful invention, commerce, and for the common good.

— WE have much pleasure in mentioning that we have received from M. Martinet of Paris a copy of his new weekly paper "Le Petit Jardin Illustré." It is published at the price of 10 centimes (one penny), and consists of sixteen octavo pages. It is worth remarking that this is the first weekly publication in France upon the subject of Horticulture, and if there is anything like the same demand for it that there is in England for papers of this character, a prosperous career awaits it.

- A NEW WATER LILY .- From Nymphæa dentata, fertilised by the pollen of N. Sturtevanti, Mr. William Tricker has secured a new hybrid night-flowering Water Lily, which is distinct and produces flowers of great beauty. In the specimen of Nymphæa Trickeri which I have seen, says Mr. J. N. Gerard in the "Garden and Forest," the leaves are 18 inches in diameter, finely toothed and a glistening emerald green above. The under surface is dark brown and boldly ribbed with numerous prominent veins. The flowers are semi-double with three rows of petals, and in form quite identical with N. Sturtevanti, having even the tendency to plication of the edges of the petals. It differs, however, not only in colouring of the leaves, as noted above, but also in the distinct colouring of the flowers, which may be described either as a light rose pink, shading irregularly to white, or as white, irregularly suffused with pink, the general effect being a light pink flower with white markings. Under artificial light it is the most brilliant of all Lilies. The white markings are then not distinguishable, and it appears as a most charming glow of light rose pink of very pure tone.

- Mr. GERARD also observes: - There are no nobler Nymphæas than N. rubra, N. Devoniensis and N. Sturtevanti, and N. Trickeri, the lightest in colour of the quartette, is apparently an important addition to the series. The night-blooming Nymphæas are precious flowers, which should meet with wider appreciation. Though they open in the evening they remain open during the early morning, and in a later stage still longer. Their flowers are charming under artificial light, and exquisite effects in decoration are possible by their aid. They will be probably always somewhat rare and uncommon, for, while the plants offer no difficulties in cultivation, to be well grown they require considerable space, and this will prevent their being grown for commercial purposes. It will be readily seen that an arrangement of Nymphæas in a suitable receptacle is one which is delightful in itself, and sure to excite attention and give pleasure. Such arrangements are frequent with ordinary day-flowering Nymphæas, but these, unfortunately, close in the evening, so that plants like N. dentata, N. rubra and its hybrids, which are open when they can be generally most enjoyed, are especially valuable.

PRICES OF GRAPES.—Such dolorous reports occasionally appear with respect to the miserable returns that are obtained for Grapes—returns that seem utterly absurd assuming that the fruit be at all good—that I venture, as some antidote to these statements, to publish what is written in a letter lying before me, received a few days since from one who is both a first-class grower and one in a large way, for his annual output is measured by tons. Perhaps the fact that a grower can be depended upon to keep up a supply of first-class samples in great bulk over some nine months of the year helps to the securing of better prices. The writer says, and he specially refers to what has been written in the Journal of Horticulture, "I still keep cutting Grapes. To-morrow the price will be 3d. more, the lowest being 2s. per lb. It may be of interest to you to know that on Monday I sent seven baskets of Alicante to ——, really the worst I had; the return, 1s. 7d. to 1s. 10d. per lb., very satisfactory, and am asked to send more. One shop alone at ——— has taken seventeen baskets this week, and other good quantities have gone to other towns. In three weeks we have turned over £100-not bad for our little place." Here is no complaining, but perfect satisfaction. When we read such distressing complaints as to prices it would be much more instructive could we see the samples. In the case quoted very little is done through markets, but chiefly with the shopkeepers direct. This fact serves to show that it is the middleman who gets the growers' profits. Why do not growers form a syndicate, and be their own salesmen, retail as well as wholesale?-D.

- WE learn that Mr. John Waterer, son of the late Mr. John Waterer, and brother of the late Mr. Michael and Mr. Fred Waterer, died at Bagshot, on the 21st ult., aged 67 years.
- —— THE PHYLLOXERA IN SICILY. It is reported that serious damage is being caused by the Phylloxera in Sicily. In the provinces of Syracuse and Catania also the loss, owing to this cause, is most alarming.
- —— DIOSPYROS KAKI.—Readers may be interested to know that a plant of the Japanese Persimmon, Diospyros Kaki, has this year borne five fine fruits in the succulent house at Kew. The plant is stated to be a grafted one and is 6 feet high.
- MR. W. GLEESON, The Warren House Gardens, Stanmore, desires us to announce he has been awarded a valuable set of silver fish carvers, offered by Mr. Colchester, of Ipswich, for the best exhibit at the Watford Chrysanthemum Show.
- ALL classes in Ireland heard with surprise and sorrow of the death of the DUKE OF LEINSTER at Carton, Maynooth, on December 1st. His Grace, who has been thus untimely cut off by typhoid fever at the age of forty-two, was President of the Royal Horticultural Society of Ireland, a post held by his father, the late Duke. A lover of Nature, taking a keen interest in all pertaining to gardening and forestry, few could surpass him in knowledge of timber and ornamental trees.
- SHADING PLANTS.—Is not the too protracted use of summer shading upon greenhouses injurious to plants? Plants in my own garden have not been satisfactory when covered with obscured glass, while those grown under clear glass were healthy and fruitful. The Spider-web Sedum previously mentioned by me has only in two years one rosette under rough glass, the web being scarcely visible, while that under clear glass has filled the space with prettily webbed rosettes.—T.
- THE TOTAL RAINFALL AT ABBOT'S LEIGH, HAYWARD'S HEATH, SUSSEX, for the past month was 208 inches, being 1.59 inch below the average. The heaviest fall was 043 inch on the 14th. Rain fell on seventeen days. The maximum temperature was 61° on the 3rd, the minimum 25° on the 1st; mean maximum 46.06°, mean minimum 35.13°; mean temperature 40.59°, nearly 2° below the average. Although we did not feel the full force of the storm of the 18th the barometer felt it; the reading on that morning was 28.75. It was very unsteady from that date till the morning of the 26th, when it made a remarkable rise from 29.18 to 30.03 on the following morning, where it remained stationary till the close of the month. December opened wet and stormy, but cleared out in the afternoon to frost, with a keen N.W. wind.—R. I.
- THE WEATHER LAST MONTH.—Mr. W. H. Divers, Ketton Hall Gardens, Stamford, writes: "November was showery and dull, but we had very little fog. There were nine bright days. The first snow of the season fell on 6th. We had a gale and a fall of snow on night of 18th. Wind was in a northerly direction nineteen days. Barometer: highest 30.42 inches at 1 P.M. on 21st, lowest 29 inches at 10.45 P.M. on 17th. Total rainfall 1.93 inches, which fell on twenty days. The greatest daily fall came as snow on 18th, viz., 0.40 inches. The total is 0.73 inches below the average for the month. Temperature: highest in shade 60° on 3rd, lowest 21° on 5th; lowest on grass 14° on 5th. Mean daily maximum 47.46°. Mean daily minimum 34.43°. Mean temperature of the month 40.85°. The garden spring ran 6 gallons per minute on 30th."
- SUMMARY OF METEOROLOGICAL OBSERVATIONS AT HODSOCK PRIORY, WORKSOP, NOTTS, NOVEMBER.—Mean temperature of the month, 41.1°. Maximum on the 3rd, 57.8°; minimum on the 5th, 24.3°. Maximum in the sun on the 6th, 93 7°; minimum on the grass on the 5th, 17.5°. Mean temperature of air at 9 A.M., 40.5°; mean temperature of soil 1 foot deep, 42.8°. Number of nights below 32°, in shade fourteen; on grass, nineteen. Total duration of sunshine in the month, thirty-seven hours, or 15 per cent. of possible duration; we had nine sunless days. Total rainfall, 2.06 inches; rain fell on twenty-three days. Average velocity of wind, 11.1 miles per hour; velocity exceeded 400 miles on four days, fell short of 100 miles on four days. Approximate averages for November: - Mean temperature, 42.3°; sunshine, fifty hours; rainfall, 2.03 inches. A rather cold and dull month, with a large proportion of northerly winds, and about average rainfall, though with more than the average number of rainy days. No damage was done here by the gale on the 18th, but the snow which fell drifted a good deal, and several roads were blocked next day,-J. MALLENDER,

- Wanderings in Wicklow—A Correction.—In the article on this subject (page 487) referring to Shelton Abbey, it is inadvertently stated that Mr. Wilmett is "not an energetic man." The sentence should read, "not an emergency man."
- —— DEATH OF MR. HOWARD.—We announce with regret the death of Mr. Howard, on November 27th, at Southgate. He was well known as a grower for Covent Garden Market, and at the time of his death was in his 59th year. Mr. Howard was an enthusiastic supporter of the Royal Gardeners' Orphan Fund and other charitable institutions.
- AUSTRALIAN FLOWERS. Apropos of the note re a "Wild Flower Carnival," published on page 491, we are informed that a bouquet of Australian wild flowers is now on its way to England frozen in a solid block of ice, and intended as a present for the Queen.
- A CORRESPONDENT writes:—"The death of the EARL OF WARWICK has taken from us an English nobleman whose love of horticulture was as strongly marked as his courtly gentleness and artistic tastes. The late Earl took the deepest interest in every phase of gardening, and cherished by constant watchfulness many of the rarer trees and shrubs at Warwick Castle; and his knowledge of their nomenclature was as thorough as his admiration for their beauty. Even in the confines of the sick room the presence of some favourite flower seemed to keep keenly alive his interest in gardening. His Lordship's decease is deeply regretted by all who knew him, and by none more so than those who were constantly associated with him. His Lordship's charm of manner and kind consideration to all around won the respect and love of equal and dependent alike."
- THE WEATHER IN HERTFORDSHIRE. Mr. E. Wallis, The Gardens, Hamel's Park, Buntingford, Herts, writes:—The weather during the past month has on the whole been very favourable to the horticulturist, planting and outdoor operations of all kinds having had very few drawbacks. The slight frosts have tended to check the very late growth, and harden vegetation against the coming winter. Like each of the preceding months of the present year November has shown some points quite opposite to its usual character. There has been an entire absence of fogs, and we shall long remember the terrific gale of the 18th and 19th, which much resembled the gale of January 18th, 1881. Rain has fallen on thirteen days during past month. Maximum in any twenty-four hours was 0.63 on the 25th; minimum, 0.02 on the 24th. Total during the past month 2.31 against 1.75 of 1892."
- --- HERBACEOUS GRAFTING.-Professor L. H. Baily of Cornell has been grafting the Tomato on Potato plants, with the result that the upper portion bore Tomatoes and the lower portion bore Potatoes.. This seems natural, and yet it is in direct opposition to experiments. which have been reported as having been made in other countries, where the result was said to be an intermixture of the two, and the facts have been brought forward as illustrating what is known as graft hybridism. The result of Professor Baily's experiments, says "Meehan's Monthly," does not show that the other experiments have been misreported or misconstrued, but it certainly does go to show the value of continually repeating experiments which are said to produce such unique results. Professor Baily found that Peppers could be grafted on Tomatoes, and that Tomatoes could be grafted on Peppers, and that these, including Egg plants, would grow when grafted on the "Alkekengi." It should be remembered, however, that all these plants are of the same natural order, and very closely related—all belonging to Solanaceæ, and there is no more surprise at this result than the grafting of the Pear on the Quince or the White Thorn. In the use of material for this herbaceous grafting Professor Baily notes that the wood must not be too young, but rather on the approach to maturity.

A CHARMING FLOWER BASKET.

ONE of the most beautiful ornaments that could be devised for the flower garden is a wicker basket, as shown in the illustration (fig. 74), and which is standing in the garden of Alfred de Rothschild, Esq., Halton, Tring. The basket is of huge dimensions, being about 14 feet across, upwards of 5 feet in height, the cross handle of course rising much higher than this. When filled with flowers it is very effective, and possesses the additional merit of being most unique. The basket is lined with turves, grass side outwards, and in this is placed a casing, which carries the weight of the soil. During the past summer the centre was bright with Lilium longiflorum and L. tigrinum splendens

grand Hydrangeas, Petunias, and Tropæolums, the latter being allowed to hang in festoons over the sides. Every plant was carefully tended, and the arrangement of the flowers reflected credit on Mr. Sanders, the head gardener.

DEATH OF MR. EPHRAIM SYMS DODWELL.

MANY of our readers will share in the regret we feel in recording the death of Mr. E. S. Dodwell, which took place somewhat suddenly at his

Born on the 28th November, 1819, at Long Crendon, Bucks, Mr. Dodwell had but recently completed his seventy-fourth year, and only this summer Mr. and Mrs. Dodwell celebrated their golden wedding, and were presented by their floricultural friends with a silver tea and coffee service at the last Show of the Oxford Carnation and Picotee Union, held, as customary, in Mr. Dodwell's garden, of which Society he from its commencement had acted both as Secretary and Treasurer. For many years he carried on business as a cigar merchant in St. Mary Axe, London, but retired from the same in 1880. In the following year he took up his residence in Oxford, where he is best known in connection

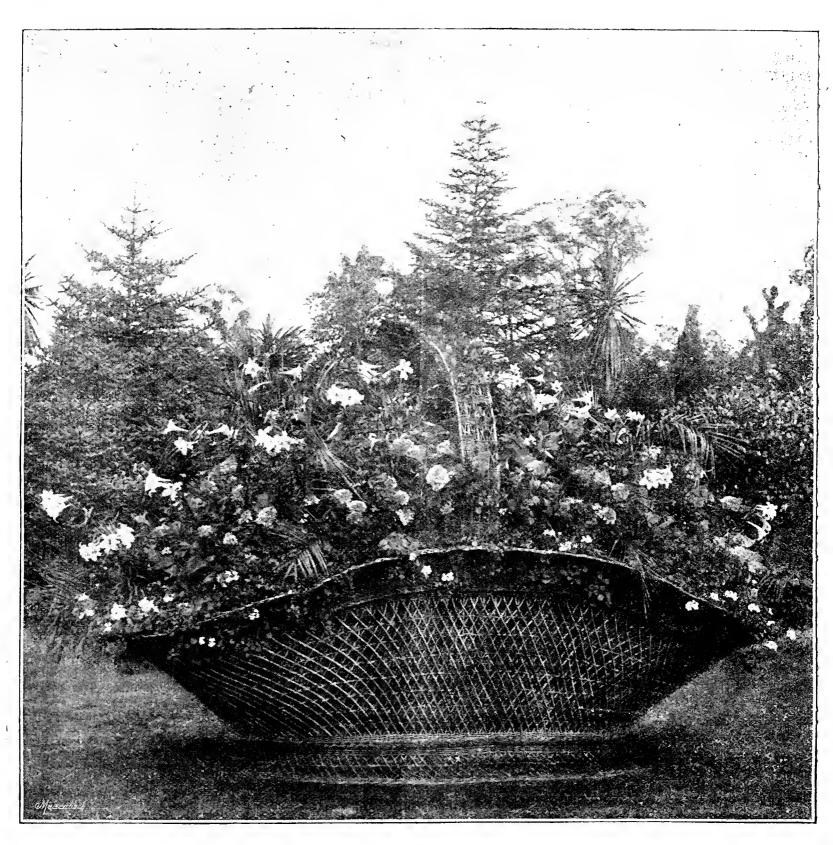


FIG. 74.—A FLOWER BASKET AT HALTON, TRING.

residence, Stanley Road, Oxford, on Thursday, the 30th ult. We understand that the deceased gentleman was in his usual state of health up to the previous day, but for some some years past he had suffered from a chronic bronchial affection, which necessitated his exercising continuous care with regard to exposure. Mr. Dodwell was seen in Oxford on the day before he was taken ill, but appeared to be more excited in his manner than customary, and on his return home it was thought advisable to call in his medical attendant, who, however, did not anticipate any immediate danger to arise from his symptoms. On the following (Thursday) morning the most painful surprise was occasioned the members of his family and friends when at eleven o'clock he passed away.

with the Society he established there on ceasing to be Secretary of the Southern Section of the National Carnation and Picotee Society.

His interest in the cultivation of the Carnation and Picotee gained for him a widely extended fame, and he will be remembered amongst amateur and professional florists as the raiser of a large number of standard varieties with which most of our readers are probably familiar. He was a contributor to the gardening Press on matters that concerned his views or practice in the pet object of his latter life, and was the author of a handbook on the cultivation of his favourite flowers.

Mr. Dodwell leaves a widow, four sons, and four daughters. Two of his sons, we understand, hold appointments in Hong Kong.



NEW CHRYSANTHEMUMS.

FOLLOWING the practice I have adopted for several years for the benefit of readers of the Journal of Horticulture, I will describe some new varieties as I have seen them, in the hope that the selection may be of service to persons who have not the opportunity of seeing them at shows or elsewhere. The advantage that an exhibitor gains in having all new varieties of merit is well known, and no matter how well grown a certain variety may be, it cannot compete with others of superior character. An example or two will suffice to show what I mean. A few years since Elaine was regarded as the best white in the Japanese section, but with the advent of Avalanche, Elaine could no longer hold its position, and gradually dropped out of premier place. Now we have another that will oust this favourite. I allude to Mdlle. There'se Rey, which is undoubtedly the finest white Chrysanthemum in existence, new or old. The advantage, then, of being in possession of new sorts of approved form is obvious to all who make exhibiting a feature-Varieties under different forms of cultivation vary somewhat in character, not only in the formation of their florets, but in colour also. For this reason the descriptions I append to each may not in all cases agree with catalogue definitions. I base my opinions on the flowers as seen.

INCURVED VARIETIES.

These appear to be fewer in number than usual, not a single sport having come under my notice during a lengthened tour and of visits to the most important shows and growers. This is to be regretted, as in spite of the number of varieties belonging to this section exhibitors at times find it difficult to stage thirty-six distinct varieties at one time. This section affords so little scope for variety of form that it is only in the matter of colour where we can obtain variety.

Vice-President Jules Barigney .- This was raised by M. Délaux, presumably from seed, and sent out first under the name of President Carnot, on trial. In colour it is chestnut suffused with buff. Catalogue description gives it as being rich crimson on the inside of the florets, but this is misleading, as it is not that part of the floret we wish to see. Unfortunately the blooms do not possess much build, but where variety

is required this sort may prove useful.

Malle. Martignac. — This is presumably another French-raised variety, possessing a much-needed colour, rich yellow. Unfortunately though the blooms are not very deep, the florets are short, but incurve

Miss Drover. - A seedling, possibly of American origin, introduced by the Messrs. Drover. An excellent bloom of it was staged by them at Sheffield, and also at Portsmouth. The florets are pointed and pearly white, a good middle row bloom. Unfortunately, though, in growth the plant is exceptionally tall.

Brookleigh Gem.—Sent out last year, is a deep lilac sport from Jeanne d'Arc, having all the characteristics of its parent in habit and

form. Many good blooms of it have been seen this year.

Lord Rosebery.—An English seedling raised by Mr. R. Owen. In colour and form it much resembles Violet Tomlin, purple violet in colour, but is larger than that member of the Princess of Wales family. Figured in the Journal of Horticulture for November 23rd, page 471.

Robert Petfield-—Presumably a sport obtained a year or two since, but not yet sent out. The stock is in the hands of Mr. R. Owen, who it is hoped will let the public have the benefit of this sterling novelty early next year. Blooms this season have freely borne out the high opinion I formed of it last year. In colour it is deep lilac with faint purple stripes. The florets are pointed and incurve thoroughly. As a middle row bloom Robert Petfield will be in great request.

Lucy Kendall.-A sport from Violet Tomlin, sent out last season by Mr. Owen, has quite come up to expectation, giving exhibitors quite a new colour. The centre of the florets are deep purple, the tip of each is

gold, which passes away with age.

Oeta.—An American-raised variety of promise. From crown buds the flowers are yellow with just a trace of bronze suffusion. From later formed buds the florets are bronze; unfortunately the blooms then are thin, lacking that substance which is necessary to make a perfect incurved bloom.

Baron Hirsch.—This variety has been plentifully shown this season, being freely produced, but it lacks quality, the petals being too erect to be termed quite first-rate.

Miss Bella Wilson.—As I concluded last year, this variety is too pointed in its petals and too coarse in the bloom to ever become popular as an exhibition variety.

Comte de Paris.—By many this variety is confused with the

Japanese Marquise de Paris. In form it partakes somewhat of the style of Jeanne d'Arc; pure white in colour, with just a tinge of blush about the base of the flower.

JAPANESE VARIETIES.

These are more numerous than in any year previous, and many excellent varieties have been obtained, which will improve the exhibitor's

stand considerably.

Malle. Therese Rey.—This must have the post of honour, it being one of the finest introductions of recent years. All other white varieties for exhibition pale before this French-raised seedling of M. Calvat. Well developed blooms measure from 7 inches to 8 inches in diameter, and are of corresponding depth, a point which renders this variety valuable for exhibiting. The florets are of medium width, and incurve slightly at the tip until fully expanded, when the point gives a little twist. The flower is white, with a faint tinge of cream in the unfolding florets. In habit of growth nothing could be more desirable; the foliage is especially robust, blooms appear to come full sized on rather weakly looking stems, which is a proof of its freedom. A bloom of this variety was illustrated in the Journal of Horticulture for November 16th,

page 449.

President Borel.—The colour is rose-magenta, the reverse pale gold, which is very perceptible in half-opened blooms. The florets are flat and of medium width, the flower being large enough for any purpose. I should advise exhibitors to add this to their list without delay

Louise.—This belongs to the type of incurved Japanese, and is one of M. Calvat's latest introductions. Not only is it a desirable acquisition for the cut bloom stand, but growing only 2 feet 6 inches high, and producing extraordinarily fine blooms, it must be indispensable for grouping purposes. The colour is flesh pink, and quite unique in that

Charles Davis.—This is a grand acquisition. Being a sport from Viviand Morel is of approved habit of growth, giving full sized exhibition blooms from plants 3 feet 6 inches high. The bloom varies much in its colouring, according to the date of "taking" the buds. Those formed early develop soft yellow blooms, while later ones give canary yellow flowers, beautifully tinted with rosy bronze. The blooms are fully 7 to 8 inches in diameter, and of corresponding depth.

Madame Edouard Rey.—Early buds of this open pale lilac in colour, being spotted and suffused with rose; those from later buds have more colour, warm rose pink. The florets are broad, incurving at the tips. The flower is full size, and a valuable addition to the exhibitor.

Eda Prass.—An incurved Japanese, though some blooms when fully developed lose that form. It is a desirable variety, and the colour is

pleasing, being a warm peach tint.

Mrs. Charles Cox.—A sport from Mons. Bernard, possessing all the characteristics of its parent in formation of flower. The colour is golden, base suffused with red. Blooms developing from late buds will exhibit a richer tone of colour.

Dr. Mrs. Ward.—An American-raised variety, having broad florets; the tip of each recurves, giving the flower a novel appearance. The surface of the florets is golden amber, which is fully displayed; the edge

of each is brick red. A striking novelty.

Miss Watson.—A desirable variety for grouping, being especially pleasing in point of colouring—a warm shade of yellow. In formation the flower closely resembles Avalanche. As a front-row bloom it will be useful to the exhibitor, but as a decorative variety it will prove

Miss Dorothy Shea.—Although sent out last year, it was only during the present season that this variety was seen in its true character. believe this variety supplied the finest individual bloom that I saw this season in a rather extended tour. The bloom in question was fully 8 inches wide and 7 inches deep, and was quite full in the centre. The colour is a rich terra cotta, with buff reverse. The petals are rather

narrow and smooth. An exhibitor's variety.

Princess Victoria. — This is one of Mr. Seward's English-raised seedlings, and represents a good type of flower. The florets are of medium width, slightly twisted at the points. Colour creamy white, flushed rose at the base. A full solid flower. The habit of growth is all that could be desired.—E. MOLYNEUX.

(To be continued.)

CERTIFICATED CHRYSANTHEMUMS.

On Tuesday last the Floral Committee of the National Chrysanthemum Society held a meeting at the Royal Aquarium, when Mr. George Gordon occupied the chair. Considering the lateness of the meeting, some meritorious flowers were staged, and first class certificates were awarded as follows:

Judge Hoitt (Mr. H. J. Jones).—A large Japanese Anemone variety with quilled incurving ray florets of a rosy blush tint, rather a flat disk

of pure white.

Col. T. C. Bourne (Mr. R. Owen).—A Japanese variety; very long flat florets of a rich rosy wine-coloured crimson, with reverse of old gold.

Lord Rosebery (Mr. R. Owen).—An incurved bloom of good size and

very solid. The colour is a deep rosy purple.

There were several other Chrysanthemums which the Committee desired to see again—viz., Mrs. Smith Ryland, a Japanese incurved, with large broad florets, crimson inside, a large solid flower; Mrs. Dr. Ward, a Japanese incurved hairy variety of good size, colour yellow and bronze; Mr. H. Jackson, an incurved Japanese of deep golden yellow; Mr. C. R. Bessent, a white incurved Japanese, with florets of good substance, and a very compact bloom; and C. B. Whitnall, an incurved

flower of American origin, colour deep purple crimson.

Some small but curious thread-petalled flowers, said to have been sent from Japan, were also staged by Mr. Morter, to whom a vote of thanks was accorded.

CUPS AND TUBES.

THOUGH we have cups and tubes of improved patterns "the Perfect" has yet to come. We want a cup with a spring or clip in the neck that will catch the stem of the flower when drawn down, and hold it securely and firmly in position. Especially is the want felt with incurved blooms, for pinning the stem with a cork wedge does not give satisfactory results. Some of them are sure to get loose, and by the time you reach "the halls of judgement" they are wobbling about.—E. K.

HAIRY CHRYSANTHEMUMS.

I HAVE been expecting to hear something about these new candidates for public favour, and have kept a rather keen look-out for them wherever I have been this season. There have, however, been so many of the other sections shown in fine form that hairy varieties, or at least the newest of them, seem to have escaped anything like marked Everybody is now fairly well acquainted with the older sorts like Mrs. Alpheus Hardy, Louis Boehmer, L'Enfant des Deux Mondes, W. A. Manda, and a few others, that nothing need be said concerning them. But some notes of a few of acceptable to those interested in the new class. But some notes of a few of the novelties may be

Hairy Wonder is a Japanese incurved bloom of a deep bronzy yellow, with numerous hairs on the reverse of the petals; and another, called King of the Hirsutes, which I saw at the Aquarium in Mr. Jones' stand, is also a yellow, which, in the uncertain light of that building, seemed to approach too nearly in form and colour to W. A. Manda. Sautel, 1893, is probably the best, for it is larger in size than most of those in 1893, is probably the best, for it is larger in size than most of those in its class; it has deeply grooved incurving florets of a light rosy amaranth inside, with a pale pink silvery reverse. Chrysanthemiste Delaux is not pretty, although distinct, is a dull bronzy crimson. Mireilli is also a Japanese, the colour pale lilac. Souvenir de l'Ami Coye is better in several respects, being a pure white Jap of the incurved type, with narrow pointed florets and plenty of hair on the reverse. Belle Arlésienne, like the four preceding, comes from France; it is less hairy than the others, but the colour is clear and good, being pure white, with a delicate shade of yellow in the centre. William Falconer is a pretty pale blush sport from Louis Boehmer, a more refined looking flower than the parent. This was raised in America, where it is also known, I believe, as Patrick Barry. Mrs. Dieterichs is probably from the same country, as Patrick Barry. Mrs. Dieterichs is probably from the same country, the florets incurve, and the colour is a clear silvery shade of mauve. Miss Baldwin is rather a flat flower, very tall in growth, the colour pale mauve or amaranth. There are about twenty other sorts announced in the cotalogues but the above ere all I have seen worth montioning. the catalogues, but the above are all I have seen worth mentioning.-P.

POMPON FLORENCE CARR.

PROBABLY never in any season has there been more Pompon Chrysanthemums shown than during the current year, for at all local shows they have been well represented, while at the "National" Exhibition they were shown in abundance. With the exception of one or two cases they were all of very high quality, showing that they are becoming more popular, and as the varieties are not very extensive any good sort would be much appreciated, and that I think we shall find in Florence Carr. This is a variety raised by a Mr. W. Carr of Crowdon in Florence Carr. This is a variety raised by a Mr. W. Carr of Croydon, who exhibited it at the show held in the Royal Aquarium, Westminster, where it was commended; it received a first-class certificate at the Crystal Palace this year. The colour of this new Pompon is of a deep bronzy red, flower of large size, fine substance, and the plant a dwarf habit of growth, something after the style of Mdlle. Elise Dordan. I do not know whether this Pompon is being sent out; if not, I hope it soon will be. Perhaps some of our readers will be able to give us their opinion about it.—GROWER.

INCURVED JAPANESE CHRYSANTHEMUMS.

Where any society is affiliated to the N.C.S. the duties of judges are clearly defined in the matter of nomenclature, and their duties in this respect are rendered quite easy. Varieties that do not correspond with the published description of each in the official catalogue must of necessity be disqualified. In the case in point (page 497) the judges ought to have exercised their powers in disqualifying Léon Frache and Mdlle. M. Hoste, as they are clearly not recognised as incurved Japanese. The latter was introduced by Lacroix, 1891, and except a few florets from early formed buds the blooms cannot be termed incurved at all. Léon Frache opens with an inclination to incurve, but this eventually Léon Frache opens with an inclination to incurve, but this eventually passes away, leaving the florets quite flat. Now that this section is increasing so fast varieties that remain incurved when fully developed only ought to be admitted. For instance, Robert Owen is a true type of incurved Japanese. of incurved Japanese.

Where judges have no definite law laid down for their guidance, as in the case of new varieties, it is then rather embarrassing for them to be called upon to make a law applicable to certain varieties.—E. M.

CHRYSANTHEMUM CATALOGUES.

MAY I be allowed to point out a very important matter in connection with the new Chrysanthemum catalogues which does not seem

to have entered the minds of our principal growers? In these days there is a large number of persons interested in tracing the origin of some of the new flowers and of discovering the age, raisers, and names of some of the older ones. A set of old catalogues of any of the principal Chrysanthemum importers would afford much interesting material of this sort, especially if they could be bound up together in a neat handy little volume. With the lists of most of the leading firms this is impossible, because every two or three years they alter the sizes of their lists, with the obvious result that after lying about for a time they become dog-eared, the wrappers torn, and are little better than waste paper. If some of our trade growers would only do as the late Mr. John Salter, or as Messrs. Dixon did-keep their lists to one size-many of us would, I am sure, carefully place them aside year by year and have them bound up for future reference and instruction. This is a plan I have adopted for some years where possible, but unfortunately several of our leading trade growers and importers will never be represented in my set of Chrysanthemum catalogues because of the frequent changes they have made in their lists.-P.

MR. MAWLEY'S CHRYSANTHEMUM ANALYSIS.

WHILST all must concede that Mr. Mawley has in the preparation of his Chrysanthemum analysis, published in the Journal of Horticulture for November 30th, shown great patience many persons will ask of what use is it when it is published? The figures given of the number of blooms shown at the Royal Aquarium November shows are interesting, in so far as they exhibit the rise and wane of exhibitors' enthusiasm. Starting low in 1885, rapidly rising for the next three years, falling to zero in 1889, then springing up most spasmodically to more than double the number of the previous year, then coming down again gradually to a low ebb in 1892, when many exhibitors doubtless having the measure of their quality wisely retired from a competition at which only the very best blooms can win. Still even these figures are of no appreciable value to the present day grower, whilst the long lists of varieties that have been popular in past days read simply as old history, for to-day already three-fourths of the Japanese mentioned are as good as dead and buried.

In the case of the incurved forms they move so slowly that change is far less in their case in ten years than in the Japanese in one year. Now, what would be far more useful as well as interesting, would be selections made by bona-fide private growers and exhibitors of say twenty-four of the best Japanese selected from their own or other boxes of the past show season. With exhibitors it is most important to learn of the past show season. With exhibitors it is most important to learn not of old and now shunted sorts, but of the very best present day varieties. I should rigidly exclude from the growers who may be invited to join in this selection—and some twenty-five to thirty would be ample—all trade growers. The object should be to secure impartial returns of the very finest varieties, each one being placed on the list by the sender in the order in which he regards it as meritorious.

It is so very obvious that whilst this season we have seen fully one half of the places in good class boxes occupied by new or practically new varieties that next year that proportion will be extended to fully

new varieties, that next year that proportion will be extended to fully two-thirds, almost the only so-called old varieties, perhaps, being E. Molyneux, Avalanche, Sunflower, Viviand Morel, W. H. Lincoln, and Etoile de Lyon; and of these how many will be found in first-class stands two years hence? It is this great swiftness to displace older good sorts that presents such a terror almost to exhibitors. They cannot, if sorts that presents such a terror almost to exhibitors. They cannot, if they wish to be in the front ranks, refrain from obtaining the best new sorts, but they do not want to purchase varieties that have either not been seen or may prove worthless. It is in this respect that high-class selections by leading private growers would prove so helpful.

Whilst we do undoubtedly derive splendid varieties of Japanese Chrysanthemums from seed, and for such a facile means of obtaining

variations we ought to be grateful, yet is it in danger of becoming something of a nuisance, because it is at once so difficult and so costly to keep pace with novelty production. Only last week there were at the Drill Hall and the Aquarium no less than eight Japanese varieties certificated, and at the preceding meetings on November 7th and 14th at the same place nine other Japanese were certificated and several others had been certificated previously, so that altogether some twenty-five at least have been so honoured, and another twenty-five have come so near to honours as to show that they have if well grown high merit. What wonder is it if in such case a selection becomes bewildering ?—A. D.

THE RIGHT BUD.

This is the most perplexing question a Chrysanthemum grower can out to me. I get this question from all parts of Scotland, Ireland, Wales, and England, but it cannot be answered without some consideration. First, as to what part of the British Isles does the question come from? What time of the year were the cuttings rooted? How were they treated after rooting? When were the plants potted? Were they ever topped, pinched, or cut back?

Before a correct or final answer can be given all the above details must be taken into consideration. The "right bud" for southern England is the wrong bud for northern districts, and the same applies to Scotland. The grower should be the best judge. He should study his locality; the time the blooms are required; whether the variety is early, medium, or late. No hard and fast rules can be laid down. The seasons vary so much; the treatment of plants varies equally as much. Therefore, no definite answer can be given to this question. Many growers profess to know the exact bud to select, and when to select it. I do myself, but only for my own locality, not for Great Britain.—R. O. M.

IN IRELAND.

It is very kind of "Taddy" (page 497) to refer to me and my visit to Ireland. I can assure him that I am not so unfavourably impressed by what I saw as he imagines. True, I did not find Chrysanthemums in that condition that would enable their owners to be bold enough to cross over to England and "sweep the decks" of the best prizes at the leading shows. The same remark applies to other countries, where I have gonc upon the same errand, therefore this may be some consolation to Paddy."

If I did not find Chrysanthemums in the condition your correspondent thinks they should have been upon this occasion, I found several things that cannot be excelled in England, viz. enthusiasm coupled with a desire to emulate the successful, and a hearty acceptance of defeat without the slightest attempt (publicly), and far as I know privately, to cavil at the awards or to entertain acrimonious feelings towards the successful exhibitors. This is a trait in the character of an exhibitor to be proud of, and one that could with advantage be copied by not a few on this side of the Channel.

I did not expect to find Chrysanthemums of the highest order of merit, therefore was not disappointed. The date was rather late for the finest blooms to be seen, and this is some excuse. I knew that the exhibitors were mainly amateurs, but from blooms that were staged at the show, "not for competition," that had a few days before won prizes at the exhibition of the R.H.S. of Ireland held in Dublin, I could very well gauge the Chrysanthemums produced in Ireland, and I would advise English cultivators not to rest on their laurels or they may find a "dish" of Irish-grown blooms set in front of them upon an English exhibition table that might be "humiliating" to the latter. If the blooms at the Dalkey Show were not entitled to rank as first-class, it is only fair to the cultivators to say under what conditions some of these said blooms were produced. Especially do I allude to the exhibits of the worthy Hon. Secretary, Mr. J. M. Ross, who last year fairly "cleared the board," but this season was not so fortunate, while his successful rival, Mr. J. Smallman, took all before him.

To return to Mr. Ross and the difficulties he has to encounter in growing Chrysanthemums. Rarc-an-ilan, the residence of Mr. Ross, is situated on the edge of a cliff in Dalkey Bay, facing east, about ten miles from Dublin. The house is but 40 feet above sea level, and within that distance from the sea at high water. During the storm which prevailed on the 18th, three days before the date of the show, it was not possible to see through the dining room windows. The glass was thoroughly encrusted with the salt deposit from the spray which was lashed against them by the fury of the gale. Within 20 feet of these windows, and facing south, stands the greenhouse in which the blooms unfolded their The summer quarters of the plants are situated on the western side of the house, and but 60 feet from the said dining room windows. So enthusiastic is Mr. Ross about his Chrysanthemnms that for the summer quarters he has appropriated part of his lawn, so that they might enjoy more space than hitherto. What would our leading English exhibitors say if they were told to produce blooms equal to their present standard under similar circumstances? Surely this is Chrysanthemum culture under difficulties. When these facts are known I doubt not but that Chrysanthemum growers generally will agree with me that "Paddy" need not take so desponding a view of my first impression

With regard to the Show itself the competition was very keen. Specimen plants were really well shown, and would have done credit to many English meetings. The class for nine distinct specimens brought out three exhibitors. Mr. Tower, gardener to J. E. McCormick, Esq., Monkstown, Co. Dublin, was an easy first with plants from 3 feet to 4 feet high, not formally trained, but carrying on an average thirty to forty blooms each, and of really good quality. Mr. W. M'Comas, The Grange, Monkstown, was a good second. In other classes for plants Mr. J. Smallman, Shamrock Lodge, Dalkey, was the principal prizetaker with excellent examples of W. Holmes, Etoile de Lyon, Mdlle. L. Leroy, E. W. Clark, and Source d'Or. So numerously were plants staged that a tent had to be requisitioned at the last moment, the Town Hall not being nearly large enough to contain all the exhibits. This is the first time that I have seen Chrysanthemums shown under canvas.

The cut bloom classes were well represented. In the open classes for cut flowers, Mr. Knowldin, gardener to J. G. Nutting. Esq., Gortmore, Dundrum, was the principal prizewinner, his exhibits being much in advance of any other, the blooms showing good culture, and were neatly staged. Mr. Smallman won several first and second prizes, his blooms of Florence Davis, E. W. Clark, Viviand Morel, Col. B. Smith, Golden Empress, Violet Tomlin, Queen of England, Lord Wolseley, and Jardin des Plantes were really creditable. The Anemone blooms from Mr. Robert M'Mullen were quite up to English form, being full in the centre and neatly staged. Prizes were offered for baskets of Chrysanthemums arranged with Ferns and other foliage. Several commendable exhibits were forthcoming, the best coming from Mrs. Findlater.—E. MOLYNEUX.

NATIONAL CHRYSANTHEMUM SOCIETY.—ANNUAL DINNER.

THE members of the National Chrysanthemum Society held their annual dinner at Anderton's Hotel, Fleet Street, E.C., on Thursday evening, November 30th, and, as on previous occasions, resulted in an enjoyable gathering. Sir Edwin Saunders, President of the Society, occupied the chair, and he was supported by many influential gentlemen interested in the culture of the Chrysanthemum. About 140 persons

sat down at the tables, and amongst others present we noticed Dr. Low, Professor Aguilar, E. Trimmer, Esq., S. Hutchinson, Esq., W. F. Forsyth, Esq., Ashley Gibbings, Esq., J. G. McKinlay, Esq., C. E. Shea, Esq., J. Halse, Esq., J. W. Wilkinson, Esq., J. T. Berridge, Esq., Messrs. C. E. Pearson, R. Ballantine, C. H. Payne, T. W. Sanders, D. B. Crane, H. J. Jones, R. Owen, S. Mortimer, and many well-known horticulturists. The room was tastefully decorated with large Palms and other foliage plants kindly lent by Messrs. E. D. Shuttleworth & Co., Albert Nurseries, Peckham Ryc, and the tables were embellished with flowers sent by Messrs. T. Bevan, G. Langdon, H. Cannell, and others. The arrangements were carried out in an efficient manner by Mr. R. Dean.

Sir Edwin Saunders, after the customary loyal toasts had been rendered, proposed the toast of the evening, "The National Chrysan-On rising the Chairman observed that he was sure themum Society." the toast would meet with a ready response. He thought it might with great propriety be termed "Continued Success to the National Chrysanthemum Society," inasmuch the progress made during the past few years left nothing to be desired. In proof of this he would give a few statistics which had been placed before him. Already 150 new members and twelve Fellows have been elected during the present year. (Hear, hear.) In addition to this fact nine more societies were recently affiliated. The growth of Chrysanthemum societies in Australia and at the Cape was a stirring instance of the popularity of this flower. Regarding the exhibitions held under the auspices of the N.C.S. during the present year, he might say that these had been most successful, not only in the extent of the exhibits, but the quality of the flowers. It was acknowledged by experts that some of the Japanese blooms staged at the October Exhibition rivalled those generally seen a month later. The November Exhibition was one of the finest the Society has ever held, there being nearly 500 entries. The meetings of the Floral Committee in October and November had been the means of bringing together a large number of new varieties, showing the increased interest taken in the Chrysanthemum by various raisers. They had received flowers for examination from the continent and other parts of the world. Early in the present year the Society sent, as they were well aware, blooms frozen in ice to New Zealand, and he had reason to believe they created much interest there. The educational work of the Society, including the papers read at conferences and meetings, had played an important part in disseminating a love for this flower. He considered this was a record of which those who were mainly instrumental in bringing it about may justly be proud. The Society was established at a period when the Chrysanthemum was not in very good favour, but it has made marvellous progress, and he ventured to think that the world was greatly indebted to the N.C.S. for the wonderful improvement made in the flower. (Hear, hear.) While occasional spasmodic exertions of a few growers may be useful, it was to the emulations of exhibitions held under the auspices of the Society that one must look for advancement. He viewed the Chrysanthemum from three points -æsthetic, educational, and commercial. In the first he included the improvements in size of flower, form, cultural details, to say nothing of the numerous insect pests with which growers had to contend. Then the arrangement of the flowers was an important feature, seeing that colours were not brought into juxtaposition, but blending them harmoniously. With reference to the second point, he had already remarked upon the educational work being taken forward by them; and as to the commercial side of the question, he hardly dare tread upon that ground further than saying that the trade growers merited all that could be said in their favour, whether they be actual or potential millionaires. (Laughter.) The Chairman concluded by remarking that the Chrysanthemum, as we now see it, was a modern flower, and he doubted not that the ancient Romans would have given much to have possessed such splendid blooms as were so plentiful now for decorating the tables at their banquets. (Applause.)

Mr. R. Ballantine gave the next toast, that of "The Affiliated Societies," and in doing so remarked that they had been a great strength to the National Chrysanthemum Society. When the idea was started eight years ago fifteen societies became affiliated to the "National," and they had gone on increasing by leaps and bounds until there were now 102 affiliated societies. Many of these were in Wales, a few in Scotland, and, he was glad to say, one in Ireland; there was also one in the Cape, but the greatest pleasure of all was in announcing that they had ten affiliated societies in that "England over the sea"-Australasia. They had been favoured with the presence of representatives from such societies on these occasions, and he well remembered the centenary festival when a lady representative from Tasmania was present. The result of this, and the excellent manner in which their indefatigable Foreign Secretary, Mr. C. H. Payne, carried out his arduous duties, was that the Chrysanthemum had increased in popularity in the colonies. It was from New Zealand that they received the first consignment of frozen flowers, and he had the pleasure that of assisting to reciprocate by despatching some frozen blooms from one of their exhibitions. These flowers had been exhibited in New Zealand and several parts of Australia, and were much appreciated. He was pleased to couple with the toast the name of Mr. W. Ratchelous, who represented the St. Neots Society, which had won the challenge trophy for the third time. (Cheers.)

Mr. Ratchelous briefly responded, and said that although St. Neots was one of the smallest Chrysanthemum societies in the kingdom, most people would agree with him that it had been well represented at the exhibitions. The members of it had won the trophy three times, and he hoped the Society would win it again. It was specially gratifying to him to hear that there was an affiliated Society in Ireland, because he had

recently received a letter from an Irish gentleman, H. F. Smith Barry, Esq., as member of Parliament for their district, congratulating the

members of St. Neots Society on the success they had attained. (Cheers.)
Mr. C. E. Shea in giving "The Health of the President," said that in
Sir Edwin Saunders they had a President that was in sympathy with the interests of the National Chysanthemum Society. He presided at the dinners and at the conferences, and he was a gentleman of patience and endurance. He said that advisedly, because Sir Edwin had once read a paper of his (the speaker's) whilst he was away. He congratulated the Society upon having such an admirable President. The Chairman briefly responded, remarking that he should have pleasure in forwarding the interests of the Society.

Dr. George Walker proposed "The Vice-Presidents, Officers, and Committees of the Society," and briefly eulogised them. To the officers and Committee he said much of the success of the Society was due. They had a capital President, excellent Secretaries, and Committees that worked like slaves.

Mr. C. Harman Payne, the Foreign Corresponding Secretary of the Society, and Mr. H. Cannell responded.

The Chairman briefly rendered "The Visitors," to which Dr. Low responded.

Mr. J. W. Wilkinson, Secretary Royal Aquarium, gave "The Press," which toast was responded to by Messrs. E. Ranger Johnson and

B. Wynne.

During the evening the presentation of prizes took place, including the challenge trophy, Holmes' Memorial cups, and medals awarded to various growers for blooms and plants staged at the exhibitions during the present year. It was announced that owing to the generosity of the President the reserve fund now amounted to upwards of £50.

NATURE'S HELPS TO GARDENERS.

THE LACED-WINGED FLY.

As though to assist man in his labours, Nature has provided several checks on the multiplication of the aphis tribe, if we, in our ignorance, did not mar her efforts. Besides the larvæ of the Syrphidæ, referred to in the Journal of Horticulture for October 26th, page 383, there are other insects that help to lessen their numbers.

The larva of the lace wing fly (Hemerobius), see fig. 75, is a very voracious aphis eater, and consequently a most useful help to us gardeners. Not being in the shape of a maggot or grub—as it is a six-legged perfect insect to most eyes—the larva may perhaps often escape death, being considered harmless; but owing to its enormous jaws, certainly a third of the length of the whole body, it might by mistaking head for tail be thought a small earwig and suffer accordingly. Like the earwig we often see in half-folded leaves, it is brownish-grey in colour, and quick in movements. These larvæ are gormandisers, so much so as to induce the naturalist Reaumur to style them the lions of the aphis tribe. The jaws are peculiarly formed, so that the aphis held by them are speedily sucked dry and tossed aside. When fully grown they are speedily sucked dry and tossed aside. When fully grown they make a sort of cocoon, in which they remain many months before the chrysalis changes to the perfect fly. This is an insect of the dragon fly tribe, having four large very fine wings, beautifully veined, many of a pale bluish green colour; the whole insect is pale green in colour, and the eyes are like brilliantly burnished gold. Though its wings are large its powers of flight are very feeble; this renders it an easy prey to birds and children. Its smell is disgusting, and this probably earns death for it from those who do not know its great value in the economy of Nature. of Nature.

The eggs are very peculiar, whitish or pale primrose in colour, oval in shape, and are at the end of a long white stem from a quarter to half inch in length. These stems of the eggs are attached to leaves or to the smaller twigs, fifteen or twenty in close proximity to each other. The stem is both firm and elastic, so that when blown about they are rarely injured. They are said to form a dainty morsel for other aphis eaters—viz., some of the ladybird tribe. They are often found on the Privet.—Y. B. A. Z.

ROYAL HORTICULTURAL SOCIETY.

NOVEMBER 28TH.

SCIENTIFIC COMMITTEE. — Present: Dr. M. T. Masters (in the chair), Prof. Church, Mr. McLachlan, Mr. Bunyard, Rev. W. Wilks, Dr.

Bonavia, and Rev. G. Henslow, Hon. Sec.

Pears and Fungicides.—With reference to the remedies suggested by Mr. Massee, Dr. Masters inquired of Mr. Bunyard as to his experience in their use. He replied that growers were frequently deterred from employing any poisonous preparations in consequence of the carelessness of the men from their want of realising the dangers involved in using them, so that they preferred to employ sulphur, and especially the "black" impurer sort.

Tamarix dimorphic.—Mr. Henslow remarked that the two species common in Egypt, T. articulata and T. nilotica, corresponded with the two forms of Casuarina exhibited by Dr. Masters at the last meeting, who observed that T. gallica not infrequently develops the two forms on

the same plant.

Sterculia nobilis, R. Br.—A fruiting specimen of this plant was received from Syon House. A synonym is Southwellia nobilis, of Salisbury's "Paradisus Londinensis." It has been known to fruit in this country, but Dr. Masters observed that it is rarely now seen. The

present tree is eighty years old, but never fruited before. Dr. Church observed that being closely allied to Theobroma cacao or Chocolate, it would be interesting to examine the seeds for theobromine.

Primula capitata and Basal Rot in Daffodils.—The following communication was received from Rev. C. Wolley Dod, Edge Hall:—"I have been engaged for several years in investigating that mysterious phenomenon, basal rot in Daffodils. The Scientific Committee have assured me (after repeated examination of bulbs sent by me) that no specific cause of it can be detected. I am inquiring whether there is anything analogous to it in any other plants—viz., death from general unsuitable conditions, commencing at the juncture between the root and the bud, and producing decay there, partial or entire. I have noticed some-



FIG. 75.—THE LACED-WINGED FLY (HEMEROBIUS). A, the Eggs; B B, the Larvæ; C, the perfect Fly, natural size; D, the same in flight.

thing similar in some Himalayan Primroses, especially Primula Stuarti. which I have ceased to cultivate because the base of the bud (I use bud in its botanical sense of crown from which the leaves sprout) is so apt to rot into pulp. In P. capitata, however, of which I have grown and flowered thousands during the last fifteen years, no winter bud is ever formed. Mr. G. Wilson tells me that in his garden at Wisley it is a hardy perennial, but with me it invariably dies if left out in winter. The tissues are not destroyed by hard frosts, for after a hard winter the leaves in the centre of the tuft often continue green in February, but rot seems to commence at the base, as in the specimens enclosed, and the open leaf tuft invariably rots off before spring, being often still green. I should be glad of an opinion whether the case is likely to be analogous to that of basal rot in Daffodils?" Mr. Wilks corroborated Mr. Dod's experience, as he found the plants died in a similar manner in his garden. The specimen was forwarded to Kew for examination.

Cuscuta reflexa.—A specimen of this parasite growing on Jasminum revolutum was received from Mr. F. W. Burbidge of the Tr. Col. Botanic Gardens, Dublin. He observes that "it does nearly as well on Forsythia viridissima and F. suspensa, as well as on Ivy. Indoors in a warm house, Pelargoniums, Fuchsias, and Crotons seem to suit it best. We had it growing on a Zonal Pelargonium which was placed in the Jasmine on a west wall last May, and it now forms a wiry net-like mass 10 feet high and 8 feet wide. It often twists upon itself." An examination of the suckers or haustoria showed that the Cuscuta often preyed upon itself whenever two branches were spirally twisted together. itself whenever two branches were spirally twisted together. As far as

a few observations can be trusted the roots of the thicker of the two stems always penetrated the other. It frequently fixed itself to the surface of the leaves of the Jasmine as well as around the stems and petioles.

Preserving Fresh Fruit in Carbonic Acid Gas.—The following communication was received from Mr. W. Sykes of Woodleigh, East Dulwich, being a description of experiments suggested at a meeting of the Scientific Committee on July 25th :- "On August 23rd I put down some Apples, Pears, Plums, Tomatoes, and eggs, but am sorry to say that, so far, my experiments with carbonic acid gas are unsatisfactory; neither does it appear to check the ripening or decomposition, and it gives the fruit a peculiar flavour. The Apples have a musty, coddled taste. With the Plums the gas centres round the stones. In the Tomatoes there is a sharp, forbidding, pungent taste throughout, which leaves them after standing twenty-four hours in the air. I allowed the gas to pass through the washing bottle into the tins, the natural air escaping through a pipe. After the fresh air had escaped (tested with a lighted match), I closed the latter pipe and let the gas work itself dead slow. After giving them all a good application (three dozen taking in both applications some six hours) I went through them again, opening the escape pipe mentioned above to scour out, then I reclosed it with pliers before closing the entrance pipe, the gas had worked dead slow, the top and bottom bulging out. The pressure at the gauge stood at 5 lbs. The water in the washing bottle was fresh boiled and put into the washer (just bearable) being changed for every dozen tins. I did not exhaust the air, and found with this test of a week that the Tomatoes were sweating equal to those kept for over a fortnight after the air was exhausted. Some Coryopsis, white Marguerites, and Nasturtiums were put under the same process (August 23rd). The first kept well, and after being in water looked none the worse; the white of the Marguerites turned to a pale chocolate beyond recovery, and the Nasturtiums collapsed into a withered heap." Professor Church observed that the failure might have been due to an insufficient time having been allowed for the atmospheric air to diffuse. He added that much carbonic acid had been proved to exist around Mangold roots when turfed over, which undoubtedly acted as a preservative.

GRAPES AND TOMATOES.

[Read at Hereford by Mr. S. T. WRIGHT, Gardener to C. Lee Campbell, Esq., Glewstone Court, Ross.]

THE CULTIVATION OF GRAPES.

In dealing with this subject my remarks must be brief, as time will not permit of an elaborate description of Grape-growing. A good start is important, and to insure that result perfect drainage is essential, as stagnant water is fatal to satisfactory results, so that if there is not a free drainage naturally, it should be provided; at the same time a heavy expense is unnecessary. A drain put down the middle of the border and covered with a foot of rubble will be ample; over this turves should be placed, grass side downwards; and if the soil is of a fairly appearance of the sould be placed. open character. I would not use anything but turf in making the border. If the soil is heavy, just sufficient lime, mortar, or plaster refuse may be added to keep the mass open and allow the water to pass away freely. My experience is decidedly against mixing animal manures with the soil for the border. It is not wanted, and it is very apt to cause the border to become sour, and the Vines more or less unhealthy in consequence. It is a mistake to make the border full width at first. Supposing it to be from 2½ to 3 feet deep, which is deep enough, a border 3 or 4 feet wide at first will be ample for the first two years, and after fruiting has commenced a foot more may be added until the allotted space has been filled. Opinions differ as to the best time to plant young Vines. I favour planting when the Vine is in active growth, disturbing the roots as little as possible, avoiding deep planting, but having the top roots of the Vine only 2 or 3 inches below the surface of the border, making the soil firm about the roots, and a thorough soaking of water applied at once. Liquid manure is seldom requisite for the first year, as it would probably cause a thick pithy growth, difficult to ripen, and thus a source of trouble in the future. What should be aimed at is a short-jointed, hard wood, with bold buds, that will be almost certain to give satisfactory results. Attention to ventilation, atmospheric moisture, and watering of the border is all-important to grow first-class Grapes.

Taking ventilation first, every practical gardener is well aware how the weather has to be studied, increasing or reducing the air admitted according to external circumstances. If too much air is given, so as to give the Vines a check, mildew sets in, or the Grapes refuse to swell properly, and if too little is given, scalding of the foliage occurs. To prevent such disasters a constant watch on the weather must be maintained, thus avoiding any rapid rising or falling of the temperature. On bright mornings a little air should be admitted early, gradually increasing it as the sun gets more power, and closing in the afternoon with good sun heat, while the Vines are growing. When the fruit begins to colour a little air should be left on day and night, but not allowing the temperature to become unduly low. After the fruit is cut plenty of air should be admitted, and the Vines kept as cool as

possible without becoming frosted. Atmospheric moisture is only second in importance to ventilation. As a rule Vines are started into growth at a temperature of 45° to 50°, with a thorough syringing of the rods twice a day, once in the morning and again in the afternoon when the house is closed. The border walls, and paths are also damped several times daily, and the

evaporating troughs on the hot-water pipes kept full of water. As the Vines come into bloom syringing them ceases, and a rather drier atmosphere maintained until the Grapes are set. If the Vines are in good health a sharp rap on the rods will cause the pollen to fly freely, and thus cause a good set. As soon as all the bunches are finished setting all the worst or smallest should be cut off, and a more genial atmosphere maintained, thoroughly damping the floors and borders early in the morning, and again in the middle of the day if bright, and again in the afternoon, shutting up with a good sun heat. If the temperature rises to 90° or 100° when closed in the evening, so much the better for Grapes, providing there is plenty of moisture, as it will cause the berries to swell rapidly, and also suit the foliage of the Vine.

Early thinning is of vital necessity if large bunches and berries are desired. In thinning, a space of about 1 inch will be ample for each berry, but for the smaller-berried varieties a little less may be allowed. The number of bunches each Vine should carry depends on its health and vigour and the size of the bunch. For a healthy Vine, I consider from 30 to 40 lbs. per rod of about 16 feet long a fair crop; with liberal feeding and good management such a group of Granes. with liberal feeding and good management such a crop of Grapes ought to finish well, and produce a similar amount annually.

The question of feeding is somewhat complex, as soils vary so much that manure excellent in one place may be of little value in another, owing to the different constituents present or absent naturally in the Therefore it is evident that Grape growers must ascertain what elements are lacking in their soil necessary to produce good Grapes, and when this deficiency is discovered it will be easy to remedy the defect. Judging from my experience in various parts of the country, I think the majority of Vines do not receive anything like adequate nourish-When we consider the Grapes, wood, and foliage taken every year from the Vines, it is apparent that a vast amount of plant food has been absorbed from the soil, and unless these elements are returned nothing can prevent degeneration setting in through exhaustion. Again, I think too much importance is attached to animal manures; all solid or liquid manures from cattle have a tendency to cause sourness of the border, followed by unhealthy root action. The best form in which to apply animal manures is in connection with artificial or chemical manures; if used with care, judgment, and a knowledge of the soil, splendid results will be certain, if combined with good culture in other

respects.

The following manures I have used with satisfactory results at Glewston Court on the light sandy soil there:—Liquid and solid manure from cows, liquid manure extracted from sheep droppings, fish guano, bonemeal, superphosphate of lime, and muriate of potash. The time of feeding is all the year round in the case of Vines under my charge; manure in some form is applied even when the Grapes are ripe, which does not affect the flavour at all, but greatly assists the Vines to bear the crop, helping also to develop the buds for next season. The advantage of winter feeding, or while the Vines are at rest, I consider of much importance, for though the root action is slight at that period the soil absorbs the plant food applied, and when fresh growth is made it is there in the most available form for the roots to take up as they require it; consequently the Vines start into growth in a most

gratifying manner.

Pruning is best done as early as possible after the foliage falls; in fact, I seldom wait until all is down, but, as soon as about four-fifths of the leaves have fallen I prune all side shoots to the first good bud nearest the main rod, which is usually the first or second eye. Young leading rods, if strong, may be pruned to within 3 or 4 feet of the old cut; a greater length of young wood is seldom advisable if the Vines are to crop for a considerable number of years. In concluding this paper on Grapes, I would strongly urge the importance of cleanliness. Insect enemies of all kinds must not be allowed a footing, and every effort should be made to keep the Vines free from attack, and the foliage clean and healthy right up to the time it falls. By doing so success is practically assured.

TOMATOES AND THEIR CULTURE.

In this short paper on Tomatoes, only the chief points connected with their management will be given. So popular have Tomatoes become, that nearly all classes have become consumers, and many acres of glass are devoted to meeting the demand for them. At the same time I question if all the Tomatoes sold as English are grown in this country; and many persons have been so disappointed at the flavourless fruit they purchased that they have decided to try to grow their own. To such persons I hope the following remarks may prove serviceable:—

If a moderate amount of heat under glass can be obtained, the early part of February is a good time to sow the seed, which should be sown rather thinly in a pot or pan containing fine and fairly rich soil. As soon as the seedlings appear they should be placed in a position close to the glass to prevent their becoming drawn. When the young plants are large enough to handle, they ought to be placed singly in small pots, making the soil moderately firm, and after giving a good watering placed near the glass again. Care must be taken that they do not suffer by want of water, otherwise they become stunted, and seldom do much good afterwards.

As the pots become full of roots, the plants may be shifted into a larger size, in soil composed principally of turfy loam and a slight addition of bonemeal and decayed horse droppings, still keeping the plants near the glass to cause a stout sturdy growth. The next shift, the plants may be transferred to large pots or boxes, using the same soil as previously named, and placing the plants in the lightest position possible, avoiding overcrowding. From one to three stems, according to room, can be trained up, pinching out all side growths as they appear;

and if the foliage is too thick half of each of the largest leaves should be

cut away.

No feeding with manures is required until the first truss of fruit is set; then feed as much as you like, as the fruit prevents any undue grossness. By heavy feeding the plants will continue bearing for months. At all times avoid a close, moist atmosphere, as it is almost certain to cause disease to set in. A warm and dry atmosphere with plenty of liquid nourishment suits the Tomato.

Outdoor Tomatoes should be sown in heat early in March, and kept growing sturdily from the first as before mentioned, gradually hardening the plants off in May, and planting them out in warm and sheltered positions at the end of that month, keeping the shoots far enough apart to prevent crowding, and shortening the leaves if necessary. A mulch of good manure, or an occasional soaking of the same in liquid form, when the plants are fruiting, will act very beneficially. At the end of August all further growth should be stopped, as fruit formed after that date will not develop properly; and it is better to throw all the strength of the plant into the fruit already formed. If any fruit is not ripened when cold weather approaches, it should be cut off with a good piece of stem, and hung up in a warm place where it will colour later on.

DESSERT TABLE COMPETITIONS.

AT the Hull Chrysanthemum Show there has been a challenge cup competition for a dessert table for many years past, the exact wording of the schedule being as follows: "Dessert table, 8 feet by 4 feet, completely laid out for six persons, only Chrysanthemums with any kind of foliage to be used in its decoration."

This year the first prize was awarded to a table having no dessert thereon, excepting one small dish containing about half dozen chocolates and another the same number of Almonds; there were also six plates, and knives and forks, in addition to the floral decorations, but no fruit or other accessories. On the one hand it is held that it is not the custom now to put the dessert on the table along with the floral decorations, and as this table was the best artistic arrangement as related to the use of Chrysanthemums and foliage, the prize was, from that point of view, rightly given to it.

On the other hand, it is contended that as there was no fruit or other accessories placed it did not comply with the terms of the schedule, having regard to the words "completely laid out," consequently must have been disqualified had a protest been entered. I shall be glad to know which is the correct view. Being a challenge competition not yet finished the wording of the schedule cannot be altered.—EDWARD

[We shall be glad to publish the opinions of table decorators and show judges on the subject indicated.7

ROYAL AQUARIUM FLOWER SHOW.

DECEMBER 5TH, 6TH, AND 7TH.

AN Exhibition of winter flowers, including Chrysanthemums, Cyclamens, and Primulas, was held under the auspices of the National Chrysanthemum Society at the Royal Aquarium, Westminster, on the above dates. There was an exceedingly good display, but owing to the dull weather that prevailed it was impossible to see the true colours of

the flowers, which were of excellent quality.

The principal class was for twenty-four Japanese blooms, and in this there were eleven competitors. The flowers were good, and a close competition resulted. Mr. E. Rowbottom, gardener to H. R. Williams, competition resulted. Mr. E. Rowbottom, gardener to H. R. Williams, Esq., The Priory, Hornsey, won the premier award with a grand stand of blooms. The best of these were Mdlle. Therese Rey, Beauty of Castlewood, Empire, Pearl Beauty, G. C. Schwabe, Princess Victoria, Lizzie Cartledge, W. H. Broomhead, and Etoile de Lyon. Mr. W. Collins, gardener to J. W. Carlile, Esq., Ponsbourne Park, Hertford, was second; and Mr. H. Alderman, gardener to G. Hatfield, Esq., Morden Hall, Surrey, third. An extra prize was awarded to Mr. W. G. Gilbert, gardener to B. Le Neve Foster, Esq., J.P., Sennowe Hall, Guist, Norfolk. For twelve bunches of Japanese blooms, six varieties, Mr. C. W. Knowles, gardener to Mrs. Chas. Egerton. Solna. Rochampton, was first: and Mr. gardener to Mrs. Chas. Egerton, Solna, Roehampton, was first; and Mr. W. Tyster, gardener to Miss Smith Dorridon, Hartwell Villa, Aylesbury, second. The class for twelve Japanese blooms, distinct, was very keenly contested, there being seventeen competitors. Mr. J. Turk, gardener to P. Bosanquet, Esq., Penfield, Hertford, was placed first with fine blooms. Amongst them E. Molyneux, Pelican, Mrs. E. Beckett, and Mrs. E. W. Clark were the best. Mr. W. G. Gilbert was second, and Mr. Rowbottom third.

The flowers in the class for twenty-four bunches of any varieties of Chrysanthemums made a good display. Mr. C. J. Waite, Glenhurst Gardens, Esher, was placed first with a stand of blooms tastefully arranged. Mr. C. W. Knowles was second, and Mr. G. Smith, Floral Cottage, Hull, third. Mr. C. Cox, gardener to J. Trotter, Esq., The Grange, Brickendon, was first with six Japanese blooms, showing Viviand Morel, G. C. Schwabe, Mrs. E. W. Clarke, Beauty of Castlewood, Etoile de Lyon, and Robert Owen in splendid condition. Mr. W. Collins Etoile de Lyon, and Robert Owen in splendid condition. Mr. W. Collins was a good second, and Mr. H. Shoesmith third. Extra prizes were

awarded to Messrs. H. Alderman and A. Gibson.

Incurved blooms were well shown for the time of year. There were sixteen exhibitors in the class for six blooms, and the competition was exceedingly keen. The first prize was secured by Mr. H. Alderman, who

had fine examples of Golden Empress of India, Princess Teck, Lady Dorothy, Lord Alcester, Empress of India, and Barbara: Mr. H. Shoesmith was second, and Messrs. W. & G. Drover, Fareham, third. An extra prize was awarded to Mr. W. G. Gilbert. Mr. H. Shoesmith was first with twelve blooms, showing these in very good condition. The best were Princess of Teck, Lady Dorothy, Chas. Gibson, and Hero of Stoke Newington. Mr. W. G. Gilbert was second, and Mr. G. Smith third. For twelve incurved blooms in not less than six varieties Messrs. W. & G. Drover were first, Mr. Gilbert second, and Mr. H. Alderman third.

For six blooms, distinct, of any new varieties Mr. E. Rowbottom won, showing Le Verséau, W. H. Broomhead, Le Drac, Waban, Chas. Blick, and Mr. Hubbuck. Mr. A. Newell, gardener to Sir Edwin Saunders, Fairlawn, Wimbledon, was first for six bunches of six Japanese blooms. Mr. C. W. Knowles was second, and Mr. D. B. Crane, Highgate, a good third. An extra prize was awarded to Miss R. Debenham, St. Peter's, St. Alban's. The last-named exhibitor was first with twelve bunches of St. Alban's. The last-named exhibitor was first with twelve bunches of single Chrysanthemums, Mr. W. C. Pagram, Weybridge, second, and Mr. G. Smith third. An extra prize was awarded to Mr. J. Agate. Messrs. T. Lansley, E. Spurge, and F. Hicks secured the prizes for six Japanese blooms. Mr. W. Howe, gardener to Henry Tate, Esq., Park Hill, Streatham, was first for a group of foliage, berried, and flowering plants; Mr. Newell being second. Mr. D. B. Crane won with a vase of Chrysanthemums, and Mr. W. Cook with twelve Cyclamens.

Miscellaneous exhibits were numerous and made a charming display

Miscellaneous exhibits were numerous, and made a charming display. Mr. H. J. Jones, Ryecroft Nursery, Lewisham, arranged one of the finest and most unique exhibits of Chrysanthemums ever seen in this country. Eleven handsome vases filled with splendid blooms and Mahonia foliage were placed on a large table with a few Palms for a background. The vase was filled in with Ferns, amongst which some Chrysanthemum blooms were dotted. Boxes of flowers were placed on the front, the whole making a feature that attracted much attention. A gold medal was awarded to Mr. Jones for his splendid contribution. Mr. J. H. Witty, Nunhead Cemetery, had a group of Chrysanthemums (silver medal); and Mr. G. Stevens, St. John's Nursery, arranged a table of blooms with Palms and Ferns. Mr. E. Rowbottom had a collection of foliage and flowering plants, as also did Messrs. W. Cutbush & Son, Highgate. Mr. R. Owen, Castle Hill Nursery, Maidenhead, sent a large collection of Chrysanthemum blooms tastefully arranged (silver-gilt medal). Mr. W. Wells, Earlswood Nurseries, also secured a similar award for a collection of Chrysanthemums arranged in a unique manner. Mr. J. R. Chard, Stoke Newington, had some table decorations (silver mcdal). Messrs. H. Cannell & Sons, Swanley, made a bright display with Zonal Pelargoniums and Chrysanthemums; and Mr. H. Perkins, Greenlands, Henley-on-Thames, won a silver-gilt medal for a collection of Amaryllis in fine condition. A first-class certificate was also awarded to Mr. Perkins for Amaryllis Charles Davis, a crimson flower with broad petals and a whitish green throat. Mr. C. J. Waite, Glenhurst, sent some magnificent vegetables.

Some new Chrysanthemums were exhibited before the Floral Committee, and certificates awarded for several varieties which are

described on page 514 of this issue.



FRUIT FORCING.

Peaches and Nectarines.—Earliest House.—The earliest house having been closed as advised in former calendars, fire heat should now be applied. The house ought to be freely ventilated even at night in mild weather, only using fire heat to exclude frost until the buds commence swelling, then 40° to 45° is quite high enough at night, turning on the heat in the morning so as to maintain 50° by day, night, turning on the heat in the morning so as to maintain 50° by day, with free ventilation between 50° and 55°, and full at and above the latter temperature, rising on bright days to 65°. Reduce the ventilation gradually, and close between 50° and 55°, leaving a little air on at the top of the house. Syringe the trees and every available surface morning and afternoon until the blossom buds are showing colour, after which discontinue syringing the trees, but sprinkle the surface of the border and path as before, so as to maintain a genial atmosphere. The inside path as before, so as to maintain a genial atmosphere. The inside borders will require to be watered with water not less in temperature than the mean of the house, making sure that every part of the soil is properly moistened.

Pines.—Young Plants.—Pits or small houses, properly heated and well ventilated, are most suitable for young stock. Successional plants often suffer irreparable injury at this season from being kept too close and warm, the plants becoming drawn and weakly. A temperature of 55° to 60° at night, with 60° to 65° in the daytime, will keep young plants gently growing, and they will not become weakly provided a little air is given at the top of the house at 65°, leaving it on all day. Do not let the temperature fall below that point, and when the sun raises it to 75° a free circulation of air should be allowed. Maintain a steady bottom heat of 80°. Avoid a very damp atmosphere, moderate humidity sufficing at this season. Examine the plants once a week for watering, applying it only when they become dry, and then give weak liquid manure in a tepid state. Keep the plants well up to the glass without touching it, and allow them plenty of room.

Providing for Fruit in May and June.—Where the means are limited considerable judgment and skill are required to maintain a successional supply of ripe Pine Apples throughout the year. There is no trouble where the successional plants can be counted by hundreds, but where the number is more limited the difficulty is to act so as to have the fruit come in at the right time. A supply of ripe Pines being required in May and June and plants are not showing fruit it will be desirable to select from those started last March which have completed a stout growth, have a thickened base, and are now resting, being guided in the selection by such as show the best indications of starting into fruit when subjected to a higher temperature both at the roots and in the atmosphere. The plants are best placed in a structure by themselves, but if this cannot be afforded assign them a light position in the house where the fruiters are swelling. A temperature of 65° at night, 5° lower in the morning in cold weather, and 70° to 75° by day will be ample at present in the fruiting department.

Cucumbers.—Winter-fruiting Cucumber plants are suffering from attacks of eelworm at the roots, this pest proving more disastrous than usual. This invisible (to the naked eye) foe gives no clear indications in the growth of the plants to an ordinary observer of the presence of the attack until the mischief is irremediable; but we advise subjecting all soil, especially turfy soil and animal manures, to a temperature of over 212°, but not so high as to burn or consume the fibry particles, before it is used for the plants, as a preventive. This we find infallible, but it is necessary to refrain from the use of vegetable or animal manures afterwards, and from any form of bone manure other than vitriolised, and rely mainly on mineral manures for sustaining the plants in health and fruitfulness.

Many failures, however, with winter fruiting Cucumbers arise from attempts at their culture in unsuitable structures. Cold weather necessitates heating the hot water pipes where there is a deficiency of heating surface to a temperature highly inimical to the plants by drying the atmosphere more than is good for the foliage, and where the pipes are in close proximity to the roots the soil is dried too much for healthy growth. The consequence is the fruits become stunted and swell indifferently, the plants falling a prey to insects. Air must be admitted very carefully, affording a little, however, whenever a favourable opportunity offers, but exclude it when the external air is cutting and cold. In bright weather, and the air sharp, turn off the top heat when the sun is powerful and likely to raise the temperature above 80°, for much sun heat before the turn of the day only accelerates growth which cannot be sustained. In such weather damp the house in the morning and afternoon, closing about midday or 1 P.M. Do not wet the fruit or the embrychic may damp off, and that formed become scabbed and deformed. Water will be required at the roots once or twice a week, and it should be equal in temperature to the mean of the house. A temperature of 60° to 65° at night, and 70° to 75° by day artificially is suitable.

The winter fruiting plants from the August sowing, and planted out in September, have grown to the extent of the trellis or nearly so, and are showing plenty of fruit. Only a few for Christmas and the New Year should be allowed to remain, and that on vigorous plants, as the plants will need all their strength to tide over a severe period should one occur, and fruit is most in demand during late winter and early spring. Attend frequently to stopping and thinning, also tying the shoots, avoiding overcrowding as one of the greatest evils. Remove bad and decayed leaves. Mildew is unusually prevalent this season, but it readily yields to dusting the foliage with flowers of sulphur or painting the hot-water pipes with a little sulphur. This also kills white fly, but aphides must be overcome by moderate fumigation on consecutive calm evenings. Subdue canker by rubbing quicklime into the affected parts, repeating as necessary.

Strawberries in Pots.—Although John Ruskin has proved as susceptible of attack from mildew in many places as its prototype Black Prince, it is highly spoken of in some quarters and grown extensively as a first early forcing variety. Where it or Black Prince can be had free from fungal pests there is a manifest advantage, as the fruit comes earlier, and is higher coloured and better flavoured than very early fruit of other varieties. The earliest fruits have commenced swelling, the crowns and the trusses are "peeping," and with them tiny aphides, which must be killed either by dusting with tobacco powder or fumigation with tobacco, or they will increase amazingly, and fasten on and spoil the flower buds. The temperature may be advanced a few degrees by day; a temperature of 50° to 55° being sufficient at night and by day in cold dull weather. A light syringing in the early part of bright afternoons will be advantageous to the plants. Examine the plants daily and supply water to all those that require it, but avoid making the soil sodden and sour by needless applications.

More plants should be placed in a house from which frost is excluded, the decayed leaves being removed, the drainage seen to and rectified if nccessary, the surface of the soil loosened, the pots washed clean, and a top-dressing of rich compost given. The plants will then be ready for introducing during the next three weeks to vineries and Peach houses being started, or a Strawberry house, assigning them a position near the glass. La Grosse Sucrée, Vicomtesse Hericart de Thury, President, and Noble are suitable varieties.

Plants for introducing later on will be quite safe in their quarters outdoors, plunged in ashes to the rim, and a light covering may be given

of dry fern or litter in severe weather, removing it when the weather is mild. If placed in frames, the plants should have the lights drawn off in mild weather, and in wet weather the lights should be tilted, for the plants cannot be kept too cool, nor must any be allowed to suffer for want of water at the roots.

THE KITCHEN GARDEN.

Vacant Ground.—In most kitchen gardens there is now a considerable amount of ground void of crops, and whether this shall be dug or trenched or made tidy for the winter ought to depend upon circumstances. Some soils would be greatly benefited by being early manured and roughly laid up to the pulverising influences of frost, winds, sunshine, and rains. Either double digging or trenching would be beneficial in other cases; while in not a few instances all such operations would be deferred with advantage to nearer cropping time. Soils differ so greatly in their constitution that it is almost impossible to lay down any general rules as to their proper treatment, as what would be right in one instance might be radically wrong in another case not apparently dissimilar.

Heavy Soils .- These naturally are of a decidedly clayey nature, and are usually most fertile under good treatment owing to their ability to absorb and retain both fertilising matter and moisture, but if mismanaged they are by no means so productive as medium and lighter soils. If there is too great a percentage of pure clay present in the soil, an early exposure to frosts may lead to this running badly and assuming the consistency of birdlime and the ground be very difficult of cultivation during the rest of the year accordingly. When former experience has shown that autumn or early digging leads to such results When former it should be discontinued till such times as it has been possible to well mix with the clayey soil a heavy dressing or repeated dressings of sand, ashes of all kinds, burnt clay, leaf soil, decayed garden rubbish, mixed with lime, well decayed tanner's bark, and such like. Once such materials get well mixed with clayey soil they will prevent it from running together again, and gradually convert the mass into an easily worked, very fertile soil. Have all or any of these materials collected, and later on wheeled on to the vacant plots, dig in with forks early next spring, or any time not long in advance of cropping, and while yet in a semi-dry state, breaking up the clods, and well mix the additions with the clayey soil by means of a course of chopping with two-tined or Canterbury

Heavy loamy soils, or those which do not contain more than 25 per cent. of clay, will usually be improved by being manured and roughly dug during the autumn and early winter, or long enough in advance of cropping to admit of pulverisation taking place. In some instances it has been found to answer well to dig before midwinter, and again early in the spring, thereby avoiding the risk of having a finely divided surface and great tough lumps underneath. On no account should heavy land be wheeled over, unduly trampled on, or dug during wet weather, or when water is standing on the surface, as this would of a certainty lead to its working very badly for at least one season, and most probably for some time longer. Either do the necessary wheeling over it during the prevalence of frosts, or else lay down planks to run on. Cow manure is about the worst kind that can well be used on heavy or clayey land, as it serves to make it still colder and more retentive. Horse stable manure only about half decayed is best for very clayey soil. Dug in freely now it will serve to keep the ground looser, and further act mechanically in breaking up the clay.

Medium and Light Soils.—When either of these rest upon a gravelly or chalk subsoil and naturally work freely without a long exposure to pulverising influences, it is not often a good policy to dig them now. Even if autumn or early winter digging has been found advantageous in former years, it would be yet unwise to manure them long in advance of cropping, as they are not sufficiently retentive to admit of this being done without the risk of the greater portion of the more soluble parts of the manure being washed down into the drains. Well decayed manure from farmyards best suits these non-retentive soils, the cow manure being most suitable for the lightest or least retentive soils.

The summer of 1893 proved exceptionally trying to crops on medium and light soils, their inability to retain moisture, owing to the absence of clay in their composition, being most marked. This failing should be remedied as far as possible in future years, a start being made at once by giving a dressing of either marl or clay. Make no attempt to divide the lumps, but distribute all thinly over the surface, trusting to the action of frosts to break them down, the mixing with the soil taking place early in the spring. This addition of clay or marl, and which latter may be defined as a mixture of clay and lime, soon has the effect of making light soils more retentive of moisture and fertility, and therefore more productive at all times.

Trenching.—In order to improve the depth of fertile soil, and to a certain extent be in a position to produce good crops of vegetables during a hot dry season, trenching should be resorted to according as the opportunities for carrying out this work properly offers. What is known as bastard trenching consists of breaking up the ground two spits or more in depth without reversing the positions of the surface soil and that immediately beneath. It is both the safest and best practice in all cases where the subsoil is of a clayey nature, and not previously ameliorated by having a variety of decaying substances, including strawy manure, vegetable refuse, and such like mixed with it. Bringing up a mass of poor soil to the surface, and burying that which has

by long cultivation been in a finely divided fertile state, is a most unwise proceeding. When, however, the surface soil has become manure-sick and inert it is greatly benefited by the addition of a small portion of the subsoil, that known as the "shovellings," or the loosened portion left after the first spit has been dug out of a trench, being quite sufficient for mixing with and correcting the surface soil. After having been broken up repeatedly and become well mixed with a variety of soluble and insoluble substances a clayey subsoil may be safely and profitably brought to the surface by the process known as trenching proper. Alluvial soils, or those that have been deposited by floods or overflowing rivers, are all of much the same character, sometimes to a very considerable depth, and in all such cases pay well for being trenched, the subsoil being made to take the place of what was previously the top spit. It need hardly be pointed out that shallow soils resting on a very gravelly or rocky bottom cannot be deepened by trenching, and should be added to as much as possible from the surface.

Ridging Soils.—The plan of laying garden ground up into ridges early in the winter is largely practised in some districts, but is not always the best course of treatment that can be adopted. In some cases the ridged soil breaks down very finely in the spring, but in the furrows the very opposite prevails, this being cold and sodden. Better by far in all such instances that ordinary digging, laying the soil up in rough spits had been done. Very stiff clayey soil may, however, in many cases be laid up in ridges with advantage, but instead of trying to arrange it in conical ridges it should be laid up squarely, the spits being disposed on the top of each other much as green bricks are dried, frosts and winds having then a good opportunity of thoroughly penetrating the spits.

PLANT HOUSES.

Chrysanthemums.—Whether good bushes or large blooms are required cuttings should be inserted where they can be obtained. It is better to wait for a time before insertion, rather than insert growths from the stem or poor puny cuttings. Those for large blooms if inserted singly in thumb pots, will root freely, even quickly, when placed under hand-glasses in a cool, airy house. When rooted under cool conditions the plants can be grown without subjecting them to heat. All that is needed is to protect them until they can be turned outside. Where large bushes are needed three cuttings may be inserted in each pot, and properly grown these will produce an enormous supply of flowers. For this purpose only free-branching and free-flowering varieties should be selected. The stools, after they are cut down, should be kept in a cool, airy structure until the cuttings have been taken; nothing is gained by placing them in heat. The plants often die, and the cuttings produced are weak, and sometimes fail to root.

Hydrangeas.—Varieties of H. hortensis that have been rooted in small pots, have prominent flower buds, and the foliage has ripened naturally, may be potted from time to time as opportunity offers. Pots 5 inches in diameter are most suitable, and the plants should be potted so that the first leaves produced are close to the rim of the pots. These plants do well if placed in good loam, one-seventh of manure and sand. Old Cucumber and Melon soil mixed together will grow them splendidly. After potting the plants should be kept in a cool, airy house for a time, when a few may be introduced into a vinery or Peach house that is just started, or any structure with a similar temperature. Plants that are kept for stock may be cut close back and rested in any cool place, and then started into growth under the conditions advised for those that have formed flower buds. Plants of H. paniculata grandiflora that were potted while their leaves were upon them will have formed some roots. The shoots may be pruned close back, leaving one or two eyes of the last year's wood. These plants do best if plunged in cold frames, and allowed to start naturally into growth.

Lilium Harrisi.—All plants that have been removed from ashes and have turned green should be placed on shelves close to the glass, where they will make sturdy growth. Be careful never to allow the plants to become dry, and watch for aphides, which are very liable to attack the plants in their points. Aphides are readily destroyed by fumigating the house or plants with tobacco smoke, or some of the various inventions provided for the purpose.

Cinerarias.—The latest plants of these should be transferred into larger pots and placed in a coolairy house, where they can come forward slowly. These, if cared for, and kept free from aphides, will be found useful when all the earlier plants are past their best. Do not allow plants that are well developed and throwing up their flower spikes to be crowded together so that their foliage will damp. Water during the early part of the day, ventilate freely on all favourable occasions, and do not employ more fire heat than is really necessary. Clear soot water, or other weak stimulants, should be given every other time the plants need water. Keep the plants standing on some moisture-holding base, or they are certain to lose their lower foliage, and if a dry atmosphere is maintained they are certain to be attacked by aphides.

Primula obconica.—Well developed plants will soon come into bloom if they are introduced into a temperature of 50°. If the blooms are required for cutting only they can remain in this temperature; if for the conservatory, they can be removed to that structure as soon as they are presentable. Plants that are required for later flowering may be kept cool in any light airy structure where the temperature does not fall below 45° at night.

Double Primulas.—Plants that are wanted in flower may be placed where the temperature ranges about 50° at night. They will

soon come into flower and continue for a long time. No attempt must be made to keep them in a close confined atmosphere, or they are certain to damp. A moderately dry atmosphere should be maintained with a little air on all occasions when the weather permits of it, ventilators being opened.

Justicia flavicoma.—This much-neglected plant will make the conservatory gay at this period of the year. When the first flowers are over the plants should not be cut back or thrown away, for they will flower a second and even a third time. Very frequently the second flowering is decidedly the best. The plants may be introduced again into warmth. When well grown the dark glossy foliage of the plant is attractive, and the contrast is very striking when large plumes of yellow flowers are produced.

TRADE CATALOGUES RECEIVED.

William Barron & Sons, Elvaston Nurseries, Borrowash, near Derby. —Conifera, Ornamental Plants, and Forest Trees.

Dammann & Co., San Giovanni a Teduccio, Italy. — Flower and Vegetable Novelties.

Herb & Wulle, Naples, Italy.—Natural Curiosities, Tree, Garden, and Agricultural Seeds.

W. Wells, Earlswood Nurseries, Redhill.—New Chrysanthenums.



APIARIAN NOTES.

HINTS FOR BEGINNERS.

The bee-keeper who intends to make his own hives must pay particular attention to the following instructions. White pine is sometimes used for hives, and it is the cheapest, but is the most worthless and least endurable. It is much affected by the weather, shrinking or swelling more than other woods. Where it can be afforded yellow or red pine should be preferred. The latter does not carry off the perspirations of the bees so well as the former, but the ventilating floor obviates all risks of injury from damp. Unless where boards are matched it is unnecessary that they should be well seasoned; but allowance should be made for shrinkage, which is about a quarter of an inch to the foot laterally only. Wood damped after seasoning swells to the same extent as green wood, therefore do not apply paint nor hinge parts together until the whole is perfectly dry, or decay is rapid, and the joint at the hinges will be open, which causes trouble. Reject all sap wood, and keep the heart of the wood outermost. Provide yourself with a few proper tools.

The instructions given are intended for amateurs and not tradesmen, as the two work on different lines. Where used boxes are available they should be secured if at a moderate price, and take care not to split the pieces when taking them asunder. Pretty section cases and supers can be made from many kinds of used boxes. Some of my hives are made wholly from such cases, including ironmongery, roof, and a dozen of supers or four-section crates, at a cost of 1s. 6d. actual outlay; paint, oil-cloths, and wrappings to be added.

Neatness is desirable, but is not absolutely necessary; but accuracy in sawing is the principal point. In sawing there are three kinds of cuts—"clearing" the drought, "riding" the drought, and cutting inside it. The use of the several cuts will be explained in a future issue. In order to work accurately, templates and measurers should be used.

Without oilcloths we should not get on very well. Summer is the best time to make them, but where a loft is accessible old ones may be spread flat, and with a brush given a coat of boiled linseed oil. No other kind of oil will do. New cloths may be steeped for several days in the oil after being washed, then hung up by one corner and allowed to drip, reversing the position at intervals until the oil begins to set, when they should be stretched out and suspended to dry. With these preliminary remarks I will close, hoping to be able shortly to give further instructions with diagrams.—A LANARKSHIRE BEE-KEEPER.

GARDENERS' CHARITABLE AND PROVIDENT INSTITUTIONS.

THE GARDENERS' ROYAL BENEVOLENT INSTITUTION.—Secretary, Mr. G. J. Ingram, 50, Parliament Street, London, W.C.

UNITED HORTICULTURAL BENEFIT AND PROVIDENT SOCIETY.— Secretary, Mr. W. Collins, 9, Martindale Road, Balham, London, S.W.

ROYAL GARDENERS' ORPHAN FUND.—Secretary, Mr. A. F. Barron, Royal Horticultural Society's Gardens, Chiswick, London, W.



*All correspondence should be directed either to "THE EDITOR" or to "THE PUBLISHER." Letters addressed to Dr. Hogg or members of the staff often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Bee subjects, and should never send more than two or three questions at once. All

never send more than two or three questions at once. All articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post, and we do not undertake to return rejected communications.

Books (H. J. C.).—You can obtain "Chrysanthemums and their Culture," by E. Molyneux, and "Vines and Vine Culture," by A. F. Barron, from this office. The former is 1s. 2d. and the latter 5s. 3d., post free.

Cherry Tree Wood (Cherry Blossom).—The wood of the Cherry tree is easily worked, beau tifully grained, and takes a fine polish. It was much sought after for merly by cabinet makers, turners, and musical instrument makers, but is not in particular request at the present time, as mahogany is readily obtainable in this country. Nevertheless, we have known good prices given of late years for sound trees, especially of the Wild Gean, which in some woods on chalk formations attains the dimensions of Oak trees, and is very clean in growth. Consult a timber merchant, or preferably a cabinet maker in a large way of business.

Mineral Constituents of Apple and Onion (E. W.).—The whole fruit of Apples contains about 0.27 per cent. of ash in 100 parts—potash, 35.68; soda, 26.09; magnesia, 8.75; lime, 4.08; phosphoric acid, 12.34; sulphuric acid, 6.09; silicic acid, 4.32; iron, 2.65. Onion ash, 0.46 per cent. in 100 parts—potash, 32.35; soda, 8.04; magnesia, 2.70; lime, 12.66; phosphoric acid, 15.09; sulphuric acid, 8.34; silicic acid, 3.04; iron, 12.29; chloride of sodium, 4.49. If the ammonia-forming substances are consumed, how can there be any nitrogen in plant ash? This, of course, is not what you mean, but the albuminoid in Apples only comprise 0.4, and the mineral matter 0.4 per cent. in 100 parts; and the albuminoides are 1.5, and the mineral matter 0.5 per cent. in Onions per 100 parts.

Sulphate of Copper Solution for Destroying Scale (D. H.)—The solution advised on page 327, October 12th, for cleaning incised and cankered wounds is far too strong to apply to the tender wood of Peach trees for the destruction of scale. It, however, would not injure thoroughly ripened wood, and certainly would destroy the scale, provided it was dislocated with a brush, avoiding injury to the buds. The solution, also, would act deterrently on the fungal germs. Try it on a few growths first, and if that does not prove injurious, the solution can then safely be used. For destroying the scale there is nothing better than 2 oz. each of caustic soda (98 per cent.) and commercial potash (pearlash) to 2 gallons of water, applying with a brush, wetting every part. If the wood is soft, dilute to 3 gallons; and apply in either case at a temperature of 120° to 130°.

The Movements of Leaves (Amateur).—You are right, spontaneous movements of leaves, or those in response to some direct irritation, are interesting. They have been subjected to close scientific study in the case of such as the Dionæa and Droseras with surprising results, the carnivorous plants having enjoyed a notoriety far exceeding the "Weather Plant," which was so much in evidence two or three years ago. The infolding of the leaf lobes in the Dionæa when some substance is introduced is familiar to many now, as also is the rapid drooping of the Sensitive Plant leaves when touched. There is, however, an occupant of the stoves in some botanic gardens which displays a still more remarkable phenomenon in its leaves, and which is not nearly so well known. This is the Telegraph Plant, Desmodium gyrans, a member of the Leguminosæ, and a native of the East Indies, and by no means a novelty. Though Mr. Darwin and others have determined that most plants have a spontaneous motion in their growing stems and roots, these are so extremely gradual that they are not readily observed, and can only be tested by careful experiment. In the Desmodium, however, we have a spontaneous movement that is visible and strongly marked. The leaves consist of three leaflets, the centre one large, oblong, or elliptical, and at the base on each side is a small narrow leaflet, which possesses a peculiar property. When the plant is healthy and growing these leaflets rise alternately by a series of little jerks until they are nearly perpendicular, and then descend in a similar way, to resume their action when the other leastet has gone through a similar process. This takes place without the application of external stimulant beyond that afforded by light or heat; the rapidity of the movement varies greatly, however, and in dull weather it is much reduced or ceases altogether, as it does when the plant becomes unhealthy or old. Sometimes the motion is confined to a few leaves, but it seems to depend chiefly on the age of the plant, the weather, or the conditions under which it is grown. In cold or a dry house it is much lessened, and does not continue so long.

Exposing Wood Ashes to Rain (D. H.).—When wood ashes are exposed to rain the potash and other salts are washed out, and enter the ground beneath and around to such an extent as to prevent anything growing on the spot for some time, though a luxuriant growth of whatever plants may be on the margin is the consequence. ashes are placed in a tub and water poured on them, and left a few days, the main portion of the soluble constituents of the ashes are found in the water, and this strained off leaves a residuum of very little manurial value; may be tested by applying these leached ashes to one tree and the lye to another, and noting the results. Dry wood ashes from wood not larger than a "cord" contained 8½ per cent. of real potash, and 2 per cent. of phosphoric acid, or about $4\frac{1}{4}$ lbs. of potash, and 1 lb. phosphoric acid per bushel. These are worth 2s. at least, besides which there is 10 to 15 per cent. of alkaline matter, available for converting vegetable substances in the soil into ammonia. A peck of wood ashes contains enough potash and phosphoric acid to support most crops on a rod of ground, but they must be applied in a fresh state to the soil, or if stored for future application, be sure they are kept dry. Leached ashes either from the lye-tub or from open heaps long exposed are hardly worth distribution. When ashes are placed in the soil their manurial proporties are not easily washed out, but they rapidly pass from the ash heap into the soil where they are not wanted, and like the drainings of manure heaps, represent liquid gold wasted.

Mixing Blood and Wood Ashes (Staffordshire Cottager). Blood and wood ashes are rather difficult to mix, not because of the coagulation of the blood with the wood ashes, but through the blood being already in that state and not readily divisible. If you stir the blood while warm until it cools, so as to prevent its coagulation, then there is no difficulty about the mixing. The blood being caught in a pail should be stirred briskly, and a handful of wood ashes at a time mixed with it, continuing this until a thick paste is formed; then turn out on a hard floor sprinkled with wood ashes, and spreading more wood ashes on the heap, mix thoroughly with a shovel as in making mortar, and having formed a crumbly mortar-like mass, sprinkle wood ashes over the heap and leave to dry. When dried it will break up into a powdery substance unexcelled as a manure for every kind of flower, fruit, or vegetable crop. The wood ashes must be dry and preferably heated to a temperature of 90° to 100° for mixing with the warm blood. If the blood is allowed to coagulate, it is best to dry it thoroughly and then grind it in a mill, as is done in manure works, though it may be pounded on a hard floor and made fine enough for distribution, adding an equal proportion of dry wood ashes and pure dissolved bone, mixing, and using about 4 ozs. per square yard. Or when the blood has clotted and is rancid, pour muriatic acid upon it at the rate of 4 ozs. to 16 lbs. of blood, stir, and add 16 lbs. of dry wood ashes, mixing well. When dry break up, and use as a top-dressing. The better plan is to mix the wood ashes with the blood before it coagulates.

Rooting Chrysanthemums (Young Beginner).—You cannot do better than insert cuttings of your Chrysanthemums at once if they are in the condition described. All persons who grow for exhibition take cuttings during November and December; in fact, as early as they can obtain them. They will not be too early for you if inserted now. It is a good plan to insert them singly in thumb pots under hand-lights in a cool Peach house or vinery. By adopting this method the plants receive no check—the hotbed is unnecessary. From the hand-lights the plants may be removed to frames and protected only from frost. Gradually harden them, and then give abundance of air. Treated thus Gradually harden them, and then give abundance of air. the young plants are grown strong from the first. All that are intended for bushes should be pinched when they are well rooted, and the growths they make are generally very vigorous. When 3 inches in length pinch You may safely continue this practice, if necesthe plants again. sary, until the beginning of May, when the shoots should be allowed to extend and only branch afterwards in a natural manner, which they may do again at the end of June or early in July. The buds that show during August must be "taken." If you manage the plants well there is no difficulty in having nine good blooms on a plant that will be creditable to you for purposes of decoration. When blooms are needed for cutting for filling various sized vases, however, some naturally grown free-flowering kinds, especially Japanese, prove invaluable. Do not pinch in July, only take natural breaks then. Plants stopped in May and then allowed to grow often produce buds in August, about the right time. Your potting arrangements are satisfactory.

Camellias Dropping their Buds (Young Beginner). — The buds of Camellias will certainly fall if the plants are allowed to become dry at their roots. Exhaustion will also bring about the same result. A very dry atmosphere after the buds have formed, for even a few days, will cause the buds to fall, or the flowers, by the time they are half or fully expanded. The mischief is frequently done weeks before budfalling is observed. Another cause, and a very likely one in your case, is unripened wood, if the trees grow as luxuriantly as you describe. If these plants are fully exposed to the sun and given abundance of air from the time the foliage is fully developed, or the wood commences to ripen and form buds, if well watered at their roots, the buds should not drop. All Camellias are flowering long before their proper time this year, especially those that have been kept under glass. This is due to the long spell of bright sunshine we have had, and the higher tempera-

ture to which they have been subjected in consequence. We do not advise you to prune the tree, either before growth or after the growth has been made. Retard the growth as much as you can, and allow the plant to start growing in a natural manner. It is doubtful if they will be as early next year, unless the plant is induced to grow soon in the season. The roots are probably too deep, which alone would account for strong growth, and probably the falling of the buds. We certainly advise you to take away down to the roots the wet, sour, exhausted surface soil. In doing so you may find that the water passes away by the side of the walls, and the evil may be easily remedied The soil can be substituted by good loam, one-seventh of the old rubble you describe, a little charcoal, coarse sand, or sandstone; broken bricks would also be beneficial if the loam is of a fairly heavy nature. materials would be better than adding too much lime rubbish to the compost. If the loam is light the amount of lime rubbish given would Cover the roots with about 4 inches of soil; press the latter firm. Do not surface-dress with cow manure. If the drainage is good, liberal supplies of water are needed; you could scarcely give them too much while growing. Directly the growth is maturing the atmosphere should be gradually brought to a drier condition until the flower buds are visible, when the syringe may again be freely used. Examine the border from time to time by means of an iron rod. If wet it will come out sticky, if rather dry perfectly clean. We cannot exactly tell you how much water to give, because circumstances alter individual cases so widely.

Names of Fruits.-Notice.-We have pleasure in naming good typical fruits (when the names are discoverable) for the convenience of regular subscribers, who are the growers of such fruit, and not collectors of specimens from non-subscribers. This latter procedure is wholly irregular, and we trust that none of our readers will allow themselves to be made the mediums in infringing our rules. Special attention is directed to the following decision, the object of which is to discourage the growth of inferior and promote the culture of superior varieties. In consequence of the large number of worthless Apples and Pears sent to this office to be named, it has been decided to name only specimens and varieties of approved merit, and to reject the inferior, which are not worth sending or growing. The names and addresses of senders of fruit to be named must in all cases be enclosed with the specimens, whether letters referring to the fruit are sent by post or not. The names are not necessarily required for publication, initials sufficing for that. Only six specimens can be named at once, and any beyond that number cannot be preserved. They should be sent on the first indication of change towards ripening. Dessert Pears cannot be named in a hard green state. (C.).—1, Bergamotte Esperen; 2, uncertain, perhaps Napoleon; 3, Easter Beurré; 4, Forelle; 5, Vicar of Winkfield; 6, Rymer. (E. R. W.).—8, Beurré de Jonghe; 9, Golden Noble; 10, Court-pendû Plat; 11, Hollandbury. (G. E. W.).—1, Minshull Crab; 2, Alfriston; 3, Winter, Greening: (G. S.).—1, Allen's Everlasting; 2, Local.

Names of Plants.—We only undertake to name species of plants, not varieties that have originated from seed and termed florists' flowers. Flowering specimens are necessary of flowering plants, and Fern fronds should bear spores. Specimens should arrive in a fresh state in firm boxes. Slightly damp moss, soft green grass or leaves form the best packing, dry wool the worst. Not more than six specimens can be named at once, and the numbers should be visible without untying the ligatures, it being often difficult to separate them when the paper is damp. (A. D. F.).—Jasminum Sambac. (L. B.).—Kentia Belmoreana. (H. E.).—1, Davallia Mooreana; 2, D. Mariesi. (Amateur).—Justicia coccinea.

COVENT GARDEN MARKET.—DECEMBER 6TH. FRUIT.

TRADE very quiet.

Apples, per bushel 2 Cobs	d. s. d. 0 to 7 6 0 40 0 6 2 0 0 15 0	Peaches, per doz 0 Plums, per half sieve 0 St. Michael Pines, each 2	d. s. d 0 to 0 0 0 0 0 0 6 0								
	VEGET.										
Beans, Kidney, per lb. 0	d. s. d. 3 to 0 4 0 0 0 4 0 6 0 3 0 0 1 3 0 4 0 0 3 6 3 1 6 3 0 0 2 0 0 9 1 0	Mustard and Oress, punnet Onions, bunch	d. s. d 2 to 0 0 3 0 0 0 3 0 0 0 6 0 4 6 0 1 5 6 0 0 3 0 0 0 0 0 3 0 7 4 0 6								
PLANTS IN POTS.											
Arbor Vitæ (golden) dozen 6 Aspidistra, per dozen 18 Aspidistra, specimen plant 5 Ohrysanthemums, per doz. 4 " large plants, each 1 Dracæna terminalis, per dozen 18 Dracæna viridis, dozen 9 Ericas, per dozen 9 Euonymus, var., dozen 6 Evergreens, in var., dozen 6 Ferns, 111 variety, dozen 4	d. s. d. 0 to 12 0 0 36 0 0 10 6 0 9 0 0 2 0 0 42 0 0 18 0 0 18 0 0 24 0 0 18 0	Ferns (small) per hundred Ficus elastica, each	d. s. d. 0 to 6 0 0 7 6 0 10 0 24 0 0 4 0 0 12 0 0 9 0 0 15 0 0 63 0 0 0 12 0								

AVERAGE WHOLESALE PRICES .- OUT FLOWERS.

Orchid Blooms in variety. Chrysanthemum blooms very plentiful this season, hence the price is very low.

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Arum Lilics, 12 blooms	3	0 to	5	0	Narciss, White (French),				
Azalea, dozen sprays	1	Ú	1	6	dozen bunches	2	0	to 3	.0
Bouvardias, bunch	0	6	1	0	Orchids, per dozen blcoms		0	12	0
Camellias, dozen blooms	1	0	3	0	Pelargoniums, 12 bunches	6	0	9	0
Carnations, 12 blooms	0	6	2	0	Pelargoniums, scarlet, doz.				
Ohrysanthemums, dozen					bunches	4	0	6	0
bunches	2	0	6	0	Primula (double), dozen				
Chrysanthemums, doz. bls.	0	6	2	0	sprays	0	6	1	0
Eucharis, dozen	4	0	6	0	Pyrethrum, dozeu bunches	2	0	4	0
Gardenias, per dozen	2	0	4	0	Roses (indoor), dozen	0	6	1	6
Lilac (French) per bunch	3	6	6	0	, Tea, white, dozen	1	0	2	0
Lilies of the Valley, dozen					" Yellow, dozen	2	0	4	0
sprays	2	0	4	0	Roses, Safrano (French),				
Lilium lancifolium, dozen					per dozeu	0	9	1	6
blooms	1	0	3	0	Roses, Safrano (French),			_	_
Lilium longiflorum, per					per 100		6	3	
dozen	6	0	9	0	Tuberoses, 12 blooms		4	0	6
Maidenhair Fern, dozen					Violets, Parme (French),		_	_	_
bunches	4	0	6	0	per bunch	2	6	3	0
Marguerites, 12 bunches		0	4	0	Violets, Ozar (French), per		_		_
Mignonette, 12 bunches	3	0	6	0	bunch	2	0	2	6
Narciss, Yellow (French),					Violets (English); dozen	_	_	_	
dozen bunches	3	0	4	0	bunches	1	6	2	0



PROFITABLE LIVE STOCK.

THE proverbial "Roast Beef of Old England" has become somewhat mixed under stress of Scotch enterprise and foreign competition. It is true that certain breeds are still sufficiently good to command special quotations at the metropolitan cattle markets, but Scotch beef has taken the lead, and is likely to keep it. At the Birmingham Cattle Show the champion prize was won by the Aberdeen-Angus heifer "Bridesmaid," of Benton. At Islington on the Monday following this Show the ileading quotations were - for prime Scotch, 5s.; for Herefords, 4s. 11d.; for Norfolks, 4s. 10d.; for Runts, 4s. 9d.; and for Shorthorns, 4s. 8d. per stone of 8 lbs. These quotations are far more significant than the Birmingham award, for although the champion Scotch heifer was also champion at Norwich, is a marvellously developed animal, and weighs 16 cwt. 3 lbs. at the age of thirty-four months, yet there were several English beasts at both Shows running the champion very closely, Mr. Wortley's Hereford steer weighing 161 cwt. at thirty-one months old, being even more remarkable for early development.

Such grand beasts are an interesting and instructive sight, showing as they do the comparative value of the leading breeds, but it is at the market and auction mart that lessons for the ordinary farmer are to be had. It is there that the failure of English breed beef in popularity and quality is realised. Yet the fact remains that for really prime homebred beasts there is always a ready market, but such beasts are not forthcoming; inferior animals predominate everywhere. It would really appear as though English graziers only finish beasts well for market occasionally, and that generally there is no attempt to do so. Meanwhile Scotch beef holds the leading place at markets, and foreign beef comes to us in everincreasing bulk, much of it being sold as "Prime English" or "Best Scotch." Returns show that of the total annual consumption of beef and mutton in this country, about a third consists of frozen or irefrigerated carcasses from abroad, or of cattle slaughtered at the port of disembarkation. moral of this fact is that inferior home-bred cattle will continue to keep low in value, that graziers of them will continue to obtain a bare profit, if any, and that the only profitable cattle to rear are those sufficiently well bred and well cared for to be really ripe for the butcher well within the second year.

The Report of the Parliamentary Committee which sat last summer to inquire into the meat trade contains much interesting matter, and shows particularly how in some towns English meat is practically driven out of the market. The most remarkable case is that of Southport, with its population of 41,500, for whom fifty-four butchers cater, yet not more than three English-bred animals were killed during each week among the whole of them. If Scotch beasts had preference in the north country towns no harm would be done, but there, as well as in the south, very much imported beef is palmed off as homebred. In London, says the report, in a large west-end establishment, professing to sell nothing but English and Scotch meat, only six sides of Scotch were said to have been sold during a whole year, the rest being American. In other shops in the city and west-end three-fourths of the beef sold as English is said to be American. Of five pieces of meat purchased in Kensington, in the neighbourhood of Piccadilly and Sloane Street, two competent judges declared four to be American. In each instance the vendors declared that they kept nothing but the best Scotch.

It is much to be desired that the report should lead to a measure for the protection of the interests of home-reared beasts. It is evident that there are plenty of people willing to pay well for really prime Scotch or English beef, and if only the trade could be placed upon a sound basis, it would be for the mutual benefit of producer and consumer. The gains of the middleman will be limited, and the British farmer would soon find home markets harden; or, in other words, prime beasts would become much more valuable, and his interest in rearing compact beasts of moderate size would be so apparent, that breeding and selection assuredly must have more attention than has hitherto been accorded them. We have no desire to see our ports closed against foreign meat, but we do claim that in common honesty it should be sold as such, and not be foisted upon consumers for the superior home-bred article. Appeals for aid to the legislature on behalf of struggling farmers have been made often enough where aid was impossible. In this matter there should be no difficulty. When an inspector detects a farmer sending diseased meat to London the farmer is fined heavily. Let inspectors also be appointed to check the transactions of butchers, and let adequate fines be imposed with all possible publicity upon any of them who are detected in a system of fraud, which has evidently attained gigantic proportions in many a pretentious west end "establishment."

WORK ON THE HOME FARM.

Lambing time commences at many farms, at most where mixed farming prevails, towards the end of the year or early in January, and preparations must now be made to afford the flock all necessary shelter and food. Every home farm should have its lambing yard, with a commodious hovel on the north side, a wall or corrugated iron sheeting enclosure, having a projecting roof, beneath which cribs are made for each ewe and its lambs to be confined in so long as may be necessary immediately after the lambing. Failing this, a lambing fold is made with parallel rows of hurdles about a foot apart, the space between them being so closely packed with litter or straw that cold wind cannot penetrate it. Thatched hurdles will not answer for this enclosure, because the ewes may pull out and consume the straw, but they are used for cribs inside of and against the enclosure, and as a roof to the cribs. See that this fold is of ample size for the requirements of the flock, and that it has a wide opening on to pasture, and another opening into a smaller or hospital fold, where ewes requiring some extra care and supervision can be taken from the cribs. Make all openings through which the flock has to pass large enough to prevent crowding, or a struggle to get through.

A small clamp of Mangold and another of Swedes is made near the fold, also a stack of Pea straw, and another of litter. If the fold is at a distance from the homestead, it is also a good plan to have a small store shed for crushed corn and chaff near the shepherd's portable hut. In all this work let the most severe winter weather of the past be your guide, making the shelter so thorough, and the store of food on the spot so ample, that it must be the shepherd's fault if the flock suffers. have often found that it is unwise to depend upon the daily carting of food supplies to the fold. This may very well be done generally, but upon an emergency, such as roads being blocked with snow, it is well to have a few days' provision at hand.

See that ewes forward in lamb are kept perfectly quiet, allow no

hurried driving by dogs, keep them on firm dry pasture, have a few racks for Pea straw placed near sheltered parts and troughs for chaff and corn. Let the condition of the pasture be your guide as to the use of these, but when once they are brought into use it is as well to go on using them, as sheep are often shy of trough food at first.

ROOT AND SEED STANDS AT ISLINGTON.—The ninety-sixth annual Show of the Smithfield Club opened at the Agricultural Hall, Islington, on Monday last, but not having received any reporters' tickets we are unable to enter into details as regards the exhibits. We understand, however, that Messrs. Sutton & Sons of Reading had a fine display of roots and seeds. The main feature was a collection of agricultural roots. Mangels were to be seen in perfection, prominent being Yellow Globe, a variety that is generally cultivated in all parts of the kingdom year by year. This kind has again been awarded the first prize for the best crop of Mangel, open to all England and Wales, grown in 1893. Gold Tankard, which has the reputation of being the best Mangel for milch cows, and Crimson Tankard are prominently represented. Among the Swedes the most striking was Crimson King. Champion was good, and maintained its reputation as one of the hardiest and best Swedes for general cropping. Some exceedingly fine roots of Perfection Turnip, a new green-top hybrid, were shown. Disease-resisting Potatoes receive general cropping. by Messrs. Sutton no less attention than roots, and on their stand there were twelve varieties of their own introduction, all of superb quality, Supreme, Windsor Castle, Triumph, Perfection, and Satisfaction being seen to great advantage. Educational cabinets of valuable and worthless pasture Grasses, and agricultural seeds were on view. Messrs. Webb & Sons, Wordsley, also had a splendid stand of roots and cereals, including grand specimens of Imperial Swede, Mammoth Long Red, and Globe Mangel. A choice collection of Potatoes was exhibited, together with a fine display of Grasses and Grass seeds, many novelties, and other items too numerous to mention.

OUR LETTER BOX.

Wheat for Cows (A. B.).—Crushed Wheat mixed with pulped roots, or with roots and chaff, may be used for cows advantageously, or it may form part of any mixed dietary for them. Begin with half a gallon, mixed with other food at milking time, and let the condition and size of each cow be your guide as to increasing the quantity. Avoid using it alone, and if you have other corn such as Oats or Barley, a mixture is always preferable to either of them alone. Marketable value has come to have much influence upon this matter, and we agree with you that it is better to use corn for farm stock than to sell it at a ruinously low price.

Thin Pasture (B. E.).—Fresh stable manure is unsuitable for pasture, but if you have old manure apply at once at the rate of thirty cartloads to the acre. This will strengthen the growth somewhat next season, but it will not thicken the plant. The proper way to proceed with pasture thin in plant and weakly in growth, is to cart soil (road scrapings, old pond mud, or ditch scourings) upon it, any time during the winter, but preferably in February. Drop the soil in small heaps at the rate of full forty cartloads per acre. At the end of February sow broadcast as evenly as possible over the pasture 20 lbs. per acre of renovating grass mixture. Then spread the soil heaps, roll sufficiently to crush the soil, follow with a bush harrow to cover the seed and mix it with the soil. Then at once apply a top-dressing of 1 cwt. nitrate of sods, 1½ cwt. mineral superphosphate, ½ cwt. muriate of potash, and ½ cwt. steamed bone flour per acre.

METEOROLOGICAL OBSERVATIONS.

CAMDEN SQUARE, LONDON.
Lat. 51° 32′ 40″ N.; Long. 0° 8′ 0″ W.; Altitude, 111 feet.

DATE.			9 A.M	•						
1893. November	Barcometer. Sea Level Dry. Wet.				Temp.	nore	Tem- ture.	Radi Tempe	Rain.	
and December.	Baron at 32° Sea L	Dry.	Wet.	Wind.	at 1 foot.	Max.	Min.	In Sun.	On Grass.	
Sunday 26 Monday 27 Tuesday 28 Wednesday 29 Thursday 30 Friday 1 Saturday 2	Inchs. 29·505 30·379 30·317 30·319 29·941 29·750 30·432	deg. 46·3 30·3 50·0 48·4 47·1 35·9 26·2	deg. 44·8 28·9 48·3 45·9 45·8 35·7 24·1	S.W. W. S.W. S.W. S.W. N.E.	deg. 42·2 41·1 40·9 43·1 43·9 44·2 41·9	deg. 47.0 50.2 53.2 50.0 50.9 38.2 35.1	deg. 43·2 28·1 30·4 48·0 45·0 35·1 23·2	deg. 51.9 53.2 [58.9 53.1 58.9 45.8 55.2	deg. 39·2 26·2 28·0 46·0 41·1 35·8 23·0	Inchs. 0 091 — 0 230 0 020
	30 090	40.6	39.1		42.5	46.4	36.1	53.9	34.2	0 341

REMARKS.

26th.—Continuous rain till 3 A.M., and from 10 A.M. to noon; overcast and damp after-

26th.—Continuous rain till 3 A.M., and from 10 A.M. to noon; overcast and damp afternoon; bright night.
27th.—Fine, but slightly foggy early; generally cloudy in morning; bright sunshine in afternoon, but slightly foggy after sunset.
28th.—Fair and mild, but scarcely any sunshine.
29th.—Overcast morning; fair afternoon but no sunshine.
30th.—Fair morning; sunshine for a couple of hours at midday, dull later.
1st.—Almost continuous rain from 0 A.M. to 9 A.M., then drizzle and occasional flakes of snow till noon; bright sun from 1 P.M. to sunset, and clear cold night.
2nd —Almost cloudless morning; generally sunny in afternoon; clear cold night.
A cool but variable week; sharp frost on the 2nd.—G. J. SYMONS.



branch extension in fruit trees, it is not unusual for the fruit spurs to become injuriously crowded, and in consequence imperfectly developed. When such is the case fruit trees may be a perfect picture whilst in blossom in the spring, but the fruit exceedingly scanty. This is frequently attributed to the inclement state of the weather during the blooming period. Frost and excessive wet will render perfect blossom abortive by injuring and destroying their essential organs of reproduction before they have performed their functions; but this is not always the cause of barrenness and the production of worthless fruit. It is often because the blossoms are imperfectly formed, in consequence of the spurs being too crowded. To allow a tree to open thousands of blossoms more than is necessary to secure a good crop is to exhaust its resources to no purpose just at a time when it is most needed.

It would be absurd, in our uncertain climate, to thin the spurs to a number only just sufficient to secure a good crop of fruit; indeed, we should not feel safe with less than treble the number that were necessary for that purpose. But then there are trees in otherwise good form—with ten times too many spurs, and it is to these we would direct attention. The best results generally follow if they are thinned a fortnight before the leaves fall, as then the remaining spurs would be strengthened and more fully developed by the returning sap. We are, of course, past that period now, but the mode may be advantageously described. In performing the operation some experience is necessary, for if done to too great an excess, the remaining blossom buds may develop into wood growth in the following spring, and the balance of the tree be upset for a year or two. The trees' growing power must be taken into consideration, and if this is known to be unduly vigorous, careful root-pruning must be resorted to.

We must not shorten the main branches, but let them remain full length, or nearly so; they will then act as safety valves to the superfluous sap just in proportion as they approach the vertical line. Horizontal branches do not act to any extent in this way, hence undue vigour must be dealt with at the roots. The finest fruits are usually obtained from spurs that lie close to the main branches in consequence of there being fewer interruptions in the flow of sap to the fruit; therefore, in thinning the spurs, preference should be given to them. Indeed, one of the main objects in thinning and shortening the spurs is "to keep them at home." It will, however, sometimes happen, especially if the spurs have been much crowded, that the inside lowest fruit buds are not sufficiently developed to produce perfect blossom the following spring; in which case a few of the outside plumper buds must be left, and then be promptly removed as soon as the fruit is ripe the next year.

In well managed trees spurs never attain to any great length, as by summer pinching and autumn pruning short spurs are obtained; but in neglected trees they are often crowded, weak, and long. Trees in this condition cannot be made presentable and capable of bearing full sized, good flavoured fruit in less than three years, and sometimes more. The flow of sap to the fruit is so much impeded in its passage through these long gnarled growths that the fruit is usually small, insipid, and worthless, and the tree altogether a mere cumberer of the ground. Providing the main

stem and branches are healthy much may be done with patience and a judicious selection of buds in rectifying former evils, also in bringing the tree into a profitable state in much less time than a fruitful young tree could be produced. Those buds most distant from the main branch should be cut off the first year, which will have the effect of strengthening those immediately behind them, and in many cases induce the development of fruit buds lower down on the spur, and sometimes on the main branch at the junction of the old spur.

If we are induced by our impetuosity to cut back the old spurs too much the first year, these latent buds that have been excited sufficiently to form close fruit buds, would develop vigorous wood growths, and thus in the end we should have lost time. The second season we may get some fairly good fruit, but we must still avoid cutting the old spurs too hard. Unless the root-action is very feeble we can seldom venture to cut back to the new fruit buds on or near the main branches until the third season.

As before stated, undue vigour must be dealt with at the roots, but we must at the same time have sufficient vigour to excite the latent buds at the base of the old spurs. In practice we find it best to defer root-pruning until the second season, in which case the old spurs can be considerably reduced.—J. H. W., Leicester, Frith.

THE GARDENERS' ROYAL BENEVOLENT INSTITUTION.

AN APPEAL TO GARDENERS IN IRELAND.

ERE the dying year passes and the new one comes, bringing with it its new hopes and fresh resolutions, I venture to bring forward a subject which has received much attention in England from gardeners and the patrons of our art, yet seems to have been given but scant consideration from gardeners in Ireland. Though I hope these few remarks may be looked upon as an appeal to all persons who are not subscribers to this noble Institution, they are especially submitted to the consideration of my brother gardeners in the Green Isle.

The plethora of candidates for gardeners' situations which obtains in our time is known to all. The years of self-denial, burning the midnight oil, the difference of being in or of being out of a situation, and the bitterness of waiting are known to many as well as to me; perhaps a few remarks coming from the pen of a gardener to gardeners may claim that sympathy and attention which abler pens in higher quarters have failed to attain, and which the subject deserves.

While other trades and professions are forming and supporting benefit societies over the length and breadth of the land, we appear to be the only class in this age of progress content to let things run on as best they may. All must and do recognise the importance of our art, which began with the first man, and which probably will only end with the last one. We cannot compel the moneyed classes to create more gardens for gardeners, nor prohibit young men from coming into the overcrowded field. For this evil I see no remedy; but, fellow workers, I do see one clearly defined duty, one way in which we can help ourselves-viz., by becoming members of the Gardeners' Royal Benevolent Institution. Some gardeners may, indeed some have, met me with the remark, "Oh, I may never need the bounty." True, O friend! I trust you never will. Your remark is not heartless, only thoughtless. We are not a selfish class, but do not refuse to "help a worn and weary brother pulling hard against life's stream."

Do start this new year by sending a guinea to the Secretary. I hear your remark, "A guinea is a guinea." Yes, it is, and something more to a gardener. Our guineas are heavy with days of toil and nights of thought. I know it, and there are so many ways for them, as a rule so many olive branches in the gardener's cottage, though there may be none in the castle; you are perchance

No. 2359.—Vol. LXXXIX., OLD SERIES.

in the mid-day of life, and the evening yet seems so far off, and the future pregnant with so many possibilities. We have so much to bother us, so much to cope with, ever-increasing worries, these scientists with their microscopes ever and anon finding out some new bug where no bug should be, and so we go on digging, planting, sowing, reaping, so busy.

> "Well doing is our wealth, Our mind to us an Empire is While Grace affordeth health."

but "unerring nature" at last silently but forcibly tells us we have had our day, the evening of life is at hand. Dame Fortune, the fickle jade, has not perhaps realised the possibilities of long ago, and perchance after all those precious guineas, sown annually, may not only have helped "the worn and weary brother," but

return to us increased an hundredfold.

I need not go into details of the Institution; all that will, I am sure, be willingly given by Mr. Ingram, the Secretary, 50, Parliament Street, London, to those who do not already know. Do you not think that amongst the 156 aged gardeners or their widows now on the pension list, that there is not amongst that number some who have thought and made the remark about not needing it that I have supposed you to make, and have lived to find "the bread then cast upon the waters" returned to them again? Are there, beyond the small amount of self-sacrifice, any good or valid reasons why you should not subscribe to it? I hope to have made

clear some reasons why you should.

In the "Horticultural Directory" there are some 300 names of gardeners in Ireland, and in the last report of the Institution there are fifteen—please note, but fifteen !—gardeners subscribing to it from Ireland. Now I take it that he whose name appears in the "Directory" is of more or less prominence in the gardening world, and that there is no name there but what is worthy of being there, so I respectfully and earnestly say that all those names should be found, and are worthy of a place in the report of that noble institution founded in 1838 for the benefit of aged gardeners or their widows; and should it never be needed by yourself you will at least have the unalloyed pleasure of helping some old friend to whom Fortune has been less kind by giving him the votes at your disposal on becoming a member.—E. K., Dublin.

CITY GARDENS: PAST AND PRESENT.

ONE of our modern authors, who has drawn fancy pictures of the future, has suggested that the City of London may some day undergo a pleasing transformation, and that groves or gardens may appear in the place of huge warehouses and busy offices. to happen by much of its business being relegated to the suburbs, while some of it is carried on underground, so that the surface of the City may be dotted over with only a few buildings, and present a broad space available as a place of meeting or promenade, to be intersected perhaps by an electric railway. As yet there are no signs of this change coming about, but much has been done of late for the improvement of those small spaces in the City which bricks and mortar have not covered, and most of which, not many years ago, were scenes of desolation, neglect, or even filth. They were closed mostly to the public - which was quite as well-now some of them are opened free, and turned into gardens; others, still kept private, have also been improved by the introduction of shrubs and plants. Even yet much may be done to make the best of these generally small gaps amidst the busy streets; several, at present inaccessible to visitors, might be thrown open, and many more shrubs and trees planted. It is found that the number of trees which will live, flourish we can hardly say, in the City atmosphere is larger than was formerly supposed. Of course a atmosphere is larger than was formerly supposed. serious disadvantage we have to contend with is the destructive propensities of the host of boys employed about London's centre who frequently commit damage from pure mischief if trees and shrubs are accessible, but I am glad to find that caretakers of city gardens report an improvement recently. Also, we are told London trees suffer from the conduct of climbing and pugnacious cats, a nuisance not limited to the metropolis.

We have no pictures extant showing the City as it was during the Middle Ages, nor even in the times of the Stuarts, but, by description, much of it had for a long time a semi-rural appearance. There were rows of trees, some for shade or ornament, others of fruit-bearing kinds; flower-plots and gardens of herbs attached to many of its mansions, also patches of ground upon which vegetables were grown. A large number of the London citizens and merchants had a taste for gardening, and as they could not obtain the needful space within the walls, as early as the fifteenth century some of the citizens hired or bought land in the east and north of London, where they cultivated plants for use or amusement, many of these

being situate along the City Road. In the reign of Elizabeth they were beginning to go still further north, and form gardens about Hogsden, or Hoxton, and Cantelowes, the old name for what we now call Kentish Town. Both the City of London and its vicinity were favourably situated for horticulture, owing to the numerous little hills and sheltered valleys below them, while the soil was refreshed by the course of winding streamlets, long dried up, which

ran from the Middlesex uplands into the Thames

The warmth of the City favoured the growth of some plants, no doubt, and until the seventeenth century, or about that period, no coal was burnt in the metropolis, so the atmosphere was free from those carbonaceous particles which clog the pores of leaves and stop the development of buds. Evelyn, writing in the seventeenth century, refers to the fine orchards there were near the Barbican, a well-known tower on the old Roman wall (presumably these orchards were just beyond, not within the City), and he notes the fact that when the supply of coal from Newcastle was suspended, owing to the Civil War, a much larger yield of fruit was obtained than had been known for some years. He proceeds to comment upon the objection to sea coal, not only as being hurtful to vegetation, but as a cause of colds, coughs, and other diseases. Actually in the City, however, there were many fruit trees, some of which bore fruit till they were cut down to make room for new streets. St. Martin Pomary, in Ironmonger Lane, a church destroyed by the Great Fire, was said to have received its name from the Apples that grew around its site. Vines on the walls of some of the houses of the nobles yielded good crops of fruit, and it was observed that the Fig seemed to thrive in the London air, and Mulberry trees were planted here and there in City gardens; two of these, of great size, near Ludgate Hill, bore fruit till the reign of George II. Almost in the shadow of St. Paul's Cathedral, even when the Stuarts began to reign, Ivy Lane was green, from the specimens of that plant which covered the houses; and the Drapers' Company had a large garden in Throgmorton Street. Others of the City companies had gardens attached to their halls, and in several of these they grew Roses, Gillyflowers, and the few flowers besides which adorned old English gardens.

A little way outside the City proper, gardens there were that yielded an abundance of Roses during the seventeenth century. In Eald or Old Street, St. Luke's, was a rosery of two or three acres, and near it a nursery planted with the best kinds of fruit trees then known, from which plenty of fruit was obtained. In Ely Place, Holborn, there was a vineyard, and the garden was famous for its Strawberries, while the Roses were so abundant there that the flowers were measured by the bushel when gathered to be paid as a yearly perquisite to Bishop Cox, after he had surrendered to Queen Elizabeth this property long held by the Bishops of Ely. One of the first gardens in which a large collection of exotics was grown, and which testified to the skill and research of Master Gerard, was situate on the slope of Holborn, and the now unattractive Saffron Hill, Clerkenwell, was formerly yellow with the bloom of this much-esteemed plant. Out in the East of London, quite in sight of its ancient Tower, were gardens in which Kale and other vegetables were raised for consumption in the City. Goodman's Fields was no fiction when Stow wrote about London; there was a farm near the Minories, and cattle grazed along the fields. Subsequently this was cut up for garden plots. Prescot Street, close by, is said to have been originally Peascod Street, from the Peas planted on the ground. West of the city, the now curtailed Temple Gardens offered citizens a pleasant evening resort, and the palaces of the Strand had long gardens reaching to the Thames.—J. R. S. CLIFFORD.

WINTER IN A SCOTTISH MANSE GARDEN.

OF all the seasons winter is generally supposed to be the least inspiring by reason of its prevailing barrenness of aspect, yet it is not altogether destitute of inspiration. It has, indeed, infinitely more life and energy than outwardly appears; for are not the seeds of summer's luxuriance steadfastly growing, invisibly to the vision, beneath the inglorious blackness of the winter earth? Does not Nature tell us what Revelation declares—that what we sow in the seemingly lifeless ground is not quickened or vivified by the subtle, mysterious, reanimating elements unless it die?

We have now so many floral gradations, flowing onwards unceasingly and dying into each other, as wave into wave on a boundless sea, that even during the so-called desolation of winter the earnest horticulturist can never realise that the beauty which waited upon his art in fairer seasons has utterly departed, leaving him to mourn the glory that has fled. His hopes, which seemed to fade in November with the last autumnal Rose, are rekindled when the winter Jasmine (Jasminum nudiflorum), as if to assert proudly that Nature is not dead, bursts suddenly into bloom.

Nothing is at present more gladdening to my vision than the picture presented by this marvellous flower, surviving the fiercest influence of the recent frosts, and fearlessly confronting with all its

gentle beauty the cruel northern blasts.

Hardly less consoling to the worshipper of Nature amid the storms of winter are the Aconite and the Snowdrop, the latter of which, as if resolved to become the predecessor of the former this season, is already above the ground. It will, I anticipate, be in flower in my garden at least a month earlier than it was last year. Another gem which promises to bloom prematurely is Sutton's Anemone, somewhat resembling A. fulgens (better known as the Scarlet Windflower) in appearance, but of larger dimensions and more lustrous hue. It is, I can certify, a very distinct development, and a precious acquisition. The Glory of the Snow (Chionodoxa Luciliæ) has not yet announced its ever-welcome advent, probably because I planted it so late. But, on the other hand, I have already flowers not too large or lustrous on Helleborus niger, the Christmas Rose. I am not without hope that as the season advances these will improve.

Roses have lasted for a long time this year. I cut my last bouquet, and a splendid one it was, on the 14th of November, from Baroness Rothschild, Pride of Waltham (also the pride of Kirkmaiden Manse), Ella Gordon, Jeannie Dickson, an Irish beauty, derived from the venerable Baroness and Marie Finger, and combining the characteristics of both; Perle des Jardins, well worthy of such a name; Prince Arthur, a darker and more velvety Général Jacqueminot, and a native of Colchester; and the snowwhite pendulous Souvenir de S. A. Prince. If this certificate in favour of those exquisite varieties of the Rose is not absolutely eloquent or impressive in expression, it is at least sincere.—DAVID R. WILLIAMSON.

SAXIFRAGA BITERNATA.

THIS fine species is seldom met with, though it cannot be considered a new plant. It belongs to the section Nephrophylium, of which the best known representative is the common S. granulata. All the species composing this section are deciduous, and of a more or less bulbiferous habit. S. biternata has, as will be seen from the accompanying engraving (fig. 76) very distinct biternate leaves, which form fine tufts of bright green colour. The flowers are pure white, comparatively large, and are borne on short stalks. Like the other members of the section, S. biternata prefers a damp shady position in sandy peaty soil. It is a native of Spain and Algeria. The illustration has been prepared from a plant that flowered in the Royal Gardens, Kew, last spring.—A. B.

THE FRUIT KEEPING QUESTION.

I CANNOT at all bring my mind to the same conclusion on this matter as Mr. Iggulden (page 437), Mr. Cheal, and Mr. Pearson (page 488) have brought theirs. Nothing is easier than to set up a theory and to sustain it, even though it may be radically incorrect, when we are faced by a problem that it is difficult to solve. One speciality of all the large fruits soft and thin of texture that have been found so abundantly this season, and then have so suddenly collapsed, is that so far from being filled to overflowing with sap, they have all been exceptionally lacking in sap or juice. What proof is there furnished that there has been any such rush of sap as is here referred to? Has any grower found this autumn that trees have made unusual wood growth because of this "overflow of sap?" or, to accommodate this pleasing theory, did it all concentrate its rush into the fruits and not into the wood? All plant physiology tells us that the leafage is the great sap-attracting force, and that did this rush after the autumn rains but have taken place then we must have seen it evidenced in an unusual autumn wood growth. That, however, was not so. There was nothing at all abnormal in the wood growth of fruit trees anywhere this autumn, but there is ample evidence that this sudden collapse of fruit began before the autumn rains occurred.

"N. H. P." (page 508), also oddly enough jumps to the sap theory conclusions with a real rush. "Pears, the early ones, have been the greatest trial; gathered one day they seemed to be decayed the next," this, too, long before we had any considerable rainfall. If the early Pears before rain came thus went, is there anything remarkable that the later ones followed suit as speedily? Then what does he say about late Apples? "These are keeping well," and yet if the rush of sap theory is to have effect, these should, having to endure so much more of it, have suffered equally with the

others.

There were some localities where prior to Apples and Pears being gathered there was not enough of rainfall to influence the roots.

In these districts the fruits have gone as early and as badly, if not worse, than where there was early and heavy rainfall. Depend upon it we have not in our fruit suffered from the autumn rains. Their influence on the fruits were inappreciable. The impression seems to be that roots are like a sponge, which sucks up every drop of water speedily. No evidence has been afforded that roots did anything of the sort in the autumn, and indeed there is no proof that the autumn rains, those prior to the end of September, were anywhere in sufficient force to reach the roots of trees, or to materially influence them. The bulk of the heavier rains came in October, and then the greater portion of our finest Apples and Pears had been gathered. No doubt the abnormal heat and drought of the season has wrought all the trouble. Through lack of root



FIG. 76.—SAXIFRAGA BITERNATA.

moisture the fruits were imperfectly formed, they lacked juice and substance. They more resembled forced Apples and Pears in texture and in method of production. We may grope as in darkness after shadows, as a drowning man catch at straws, but we shall never be able to escape from the conclusion that not the refreshing autumn rains, but the abnormal heat and drought which preceded is the cause of all our hardy fruit troubles.—A. D., Surrey.

In reference to the remarks of Mr. Iggulden (page 437) I have looked over the fruit room, and find our large collection (some 200 varieties) on the whole keeping well. It must be borne in mind that this year we are at least four weeks earlier than usual in the ripening of nearly all fruits; and, as a natural result, the August and September kinds of Apples are nearly all past, though in an ordinary year we keep them till January. Potts' Seedling, Ringer, Cellini, Professor, and Manks Codlin, are still good and sound, also the Old Hawthornden; but the extra size fruit of the large-growing sorts, having reached an abnormal size this year, could not be expected to keep well. All the largest specimens are nearly past. Warner's King, The Queen, Queen Caroline, and Codlins are the only kinds which, as a whole, are not keeping well. On the other hand, the Apples that require a warm time are very grand in colour and size, and Calville Rouge, Calville Blanche, Calville Malingre, Sturmer Pippin, Clark's Late Pippin, Royal Russet, the Nonpareils, the race of Pearmains, and Reinettes, are very sound, and look like keeping well. I would caution the public not to be led away by the past hot season. Not only was it exceptionally warm, but the spring was so genial that the fruit never had a check. Though it did not make much progress in the drought, it very rapidly swelled when the rains came in May and June, and in this way had a month's start. These circumstances may not occur again for many years.

We have had the American varieties in our nursery for twenty years, but with the exception of Wealthy, Melon, and Mother Apples they have never been of any value outside. Northern Spy never fruited at all. No doubt the "Americans" we have will keep, but that is of no use if the quality is second-rate, and from present appearances our British sorts will be as good late as the Americans. We have in very fine condition Wagener, Melon, Peck's Pleasant, Fallawater, Wealthy, Mother; but King of Tomkins County, Twenty Ounce, and Washington are a little past; and Baldwin is very inferior; Newtown Pippin, small, but of plump texture, and just changing colour; New Rock Pippin,

good.

Since writing the above I have seen Mr. Cheal's sensible remarks (page 488), and concur with him, that we cannot do better than plant our own tried kinds. Our fruit room is on the soil, and we keep this damp, thus preventing that shrivelling which is often so prevalent where too dry an atmosphere is kept. After the fruit room we will turn to the trees, and now that the leaf is off a little we can see the bristling fruit buds and the dark brown wood ripened to the tips, which gives us hope for next year. We have heard no complaints among the large growers as to bad cases of decaying in stores, and generally growers are well satisfied with the prices which have ruled for really clean well sorted fruit. Wagener Apples, as grown here, are finer than the Canadian examples shown at the Drill Hall, but at present they have a distinct Quincey flavour.—George Bunyard, Maidstone.

The general complaint, as Mr. Iggulden says, is that Apples keep badly this year. No doubt this is to a great extent caused by the large amount of saccharine in the fruit. This is easily observable in the large number of cider fruit, which I convert into cider. The juice of nearly all varieties, when tested with the saccharometer shows 10 per cent. and more than their usual quantity of saccharine. At the same time, when estimating the time of ripening Apples and Pears, it must be remembered that the season 1893 has been quite a month earlier all through, both in time of blossoming, setting fruit, ripening fruit on trees, and, therefore, maturing later sorts in store. However, in cool fruit rooms and when the fruit was left to mature well on the trees I have no fear but what the late sorts will keep well. No doubt in certain cases the fruit did get sunburnt, some of the softer fleshed varieties especially. I quite agree with Mr. Iggulden that we can limit our varieties too much. It is always observable that seasons will suit a variety which will not when others usually prolific fail, and the same also applies to localities. At the same time it is folly for market purposes growing too many sorts.

As regards American sorts, I believe they are usually better keepers than ours; this season has suited them, and they are much finer than usual; but it does not follow that it would be wise to cultivate them generally. Such sorts as Newton Pippin, Baldwin, Northern Spy, and others will never pay to cultivate in this country. Amongst the best are American Mother (grand for a warm soil), Wealthy, King of Tompkins County, Rhode Island Greening. These, I think, are worthy of extended cultivation. Jonathan is a good keeper but poor bearer. I have added about fifty of the newer American varieties to my trial plantation, procured direct from America and selected as those sorts most highly spoken of by the leading fruit growers there. Whether they will prove as good in our climate is a question which can only be answered by years of trial, but as a rule I find an Apple does not retain the reputation it does in the country of its origin.—John Watkins, Pomona Farm Nurseries, Withington, Hereford.

I HAVE read with interest the articles in the Journal of Horticulture on the keeping of Apples this season. I quite agree with "A. D." (page 465), that in a season like the past, our ordinary methods of keeping Apples are not the best. The advice as to the stacking of Apples outdoors is worthy of being put into

practice. I generally select a dry plot of ground where I intend to stack the Apples, and spread clean Wheat straw from 1 to 2 inches thick on the surface. The Apples are placed on the straw and formed ridge shape, like Potatoes, all bruised and small sized fruits being placed on one side for immediate use. After forming the ridge I cover the Apples with clean straw, and bank up with soil, fixing a 2-inch drain pipe at intervals on each side to let out moisture and admit a current of fresh air. During frosty weather the mouth of the drain pipes can be easily closed by being filled with dry bracken. I have 50 bushels of Apples stacked in this manner, and I am confident from the results of past experience that the fruit will well repay me for any extra labour, and will keep far better this year than others will in an ordinary fruit room. The Apples I usually store thus are for use after Christmas.

Much fruit is yearly lost by careless gathering. Only men who can thoroughly be depended upon should be allowed to perform the work. The practice of shaking down fruit because it cannot be reached without a little exertion on the part of the fruit gatherer should be deprecated. On the whole my Apples, both in the fruit room and those which are stacked, are keeping well. Those produced from trees in the orchards are very firm, especially so from trees planted on the hillsides facing north and east. The late Mr. T. A. Knight had his orchards established on ground facing all aspects, and the wisdom of his so doing is fully apparent in that we generally secure, no matter what the season, an abundant crop of Apples for home consumption. Our orchards are not planted with a few sorts, but with trees of many well tried varieties known to suit the soil and climate, so that if one variety fails,

others yield a crop of fruit.

I quite agree with Messrs. Iggulden and Cheal that there is some danger of too few varieties being planted. My advice is plant many trees of early and late varieties which are known to suit the soil in different parts. Beauty of Kent with me is sound at present, also Blenheims, King of the Pippins, Jefferson's (Devon Red), Hollandbury, Mère de Ménage, Reinette du Canada, Golden Noble, Goff, and Wyken and Ribston Pippin. I have said nothing about Dumelow's Seedling, Northern Greening, and other late varieties. Those who are fortunate enough to have a good supply of late Apples will be able to realise good prices for their fruit. It has been a sad sight this season to see so much fruit wasted because fancy prices could not be obtained. — John Chinnery.



CIRRHOPETALUM ORNATISSIMUM.

This is a beautiful little Indian Orchid, second only in size and interest to the new C. Colletti, to which it is closely allied. The former was introduced from Sikkim in 1882, when it was named by Reichenbach. It first flowered, says Mr. W. Watson in the American "Garden and Forest," at Kew in 1887, and a picture of it was published in the "Botanical Magazine," t. 7229. A plant of it was exhibited in flower by Sir Trevor Lawrence, Bart., at a recent meeting of the Royal Horticultural Society, who awarded it a first-class certificate.

It has four-angled pseudo bulbs springing from long creeping rhizomes, a leathery leaf 4 to 6 inches long, and a graceful scape 8 to 12 inches long bearing an umbel of flowers, each 4 inches long, including the tails of the broad curiously twisted sepals, which are yellow, lined with dots of purple; the short petals are each tipped with a brush of red paleæ; the labellum is small, tongue-like and coloured purple-black. Cirrhopetalums are finding general favour with English cultivators, being easy to grow in a stove, free flowering, and exceptionally interesting in flower structure.

ODONTOGLOSSUM CRISPUM.

A CORRESPONDENT writes to a foreign contemporary that the best varieties of Odontoglossum crispum have been found, so far, in a comparatively small range between the fourth and fifth degrees of northern latitude on the western slope of the eastern Cordilleras, and at an elevation of 6000 to 7000 feet. The plants grow higher up the mountains, and farther north and south; but when found at an elevation of 9000 feet they are smaller, with more decidedly pear-shaped bulbs, which shrivel a great deal when they are dried off. At the elevation of 9000 feet the temperature sometimes falls to 42° Fahrenheit, while at 6000 the thermometer never registers less than 55°.

O. crispum is fond of light and air, and, therefore, does not grow in the dense woods, but on the edges of openings, where it can receive sunlight and enjoy the breezes. This is why it seems to follow the little streams and gullies in the mountains which apparently split the forests open. It grows on the thick limbs and crotches of large trees, such as the Chinonas and Melastomas, and the trees upon which these Orchids are found are cut down without mercy, and the plants are torn off and shipped away.

CATTLEYA CITRINA.

Relative to the remarks upon Cattleya citrina, by "C." (page 505), I would like to state what has been my experience with that fastidious Orchid. I once had charge of some plants of it fresh from the nursery, evidently only newly placed in small pans. The pseudo-bulbs were perfectly upright, but as the plants commenced to grow, the growth described a half-circle, and when about $1\frac{1}{2}$ inch long were something like a half-moon. The following year they resumed their old habit of growing downward.—F. Tugwood.

In reply to your correspondent "C.'s" inquiry (page 505), with regard to the downward position of Cattleya citrina, my experience is that it grows much stronger when placed in shallow pans, and consequently produces finer flowers and more freely. Although placed in paus in the upright position, the next growth made will assume its natural position downwards. When so cultivated, the growing point should be placed close to the edge of the pan, the growth is then unimpeded, and its pretty sweet-scented flowers are seen to the best advantage.—W. H. Stephens.

Your correspondent "C." (page 505) asks about growing Cattleya citrina. It grows naturally downwards; if it be placed in a basket with the pseudo-bulbs upright, it soon grows over the side. I have more than a hundred, all in perfect health and vigour, some of which I have had more than twenty years. They are growing on a great variety of materials, all nearly equally healthy, whether on cork, several kinds of bark, Oak root, Teak baskets, stages made of split pieces of Oak or Laburnum, Acacia, bundles of Yew branches tied together, or others also. I think perhaps I like the Yew branches better than anything. Of course, I generally tie them on with the pseudo-bulbs pointing downwards. I never tried them in a pot with peat and sphagnum; but I should think there hardly could be a worse way of growing them. Like most Mexican Orchids, they thrive in an airy greenhouse or vinery, but not in an Orchid house.—C. W. STRICKLAND.

JUDGES JUDGED.

As you say your pages are open to any explanation regarding this matter (page 503), I shall like to give my opinion. I do not say the Judges were correct or not in their awards, but as to the charge you make against the Committee not appointing competent Judges is not correct. I know for a fact that the Judge appointed for this particular class is one of the best in the south. But what of that? He telegraphed to the Secretary the night before the Exhibition, stating his inability to act. I think you and your correspondent ought to have known the whole truth about this matter before giving your verdict of guilty against the Committee.—BERKS.

[We certainly did not pronounce the Judges guilty of incompetence. We carefully refrained from doing anything of the kind. The Committee are wholly and solely responsible for that verdict. The only way of ascertaining the "whole truth" was by inviting information, and we are obliged by the quota supplied by "Berks." Perhaps he could supply more.]

The article respecting this in last week's Journal is very instructive, and shows very plainly that committees cannot be too careful in selecting judges, that, of course, is taking it for granted that one "expert" is more than equal to the three judges in question. A similar case came under my notice during November. The exhibition was not a small one, as may be seen when I mention over £30 were awarded in one class for cut blooms. Two sets of judges were appointed, one pair to adjudicate on the cut blooms, the other the miscellaneous plants, as well as the groups of Chrysanthemums. Of these latter there were nine, and these were classed "for effect" and "quality of blooms." The judges who awarded the prizes to the groups, considering their work finished, left the exhibition. It was then discovered that the certificate of the N.C.S. should have been awarded to the best group in the show. The judges (one of whom was an expert) who officiated on the cut blooms were asked to make the award, and they proceeded to do so. The certificate fell to a second prize group, much to the discomfiture of the secretaries and committee. This plainly showed some persons had erred in judgment. To get out of the difficulty, the certificate was ultimately awarded to a non-competitive group of well grown plants. The mistake apparently was in having really good "all round" and

practical gardeners who were not Chrysanthemum experts as judges for the groups. I would like to add the committee were apprentice hands, this being the society's second year of existence.—VISITOR.

Unless committees of flower shows are always prepared to submit disputed awards of judges to some court of appeal it is most obvious that the old formula, "the judges' decisions are final," must be adhered to both in spirit and in letter. A graver violation of their own law could hardly have been conducted than was that act referred to in your leader of last week. That a committee should first deliberately select certain persons to act as judges at their show, men whom it would have been a complete condemnation of the competence of the committee, if incompetent themselves, and then to practically admit that they were incompetent by employing "an expert" to repoint the flowers in the disputed class, was one of the most inconceivable insults ever inflicted on judges, that is to say if it were done as alleged by your correspondent. I do not know who the judges were.

But who was the "expert," and what special qualifications did he possess that were not possessed by the Judges? Is it a case where a Committee obtains the assistance of local men on the cheap, and finds that such help is dear in the long run? or is it a case of securing the best man obtainable at reasonable charges? This should be made known, although neither between the former would justify the Committee for one moment in withdrawing confidence from their Judges after the awards had been made, and in inflicting upon them the grossest of insults.

It is, it must be held, imperative in every case—except where Committees thoughtlessly admit of appeals to some other authority than the regular Judges—that the decision of these officials must be final, and without appeal, except, of course, in some proved case of fraud, which is of a very different nature. To open the door to indiscriminate appealing would be to evoke all the wildest and fiercest passions of human nature, and to convert flower shows into pandemoniums.

human nature, and to convert flower shows into pandemoniums.

But, after all, the "expert's" pointing proves nothing. It simply shows, if anything, that it is utterly impossible to establish any code of pointing that shall in all cases be infallible, for the simple reason that the code has to be in all these cases determined by diverse people. I will wager that if a dozen "experts" had followed the Judges in this particular instance that no two would have pointed alike. If anyone doubts let them test a case next season, and note the result. It is so easy to see, did we admit the process of "judging the judges," that we should be landed in chaos, whilst in theory I see no reason whatever why the points awarded to each flower might not be made known to the exhibitors, and specially the full number of points awarded to each exhibit. If ully understand that in practice it might lead to an intolerable nuisance. It is a degradation of exhibiting that some dissatisfied exhibitors should hang about their exhibits and wrangle and complain, and exhibit so much of the worst aspects of human nature. This sort of thing it is feared the publication of individual pointing would largely increase. So much yet has to be learned from Dean Hole's Rose book's adjuration—

"But if ye fail, or if ye rise,
Be each, pray God, a gentleman."

—D

Your leading article (page 503) deals so fully with the matter of exhibitors' protests, that little clse is left to be said. Year after year I am the more convinced that judging by points where the stands of blooms are close in merit is the only just method of awarding the

At an important show where I was engaged during the last month valuable prizes were offered for twenty-four Japanese blooms. At least five of the competing stands were close in point of merit. After the public were admitted a well known Chrysanthemum judge remarked to me after well examining the exhibits in this particular class, "I am sure the blooms here are close to-day, would you mind telling me what difference separated the first and second stands?" "Certainly," I answered, and turning to my notes replied, "3½ points." The question and answer occupied less than one minute. How could the difference be noted so quickly by any other method? Some judges favour what I term the comparison method. Instances have occurred this year where exponents of this method have officiated, and upon being appealed to civilly to state the difference between certain stands, replied curtly, "That's my business."

It cannot be said that the blooms placed first by the "expert" (page 503) were of high excellence, or else this individual pointed them low. Forty-eight Japanese blooms of good quality should give at least 195 points, and when extra good in all respects twenty points more would not be out of the way high pointing. My opinion of awards made is that the adjudicators should be in a position to give a reason for their decision, and when this can be clearly done seldom are the judges at fault. It is those persons who cau give no tangible reason why one stand of blooms is superior to those in another that make errors.—E. MOLYNEUX.

Possibly those who are always "judges" will be those who trouble themselves the least about your leader. Yet, as a rule, judges are, I believe, strictly honourable men; but though honourable men, they are men, and therefore fallible. Those who, like myself, occasionally act in that difficult and by no means to be desired capacity will perhaps think more about the incident therein mentioned.

On the part of the judges there is very much to be said. There are rules about "the tents being cleared for the judges" at a certain hour, which should be just as binding as "the decision of the judges is final. One is as much a regulation of the show as the other. Yet, where do you see it carried out? and who is the Hercules that is to sweep this Augean stable clean? Why are the judges to have the time at their disposal (generally utterly inadequate) cut short by the breaking through of one

rule, whilst another regulation may not be interfered with?

In judging Roses there is no doubt that the verdict given by the judges at noon may often be considered unsound by many at 4 P.M. The judges, however, have to judge flowers as they are, not as they may be a few hours hence; but in the case of Chrysanthemums there is a lasting power the Rose possesses not, and in the afternoon judgment may be as easily settled as at the earlier time. Many years ago, I think nearly half a century, when reporting for your pages a large West of England Show, I noticed what I considered errors in judging. One of the exhibitors, whom I knew only by name, somehow fixed the report on me, and was exceptionally indignant, not that I cared an atom for the gentleman's spleen. Well, in that report I suggested that judge should judge the judges. The idea was scouted, but here at this Exhibition something of the kind seems to have been done, if your correspondent is accurate in his statement.

My idea was this. We—judges, exhibitors, committee-to error, there is nothing infallible about us. Why should Why should we ape it? Assuming, then, that judges may make mistakes—and sometimes, recollect, it may be an accidental error of copying on the card the wrong number of the exhibitor-why should not another judge scan the verdict before its being sent to the secretary's tent, and detecting what he may consider an error, tap his brother judges on the shoulder and say, "Come, just point over these two stands with me?" It is well known that stands may be so close together that points do not separate them, and the judges are forced to take setting up into account to decide; these are not the cases where dissatisfaction arises. Possibly in the case mentioned there was little to choose between third and fourth prizes, but when you come to compare these with the second prize it is plain that a matter of thirty points must have been a startling difference in the stands. And it is for these manifest oversights or misjudgments that the extra judge making his own conclusions and finding them at variance with the recognised censors, might advantageously hold a consultation with them before the decision is made

Some such arrangement would do away with such a glaring case as the comparison between second, third and fourth prizes at the exhibition named; nay, it actually did detect the error, but too late for alteration.—Y. B. A. Z.

THE case mentioned on page 503 is the worst muddle I have ever heard of. Neither judges, committee, or secretary are to be congratulated, and it appears doubtful if the final judge or censor ought not to be included with them. It is well you have published the alleged facts; they contain many warnings. But putting the above case on one side for the present, I would ask, Are not many errors in judging caused by neglect to clear the place of exhibition soon enough l It is nothing unusual at some shows to find the officials nearly an hour behind the notified time for clearing; chiefly, it is presumed, because one or two exhibitors have arrived late, and have not finished staging. This is grossly unfair to those who do try to abide by the regulations, as they cannot safely leave their exhibits until the place is cleared, and the judges are hurried round in order to get finished before the time to admit the public. All such rules should be carried out to the letter. If any exhibitors are not ready, let them be disqualified; they will learn to arrive in time at the next exhibition.

The best arrangement I have seen in this matter is that practised at Birmingham Chrysanthemum Show. A notice printed in bold type is sent to each exhibitor a day or two before the show, saying that the rule as to time will be strictly enforced. A bell is rung as a warning to be ready about ten minutes before the time, and the hall is cleared

punctually and quickly when it is rung again.

The above is the only reason I can think of for many mistakes in judging which one sometimes meets with. A few years back at a very large show I remember two dishes of Sea Eagle Peach in one collection of fruit were shown under distinct names, one of them being selected with less colour than the other. Good judges ought to find out and disqualify those who do such tricks, but if they are pressed for time they cannot reasonably be expected to do so. It is a pity such cases should occur, but as long as there are shows there will doubtless be a few dishonest exhibitors who are not ashamed to rob their neighbours. There ought to be some means of punishing them by law for this, I consider it quite as bad as picking a man's pocket.

If I understand your article rightly on page 503 you say the judges' decision cannot be altered after the public are admitted. If this holds good, how are judges' mistakes to be rectified in the future?-

W. H. DIVERS, Ketton Hall Gardens, Stamford.

THE article on page 503 throws a search light of electric power on the case in question, and places the matter, so far as it has gone, very clearly before the public. Although the verdict has been found, sentence will presumably be deferred until all the side lights have been turned on what is undoubtedly a momentous subject.

As a judge and exhibitor of some years' standing may I be allowed to make a few comments and offer a suggestion? The case appears to resolve itself under two heads—viz., error or incompetence. I need not dwell on; the leading article deals with that so con-But error or difference of opinion, which the so-called error may resolve itself into, allow me to turn on a side light from afar off truly—viz., ancient history. "Long, long ago, beyond the space of twice a thousand years," Jupiter, in a merry mood, showered down on mortals a number of spectacles, which each fitted on (no two were alike), and each mortal since has been comeplled to wear them, though invisible; hence, till Jupiter takes back his gift, we mortals shall never see things alike.

Another side light. Given two exhibitors, each complying with the rules, each with blooms of about equal merit, the deft hand of one exhibitor will with neat arrangement and finish in setting up add a grace and charm to his stand which his opponent fails in doing, though on analysis of the individual blooms this does not count, but in close competition does not this influence the judges, and should it not receive consideration? It does from the public, and they are no bad judges. I have seen the humble man from a single-handed place, practically unknown and unnoticed, the first to put up his stand, the last to leave it, giving a touch here, another there, while my lord's gardener disdaining these trifles, dishes up sans ceremonie and sans goût, but to find later on that these little things are not to be despised, and do carry

weight.

Who, as an exhibitor, when clearing out for the judges does not give a final look, and take the measure of his opponents with his eye? I do, and am seldom far out in this premature judging. After that, unless anything glaring should be found, which I never have, I do not question the judges' decision, and though not always getting the expected place, at other times the unexpected falls to me, and any seeming error either way I attribute to Jupiter's spectacles, which we, the judges, and even experts, are condemned to wear. My suggestion is that the National Chrysanthemum Society should formulate and publish a clearly defined code of rules for the help and guidance of judges, which would undoubtedly be recognised as the standard of all societies. committee of judges nominated by Mr. Molyneux, himself acting as Chairman, is an alternative suggestion.—E. K.

THERE can be no doubt that the show referred to on page 503 last week was that of the Scottish Horticultural Association, and the allegations contained in your correspondent's letter demand an answer from me as Secretary.

Your correspondent states two facts, viz.: first, that "The Committee so far entertained the protest as to appoint a competent expert to 'point' the different stands;" and, second, that "The Secretary told the 'protestors' that the Committee acknowledged the misjadgment, but, owing to a clause in the rules, viz., 'The decision of the Judges is final, nothing could be done in the matter."

To both of the above "facts" I have to give a most emphatic

When the disappointed competitors handed me their protest it denial. was laid before a meeting of the Committee, and it was resolved that the Committee had no power to call in question the decision of the Judges, in whose skill and integrity they placed every confidence; and this decision was communicated to the "protestors."

As this matter must be brought before my Committee, in justice

to myself I think it but right that the name of your correspondent should be placed in my hands. The other remarks contained in your editorial do not call for my criticism, and therefore I pass them over for what they are worth.-ROBERT LAIRD.

We are obliged to Mr. Laird for informing the public that the Show alluded to was that of the Scottish Horticultural Association, held in Edinburgh on the 16th, 17th, and 18th ult. Our correspondent of last week sent us his name and address, assuring us of the accuracy of his statement, which he desired us to publish. He did not mention the name of the Society, nor did we know it when our last issue was published. It was in no degree material that we should know it. It was a question of what Mr. Laird describes as "facts," but which we described as allegations, these being of such an extraordinary nature, yet stated with such precision, as to demand attention. We placed our pages open for any counter statement, and as readily insert Mr. Laird's communication as we did that of the writer whose accuracy is so emphatically denied. The Committee, he says, did not appoint an expert to point the blooms after the Judges, and did not acknowledge any "misjudgment." Who then appointed the "expert," the result of whose irksome duty we published last week? Our correspondent will note Mr. Laird's request for his name and address. We have no objection to these being furnished for placing before the Committee as suggeste 1.]

CRYSTAL PALACE SEPTEMBER FRUIT SHOW.

I AM pleased to see in your last issue that "H. W. W." (page 508) draws attention to these once popular gatherings of pomologists, the discontinuance of which has indeed been a great disappointment to both fruit growers and exhibitors generally. Like "H. W. W.," I was for some years an exhibitor at these shows, and always looked upon them as being the best managed and best conducted of any in my experience of exhibiting.

I endorse every sentiment "H. W. W." has expressed in his desire to urge the Crystal Palace Company to renew their September Fruit

Show, and if they will do so I can only say that I for one will endeavour to support them.—AN OLD EXHIBITOR.

I TRUST there will be not only a strong backing-up of "H. W. W.'s" appeal (page 508) for a resuscitation of the September Fruit Show, but also that a sort of memorial from a large number of fruit growers will be prepared, signed, and sent to the Crystal Palace Directors in favour of the suggestion. Let "H. W. W." prepare the memorial and sign it, then send it to the Editor, who should be authorised by fruit growers all over the kingdom to attach their signatures, sent on specially provided slips, and it could then be forwarded to the Crystal Palace Directors. It is so obvious that not only has no other show been found a substitute for this exhibition but there is less probability than ever in the future that any substitute will be furnished anywhere in or about London. The opportunity is an excellent one for the Directors to resume their proper position in relation to the National Autumn Fruit Show.—D.

MESSRS. E. D. SHUTTLEWORTH & CO., LTD.

ALTHOUGH but some three years or so have elapsed since Messrs. E. D. Shuttleworth & Co., Ltd., first established themselves at the Albert Nurseries, Peckham Rye, they have obviously made great progress, and the firm now occupies a prominent position amongst metropolitan nurserymen. Visitors to exhibitions held in the metropolis, also in the provinces, have often had their attention drawn to the meritorious exhibits staged by this firm, and these, with the judicious management of the Chairman of the Company, Mr. Charles Hicks, have done much towards building up a growing business. The Albert Nurseries are situated about half a mile from Honor Oak Station, and rather more from Peckham Rye, both on the London, Chatham, and Dover Railway, Messrs. C. Hicks, H. Wigley, and T. Baker being the directors. To meet the increasing demands several large glass structures have recently been built, and these, together with many other houses and numerous pits and frames, are filled with healthy plants of various

descriptions.

Being growers for the wholesale as well as retail trade Messrs. E. D. Shuttleworth & Co. carry on an extensive business in ornamental foliage and flowering plants suitable for decorative purposes. Palms for example are strongly represented, and we are keeping within bounds in saying that so far as these are concerned the firm can hold its own perhaps with any in the country. Thousands of plants in all stages of growth may be seen, including seedlings an inch or so in height to those magnificent specimens 10 or more feet high, which have embellished so many exhibitions during the past two or three years. It is impossible to enumerate the whole of the species grown, but it may be mentioned that of such popular kinds as Cocos Weddelliana, Geonoma gracilis, Kentia Canterburyana, K. Belmoreana, K. Fosteriana, Latania borbonica, and Areca lutescens there is an enormous stock. Asparagus plumosus nanus is largely grown, there being an almost insatiable demand for this decorative plant, and the same applies to the best of the Dracænas. The last-named plants are characterised by a clean healthy appearance, and bear the impress of skilful cultivation. Crotons, too, receive special attention, as a glance at the beautifully coloured foliage will testify. If further corroboration were necessary we have it in the fact that the firm has on several occasions procured first prizes for these plants when exhibited. Only the best are kept in stock, and thousands of young plants are annually propagated. What has been said in regard to Palms is applicable to Ferns, which appear to have more than ordinary notice given them. Several houses are devoted to their culture, and it may be observed that immense numbers of the best decorative kinds are raised from spores. Some plants of A. farleyense in 6-inch pots were exceedingly healthy, as also were Pteris tremula Smithiana, and Davallias of various kinds. Ornamental foliage Begonias are not forgotten, there being a good demand for these plants; also Araucaria excelsa, Aralias in variety, Marantas, Aspidistras, and Cyperuses. As is now well known Cycads are a specialty at the Albert Nurseries, and some splendid specimens of C. revoluta have been exhibited by the firm on several occasions. Other foliage plants deserving of individual notice are Poinsettia pulcherrima variegata, Abutilon foliis variegata, Souvenir de Bonn; also the new Sonerila Baron Sallier and Phrynium variegatum, a plant worthy of more extensive cultivation.

Whilst so much attention is given to ornamental foliaged plants it must not be thought that those usually grown for their flowers are overlooked. The latter are cultivated quite as extensively as the former, and equally as well. Roman Hyacinths and Lily of the Valley are now blooming profusely, while the early Duc Van Thol Tulips are already showing their brilliant blossoms. Large consignments of well-ripened crowns of Lily of the Valley, with bulbs, are imported from abroad, and apart from the forced flowers during the winter and spring, a rising trade is done in roots through the autumn. Messrs. E. D Shuttleworth & Co. also import thousands of Ghent, Mollis, and other Azaleas, and many of these are now expanding their flower buds in a genial temperature. Others, again, are temporarily planted in beds for furnishing a later supply and meeting the demands for imported plants that arise. Orchids are grown in good numbers, as also are Zonal, Ivy-leaved, and other Pelargoniums. An immense stock of Marguerites in pits attracts notice, and Gardenias are well represented, the plants being clean and healthy. Ericas in variety, double Primulas, Bouvardias, and Cyclamens

are also extensively grown.

Messrs. E. D. Shuttleworth & Co. have a branch nursery at Fleet, Hampshire, over which Mr. Wigley presides, and here, the Journal representative was informed, hardy plants, Roses, Coniferæ, forest and fruit trees, are grown in large numbers. About two acres of ground are devoted to the culture of Daffodils, which give promise of becoming a leading feature in the business. Carnations and Dahlias, with other popular flowers, likewise have attention, all the newer varieties of these being cultivated. Much more could be said in regard to this thriving business, but the foregoing will suffice to show the firm merits all the attention that has been given. It is worthy of mention, however, that comprehensive and well arranged catalogues of general plants, bulbs, and seeds are issued by this firm, and these, like the plants, deserve more than a passing glance.

DESSERT TABLE COMPETITIONS.

The points raised by Mr. E. Harland in connection with this subject (page 519) may perhaps appear confusing to some, but to my mind the matter is clear and simple enough, as it hinges upon the query, Can a dessert table be considered "completely laid out" if no fruit or other accessories are placed upon it? Decidedly, yes, as the custom of not placing fruit upon the table is a rapidly extending one. True, there are hosts of families among whom the older custom of placing both fruits and sweetmeats upon the table still lingers. That, however, does not prove a dessert table to be incomplete without them, any more than that a dinner table would not be considered "completely laid out" unless the viands were placed upon it. In my opinion, therefore, the Judges at the Hull Chrysanthemum Show rightly awarded the first prize to the table which was acknowledged to be the best artistic arrangement, and I fail to see how a protest for disqualification could have been sustained by the point raised.—H. Dunkin.

On first reading the paragraph contained in the Hull Chrysanthemum schedule, one naturally comes to the conclusion that the exhibitor who had no dishes of fruit in his exhibit for dessert table decoration would render himself liable to disqualification. But, on closer scrutiny, it is plain that the Judges would not have been justified in disqualifying such exhibit, as it would be quite in conformity with the wording of the schedule. One has no doubt as to what was in the minds of the Committee when arranging for this class, though the Judges cannot take into account any intentions of the donors of such prizes, but must give their decision according to the exact wording of the schedule.

The clause is very explicit as to what flowers and foliage are to be used, but not a word as to what kind of dessert fruit, or how many dishes, "if any," were required; the word "completely" contains, no doubt a good deal of meaning, but to have its full significance the clause should read, "completely laid out, with not less than 'so many' dishes or varieties of dessert fruits."—GEO. WOODGATE, Warren House Gardens,

Kingston Hill, Surrey.

It is very evident that the problem propounded for solution by Mr. Harland is more one for logicians than for table decorators. Custom or rule does not bind the case. It is to be determined by interpretation of words. Those of primary importance are "dessert" and "completely. Now, with regard to the first, what is a dessert table? Clearly one at which people sit to partake of whatsoever of fruit, sweets, and drinks, may be placed before them. Now, we have hundreds of dinnertable competitions florally dressed, but because "dinner-table" did anyone ever hold that in any such competition there must be placed on the table dishes of meats, entrées, poultry, fish, vegetables, and sauces? Of course no one. It is held that dinners are not now so served, but rather are furnished à la Russe. That estimate has always been excepted, and no one perhaps has ever held that because called "dinner"-table the presence of the usual accompaniments of a dinner were essential. We have but to apply the same rule to a "dessert" table, and the solution of the problem is found.

Besides, it is evident that "fruit," or the ordinary concomitants of a dessert, was not in the minds of the framers of the schedule, or they would have so expressed themselves. On the other hand, Chrysanthcmum flowers and foliage are specially enjoined. It is so obvious that the prize is given for the best floral dressing, because the form or material of dressing is strictly enjoined. Then as to the interpretation of the word "completely," who would undertake to assume when or how a table was completely furnished with dessert? Say it is for six persons, should the dessert include a Pine, white and black Grapes, Pears and Apples, Oranges, dried fruits, nuts, swects, biscuits, and wines. Does not all this paraphernalia present itself to any sensible person's mind as preposterous? Indeed, were it bound to be furnished, it is but too evident that the judgment of the tables would be more contingent on the fruits than on the floral decorations and their style of arrangement. That it is not now the ordinary practice at small dinner tables to place all the dessert on the table—a vicious practice—but to hand it round from the sideboard, shows that in merely furnishing plates, knives and forks, and one or two trivial dishes, that the principal decorator merely wished to convey the idea, as intimated in the schedule, that places at the table were furnished for six people, and that number only. That was his interpretation of the word "completely," and it would seem to be the only logical one.

A dessert table does not mean one dressed with a dessert. Had such been expected it would have been specially provided for. What was required is what is fully expressed in the quotation from the schedule,

"Only Chrysanthenums, with any hardy foliage, to be used in its decoration." The word "only" settles the business.—A. D.

MR. HARLAND has given us a very queer nut to crack. If the framers of the prize schedule of the Hull Chrysanthemum Show had tried to word the conditions governing the class for a "dessert table," so as to cause confusion among both exhibitors and judges, they could not well have done it more effectively. Personally I am inclined to agree with those judges who, when they have to decide a knotty point, lean towards sustaining the framers of schedules in what they intended should be understood by certain conditions, and not towards those of the exhibitors who prefer to put their own, and perhaps a very different construction upon the wording. In particular would I favour what has been accepted as the right construction in former years. In the course of a fairly long career as an exhibitor I have been either disqualified or lost points more than once for putting my own construction upon the wording of certain rules, and can therefore sympathise with those who also have to suffer if not exactly for "conscience sake," at any rate for "backing their own opinion."

"backing their own opinion."

As a Judge I thoroughly dislike disqualifying exhibits, though it has to be done occasionally; and all things considered I should have hesitated about voting against the table at Hull on which there was no fruit. If it had been worded "only fruit and Chrysanthemums, with any kind of foliage to be used," there could have been no mistaking the conditions; but unfortunately fruit was left out, and this gives a good opening for a lawyer. Candidly I think the Judges took the only way out of the difficulty. It is unfortunately too true that in some quarters it has become the custom to keep the dessert off the table, this being served very much as the earlier part of the dinner is done. This practice is to be commended in all cases where the dessert will not bear much inspection, but is not likely to prevail where the host or hostess has some good home-grown fruit to offer. By all means serve Grapes without bloom, bruised Pears, shabby Apples, and imported fruit generally from the sideboards; but if my brother gardeners are well advised they will endeavour, to the best of their ability, to keep up the old custom of placing some of the best of their fruit on the table. Not only does it add greatly to the general effect, but it often leads to an acknowledgement—that is to say, a commendatory notice from the guests, and subsequently the master or mistress as the case may be.

If 1 intended to compete for the prizes offered at Hull I should certainly feel justified is using four good dishes of fruit, both because the wording admits of this being done, and more especially because I am certain that would gain me a few points with the Judges. Seeing that the wording of the schedule must stand, my advice to the Hull Committee is to let matters take their course, beyond intimating to the Judges, if they are different to those engaged this year, that there must be no disqualifying tables, whether fruit is or is not used in their decoration, providing the competitors adhere to the other conditions. They have established a precedent, which ought now to stand till the end of the competition.—W. IGGULDEN.

WITH Mr. Harland, I fully agree that the first prize was rightly awarded to Mrs. Douglas Joy, of Welton Hill, her table being much the best artistic arrangement of Chrysanthemums and foliage, and that, I take it, is the principal object for offering these prizes. Yet, on the other hand, I must entirely differ from Mr. Harland when he states that "if a protest had been entered, this table must have been disqualified," because, forsooth, it was not "completely laid out." In this instance, what a bugbear that word "completely" can be made. Was every exhibitor to load her table with all the known wines and cordials, also all the home and foreign fruit, both fresh and dried, that our fruiterers could supply? I think if such were the case there would be a terrible crowding out of everything in the way of floral decorations. Your correspondent wishes "to know what is the correct view." I quote the following from "The Gentlewoman" (no mean authority, by the way):—"Fruit is not often put on the table for dessert, but instead very small dishes of salted almonds, olives, and French bonbons."—A YORKSHIRE BITE.

REFERING to "Dessert Table Decoration," I have come to the decision that fruit and every requisite should have been placed on the table to accord with the wording of the schedule. At Southampton, as far as I can now recollect, it mentions in the schedule, "in the dessert table class," that fruit need not be placed on the table. I do not see how a table can be complete without the fruit and all requisites.— F. W. FLIGHT, Cornstiles, Twyford.

I THINK a Judge would take a bold step if disqualification was enforced because a table was devoid of fruit in its adornment. I know of no rule that bids the placing dishes of fruit on the table. This is entirely a matter of personal taste, and in the absence of such a rule the laying down of individual law is liable to bring complications. I have repeatedly seen tables this year win premier honours that had no fruit on them beyond dishes similar to those described by Mr. Harland on the winning table at the Hull Show.

The main point in awarding the prizes for table decoration is to recognise the greatest skill and taste in disposal of the flowers allowed. It would be a peculiar law, I think, that permitted an exhibitor to take a premier honour with an arrangement of flowers of diverse colours, as well as being huddled together, for the reason that it contained a solitary dish or two of any ripe fruit which its opponent, intentionally or

—"The Great Stor Harding, F.R.Met. Soc."

On Changes in the Bombay Water "On Changes in the Bombay Water".

otherwise, had omitted. In the absence of definite instructions that dishes of fruit must be employed, I cannot see how disqualification can be supported. I have examined many schedules containing classes of this kind, and in nearly all the conditions are similar to those named in the Hull schedule. The definition applied to the words, "completely laid out," I take it means that such articles as plates, knives and forks must be present.—E. MOLYNEUX.

[Those letters from exhibitors, judges, secretaries of shows, and accomplished table decorators, are overwhelmingly in favour of the interpretation of the conditions by the adjudicators at Hull—Mr. Cypher of Cheltenham, and Mr. Hudson of Gunnersbury.]



THE WEATHER IN LONDON.—Much rain has fallen in the metropolis since publishing our last issue. A slight frost was apparent on Sunday morning, but as the day advanced it rained heavily. Monday proved fine, but on Tuesday it was very squally. Wednesday opened wet, and at the time of going to press the weather is very unsettled, but mild.

— Weather in the North.—There has been very little frost during the past week, but many sleet showers and much high wind. Throughout Thursday night and all Friday a gale from the southwest blew, causing much damage to property, and Saturday was also gusty with heavy showers of sleet. Roads were slippery, and driving difficult from frost on Sunday morning, but there was high wind and drizzle in the evening. Monday was the best day of the eight, and this morning (12th) the ground is white with snow.—B. D., S. Perthshire.

— Mons. Ed. Ortgies,—It is announced that Mons. Ed. Ortgies, who for the last thirty-eight years has been Curator of the Botanic Gardens, Zurich, is about to retire into private life, and will resign his office on April 1st, 1894. As a young gardener, Mons. Ortgies served at Chatsworth, also in some of the London nurseries, and was a foreign member of the Royal Horticultural Society.

— RUGBY AND DISTRICT HORTICULTURAL SOCIETY. — May I, through your columns, express to those exhibitors who so kindly gave their spare blooms and fruit to the stall held at our late Show on behalf of the Royal Gardeners' Orphan Fund, and also to Messrs. E. D. Shuttleworth & Co. for sending a case of small Ferns and Palms for the same object, our Committee's sincere and hearty thanks, and to state the amount realised was £6 17s. Sd., a cheque for which has been forwarded to the Hon. Secretary to the Fund.—WILLIAM BRYANT, Sec.

THE SEASON.—What is to be done with regard to the more "precocious" belonging to our herbaceous plants? Many of these are pushing vigorously—bulbous plants, too. I have already gathered Crocuses, shallow planted ones of course. My idea is to have a supply at once at hand of cocoa-fibre refuse, and when serious frosts attack us to drop it into the centre of the plants, and for 4 or 5 inches around them. Do not put it on before it is absolutely necessary. Pæonies are very hardy, but still the early growth must be susceptible to frost. Whatever should be put on must be light stuff, and dry.—J. A. W.

THE DECEMBER NUMBER OF "CURTIS' BOTANICAL MAGAZINE" has just been received by us. It contains representations of Amorphophallus oncophyllus, Eulophia Zeyheri, Protea rhodantha, Abutilon vitifolium, and Eria Meirax.

— WE acknowledge the receipt of the Christmas number of Sylvia's "Home Journal," which is a most tastefully arranged and profusely illustrated sixpennyworth, and conspicuous among the exceptional numbers issued at this season.

—— ROYAL METEOROLOGICAL SOCIETY.—At the next meeting of the Society, to be held at 25, Great George Street, Westminster, on Wednesday, the 20th inst, at 8 P.M., the following papers will be read:

—"The Great Storm of November 16th to 20th, 1893," by Charles Harding, F.R.Met.Soc. "Rainfall and Evaporation Observations at the Bombay Water Works," by S. Tomlinson, M.Inst.C.E, F.R.Met.Soc. "On Changes in the Character of Certain Months," by A. E. Watson, B.A., F.R.Met.Soc.

- "KEW BULLETIN."—We have received a copy of the "Kew Bulletin," Appendix 1894, which contains a list of such hardy herbaceous annual and perennial plants as well as of such trees and shrubs that have matured seeds under cultivation in the Royal Gardens, Kew, during the year 1893. These seeds are available for exchange with colonial, Indian, and foreign botanic gardens, as well as with regular correspondents of Kew. The seeds are only available in moderate quantity, and are not sold to the general public. It is desirable to add that no application, except from remote colonial possessions, can be received for seeds after the end of March.
- ROYAL BOTANIC SOCIETY.—At a meeting of this Society, held on Saturday last, in the gardens at Regent's Park, Mr. Arthur Rigg in the chair, it was reported that the donations received since the last meeting included specimens of the peculiar tropical ants inhabiting Myrmecodia Beccari, living plants of which are already in the gardens. These plants are remarkable as affording food and shelter to certain genera of ants in return for the protection they are able to give against the attacks of injurious animals or insects. It is stated that H.R.H. the Duke of York has been made a Fellow of this Society.
- A TRANSATLANTIC contemporary states:—Three of the largest Japanese Maples in America are now standing in Prospect Park, Brooklyn. They are said to be among the first of these trees sent there by the late Mr. Thomas Hogg, and are now, perhaps, 35 feet high, with a corresponding trunk circumference. Although they are beginning to be crowded they are fine trees, and during the late autumn they are especially beautiful. This late retention of foliage is a peculiarity of East Asian plants, and it should be taken advantage of when planting for autumn effect.
- STAPELIA GIGANTEA.—This wonderful species, according to Mr. W. Watson, in the "Garden and Forest," has recently flowered freely in a stove at Kew, and some of the star-shaped flowers measured a foot in diameter. While it may be taken as a general rule that Stapelias prefer a dry atmosphere with plenty of sunlight and warmth, there are exceptions, and S. gigantea is one of them. Until this plant was placed in a moist stove along with the Palms and Aroids, where it had shade in bright weather and plenty of water at all times, except for a few weeks in midwinter, it never flowered. There is something fascinating about the flowers of Stapelias, dull though they are in colour as a rule, and disagreeable, too, in odour, but when these flowers are a foot across, tawny-red in colour, hairy, and not too disagreeable in odour, they are worth a place in every stove collection. S. gigantea is as interesting in its way as Aristolochia gigas Sturtevanti or Victoria regia.
- LILIES AND THEIR CULTURE.—This was the title of an able lecture delivered before the members of the Wakefield Paxton Society at their ordinary weekly meeting on Saturday, December 2nd. The lecturer was Dr. Clarke, M.A., of Headingley, Leeds, Professor in the Agricultural Department at the Yorkshire College, Leeds. Dr. Clarke is an authority on horticultural and agricultural matters. He has a hobby in the culture of Japanese Lilies. The lecturer named many of the best varieties of Lilies suitable for indoor and outdoor cultivation in this country, and by means of chalk illustrations on a black board he showed the best mode of planting Lilies in pots, strongly recommending the use of peat, sandy compost, and rape dust. He deprecated the practice of plunging pots of Lilies and other bulbs in ashes, saying that the rain frequently washed sulphurous matter out of the ashes into the bulbs, and this had a damaging effect. He preferred clean and dry straw to either ashes or cocoa fibre dust, this being a safer material for the purpose in question.
- MISSOURI BOTANICAL GARDEN.—We have received a pamphlet containing the fifth announcement of the pupils at the Missouri Botanical Gardens, St. Louis, U.S.A. Previous to entering the garden the pupils must pass a preliminary examination. Pupils are lodged in comfortable rooms in a spacious dwelling adjoining the garden, under the charge of a competent employé of the garden. The lodging-house includes a reading-room supplied with horticultural and agricultural papers, and also with a collection of books on the same subjects, of which the pupils have free use. So far as possible, the surroundings of pupils are made home-like, and without assuming any responsibility for their behaviour, an effort is made to subject them to influences calculated to insure for them habits of industry and investigation. During the first year of their scholarship the pupils work at the practical duties of the garden nine or ten hours daily. After the first year, one-half of each day is given to manual work, the remainder being devoted to class work.

- A BOTANIC GARDEN FOR CARDIFF.—It is reported that the Parks Committee of the Cardiff County Council recently passed a resolution to the effect that £500 be voted for the purpose of erecting a glass house, and for buying a collection of herbaceous plants to form a botanic garden in connection with the Roath Public Park.
- PRESENTATION TO MR. W. BAILEY.—We learn that on the 6th inst. the employés at Southwark Park, S.E., presented Mr. Bailey, until recently superintendent of the park, and now of Dulwich Park, with a handsome electro-plated cruet stand. The foreman, Mr. F. Bright, made the presentation on behalf of the men, and wished Mr. Bailey success in his new appointment.
- THE WATFORD CHRYSANTHEMUM SHOW.—I was somewhat surprised to read in your last issue (page 512) that Mr. Gleeson, The Warren House Gardens, Stanmore, had been awarded a set of fish carvers for the best exhibit in the Show. Mr. Colchester offered the above as a special prize for the best exhibit in the Show grown with a specified manure, but too late to appear in the schedule, consequently the Judges considered it would be wise to hold over the prize till next year, and did not award it to Mr. Gleeson, but I suppose Mr. Colchester has done so personally. I do not object to Mr. Gleeson having the prize in fact, I congratulate him on receiving it, but I do object to him saying it was for the best exhibit in the Show. The Judges alone should decide this.—One of the Committee.
- LIVERPOOL HORTICULTURAL ASSOCIATION.—On Saturday evening last the members of the above Association held their seventh annual dinner at the Adelphi Hotel, Lime Street; but in consequence of the large amount of sickness prevailing many old friends were missed, and the company, which numbered seventy-four, was only about half the usual strength. Mr. W. Tunnington, in proposing the toast of the Association, spoke of the great difference of the exhibits of sixteen years ago and the present time, more particularly the Chrysanthemums. He referred to the good work the Association had done in disseminating knowledge in horticulture amongst the young gardeners, and hoped it would go on prospering in its work. Mr. T. White, the Chairman of the Association, briefly responded, and regretted that their splendid exhibitions were not more patronised by the public.—R. P. R.
- DOYENNE DU COMICE PEAR FROM A NORTH WALL.—Very good samples of fruit of this fine Pear so produced were shown by a local gardener at Limpsfield, Surrey, on the occasion of a lecture on fruit culture by one of the County Council lecturers last week. The fruits were larger than what are often found on wall trees on a warm aspect, but even so late as November 22nd were far from being ripe, and would be probably be at their best a month later, whilst the flesh was excellent. It lacked softness and the fine flavour which so characterises this grand Pear. That such fruit would be produced on a north wall in ordinary seasons is doubtful, indeed in this case the tree had not borne before the present year. It is very obvious all the same that some good Pears will and do produce good fruit on a north wall, and it may be with a view to prolong the Pear season, all too short this year; to also grow more on north walls than is at present the case.
- BIRMINGHAM AMATEUR GARDENERS' ASSOCIATION.—The present session of this Association was brought to a close on Wednesday, 6th inst., when Mr. Alderman Wm. White, J.P., gave his Presidential address at the Temperance Institute. There was a good attendance, but not so many as there should have been to hear such an enthusiast in gardening matters, who as Chairman of the Parks Committee is Birmingham's "head gardener." He chose for his subject "Gardens, Gardeners, and Gardening." His connection with a garden commenced fifty years ago, when he used to enjoy many a chat with his father's gardener. As to gardeners, he had always found them a very genial class of mcn; but he thought rather addicted somewhat to calling their employers' plants and fruit "my this" or "my that." In the case of his own gardener (for he said he was only an under gardener now) he held that he had a right to style them as partly his own, and when the gardener spoke of "my Grapes," he turned and said, "Oh! they are not yours entirely, for they partly belong to me." However, to turn to gardening, he said that times had greatly altered when he was a youth; very few at that time had a greenhouse. At the conclusion of his address, Mr. Griffin proposed and Mr. Roe seconded a vote of thanks to the President for his very interesting address. Messrs. E. D. Clarke, Gosling, W. B. Griffin, and R. F. Rees exhibited plants and flowers, and the usual awards were made. The silver medal for the highest number of points during the year has been won by Mr. Gosling, the bronze medal by Mr. W. B. Griffin.

- —— TRAPPING BULLFINCHES.—A few weeks since I noticed Mr. Hiam was writing about trapping bullfinches. Will Mr. Hiam say if the trap cages can be easily made, or where they can be bought?—J. E.
- Mons. L. GILLEKENS.—We are informed that Mons. Gillekens, who has been Director of the Ecole d'Horticulture of Vilvorde for twenty-six years, has tendered his resignation. Mons. Gillekens will, we understand, retain his present title as an honorary distinction.
- A LARGE PAULOWNIA.—Mr. George Canby writes that he has since made an accurate measurement of the great Paulownia or Empress Tree in Independent Square, Philadelphia, and he finds at 3 feet from the ground it is 9 feet in circumference. As we ("Meehans' Monthly") happen to know that this is probably the oldest tree in the United States, it will be interesting to learn if there is a larger one or not in the country.
- THE ROYAL HORTICULTURAL SOCIETY OF IRELAND .- A special meeting of the above Society was held on December 4th at the office, 15, Lower Sackville Street. The following members of Council were present:—Sir Percy R. Grace, Bart., D.L. (in the chair); Major Cusack, J.P.; Mr. Edmund D'Olier, Mr. F. W. Moore, Mr. William Dick, Mr. George Casson, J.P.; Mr. C. Strong King, J.P.; Mr. George Ross, M.A., B.E.; and Mr. Hamilton Drummond, J.P., Hon. Sec. The following resolution was passed:—"That the members of the Council of the Royal Horticultural Society of Ireland desire to express their deep regret at the death of His Grace the Duke of Leinster, their late President, and their sincere sympathy with Her Grace the Duchess in her bereavement, and that a copy of this resolution be sent to Her Grace.—(Signed) Percy R. Grace, Bart., Chairman." The following were elected annual members of the Society: - Major A. Mansfield, Morristown Lattin, Naas, Co. Kildare; Mrs. Adam Findlater, Primrose Hill, Kingstown; John M'Entaggart, Esq., Highfield Manor, Rathfarnham and Lower Sackville Street.
- CALIFORNIA AND AUSTRALIA CANNED FRUITS.-A horticultural magazine of Melbourne, Australia, calls attention to the fact that Australia may become a close competitor with California in furnishing dried and canned fruits for exportation to the old world. Peaches, Pears, Plums, and Apricots find themselves very much at home in Australia; and the freight from there to the old world is little, if any more than the freight from California. For some reason or other, the enterprise in prosecuting these branches of fruit business has never been very successful in Australia; but our contemporary states that during the past year or two a great advance has been made in this branch of fruit economy, and that at least one firm in South Australia has been remarkably successful in making profitable ventures in this line to the old world. In some branches of agriculture the Australians have become close competitors with America for portions of the trade of the world; and it would look, from the facts above noted, as if they were destined in the future to come closely into competition with an industry which has been almost a monopoly for California.
- THE WEATHER LAST MONTH IN SCOTLAND. Mr. G. McDougall, Stirling, writes: - The total rainfall here was 3.417 inches, which fell on eighteen days, the greatest fall being 0.950 inch on the 16th. Frost was registered on nineteen days. Warmest day, 54.2° on the 27th; coldest day, 35.5° on the 18th; warmest night, 49.8° on the 29th; coldest night, 21° on the 21st. Mean maximum, 45 6°; mean minimum, 31.4°. The terrific gale of the 18th will long be remembered as the most disastrous experienced in this district for a long time. Nurserymen will be busy before they can supply the demand that is sure to arise if only some of the trees blown down are replaced. On the Abbey Craig, which belongs to the town of Stirling, more than 3000 trees are uprooted. In some parts they are literally packed above each other. Mr. Lunt, gardener at Keir, told me that all their finest specimens are down. Some of the woods at Airthrey have the appearance as if a battery of artillerymen had been practising amongst them. It is the same cry from all quarters, "What a destruction among our woods! The finest of our trees are lying prostrate, trees which we cannot replace."
- WHITE EARWIGS (page 511).—I have often observed earwigs of a lightish colour, but they were always under cover, and, when disturbed, they endeavoured to get out of sight as soon as possible. I have always attributed their lightish colour to a new change of garments. Some of the Carabis beetles, too, may be seen with their elytra white and soft, but these again are newly emerged from the chrysalis.—G. MACDOUGAL, Stirling.

- —. A GIFT TO DUNDEE. We understand that Messrs. R. B. Laird & Sons of Edinburgh have offered to the Council of the City of Dundee as a gift glass houses, trees, and shrubs, valued at £4000. It is stated that the houses are those at Coates Gardens, Edinburgh.
- Two Crops of Grapes in One Season. California is especially favoured in many ways. It seems to be the Paradise of fruit growing. It does not seem to be generally known that they have two crops of Grapes often in one season. At the present time, according to an American contemporary, one of the questions with Californian fruit growers is whether it really pays to allow the Grapes borne upon the later wood growth to mature; some believing that the drain on the vitality of the Vine injures it for the future, while some contend that the plant is just as strong in after years where these two crops are taken as it would be with only one.
- WOOLTON GARDENERS' MUTUAL IMPROVEMENT SOCIETY .-On Thursday, the 7th inst., under the chairmanship of Mr. H. Corlett Mr. R. G. Waterman gave an interesting account of various noted horticultural places he had visited during the summer-viz., Impney Hall, Droitwich, the chief features being the Chrysanthemums and fernery; Appley Towers, Isle of Wight, mention being made of an unusually large Fig tree carrying an enormous crop; Messrs. Drover's, Fareham, and their Chrysanthemums; Swanmore Park, where Grapes were very fine, but the great feature was the Apple trees, carrying such a heavy load as to necessitate their being propped. He finished an interesting paper by mentioning the Earl's Court Exhibition and the Crystal Palace Fête. Although a departure out of the ordinary run of the meetings, it proved of great interest, as showing many different methods and ideas at the places visited. Mr. Stoney and Mr. Carling followed with a few remarks. The usual votes of thanks terminated the meeting.—R. P. R.
- FRUIT MACHINERY.—When we consider the vast difference between the price of labour in American gardens and orchards, and the low prices paid in the Old World, it is a matter of surprise to foreigners that we, says an American paper, can compete so successfully with them in their markets. They attribute it to our fine climate and good soil, yet there are not wanting some intelligent fruit cultivators who believe that these conditions are just the reverse, that America has probably the worst climate in the world for the successful growth of fruits, and that it is simply American genius which overcomes these difficulties, and thus gives them the command of the world's markets. But it is in the Far West, and especially along the Pacific slope, where thousands of acres are devoted to fruit culture, and the fruit industries are among the most profitable of the States' revenues, that this adaptation of art to overcome Nature is more apparent perhaps than in the Eastern States. Sometimes we see praise given to the systems of education in effect in the Old World as compared with that popular in America; but if the proof of the pudding is in the eating, American education seems to have decidedly the advantage.
- THE ANTWERP EXHIBITION. Arrangements are now in progress for the adequate representation of Great Britain and Ireland at the forthcoming International Exhibition at Antwerp, which is to be opened in May next, and of which the King of the Belgians is the patron, and the Count of Flanders the President. The Exhibition includes industrial, scientific, and artistic productions, maritime, colonial, and African sections; and shows of agricultural products, flowers, and fruit. The site of the Exhibition is a plot of land of 200 acres, near the river Scheldt, and connected with all the principal railways, and the main buildings cover 120,000 square yards. The Governor of Antwerp is the President of the Executive Committee, and the Belgian Government has appointed a Commissary-General. The British Government has authorised Mr. De Courcy Perry, Her Majesty's Consul-General in Belgium, to act as Commissioner-General for Great Britain, and he has nominated as the Antwerp Committee the Lord Mayor, Sir Frederic Leighton, P.R.A., Alderman Sir David Evans, Sir George Birdwood, Mr. Kennedy, C.B., Colonel North, Mr. Walter H. Harris, Mr. A. Agelasto, Mr. James Dredge, Mr. John Morgan, and others. The scheme has received the warm approval of the London Chamber of Commerce and the Associated Chambers, and a programme indicating their co-operation will shortly be issued. information will be supplied in London by the Chamber of Commerce, and in Antwerp by the British Consul-General. To co-operate with the Chamber of Commerce an important Committee has been formed by M. Rogier, Belgian Vice-Consul in London. Many of the exhibitors at Chicago are sending their goods direct to Antwerp.

OSTROWSKIA MAGNIFICA.

In a note on Ostrowskia magnifica, which appeared in the Journal of September 28th (page 282), I referred to the difficulty of preserving

Mr. J. N. Gerard, of Elizabeth, New Jersey, U.S.A., the writer of the article, very kindly sent me a copy of "Garden and Forest," which was followed by a letter giving further information. In the meantime I had been in communication with the Rev. H. Ewbank, who is not easily



Fig. 77.—OSTROWSKIA MAGNIFICA.

and flowering this plant, and asked for information regarding it. On page 355 an extract from the American "Garden and Forest" was published, giving the experience of a correspondent of that journal in its cultivation, in which he had been successful. Shortly afterwards

baffled in the culture of hardy flowers, and, as I expected, special treatment is required in order to grow and flower this undoubtedly fire plant.

Mr. Ewbank says it should be dried off in the summer in situ. He

does it by placing a piece of glass over it after flowering, and it appears that Herr Max Leichtlin says that it requires this treatment. The experience of Mr. Gerard also points to the necessity of a period of rest in summer. His plant is grown in an Oncocyclus Iris bed, a raised border against the south wall of the dwelling house, where plants can be kept perfectly dry from time of ripening until well into August. There (New Jersey) the Ostrowskia does not start into growth until well into April, and hard frosts are not experienced after the first week in that month.

This information would point to a bed devoted to Oncocyclus Irises being one of the most suitable positions for the Ostrowskia, these Irises also requiring a period of perfect rest. The early starting into growth of the Ostrowskia, which in this neighbourhood we also experience with the Eremuri is not so easily remedied, and I fear for this we shall have to protect for a little while in the early spring. It still remains to be seen whether our cooler summers in the north will give sufficient heat to ripen this plant. The summer heat at Baden Baden, New Jersey, and Ryde must be considerably greater and more prolonged than we can expect further north, but we must make another attempt to attain success with an uncommon flower.—S. Arnott, Dumfries.

[This plant, flowers of which are depicted in the illustration (fig. 77), was exhibited by Messrs. J. Veitch & Sons, Royal Exotic Nursery, Chelsea, at a meeting of the Royal Horticultural Society in July, 1888, when a first-class certificate was awarded for it. It is stated that Messrs. Veitch & Sons first flowered Ostrowskia magnifica in this country.]

THE RASPBERRY MOTH (LAMPRONIA RUBIELLA).

The small red caterpillars of this moth are most destructive to Raspberry canes. The culture of Raspberries has enormously increased, as they have proved in some seasons to be a most profitable crop; their enemy, the Raspberry Moth, has multiplied in a proportionate degree. The production of this valuable fruit has been much decreased by its action in some seasons, and it has been consequently considerably dearer than other fruit, Currants, Strawberries, and Cherries, for instance, as seen by the higher prices charged for Raspberry jam when the insect has been troublesome. On many fruit farms the crop has been reduced from one-third to half in consequence of the attack of this insect. Fruit farms in Kent and other counties have been visited in the spring, upon which at least half of the buds of the Raspberry canes had been destroyed. In some of the buds the caterpillars were still actively working, in some they had changed into pupæ. This is frequently the condition of many Raspberry plantations in England and Scotland. Much mischief is often occasioned also in gardens and allotments where patches of Raspberry canes are cultivated.

Upon close examination of the attacked Raspberry canes, it will be seen that the soft juicy part at the base of the buds has been eaten away, so as to kill the buds and prevent their foliage and blossoms from being put forth. There is also a hole in the cane at the base of the buds, in which the pupa will be found ensconced.

DESCRIPTION OF THE MOTH.

The Lampronia rubiella, or Raspberry Moth, belongs to the family Tineidæ, of the group Tineina. It is a most beautiful moth, of a light brown colour, with a series of spots like burnished gold upon its fore wings. The hinder wings are slightly lighter in colour, with light fringes. It is barely half an inch across its wings, and its body is only about the fourth of an inch in length. It may be seen towards the end of May, or the first week of June, flying round the Raspberry canes.

LIFE HISTORY.

The moth places her eggs upon the flowers of the Raspberry canes at the end of May, or in the beginning of June. After five or six days the caterpillar may be found in the raised white receptacle upon which the fruit, or more correctly the collection of little fruits composing the Raspberry, is formed. The caterpillar does not appear to injure the fruit, nor, indeed, to feed at all at this time. Mr. Stainton, in his "Manual of Butterflies and Moths," says that the caterpillar hibernates without feeding. When it is fully grown the caterpillar makes its way out of the receptacle, either by crawling or by letting itself down by silken cords to the earth beneath the canes, and passes the winter in a case, or kind of cocoon. It emerges from this state of hibernation on the first approach of spring, and crawls up the Raspberry canes, and getting to the buds, worms itself into these at their bases, and makes up for long autumn and winter months of fasting by feeding upon them. In 1892 caterpillars were first found in Raspberry buds on April 10th. Dr. Chapman states that the caterpillar leaves the hibernating cocoon in March, early or late, according to the season.

When the time arrives for pupation, the caterpillar scoops out a hole in the pith of the canes, just below the bases of the buds, in which it turns to a chrysalis.

From a quantity of pieces of Raspberry canes, whose buds were badly infested with caterpillars, sent on the 8th of May, and kept in a glass case, moths came forth on the 9th of June. That there might be no

possible doubt as to their identity, some were sent to Mr. Stainton, who pronounced them to be Lampronia rubiella.

The larva is close upon a quarter of an inch long, decidedly pink in colour for the most part, though the shade of colour varies somewhat in individuals, and becomes more rcd in most larvæ as they get older. The head is black. There is a patch of black on the first segment. It has three pairs of black feet on the thoracic segments. The pro-legs number four pairs, and there is a pair of anal feet.

The pupa is exactly the fourth of an inch long, tapering somewhat unusually, and has a curious spine upon the back on the last segment.

METHODS OF PREVENTION AND REMEDIES.

The caterpillars are just under the surface of the ground, around and among the stocks of the Raspberry canes. As it has been shown, they remain there from about midsummer until March. Therefore, forking the ground round and between the stocks deeply with a pronged fork, or even hoeing it with a three-toothed hoe would destroy some and bury others so deeply that they could not get forth.

others so deeply that they could not get forth.

Dr. Chapman has suggested the following practical method of prevention: "The caterpillars are in the crown of the stock, or near it, and under rubbish there collected. Rake this away, and earth the stock up again, and you will thus bury them, and most will

perish."

Soot, lime ashes, or soot and lime mixed, which form a pungent compound, might be forked or hoed into the ground in the autumn or winter.

Raspberry canes in field culture are nearly all cut away, so that there are but few canes or stems left. It would be easy, therefore, to put a little thick softsoap composition containing paraffin oil, or carbolic acid, or some other offensive stuff, with a large paint brush, upon the lower part of each cane that is left, in order to prevent the caterpillars from crawling up. They are very small, and the least obstruction of a disagreeable nature, it is believed, would stop their progress.

Cutting off and burning the infested stems while the caterpillars are in the buds or receptacles, between April and the middle of June, would destroy many caterpillars. This may be very freely done, as Raspberry canes throw up plenty of shoots to take the place of those cut away.—

(Board of Agriculture.)

FLORAL NOMENCLATURE.

RESPECTING scientific names (page 495), if young men during the probation of bothy life embraced those golden opportunities seldom recurring afterwards by a little steady and continuous application of spare time to self culture we should not hear so much of bad spelling. Many do, I know, but there are very many more who do not, who would not think of going into the field of knowledge after the day's work in the houses or garden is over, and there delve a little for themselves by digging up a few of those dry old Latin roots. To those who do, how they bud forth into leaves and flowers; concealed under those hard names, what a hitherto hidden world is revealed to him. It may have to be done under difficulties. I have experienced some in settling myself in the corner of a small bothy kitchen of a winter's night with four playing with cards on the table, and one solitary candle between us. I know the fifth part of that luminary seemed very small to me, but

"He who hopes th' Olympic prize to gain, All arts must try and every toil sustain."

Relative to the names of florists' flowers, could not some protection be given by special societies? For instance, could not the National Rose Society persuade the raiser of, say, Souvenir de Mons. Andre Leroy d'Angers that his Rose by any other name would smell as sweet? or the National Chrysanthemum Society that L'Enfant des Deux Mondes would not suffer if deprived of its two worlds, or, vice versâ, the two worlds might do without the child? These are stumbling blocks that trip up old gardeners as well as young ones, and those who will persist in so baptising their progeny must not only expect liberties taken with them, nor be surprised if they get so mutilated that they fail to recognise their own children.—E. K.

THE POLLINATION OF PEARS.

I AM, as must be many of your readers, much indebted to Mr. Abbey for his suggestive article (page 506) on the "Pollination of Pears." The subject appears to have been neglected in this country, while it has been forced upon the attention of Americans by their custom of planting large areas with single varieties. This has enabled them to discover that certain varieties under such circumstances do not become fertilised, although the same varieties elsewhere are well known to be fertile.

It is difficult for an amateur to derive from a mixed collection, where many varieties are grown together, much experience as to the matter at issue; yet I venture to give some little, not because of its value, but that it may induce others to give us the benefit of theirs, as I believe the subject is well worthy of discussion. To take some of the Pears mentioned by Mr. Abbey: Beurré Giffard, an excellent Pear and valuable for its season, although perfectly healthy, very rarely sets its fruit with me, while Williams' Bon Chrêtien or the Bartlett, as invariably bears a large and regular crop; Beurré Clairgeau, quoted as imperfectly staminate, is retained in my collection solely for its

beauty, when annually loaded with its handsome fruit; it is never eaten here.

I fully agree with Mr. Abbey that Comte de Lamy is the best of all Pears. It has every merit that a Pear should possess, not excepting size, which is most convenient for biting. Every Pear to be enjoyed perfectly should be bitten, large juicy Pears cannot be so eaten comfortably. Jersey Gratioli with me sets its fruit regularly and so abundantly that it has no energy left to make young wood; there is no Pear more refreshing. The fartility of family these descriptions are the Pear more refreshing. The fertility of fruit trees depends on the perfect development of the blossom, and this may vary with soil, situation, or climate. Therefore it is not difficult to understand that a variety, which in some circumstances does not develop its anthers, may, under other conditions, perfect them, and so some of the discrepancies referred to in Mr. Abbey's article may be explained.

Mr. Abbey teaches the lesson to make an accurate record of the dates of the blossoming of the Pear, and at the same time to note down carefully the condition of the fertilising organs; and if it be found in a tree otherwise healthy, but unfruitful, that the anthers are imperfect and deficient in pollen, to plant in the neighbourhood of that tree a variety which produces pollen in abundance, and in the meantime, until the latter is in a condition to assist the tree deficient in pollen, to try the experiment of fertilising it by artificial means with foreign pollen.— E. Tonks, Knowle, Birmingham.



MR. MOLYNEUX IN IRELAND.

I AM grateful to Mr. Molyneux for the kind expressions (page 516) in his courteous letter on Ireland, and considerably soothed besides. He has, figuratively, taken the shillelagh out of my hand. Being behind the scenes whilst he was on the stage that exciting day in Dalkey, I was privileged and pleased to hear the vox populi unanimously vote him "A jolly good fellow." That is a fact, and not blarney from—PADDY.

INCURVED JAPANESE CHRYSANTHEMUMS.

RELATIVE to the article in the Journal of Horticulture, November 30th, page 497, as I was the winner of the first prize at Reading alluded to by "Beginner," I must say neither Gaspard Rozain, nor Mdlle. Marie Hoste were exhibited in my stand. I should not think of putting either in as an incurved Japanese. Perhaps it would be as well for "Beginner" to be sure before he states anything in print. If necessary I can give the names of all blooms exhibited in my stand,—G. LANE, Highfield, Englefield Green.

CHRYSANTHEMUM FLORENCE CARR.

I SEE a "Grower" (page 515) is inquiring where Florence Carr can be obtained. It may interest your readers to know that I have secured the stock, and the variety, with others, is being advertised.—W. WELLS.

CHRYSANTHEMUM ROBERT PETFIELD.

MR. R. OWEN writes, "An error has crept into your notes (page 514) regarding the parentage of this incurved Chrysanthemum. It is not a sport, but a seedling from Princess of Wales of my own raising." In justice to Mr. Owen, who is to be complimented upon the introduction of such a sterling novelty, I hasten to make the correction.— E. MOLYNEUX.

CHRYSANTHEMUMS AT PHILADELPHIA, U.S A.

AT this Show, the first prize for six new varieties never before exhibited was awarded to my old friend, Mr. H. B. Surman, of Germantown. The same grower was also awarded a silver medal for Mrs. W. A. Reed, an orange-yellow Japanese of the Golden Ball type, and a certificate of merit for another new seedling named Dr. Herbert M. Howe. The flowers of this variety are of fine "Elkhorn" form and good pink colour. Mr. Surman is well known as the raiser of many of the best American varieties .- CHAS. LAWTON, The Gardens, Welton House, East Yorkshire.

CHRYSANTHEMUM CHAS. DAVIS.

By altering a phrase and passing it off as a quotation "Querist" (page 497) now limits his grievance to the statement that the unsuccessful blooms were "perfect in shape, fresh, and equal in size" to those that secured the award. It is precisely here where we differ. The winning blooms were not faded; they were only paler in colour, and so far as size is concerned they were much larger blooms altogether than those which appear to have captivated the eye of "Querist."

As to point judging at the Floral Committee, I am not aware that such a system is supposed to prevail there at all. Their only rule is that when more than one exhibit of the same variety is staged the award shall be to the one in the best condition. What "best condition" means is for them, or the majority of them, to decide. As I have said before, the Committee certificate the variety, not any particular tone of colour the flower may assume. Of course, "Querist's" individual opinion may differ, but when well-known exhibition flowers are staged for certificates size must tell, and evidently did so in this case.—P.

CHRYSANTHEMUM MDLLE. THÉRÈSE REY.

I AM pleased to find Mr. Molyneux (page 514) places this beautiful new white Japanese in the foremost place of novelties. It seems to me to be amongst white what E. Molyneux is amongst dark varieties. It is a distinct departure from the too common forms in whites, either dense petalled reflexed of the Avalanche style, or else incurved like Stanstead White. Mdlle. Therese Rey was one of the very best shown at the Royal Aquarium last week. It keeps its true character to the last, and does not, as some others do, vary its proper form with age. The florets are broad, flat, and very pure, but are not too long, as is the case with so many varieties. With so very many new Japs showing incurved form, and Robert Owen is the best of that strain yet, it is rather refreshing to find such a delightful variety in the white Mdlle Thérèse Rey, that is so very "Japanese" in character.—D.

THE N.C.S. AND ITS CERTIFICATES.

BECAUSE I referred to the fact that the Royal Horticultural Society sometimes sit in a bad light "A Mummer" (page 497) jumps to the conclusion that I am trying to argue that they always do so. One thing is certain, whether they meet an hour earlier than the National Chrysanthemum Society or not, that it must have been very bad on November 14th, when your reporter says it was impossible to see the true colours of the flowers. I should like to know where fair daylight can be depended on in Local during November, and all I intended to point out was that the N.C.S. is not the only Society that suffers from

what none of us can help.
"A Mummer" finds the R.H.S. more lavish than the N.C.S. in the matter of certificates, and hopes the latter will not follow suit. I fail to see why. The one is not essentially a Chrysanthemum Society, the other is. The novelties exhibited at the N.C.S. must be far more numerous than those staged at the Drill Hall, and what would be more feasible than to find the National awarding a larger number of certificates? If they do not do so, and "A Mummer" seems to know, it only shows what I have already stated, that a very rigid system of selection is carried out by the N.C.S., and that the standard now required is a very high one.—P.

NATIONAL CHRYSANTHEMUM SOCIETY.

THERE was a meeting of the General Committee of the above Society on Menday last at Anderton's Hotel, Mr. R. Ballantine occupying the chair. After reading the minutes of the previous meeting the Chairman mentioned that there was only one matter arising out of them, and it referred to the suggestion of holding the Society's Show elsewhere than at the Aquarium. He had visited two places suggested, but they were quite unsuitable, not only in regard to size but also in the price required. He would be pleased to inspect any building that members thought appropriate, but he felt that no terms equal to those offered by the Aquarium Co. could be obtained, and that the Society was not in a position to hold its shows entirely on its own account.

The awards of the Arbitration Committee at the December Show were then confirmed, consisting of a gold medal to Mr. H. J. Jones, silver-gilt medals to Mr. W. Wells, Mr. R. Owen, Mr. Henry Perkins; and silver medals to Messrs. Chard, N. Davis, E. Stevens, Rowbottom, Waite, Witty, and Cannell & Sons for exhibits of Chrysanthemums, and other flowers. The Secretary presented the interim report of the Schedule Sub-Committee, from which it was gathered that arrangements have been concluded with the Aquarium Co. to hold exhibitions in 1894 in October, November, and December, and that the Society will receive £300 towards the prize money. The dates fixed are as follows:—
10th, 11th, and 12th October; 6th, 7th, and 8th November; and 4th, 5th, and 6th December.

The financial statement showed receipts to the amount of £650, and the reserve fund has been increased to upwards of £50. Thirteen new members were elected. The paper by Mr. C. E. Shea on judging was then read by the Secretary in the absence of the author. It was a lengthy but interesting review of the present system, and contained

suggestions for a new method to be authoritatively set up by the N.C.S. This paper will appear in the schedule for the ensuing year.

NEW CHRYSANTHEMUMS.

(Concluded from page 514.)
Van den Heede.—The colour of this is peculiar, being that of cherry wood, the reverse buff lake. The florets are perhaps a trifle short, the flower is exceptionally full and solid.

Le Verseau.—When developed from what is known as late crown buds this may be termed a refined Etoile de Lyon. The florets much resemble that variety in formation, while they form a full solid flower, in every respect possessing much quality; in colour rosy lilac, the tip

of each floret is white when expanding.

Thomas Wilkins.—This resembles Mrs. F. Jameson in form, the florets are however longer, the flower full and solid. In colour it is golden bronze—a promising variety.

James Myers.—This is an English raised seedling. In form it reminds one of Flamme de Punch. The colour is rose.

Rose Wynne.—Incurving florets of extra width, blush, heavily

veined with rose pink. A large loosely formed flower.

Madame R. M. Ricoud. - Narrow flat florets, rose lilac, tipped white, a

full solid bloom; most promising.

Golden Wedding.—Although yellow flowers are tolerably plentiful in this section, there is room for more when they possess the sterling quality of this American raised variety. Rich orange yellow is the shade of this. The florets are narrow at the base, widening towards their extremity and incurving at the points.

International.—This is a giant in size, even moderately well grown blooms measuring 8 inches in diameter. The florets are flat and broad, with a semi-drooping character; lilac in colour, with rich purple

stripes.

Miss Muriel Scott.—The lower florets are golden bronze, the centre

pale yellow. A full and pleasing variety.

C. Vere Flood.—The result of a cross between Mrs. F. Jameson and Puritan, and retains some of the character of both. In form the florets partake of the former. The colour is deep purple rose, mottled white in the centre.

Thomas Hewitt.—This variety is deserving of notice on account of its great keeping property. The florets are broad, and incurve thoroughly, giving it a massive appearance. The colour is white, flushed and striped

with rose.

Mrs. J. Hammill.—Like the foregoing, this belongs to the incurved section. The florets, too, are of massive proportion. In colour they are creamy white, suffused with rose.

Pearl Beauty.—An American seedling, raised in 1892. The florets are ivory white and heavy in appearance, belonging also to the incurved section.

Madame Adolphus Chatin.—As an incurved Japanese, this should prove valuable to the exhibitor. The florets are broad and pure white; with age they become tinged with pink, adding to their appearance.

Middleton Clarke.—This variety has reflexed florets, rose crimson in

colour; promising.

Sautel, 1893.—Sautel adding the year of introduction to its name must have thought highly of it. The florets resemble those of Comte de Germiny in formation. The colour is lilac on the reverse, rose inside.

Silver Cloud.—An American raised variety, quite unique in point of colouring, which reminds one of the outer covering of a pale coloured Mushroom, the florets are broad, and remind one of late flowers of Mdlle. Marie Hoste in their form.

Niveum.—Dwarf in habit of growth, the florets are strap shaped,

pure white, and full flower.

Madame Isaac.—This is also pure white, the flat sword-like florets are numerously disposed, making a full solid bloom, quite promising.

H. Hammond Spencer.—Named by Mr. Jones after the Devonshire

exhibitor. It is a full flowered rose lilac bloom.

exhibitor. It is a full flowered rose fllac bloom.

Duke of York.—The plant is of dwarf growth, carrying very large blossoms; the colour, magenta, is showy, suffused with silver. The points of the flat florets incurve, giving the bloom much character.

Le Prince du Bois.—This was raised and exhibited by Mr. C. Gibson, which is a guarantee of its worth. The colour is pleasing, rich yellow, fading to a lighter shade with age. The florets are narrow, twist slightly at the points, and have a semi-drooping tendency.

Miss Alice Wilson.—An improved Stanstead Surprise, the colour being richer, while the blooms have more substance: a decided gain

being richer, while the blooms have more substance; a decided gain.

Kentish Yellow.—Perhaps the best of yellows, the florets have an inclination to incurve. It is devoid of anything approaching coarseness, the rich colour is decidedly pleasing.

Professor Whitmack.—We have not too many varieties of this colour—rose magenta, therefore this should become popular with arbibitors. The reverse is silver which is plainly seen until the blooms. exhibitors. The reverse is silver, which is plainly seen until the blooms are fully expanded, as they at first incurve. The blooms are not extra large, but possess quality.

Primrose League.—This provides the exhibitor with blooms for the back row, they being extra large. The colour is creamy white, primrose

centre, as the florets develop.

Lizzie Cartledge.—Bright rose pink, reverse silvery white, late crown buds develop blooms with even flat florets, a trifle pointed, the whole

possessing much merit.

Dr. Brigham.—The blooms of this American variety resemble Avalanche in form, except that it is not quite so compact. The colour is creamy white, with a blush suffusion at the base. As an early flowering variety it deserves a place in collections.

Joan Farwell.—Rich crimson, very bright, reverse gold, the florets narrow and serrated at the points, curling slightly also; a full, solid

bloom.

C. Shrimpton.—This is best described as a dull coloured E. Molyneux.

The florets resemble those of this variety in formation.

T. W. Sanders.—The flowers are delicate yellow, and the florets are

narrow. It is not extra large, but perfect in all other respects.

Alice Seward.—Where incurved Japanese varieties are favoured, this English seedling is well worth growing. The colour of the stout florets

is rosy purple.

Potter Palmer.—This variety was in existence last season, but only in the hands of a very few growers. It is perhaps the purest white in existence; the florets at the base are tubular, those in the middle or body of the flower are lance shaped. Fully developed blooms measure 8 inches in diameter, and of corresponding depth.

Mrs. Robert Craig.—Another of American origin; the blooms are

large, pure white, incurved Japanese.

J. Whittle.—Flesh pink, deeper in the centre as the flowers expand; promising.

Mrs. A. G. Ramsay.—In colour this is Indian-red, tipped gold, which passes away with age; a full promising flower.

Mrs. Hillier.—The florets slightly incurve at the tips; in colour it is yellow in the centre, passing to primrose at the edge.

Principe de Trabia.—An incurved Japanese, rosy lilac; promising. Robert Owen.—The best of all the incurved Japanese section; the florets fold evenly over, forming a regular ball of bronzy yellow.

JAPANESE ANEMONE.

Several sterling novelties have been added to this section this season, rendering this class all the more attractive.

Sir Walter Raleigh.—This is furnished with handsome guard florets,

blush white, with a full rose-coloured disc.

Queen Elizabeth.—Lilac pink guard florets, with deep blush disc. John Bunyan.—The finest introduction in this section for years. It is best described as having a Gluck centre, with paler coloured long guard florets.

W. W. Astor.—High rosy yellow disc, tinted blush long flat guard florets. The above four varieties were raised by Mr. Owen, who is send-

ing them out.

LARGE ANEMONES.

Celtic.—Brassy lilac, full centre, short guard florets. Hibernius.—Bronze disc, pale yellow guard florets.

SINGLES.

A few have been added to the list of single-flowered varieties, of which the following are the most noteworthy:

Pattie Penford.—The florets are of medium length, semi-drooping,

and pure white. The disc is high, pale green in colour.

Dolly Varden.—The florets are rose magenta with yellow disc. A

remarkably free flowering variety of dwarf habit.

Rev. W. E. Remfrey.—Purple amaranth, florets cup shaped, very

Alice.—Creamy white, shaded blush, long flat florets.

Millie Agate. The base of the florets white, deepening to blushpink at the edges; good form.

HIRSUTE VARIETIES.

These have increased so rapidly of late that abundant material is

available now to form a separate class.

Hairy Wonder.—This is being sent out by Mr. Jones, and is considered by him to be quite one of the best in this section. The florets are broad, incurve thoroughly, and are more thickly covered with their hirsute appendages than any other variety. The colour is buff, suffused with chocolate.

Wm. Falconer.—A sport from Louis Boehmer. In colour it is a

blush pink, changing to lighter shade.

Queen of the Hirsutes.—Dull red, freely incurved, thickly covered with hairs.

L'Enfant des Deux Mondes.—This is a pure white sport from Louis Boehmer, and certainly the best of all the section.

W. A. Manda.—Rich orange yellow; points of florets incurve closely. The body of the flower, though, is rather thin.—E. MOLYNEUX.

ROYAL HORTICULTURAL SOCIETY.

DECEMBER 12TH.

THE last meeting for the current year was held at the Drill Hall, James Street, Westminster, S.W., on the above date. There was a fair display, Orchids and Chrysanthemums being well represented. Fruit was also shown in good condition. Being the concluding meeting for 1893 votes of thanks to the Chairmen of the Committees were unanimously passed.

FRUIT COMMITTEE.—Present: Philip Crowley, Esq. (in the chair), and Rev. W. Wilks, Dr. Hogg, with Messrs. H. de Vilmorin, H. J. Pearson, G. Bunyard, G. W. Cummins, J. Cheal, G. Taber, T. J. Saltmarsh, W. Warren, A. Dean, W. Bates, A. J. Laing, J. Willard, G. Wythes, C. Ross, F. Q. Lane, J. Hudgerson, H. Balderson, G. Sage, A. H. Pearson, I. Smith and J. Wright, a large attendance as is usual A. H. Pearson, J. Smith, and J. Wright—a large attendance, as is usual at the last meeting of the year; also as is usual on such occasions, the

duties of the Committee were somewhat light.
D. C. A. Cave, Esq. (gardener, Mr. J. H. Stevens), Sidbury Manor, Sidmouth, Devon, sent a seedling Orange, Edith—beautifully shaped, fruits juicy, and delicious. The leaves attached to the fruits somewhat resembled those of Lemons. The tree is said to be a free bearer, and was raised from seed by Mr. Cave. A first-class certificate was

unanimously awarded.

Mr. Owen Thomas, The Gardens, Frogmore, sent a dish of large fruits of ripe Tomatoes, Frogmore Selected; also stems bearing fine clusters. A cultural commendation was awarded, and a desire expressed to see

samples in February.

Messrs. Lane & Sons, Berkhamsted, exhibited seventy dishes of well kept Apples, including splendidly coloured specimens of Lane's Prince Albert. A silver Knightian medal was recommended. Upwards of thirty dishes of excellent Apples from Messrs. John Laing & Co., Forest Hill, were marred in appearance by excessive polishing (bronze

Messrs. James Veitch & Sons sent very tall Brussels Sprouts with compact knobs, also bronze, green, and beautifully variegated Kales, and a vote of thanks was accorded. A small collection of vegetables from the Society's Gardens at Chiswick included specimens of the christmas Drumhead Cabbage; heads medium size, round and firm, said by Mr. Barron to remain in the same condition throughout the winter. plants were grown from seed sown presumably in May or early June. The variety has been grown at Chiswick for seven years without sustaining injury by frost. It is of French origin, and the leaves dark green. Mr. Bunyard grows this Cabbage, and values it highly for its hardiness and excellent quality in winter. An award of merit unanimously awarded. Mr. Osman sent a new form of Grape scissors, opening

with a spring; to be tried with other forms at Chiswick.

Before rising from the table the Chairman thanked the Committee for their attendance and support during the year. Dr. Hogg returned the compliment by proposing a vote of thanks to Mr. Crowley for his ability and urbanity as Chairman. This was passed with acclamation, and the last of the year's series of pleasant meetings was brought to a

FLORAL COMMITTEE.—Present: W. Marshall, Esq. (in the chair); Messrs. J. Laing, R. Owen, H. Herbst, R. Dean, H. B. May, C. F. Bause, G. Stevens, F. Ross, C. Jeffries, P. Barr, T. W. Girdlestone, J. D. Pawle, W. Furze, W. Bain, T. Godfrey, T. Baines, C. E. Shea, C. Noble, J. T. Bennett-Poë, G. Gordon, Jas. Walker, G. Paul, and the Rev. H. H. D'Ombrain.

Messrs. Hugh Low & Co., Bush Hill Park Nurseries, Enfield, staged a handsome collection of Cyclamens, comprising many splendidly flowered plants (silver Flora medal). A beautiful group of foliage and flowering plants was staged by Messrs. J. Laing & Son, Forest Hill. Prominent amongst the plants in this exhibit were Orchids, Crotons, Palms, Cyclamens, and Anthuriums (silver Flora medal). An attractive feature of the show were the Nepenthes shown by Messrs. J. Veitch and Sons, Royal Exotic Nursery, Chelsea. Particularly noticeable were N. Northiana, Chelsoni, mixta, cincta, Amesiana (first-class certificate; see below), Burkei excellens, and Morganiæ (silver Flora medal). H. B. May, Dyson's Lane Nurseries, Upper Edmonton, exhibited a charming collection of Ferns, in which Lomaria platyptera, Pteris Victoriæ, P. tremula Smithiana, Platycerium stemmaria (æthiopica) first-class certificate; Ncphrolepis davalloides furcans, and Polypodium nigrescens were the most striking (silver Flora medal). Mr. Robert Owen, Maidenhead, showed a table of Chrysanthemums in excellent condition. Amongst the best were Golden Wedding, Viviand Morel, Abbé Mendenhall, Secretary Farson, Niveus, Mdlle. Thérèse Pankoucke Mrs. Marian Bourne, and Good Gracious received awards of merit, and are described elsewhere (silver Flora medal). A botanical certificate was accorded to Mr. Bain, gardener to Sir Trevor Lawrence, for a plant of Massonia amygdalina in bloom. Costus igneus was also staged by the same exhibitor, and a first-class certificate awarded (see below). Mr. Bain also showed a basket of Primula Forbesi composed of profusely flowered plants. A small collection of Chrysanthemums was shown by Mr. W. Wells, Earlswood Nurseries, Red Hill. Mr. J. R. Tranter, Mr. J. R. Tranter, Henley-on-Thames, staged plants of Nicotiana affinis variegata.

From the Royal Gardens, Kew, came specimens of Manettia bicolor, Brownea Crawfordi X, Bomarea oligantha, Senecio macroglossus, Thunbergia (Hexacentris) Mysorensis, Bomarea pataccensis and Calpurnia aurea, the Natal Laburnum (a vote of thanks was adjudged). Specimens of Veronica Purple Queen were staged by Messrs. J. Veitch & Sons. Mr. Balderson, Hemel Hempstead, showed fine blooms of white and rose coloured Primulas, and also a bunch of a rich deep velvety crimson variety, which has a clearly defined circle round the eye of a much

deeper shade. It is a grand addition to these popular plants.

ORCHID COMMITTEE.—Present: H. J. Veitch, Esq. (in the chair); Dr. Masters, Messrs. J. O'Brien, De B. Crawshay, H. M. Pollett, H. Ballantine, C. J. Lucas, T. Statter, E. Hill, J. Douglas, T. B. Hay-

wood, and J. Jaques.

Messrs. B. S. Williams & Son, Upper Holloway, N., staged a good collection of Orchids, comprising Cypripediums, Odontoglossums, Oncidiums, and a few Lælias. The group had a background of Palms, and Ferns were arranged along the front, the whole making an effective display (silver Banksian medal). Messrs. F. Sander & Co., St. Albans, sent a small group of choice species and varieties. Amongst these were the beautiful Lælia anceps Sanderiana, L. autumnalis alba, Cypripediums in variety, and Zygopetalum rostratum. An award of merit was adjudged for the last-named plant, which is described elsewhere (silver Banksian medal). Mons. Jules Hye Lysen, Gand, sent a plant of Cypripedium fascinatum, a grand form, for which a first-class certificate was awarded (see below). C. J. Lucas, Esq., Warnham Court, sent Cypripedium Warnhamensis, evidently a free flowering hybrid (award of merit). E. Ashworth, Esq., Wilmslow, Cheshire, staged Lælia anceps Amesiana (figured in the Journal of Horticulture last week) in good condition, and other Orchids. W. Wells, Esq., Bloomfield, Sale, had a fine spike of Cattleya exoniensis which attracted notice. Mons. Linden, Brussels, had a number of choice Orchids, including Lycaste Imschootiana (award of merit); L. Luciana (botanical certificate); Lælio-Cattleya Stchegoleffiana, and Odontoglossum crispum var. Thompsonæ (award of merit). A silver Banksian medal was recommended for the collection.

Messrs. J. Veitch & Sons exhibited a collection of Orchids, including Cypripediums T. B. Haywood, C. Leeanum, C. Enone (award of merit). A botanical certificate was awarded for Dendrobium glomeratum, shown by Messrs. Veitch. Baron Schröder was awarded a first-class certificate for Lælio-Cattleya Nyca, which is described below. Messrs. Hugh Low & Co., Clapton, sent a small group of Cypripediums and Odontoglossums, arranged with Palms (silver Banksian medal). Mr. J. Wythes, gardener to the Duke of Northumberland, Syon House, Brentford, staged a splendid group of Calanthes, and a silver Banksian medal

was recommended...

J. F. Ebrer, Esq., Woodlands, Beckenham (gardener, Mr. A. Waite) was adjudged an award of merit for Cypripedium Sallieri aureum. T. Statter, Esq., Stand Hall, Manchester, had some Cypripediums, as did R. J. Measures, Esq, the latter showing C. venustum Measurianum (award of merit) and Pleurothallis scapha (botanical certificate).

CERTIFICATES AND AWARDS OF MERIT.

Chrysanthemum Good Gracious (R. Owen).—A delicate rose-coloured

Japanese, with narrow somewhat twisted florets (award of merit).

Chrysanthemum Mrs. Marian Bourne (R. Owen).—An incurved Japanese variety, with broad silvery rose-coloured florets.

Costus igneus (Sir Trevor Lawrence).—A fine species, with large,

rich, orange-coloured flowers (first-class certificate).

Cypripedium venustum Measurianum (R. J. Measures, Esq.) .- A distinct form with rather small flowers. The upper sepal is white lined green, the petals and lip being yellow marked with green. The foliage is pale green blotched with a darker shade (award of merit).

Cypripedium Warnhamensis (C. J. Lucas, Esq.).—This is a very fine hybrid, said to be the result of a cross between C. Curtisi and C. lævigatum. The upper and lower sepals are similar in colour, being white veined with purplish crimson and green. The petals are twisted and are spotted, and suffused with dark purple. The lip is very large, and of a bronzy green shade. The plant exhibited bore two flowers on one spike (award of merit).

Cypripedium fascinatum (M. Jules Hye Lysen, Gand).—This is a splendid acquisition. The upper sepal large, white, suffused and spotted crimson, with a green base. The petals are spotted purple, and also have light purplish tips. The lip is very dark (first-class

certificate).

Cypripedium Sallieri aureum (J. F. Ebrer, Esq.).—This is the result of a cross between C. insigne and C. villosum. The flowers are mainly a shining greenish yellow, the upper sepal being spotted brown (award of merit).

Cypripedium Enone (J. Veitch & Sons).—The result of a cross between C. superbiens and C. Hookeri. The upper sepal is white and green, petals spotted and suffused purple, the lip being bronzy green (award of merit).

Lælia Finckeniana (C. W. Fincken, Esq.).—The plant of this that was exhibited had one spike carrying six flowers. The sepals and petals are pure white, the lip also, with a broad violet margin on the tip (firstclass certificate).

Lælio-Cattleya Nyca (Baron Schröder).—This bigeneric hybrid is the result of cross between Lælia crispa and Cattleya gigas, raised by Messrs. J. Veitch and Sons. It is a magnificent flower with large rosy mauve petals and sepals. The lip is a rich purplish crimson, and the throat pale yellow (first-class certificate).

Lycaste Inschootiana (M. Linden, Brussels).—A very distinct hybrid, being the result of a cross between L. Skinneri and Maxillaria The flower is a pale yellow shade, spotted crimson. The lip is a brighter shade than the other parts of the bloom, and the throat is richly spotted (award of merit).

Nopenthes Amesiana (J. Veitch & Sons).—This is a handsome hybrid between N. Rafflesiana and L. Hookeriana, the former being the pollen parent. The pitchers are short and very broad, the ground colour being green, profusely blotched with deep crimson (first-class certificate).

Odontoglossum crispum var. Thompsonæ (M. Linden, Brussels).—A grand variety of the well-known type. The plant shown bore a splendid spike of fourteen flowers (award of merit).

Platycerium stemmaria (athiopica) (H. B. May).—A handsome species, with large fronds of a bright green, covered with a silvery down (first-class certificate).

Zygopetalum rostratum (F. Sander & Co.).—An exceedingly pretty pecies. The lip is for the most part white, crimson lines starting from the base. The petals and sepals are white, tipped with pale brown (award of merit).



NATIONAL ROSE SOCIETY.—NEW CATALOGUE FUND.

SUCH of the subscribers to this fund as have not paid their donations will oblige by doing so at an early date to Mr. Charles Grahame or Mr. E. B. Lindsell, the Hon. Secretaries, who wish to close the list.

PROTECTING TEA ROSES.

I FIND nothing better than a mixture of burnt refuse and light soil. Three spadefuls of this dropped into the centre of the plant is better, I think, than the earthing-up system, for to earth up sufficiently must interfere with the surface fibrous roots, and if there be no such roots there has been a lack of good cultivation. The burnt refuse, too, in the spring, when pricked into the soil, serves as a valuable manure. Light dry litter straw or bracken form should be added later or Light dry litter, straw, or bracken fern should be added later on, weather demanding.—J. A. W.

ROSE PESTS AND THEIR ERADICATION.

It does not much matter what the time of year may be, we are sure to be able to find insect pests of some kinds upon Roses carrying young growth. Even under the most skilful treatment a few can generally be found. The above fact indicates how very necessary it is to adopt precautionary measures early, and although I do not wish to discourage growers by the formidable list of enemies and diseases it would be easy to name, it may be well to draw attention to a few of the most persistent pests the Rose is subject to. The whole secret of keeping Roses healthy and clean is to commence operations early, and I am quite certain that precautionary measures are invaluable. "I must fumigate soon, I see there are a few flies about," is a remark a friend of mine made use of while I was looking through his conservatory a few days ago. This will not do. Instead of "soon" it should have been at once. Why wait until the enemies have increased before commencing the fight? And yet this is the plain truth about delay. Not only is it easier to kill a few, but we avoid the injury they and their posterity would commit.

There are far too many enemies, and also too many remedies in the way of insecticides for me to name them all, so I propose to confine myself to a few general hints. The two most important of these are immediate operations as soon as the pests are discovered, and the freer use of insecticides of a weaker nature than usual. A very little should be contained in all the water the plants are syringed with, and this will be found a grand check to insect life. A free use of the syringe prevents any dust or other impurities from settling upon the foliage, and encourages growth. Green fly, thrips, red spider, scale, and other insects may be killed easily while in a young state, but when they are allowed to increase it is difficult to dislodge them. The older insects are also able to stand against stronger measures than would be safe to use upon the tender young growths which they affect with such disastrous results.

Among diseases under glass we must name mildew as the worst, but this can be cured if taken in hand at once. The first point is to decide upon the cause, and alter that; when this is done give a free syringing with a reliable insecticide to which has been added a little flowers of sulphur. Do not be persuaded into dusting over the foliage with sulphur. This has an unsightly appearance, is far less effectual, and wastes a great deal of sulphur. Mix the sulphur in the form of paste previous to putting it in the solution. It will then be easy to apply if the whole be kept on the move while using. In dusting the foliage it is impossible to do it uniformly, or to get the sulphur to adhere to the lower part of the leaves. This difficulty is surmounted when applied as I have directed above; when the foliage dries there will be a very slight dusting of sulphur left wherever the solution touched, and the unsightly appearance of dusting is avoided.—PRACTICE.

MESSRS. HARKNESS & SONS' ROSES.

WE notice Messrs. Cocker & Sons (page 509) take exception to "D., Deal's," remarks (page 494) re classes of seventy-two Roses, and wish to point out that the only exhibitions where during the season of 1893 prizes were offered for seventy-two Roses distinct were Crystal Palace, Gloucester, Hereford, Bath, Manchester, Wolverhampton, and Worksop, the first in each case being awarded to us. The class referred to by Messrs. Cocker at Tibshelf is for fifty varieties, whilst that at Elland is for twenty-four varieties, so neither are ever referred to in connection

with the great classes of seventy-two distinct.

With regard to the number of times Messrs. Cocker claim to have met us, there must be some mistake. We only competed against them at seven shows, four of which were in August, with the result that sixteen first and one equal first were awarded to Messrs. Cocker, and seven firsts, and one equal first were awarded to us, including the leading prizes at Newcastle and Trentham. At Tibshelf it may be interesting to state that we were beaten in the largest class by one point only, the total number of points being 109 as against 108. We were second for forty-eight distinct, equal first for thirty-six with Messrs. Cocker; we were also first for twenty-four blooms. We considered our Roses quite over by the last week in July, and only attended several of the August shows in response and repeated invitations from the secretaries. We feel we owe you an apology for occupying your valuable space for so trivial a matter.—HARKNESS & SONS.

MANURING AND TRANSPLANTING ROSES.

I HAVE read with interest the letter under this heading from "A Lover of Roses" (page 510), and should think a great deal of his advice is good and sound. But there are one or two points to which I should take exception. I think it is a mistake (though not an unusual one) to try to make a top-dressing of manure in the winter act both as food and protection—as a manure and as a mulch. If meant for a mulch, then long strawy manure would be better, and dead leaves the best protection from the frost. And surely the plants themselves require covering from frost even than more the roots; and this may be done in a far cleaner and more sightly manner, and also more readily, with leaves than with either long or short manure. If meant for food, some good will be done by the rain permeating the manure, but not much; you cannot expect much good from liquid manure in the winter, unless it be plentiful or very strong.

But it is the "forking" in of the manure in spring, after (as "A Lover of Roses" admits) the rain has washed the nutriment out, that seems to me a great and common mistake. It is a very usual piece of advice: "After planting, mulch the surface with manure for protection against frost" (some say "long manure," which would be the best protection, but would add to the after uselessness and hopeless struggles with the fork), "and 'fork it,' 'prick it,'" (I have seen "hoe it") "into the ground in the spring. Now, it is not only that the manure, being thoroughly washed and bleached by the rain and snows of winter, can be of very little service in the ground—but what I want to know is, how I am to "fork," "prick," or "hoe" in 3 inches of manure, whether long or short, so as to cover it, and yet not disturb the roots, which are

to be close to the surface, or put the manure in actual contact with them, which is well known to be prejudicial?

The roots of my Roses are horizontal and close to the surface, and I not only should not attempt such a job, but believe it to be of as little use as another one for which "A Lover of Roses" neglects precious planting time; and that is, gathering leaves as they fall. I know of no picture that shows a more striking object-lesson of waste of time than one I have often seen: a man sweeping leaves on a path or lawn, while they are in the very act of falling behind him as fast as he gathers them up. The great bulk of the leaves fall in ten days or a fortnight; an army could not keep the place elean during that time; and in many places a good sweeping wind, instead of adding to, saves labour eventually when the time comes for gathering them up.—W. R. RAILLEM.

NATIONAL ROSE SOCIETY .-- ANNUAL MEETING.

THE annual general meeting of the members of the National Rose Society was held at the Horticultural Club Room, Hotel Windsor, Victoria Street, S.W., on Thursday 7th instant. The Rev. W. Wilks occupied the chair, and there was a large attendance. Amongst others present were Sir Alexander Arbuthnot, Dr. H. Shackleton, Revs. F. R. Burnside, Page-Roberts, Foster-Melliar, F. H. Gall, H. A. Berners, Captain Christy, Messrs. C. J. Grahame, R. Bloxam, C. E. Shea, Colin Romaine, Cecil Cant, W. J. Jefferies, J. Bateman, F. Cant, G. Bunyard, G. Paul, E. B. Lindsell, G. Prince, J. Cranston, H. Merryweather, J. D. Pawle, H. P. Landon, R. E. West, H. Appleby, W. Boyes, J. Burrell, W. F. Cooling, R. L. Knight, G. Mount, A. Piper, A. Prince, A. Slaughter, R. H. Langton, G. Moules, W. H. Williams, J. T. Strange, A. W. Paul, with Rev. H. H. D'Ombrain and Mr. E. Mawley, the Hon. Secretaries, and Mr. T. B. Haywood, Hon. Treasurer. Messrs. Colin Romaine and Cecil Cant were appointed scrutineers of the ballot. Following this the report of the Committee for 1893 and the financial statement were read. Much discussion followed regarding the date of the provincial Show at Halifax, and many members expressed their opiaions on the subject. Mr. Lindsell said he had consulted some northern growers, including H. V. Machin, Esq., of Worksop, and Messrs. Harkness & Sons, Bedale, and they were in favour of July 12th, being anxious to meet the great southern rosarians. Mr. F. Cant said that if held on the 19th of July all southern growers would be excluded. Sir Alexander Arbuthnot, G. Paul, W. J. Jefferies, E. Mawley, and the Rev. H. H. D'Ombrain were in favour of the latter date, and it was eventually decided, by a large majority, that the Northern Show of the Society be held at Halifax on July 19th. The report and financial statement, which are published below, were adopted.

REPORT OF THE COMMITTEE FOR THE YEAR 1893.

The past season, owing to the continued drought and heat, proved one of the most disastrous for Roses and Rose shows that has been experienced for many years, so that notwithstanding the loyal support of the exhibiting members at the three exhibitions held by the Society, the blooms staged were, as a rule, much below the average in number, size, and quality. The competition at the Show of Tea Roses held at the Drill Hall, Westminster, was good, also in several of the leading classes at Worksop, but at the Crystal Palace there were fewer Roses than at any similar exhibition for nine years. In connection with the Worksop Show, some of the stands exhibited at which were exceptionally fine, it should be stated that the success of the Exhibition was greatly due to the admirable manner in which all the arrangements connected with it were carried out by the Committee of the Worksop Rose and Horticultural Society, especial credit being due to Mr. H. V. Machin, Vice-President, Mr. J. S. Whall, Hon. Treasurer, and Mr. G. Baxter, Hon. Secretary.

The new catalogue of exhibition and garden Roses was issued to members early in May last, and appears to have been much appreciated. Several foreign trade growers have already followed the Society's lead in introducing into their own catalogues a separate section for Hybrid Teas upon similar lines to that adopted in the Society's catalogue.

It is with much regret the Committee announce the loss the Society has sustained during the year through the death of one of its Vice-Presidents—the Rev. J. M. Fuller—whose valuable services as Chairman at their meetings will be greatly missed. They have also to deplore the death of Monsieur J. B. Guillot, a recently elected honorary member, and so well known to rosarians generally as the raiser of many of the choicest Tea and other Roses in cultivation.

Notwithstanding the great depression in trade which has prevailed throughout the country during the past year, the number of members as well as the number of affiliated societies has been well maintained; in fact, in no previous year, with the exception of 1892, have the present numbers been exceeded.

FINANCIAL STATEMENT.

The Committee congratulate the members upon the present satisfactory financial position of the Society. The amount in hand at the beginning of the year was £31 16s. 7d., and now at its close there remains £81 19s. 3d. to carry forward to the next account, the total expenditure having been £699 3s. 3d., while the aggregate receipts, including last year's balance, were £781 2s. 6d. It should here be stated that a special fund was raised early in the year among the exhibitors to defray the cost of printing and binding the new catalogue, so that no part of the cost of its publication has fallen on the ordinary funds of the Society. Although more than the usual number of changes

have taken place in the *personnel* of the non-exhibiting members the amount received in subscriptions was nevertheless in excess of that of any previous year.

NATIONAL ROSE SOCIETY. BALANCE SHEET, YEAR ENDING 30TH NOVEMBER, 1893.

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-T. B. HAYWOOD, Hon. Treasurer.

ARRANGEMENTS FOR 1894.

In order to meet the requirements of exhibitors in all parts of the country, it has been decided by the Committee to hold next year a Southern Show, a Metropolitan Show, and a Northern Show. The carly exhibition of Tea Roses at the Drill Hall, Westminster, will therefore be discontinued, and a Southern Show be held instead of it at Windsor, in connection with the Windsor, Eton, and District Horticultural and Rose Society, on Wednesday, June 27th. The Metropolitan Show will take place at the Crystal Palace on Saturday, July 7th, while the Northern Show will be held at Halifax on Thursday, July 19th, in conjunction with the Salterhebble and District Rose Society.

MEMBERS' PRIVILEGES.

Members subscribing £1 will be entitled to two private view tickets and four transferable tickets, the latter admitting at the same time as the general public, while subscribers of 10s. are entitled to one private view ticket and to two transferable tickets. Each of these tickets is available for any one of the Society's Exhibitions. Members joining the Society for the first time next year will also receive a copy of the Society's new descriptive catalogue of exhibition and garden Roses. Members alone are allowed to compete at the Society's Exhibitions.

There are two classes of helpers to whom the Committee feel especially grateful. In the first place to those local Secretaries who have either secured for the Society new members, or, where this has not been possible, have done all in their power to keep within its ranks those they had previously obtained; and secondly, to all those who, by the gift of special prizes or by contributing to the prizewinners' fund for the new catalogue, have enabled the Committee to maintain the high standard of prizes offered in the schedules. Among the local Secretaries two are worthy of special mention—Mr. C. J. Grahame, late local Secretary for Croydon, who again secured for the Society a large number of new subscribers; and Mr. C. F. Hore, who has for many years rendered the Society such good service as local Secretary for Beckenham, and to whose zeal and energy the Society is indebted for the largest number of subscribers ever obtained by any individual member of it.

ALTERATIONS OF BY-LAWS AND REGULATIONS.

Following the usual resolutions passing votes of thanks to the Hort cultural Club for the use of their rooms during the past year, and to the officers and other members of the Committee for their services, several alterations and additions to the by-laws and regulations were made.

Mr. R. L. Knight first proposed an addition to be made to by-law 5, and after a discussion an amendment was moved by Mr. Bloxam, so that the addition to the said by-law will now read: "A general meeting of the Society may be called at any time on a requisition, signed by not less than twenty members, being delivered to one of the Secretaries at least fourteen days prior to the date of the proposed meeting. The requisition must specify the business for which the meeting is called, and no other business shall be transacted thereat." Mr. G. Paul seconded the proposition, which was carried.

Mr. Lindsell then proposed that by-law 12 should be altered to read: "The Society's regulations for exhibitions, 2, 5, 6, 7, 8, 13, and 14, are binding on all affiliated societies, and must either be printed in their schedules, or it must be prominently stated in them that their exhibition of Roses is held under the National Rose Society's regulations." Several members spoke on this point, and an amendment was moved by Mr. Jefferies, making it binding for all affiliated societies to print the N.R.S.

regulations in their catalogues. The amendment, however, on being put to the meeting was lost, so that the alteration in by-law 12 being eventually carried by a large majority will read as above.

Mr. G. Paul, after pointing out the necessity of such an alteration, next moved that regulation 6 be altered so as to read:—"The following Roses which are bracketed together are considered synonymous, and must not be shown in the same stand; for instance, Marie Finger must not be shown in the same stand as Eugénie Verdier:—

HYBRID PERPETUALS—

Charles Lefebvre
Marguerite Brassac
Paul Jamaiu
Comtesse de Choiseul
Marie Rady
Duke of Wellington
Rosieriste Jacobs
Eugénie Verdicr
Marie Finger
Exposition de Brie
Ferdinand de Lesseps
Mauriee Bernardin
Sir Garnet Wolseley

HYBRID PERPETUALS—

Grand Mogul
Jean Soupert
La Rosière
Prince C. de Rohan

TEAS AND NOISETTES—
Alba Rosea
Josephine Malton
Madame Bravy
Madame de Sertot
Souvenir de S. A. Prince

"The climbing variety of any Rose cannot be shown in the same stand with it; for instance, Climbing Devoniensis cannot be shown in the same stand with Devoniensis.

"N.B.—In bracketing varieties together, foliage and habit of growth are not taken into consideration." This proposition was, after being duly seconded, immediately unanimously adopted.

Mr. F. Cant moved that an alteration should be made in Regulation 14, and after some discussion it was proposed that it should read: "Hybrid Teas cannot be shown in the classes set apart for Teas and Noisettes, but may be shown amongst Hybrid Perpetuals, and in the mixed classes." Mr. Jefferies seconded this resolution, and it was unanimously carried.

Mr. West next proposed that the following new regulation be added: "In all cases where three trusses of each variety are required to be shown the three trusses must be arranged in the stand triangularly." Mr. C. J. Grahame said that in connection with this it would be advisable to have a clear understanding as to what was really meant by "triangularly." It was a question of more importance than many might suppose. Some years ago a dispute arose at the Crystal Palace as to what form the triangle should be—that is to say, whether the base, as it were, ought always to be at the bottom. The Rev. W. Wilks remarked that, in his opinion, the triangles would make a better appearance if placed alternately in the box. After being seconded the motion was carried.

Mr. J. Bateman, on behalf of Mr. A. Dickson, made a proposed alteration of note respecting "New Roses," to read: "In such classes by 'New Roses' are meant those offered for the first time in English nurserymen's lists in the spring of a certain year and subsequently; also named seedlings and sports not yet in commerce." A lengthy discussion took place on this point, and many members expressed their views. Mr. Bateman lucidly referred to the importance of the question, but the Rev. H. H. D'Ombrain thought the existing regulation would do, and was very unwilling to alter it, being sure Mr. A. Dickson would not mind if the proposition was not carried, as he had won the gold medals for new Roses. Mr. Grahame dissented, as did others, including Mr. E. Mawley, Mr. G. Mount, Mr. Jefferies, and Mr. G. Bunyard, the latter remarking that some further mark of recognition for new Roses would be a necessity a few years hence, inasmuch as after the past tropical summer many seedling Roses would be forthcoming. Mr. G. Paul seconded the proposition, and it was subsequently carried to read as above.

Mr. F. Cant, after the above alterations and additions in the bylaws and regulations were made, brought forward a personal matter. He said inasmuch as a report to the effect that Mr. Orpen had exhibited Roses from his (Mr. Cant's) ground had been circulated, he wished to give an absolute denial to the rumour. He did not think that the statement had been made maliciously; but, nevertheless, such would be damaging to him from a business point of view if not contradicted. Sir Alexander Arbuthnot deplored the action of the Society in deciding to discontinue the Exhibition of Tea Roses at the Drill Hall.

Sir Alexander Arbuthnot deplored the action of the Society in deciding to discontinue the Exhibition of Tea Roses at the Drill Hall. He thought that if precautions were taken, and announcement made through the Press, that the attendance at the Drill Hall on such occasions would be better. The Rev. Foster Melliar also regretted that no show of Tea Roses would be held at the Drill Hall next year. The Rev. W. Wilks remarked, as the matter had been brought forward he might say, although nothing to do with the present meeting, that the Council of the Royal Horticultural Society likewise regretted the step taken, but they had arranged that practically the same amount of prizes would be offered for Tea Roses at the Drill Hall on the day previous the Exhibition at Windsor.

The scrutineers having announced the result of the ballot was to the effect that the house list had been unanimously adopted, a vote of thanks to the Chairman closed the meeting.

THE ANNUAL DINNER.

AFTER the annual general meeting passed off so harmoniously, it was only fitting that the day should close with the annual festive gathering, which, after various alterations has come back to its original day. That the change was appreciated is evident from the fact that there was a larger attendance than there has been for a great many years past.

The President of the Society, the Very Rev. the Dean of Rochester, was unavoidably absent, but his place was ably filled by the Rev. W.

Wilks, one of the Vice-Presidents of the Society. The guests included a large number of both professional and amateur Rose-growers. It is not the custom at this dinner to have many toasts; in fact, except the loyal toasts and that of the Society, all else are excluded. The Chairman, in proposing that of the National Rose Society, congratulated the members on its success; a Society which in these days could show a balance of £81 was indeed in an enviable position. This was in no slight degree to be attributed to the admirable manner in which the Committee and officers of the Society have fulfilled their duties. He therefore proposed prosperity to the National Rose Society, and coupled with the toast the names of the Secretaries, both of whom responded to it. After Mr. George Paul had proposed the health of the Chairman, who briefly replied, the party separated.

THE "KNOWSLEY" SNOW PLOUGH.

As the time of the year is at hand when snow ploughs may be in request, I am sending a photograph of one which we have found to be a great improvement upon the rude implement in ordinary use. The "Knowsley" snow plough is, as will be seen by the illustration (fig. 78), an adjustable machine, and can be readily fixed to suit various widths of road, up to about 12 feet. There is a slightly projecting plate of iron fixed to the bottom edge of each side piece, which act as "shares" in cutting the snow loose from the ground, and a pair of iron "skates" fixed in the line of draught, and secured to the shafts and front part prevent the possibility of the implement refusing to act when it happens to get into a deep drift. As a further aid to that end the

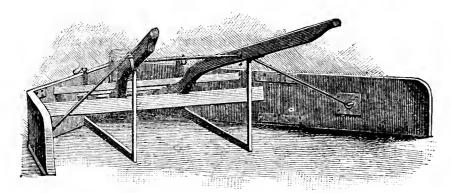


FIG. 78.—THE "KNOWSLEY" SNOW PLOUGH.

power is applied, that is the horse is hooked on, not at the extreme end as is usually done, but a little further back. The draught of the new implement is much lighter than that of the old pattern. The plough is shown here with one side extended and the other drawn in .- F. HARRISON.

OSIERS.

(Continued from page 273.)

HITHERTO the ordinary practice of most growers has been to sell the rods when cut to persons who peel, sort, and store them. The peeler requires a considerable supply of labour at a particular period, buildings in which to store the rods, and capital to enable him to hold the stock until it is wanted.

The cost of peeling is as follows. Women are paid 5d. per green hunch. The rods are brought to them by men, who sort, dry, tie, and store the bunches. Two men will attend to ten or twelve peelers, and they are paid 2d. per green bunch. A woman will peel from three to three and a half bunches in a day. The peeling process extends over eight to ten weeks.

The per-centage and weight of each class of rods produced in a holt has been estimated as follows :-

Large rods, 35 per cent., 56 lbs. per bunch.

Middle, 40 , 40-45 lbs. per bunch. Small, 28 lbs. per bunch. 25

Average weight per bunch about $43\frac{1}{4}$ lbs.

It takes three bunches of green rods to produce two bunches of peeled rods, and the ratio of white rods to green rods will be, approxi-

mately, $54\frac{1}{2}$ per cent. in weight.

A large proportion of the Osiers grown are sold by the growers in a green state. In the Cambridge district it has become usual to sell by auction at so much per acre, the purchaser cutting the crop and carrying it away. Basket-makers frequently contract with growers to take their green rods at a fixed price for a series of five, seven, or even fourteen years. The most common plan is for the grower to cut and sell green on the spot at the market price of the day. This price has of late years ranged from 1s. 6d. to 2s. 6d. per bunch, and at the present time the price is 2s. for good rods. Some of the larger growers peel and store the rods, and sell them when there is a brisk demand. Some, and an increasing number, combine the business of growing with that of manufacturing.

White rods are now generally sold by the ton, and the present price is about £18.

It will be interesting to compare the relative returns to the grower who sells the raw material and to the intermediary who prepares that material for the manufacturer. Taking the figures and prices given previously as a basis, it would appear that a grower who sells his rods green would receive for an average crop at present prices £15 an acre. A grower who peels his rods would receive for the same crop at present prices £34 19s. 1d.

The details of the calculation are as follows: - Average crop 150 bunches.

A. GROWER WHO SELLS GREEN.

150 green bunches at 2s. £15 0 0

B. GROWER WHO PEELS.

150 green bunches yield 100 bunches of white rods, average weight per bunch $43\frac{1}{2}$ lbs. = 1.942 tons at £18 per ton ... 34 19 1

> ... £19 19 1 Difference in gross returns ...

The cost of peeling, sorting, and storing has been stated as 7d. pe green bunch.

150 bunches at 7d. ... Add for carriage from holt to peeling yard 0 12 6 ld. per bunch Cost of peeling, &c. ... £5

This leaves £14 19s. 1d. to pay the middleman for his outlay of capital and risks of trade. It would seem, then that at current prices the value of the crop is divided pretty equally between the grower and the middleman, and that, as usual, the producer of the raw material gets very little in proportion to his original outlay unless he prepares his crop for the artificer.

Of course, in the fluctuation of prices the circumstances are sometimes less favourable to the man who does the intermediary work of dressing the raw material.

If the price of green bunches is 2s. 6d. when the price of rods is no more than £18, the margin between gross receipts of the two is reduced by £3 15s., and if the minimum prices of green rods and white rods be taken the case is very much altered.

150 green bunches at 1s. 6d. 1.942 tons of white rods at £10 per ton £19 8 4 Expenses of peeling and carriage ... 5 0 0 Difference...

It may, perhaps, be taken for granted that on the average the dresser or finisher has a good margin between the current price of the raw material and that of the prepared goods, and that an Osier grower who has conveniently situated and suitable premises, where a sufficient supply of labour can be found, has a great advantage over one who has no choice but to sell his rods as he cuts them, because he can get the middleman's profit.

Among other causes of the alleged decline in the osier industry, it has been said that cane is now largely used in the place of wicker-work Boxes have taken the place of hampers for the transport of fish. Barrels are much used for Potatoes, and iron scuttles and sieves are more common than they were.

There is also said to be some difficulty in obtaining an adequate supply of labour at the particular period when the peeling must be done. If that process is not completed before midsummer the quality of the rods is seriously deteriorated.

A grower states it as his own deliberate opinion that "a holt planted in a suitable site, well planted, cleaned, and cared for, filled up and replanted when necessary, has always paid its way, and where the circumstances allow of peeling the rods a very good result has been obtained.

(To be continued.)

TRADE CATALOGUES RECEIVED.

James Carter & Co., High Holborn, London.—Vade Mecum and Seed Catalogue for 1894.

W. Cutbush & Son, Highgate Nurseries, London, N. - Chrysanthemums.

E. & W. Hackett, 73, Rundle Street, Adelaide, South Australia. -Manual for the Garden and Farm.

Hogg & Wood, Coldstream and Duns .- Forest, Ornamental, and Fruit Trees, Roses, Clematis, and Shrubs.

J. Laing & Sons, Forest Hill, S.E .- Vegetable and Flower Seeds.

J. R. Pearson & Sons, Chilwell Nurseries, Nottingham .- Chrysanthemums.

W. Wells, Earlswood Nurseries, Redhill.—Chrysanthemums.



HARDY FRUIT GARDEN.

Winter Pruning.—It is desirable to begin and complete this operation during the present month, as it is better to relieve trees and bushes of superfluous wood as soon as possible after the fall of the leaves. Though trees apparently are at rest there is yet a certain amount of activity prevailing which is seen in the gradual plumping and swelling of the buds, this process continuing all the winter. If pruning is deferred until early spring the buds intended to remain are deprived of much support they might otherwise receive when they have not to share it with useless growths. Mild, dry weather is the best time for pruning operations, hard frosty weather the worst. Much may be done on a slight frosty day, the ground being clean to walk upon, and the work not unpleasant.

Pyramid and Bush Trees.—Trained trees, well established, with the branches sufficiently wide apart to admit sun and light to each throughout the entire length, will need only the side shoots pruning to three buds, leaving the leading growths about a foot in length, or less if extension is not desired. Trees in the course of formation, having well ripened leading growths not too long, need not have these shortened severely, the removal of the points, which are invariably blossom buds and would prevent extension, being usually sufficient. Long immature shoots must be shortened back to firm wood, cutting near to a bud pointing in the right direction, making a short, sloping cut, which leaves no snags to die back. Remove dead spurs or wood, and of the spurs remaining any which are unduly elongated shorten back, also thin out crowded clumps. The access of light and air to the interior of the trees will then strengthen weak fruit buds.

Standard Trees.—The mistaken practice of shortening the branches of fully formed trees to any extent results in filling the interior and the upper branches with useless shoots. Properly managed standard trees require little pruning. Rank, gross growths when they appear may be cut out entirely. Branches extending beyond the bounds which mark a shapely, well balanced tree are better shortened to where other branches originate, this preventing the production of strong young growth likely to crowd the trees and make them unfruitful. Remove branches crossing one another, as well as those thickly and ill-placed. The advantages of having the branches thinly disposed, not only in winter, but in the summer, so that every part can receive the full benefit of abundant air and light, will quickly be apparent in early and continued fruitfulness, thus reducing severe pruning to a minimum.

Cordon Trees.—Upright, diagonal, and horizontal cordon-trained trees are easily managed, if the proper attention is accorded in the summer in stopping the side shoots, and, when the full extent of space is not covered, allowing the leaders to extend. Young trees well managed in these respects will soon be furnished from the base upwards with fruit buds. The pruning necessary at this season consists in reducing to two or three buds the summer-pruned shoots, slightly reducing elongated spurs, and thinning out where much crowded any clusters of spurs on aged cordons. As a rule immediately fruit bearing commences on young cordons over-vigorous growth of side shoots and leaders will be subdued, but should strong shoots assert themselves unduly, which cannot be restricted by summer pruning, lifting the trees when the leaves fall will restore the balance.

Fan-shaped Trees.—This form of training fruit trees is one of the best, because of the readiness with which branches can be replaced. It admits also of the combination method in the case of stone fruit trees by which fruit is produced on spurs as well as on young wood of one or two years' growth. Morello Cherries, Peaches, Nectarines, and Apricots produce fruit freely and best on healthy shoots of medium strength developed the previous season, but they will also bear on spurs. Plums and dessert Cherries on walls should have the branches well furnished with spurs by summer pinching, and the intervening spaces occupied with young wood thinly disposed, which will bear the second year. The chief pruning, therefore, consists of cutting out the old bearing wood and training in succession shoots, stopping those not well placed in summer to form spurs. Plums and Cherries may be pruned now, Peaches, Nectarines, and Apricots in February.

Bush Fruit.—Birds begin their depredations among Gooseberry and Currant bushes earlier than many people suspect, therefore it is not well to prune Gooseberry trees severely, but merely to thin out crowded shoots and branches, leaving a good proportion of young wood for future bearing. This may be done now or in spring, but whether the bushes are pruned or left alone they should be well dusted with soot or lime, applying either when the trees are wet with dew, fog, or rain. The buds are thus rendered distasteful to the birds, who in a great measure leave them alone so long as the bitter deposit adheres to the shoots.

If Red and White Currants have a great proportion of the buds picked out on the spurred-in shoots the following crop of fruit will be light. Cotton or worsted run in lines over the trees will prevent birds taking the buds, but the best protection is to grow the trees under wire netting, forming a fruit cage from which birds can be excluded during

winter, and when the fruit is ripe. At other times they should have free access to the trees, or insects may become rampant. Shorten the leading shoots of Currants to 8 or 9 inches, the side growths to an inch. Black Currants may have the old worn out shoots cut away, maintaining a good selection of vigorous young growths from the base which bear the finest fruit. No spurring-in of side shoots or shortening the leaders except where extending beyond bounds is necessary.

FRUIT FORCING.

Vines.—Earliest House.—After the buds break the temperature will need to be increased to 60° at night in mild weather, and 55° in severe, gradually increasing it so as to have it at 60° at night when the Vines are in leaf, and 70° to 75° by day with moderate ventilation. If there are evaporation troughs in the house, keep them regularly charged with liquid manure. Where these do not exist, and there is no fermenting bed, guano water, 1 lb. to 20 gallons of water, or the urinary drainings of stables and cowhouses, diluted with six times the bulk of water, may be sprinkled on the floor and surfaces of borders in the late afternoon, two or three times a week. Vines in pots will require more nourishment as the growth advances, supplying liquid manure at the temperature of the house. Sprinkle the house two or three times a day in clear weather, avoiding a very close and too damp or a dry atmosphere. Tie up the Vines in position as soon as growth has commenced in the lowest buds, always before the shoots are so long as to be damaged by the process. Disbudding should not be practised until the fruit shows in the points of the shoots.

Houses to have Fruit Ripe in May .- The Vines for this purpose must be started without delay, for quite five months are necessary to secure fruit of the early varieties during the winter and spring months. To facilitate a good break, and to save fuel, a bed of stable litter and leaves in equal parts, placed on the floor of the house, turning a portion of it daily, so as to supply ammonia, is useful. The outside border must also have the needful protection from cold rains and snow. If the roots of the Vines are mainly inside, a covering of leaves about 6 inches thick, and a little litter over them to prevent their being blown about by wind, will afford the needful protection. Where the roots are chiefly outside a covering of warm litter after the Vines break will materially assist root action and the supply of nourishment; two-thirds leaves to one third of stable litter affording a less violent heat, but more lasting than all manure. This material once put on must be kept at a regular heat by adding fresh as necessary and removing some of the spent. The inside borders should be made thoroughly moist, but not soddened, by applying water, or in the case of weakly Vines, liquid manure at the mean temperature of the house—preferably 5° in advance of it. It suffices if the soil is moderately moist until the Vines break. Start with a temperature of 50° in severe weather, 55° in mild weather, and 65° by day, except the weather is severe and dull, when 55° will be more Maintain a moist atmosphere by syringing the Vines and suitable. house occasionally, but avoid excessive moisture and keeping the rods dripping wet, for this excites the production of aërial roots from the rods. Depress young canes to the horizontal position or below to cause the buds to break regularly.

Midseason Houses.—The Vines will, in most cases, be pruned and at rest. If not, the pruning and cleansing of the house and Vines should be attended to without delay, for late pruning favours bleeding and insect pests immensely. Where the Grapes are partially cut the remainder may be removed with a good portion of wood attached, and that inserted in bottles of water, with a piece of charcoal in each, will keep the Grapes admirably in a dry room from which frost is excluded. This will liberate the Vines for pruning (it being assumed that the leaves are all down) and the house for cleaning, repairs and painting. The Vines ought only to have the loose bark removed, be washed with soapy tepid water, and afterwards with an insecticide. If they have been infested with scale or mealy bug add a fluid ounce of petroleum to a gallon of water in which 4 ozs. of softsoap has been dissolved, and churn violently with a syringe until the oil is well mixed with the solution, which is best effected at a temperature as high as the hand can bear, and then applied in a tepid state to the Vines with a stiffish brush, reaching well into every angle, crevice, and hole. Remove the surface soil without disturbing the roots, and supply a top-dressing of fresh loam about a couple of inches thick, and sprinkle over it a good handful of bonemeal and a similar amount of wood ashes (from twigs) per square yard. Both will be diffused through the soil, and be in a condition for taking up with the roots by the time the Vines start into growth, when they can be fed with quick acting manures.

Late Houses.—When the foliage is all down fire heat will only be necessary to exclude frost in dry weather, taking care to admit air before the sun acts on the house so as to cause moisture to be condensed on the berries, for in that case the skin of the Grapes will become discoloured and rapidly decay. A temperature of 50° by artificial means dries the atmosphere too much to preserve thin-skinned Grapes, such as Black Hamburghs, in sound condition—that is, without shrivelling. Muscats, Lady Downe's and Gros Colman require a temperature of 50° until thoroughly matured, and then a dry and equable temperature of 40° to 50° will insure their sound keeping, but a close, damp atmosphere causes the berries of Gros Colman to split and those of Muscat of Alexandria to spot, and the end of their keeping is then begun.

Figs.—Potted Trees.—For the early supply of Figs experience has proved the advantage of the pot over the planted out system. Trees in pots forced early for a number of years become more fruitful as they advance in age, and they commence growth as the usual time of starting

comes round in a lower temperature than trees that have not been subjected to the process. Being grown gradually they retain their first crop fruits much better than trees forced for the first time, unless these have been started early in the previous season, so as to make and complete their growth early, and have time for rest before starting. One great mistake in the culture of Figs in pots consists in retaining more trees than can have full exposure to light, for instead of reducing the number of trees by removing the least appreciated varieties or duplicates, the whole of the trees first procured are attempted to be grown in small pots and by reducing the heads. This is not the way to secure plants of fine Figs, for the extension system of pruning is not applicable to potted trees, and those that are early forced must not be crowded. For early forcing Early Violet and St. John's are excellent small fruited varieties, White Marseilles and Brown Turkey Figs being far the best for general supply, and afford an excellent succession. Trees in pots do remarkably well when afforded bottom heat, the pots being stood on loose brick pedestals, the roots allowed to extend outside the pots, and renewed annually. This with copious supplies of liquid manure, and judicious thinning of the second crop fruits, results in a satisfactory crop of early Figs, the most important in forcing.

Planted-out Trees.—These are much more luxuriant and have longerjointed wood than trees in pots. They are often unfruitful when grown
in a deep and rich soil. To have fruitful trees the border must be
firm, narrow, shallow, and well drained, then the growth will be sturdy,
the foliage thick, the wood stout, short-jointed, hard, and well-ripened.
The border must be composed of well-compacted rather strong loam,
containing plentiful supplies of calcareous and siliceous matter. A
width of 3 feet is ample to begin with, and 6 feet for the largest tree,
and a foot depth of drainage must be provided, having a drain under
(unless the substratum be gravel or other natural drainage) to carry off
superfluous water, placing a 3-inch layer of lime rubbish over it. The
soil may consist of medium textured loam, inclined to be stiff rather
than light, and if not calcareous add a sixth of gravelly marl, a fifth of
old mortar rubbish and a fourth of road scrapings, well incorporated.
If the loam is inclined to clay, omit the marl and add more road
scrapings, if light omit the road scrapings and increase the marl. Put
together firmly when moderately dry, allowing a few inches for
settling.

Trees with single stems are the only suitable ones. They will be in pots. Remove and wash away all the soil; then disentangle the roots, spread them out evenly, covering about 3 inches with fine soil, and give a good watering. When the surface has become dry, tread firmly, and mulch with a little short manure. Fan training is the most suitable. The house must be light, face south for preference (imperatively so for early forcing), and have top and bottom ventilation. The shoots should be trained about 1 foot from the glass. For a lean-to it is better to plant the trees at the back and train the growths down than plant in front and take them up the roof. This insures the light direct into the points of the shoots, and the fruit is borne freely throughout the length of the terminals, which produces much finer specimens than stunted pinched growths.

For general forcing purposes no Fig surpasses Brown Turkey, and it has an eligible companion in White Marseilles. Negro Largo is very fine, especially for succession and iate crops, but it must be confined at the roots. For high quality Black Bourjassotte, Gourand Noir, Monaco Bianca, and Grizzly Bourjassotte are unrivalled as midseason varieties, while for late use Col di Signora Bianca and Agen are excellent. To ripen these well they require fire heat.



APIARIAN NOTES.

THE LANARKSHIRE STORIFYING HIVE.

"A Sussex Amateur" is desirous of having full information how to construct the Lanarkshire storifying hive. At an early date descriptive notes with drawings will be published, which will enable any amateur to make them, or to materially assist his tradesman. Meanwhile it is to be hoped no one will allow himself to be carried away with the idea that a hive of some peculiar construction should first be procured, and then large yields of honey will follow without further exertion. The fact is, as I have repeatedly shown, as much honey can be had from a common box or straw hive, as from the most elaborate frame one. Give them proper attention with ample accommodation, and the bees of the abused straw hive will yield to their owner as much weight or more of a superior quality of honey than any frame hive of the modern bee-keeper, with the use and the abuse of combs and extractor. Turning unsealed combs containing brood, food, and water for larvæ into it does not produce that excellence in honey we were accustomed to in our youth from the selected combs of the straw hive. The sealings of the comb were cut and honey allowed to drip through a clean wicker basket and muslin cloth.

The advantages of frame hives are to be sought for in different directions than large yields of honey. But in the proper management of superior frame hives the facilities are greater to increase the yield if given proper attention; if neglected, then the large straw hive is superior. The winter problem is thoroughly solved in the Lanarkshire hive. The bees are all preserved alive in it during the winter; breeding goes on uninterrupted and in a healthy state from the end of December. The bees are always strong, and ready to gather honey and pollen from any source at the earliest opportunities. Bees that have been badly wintered in unhealthy hives require weeks to make up what they lose in the winter through dampness and other evils.

A properly constructed hive enables the bee-keeper to add or diminish its size at will, and to compel the bees to store the choicest honey where he chooses. He may also delay or prevent swarming according to circumstances, and to be able in a few minutes to move them from one place to another, with perfect safety to the bees and to those attending them. It is possible, too, to pack them when in transit in little space without any damage resulting to the hives. The foregoing are only a few of the properties the Lanarkshire storifying hive possess, which gives the bee-keeper a slight idea of what a hive should be like and what it should possess.—

A LANARKSHIRE BEE-KEEPER.



*All correspondence should be directed either to "THE EDITOR" or to "THE PUBLISHER." Letters addressed to Dr. Hogg or members of the staff often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Bee subjects, and should never send more than two or three questions at once. All articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post, and we do not undertake to return rejected communications.

Communications for Our "Next Issue" (J. K.).—You are only one of several correspondents who prevent their communications appearing in the desired "next issue" by posting them too late for that purpose. Only brief and urgent letters arriving on Wednesday morning can be inserted the same week.

Chrysanthemum Waban (E. Molyneux).—The bloom is very imposing, being just 30 inches in circumference. Evidently you do not intend Chrysanthemum growing to become a lost art at Swanmore, though you have "given up showing."

Black Paint for Hot-water Pipes (T. R. P.).—Lampblack formed into a thin paint with boiled linseed oil is the best. If the pipes are made warm before, and kept so whilst the paint is being applied, it will dry sooner, and air being admitted the smell will not prove injurious to plants. Only one even coat need be given.

Sawdust from Stables as a Mulch for Fruit Trees (F. J.).—Sawdust, after being used for bedding horses, is a good mulch for fruit trees, as it is rich in ammonia-forming matter. The only danger attending its use is that of favouring fungi, which may prove injurious to the roots of the fruit trees, but we have used it without any deleterious consequences following. It may also be used for Strawberries.

Vine Affected with Mildew (F. J.).—After washing the Black Hamburgh Vine with softsoap and water, and thoroughly cleansing the house, the rod and spurs may be dressed with sulphide of potassium, 1 cz. to a gallon of water, applying with a brush, and reaching well into every angle and crevice, but taking care not to injure the buds. Limewash the walls, adding a good handful of flowers of sulphur to a pailful of limewash. Remove the loose surface soil from the border, and supply fresh loam. If the mildew appear next season dust with flowers of sulphur.

Specks on Apple (Effingham).—The specks are produced by a fungus called Glæosporium fructigenum. It is rather common this year on the gritty Pears and hard-fleshed Apples, attacking them later in the season than usual, but it develops rapidly in the stores. Sulphide of potassium, half an ounce to a gallon of water, used as a spray or through a fine-rose syringe when the fruit is about a quarter grown, again when half grown, and a third time when about three parts grown, is recommended as a preventive. The fruit should be disposed of, or preferably destroyed. If the Apples are used the peelings ought to be burned.

Greenish-white Chrysanthemum (R. P.). — Mr. Molyneux says the only variety he knows resembling Florence Davis (Japanese) in colour is Lord Eversley, a sport from Princess Teck, originating in the hands of the late Mr. Wildsmith, at Heckfield, in 1887. In formation it is, like nearly all sports, the exact counterpart of its parent. It, however, produces the smallest blooms of all the "Teck" family. For late flowering it is valuable, and for exhibition, too, where a large number of varieties is required. Like Florence Davis, the florets are tinted green when unfolding, but as in the case of that Japanese variety the blooms are pure white when fully developed. In the case of Lord Eversley, though, it is the tips of the florets that are green, in the other referred to it is the centre of the flower.

Microscope for Examining Bacteria (L. D.).—To show the bioplasm or living matter growing and multiplying in the bundles of fibrous tissue in animals, or in the cells of plants, a power of 700 diameters is necessary; while to differentiate or show the very minute particles of the contagious living matter or bioplasm a lens magnifying 1800 diameters is required; but to distinguish the malignant from the useful bacteria, and refer each to its specific character, a power of 5000 diameters is absolutely essential. This implies a knowledge of bacteriology, attainable only by a long course of study and acquirement of the distinction between fungal and bacterial ferments, which in many cases, especially in plants, is only determinable by cultures.

Sunday Work in Gardens (A. E. C.). — Our correspondent could not have been aware of what you state, and, we hope, exaggerate. We cannot understand that any gentleman countenancing such Sunday work in his garden as "hoeing between Beet, hacking Potatoes, 'wartering' Lettuce plants" (you should learn to spell 'watering') "syringing Peas, Cherry trees, and doing such like work." We are of opinion that all unnecessary labour should be avoided in gardens on Sundays. Your letter is so faulty in grammar that it cannot be inserted. You say our correspondent does the work indicated, though you no doubt intended your allegation to apply to the gardener whose work he described.

Liquid Manure in Winter for Vines (W. Law).—As you say the border is poor, and you could not obtain sewage until now, by all means use it at once provided the site is naturally or artificially drained so that superfluous water passes away freely. Some of the most profitable Vines we know, and which have afforded splendid Grapes that have won leading honours at the best shows this year, are made so in part (and the grower believes it a considerable part) by applications of liquid manure on favourable occasions during the winter. It can be used with advantage much stronger, during what is known as the resting than the growing period of Vines and fruit trees. Do not miss the opportunity of applying it to anything that needs manurial support.

House for Fruit and Chrysanthemums (W. H. M.).-1, The house will answer as regards aspect, but it is somewhat narrow, for with a path up the centre there will be a 4 feet 6 inches border on each side. This is quite wide enough for the trees with liberal feeding. You may have a tree on each side. Dymond and Royal George are excellent Peaches, planting the first on the south-east, and the latter on the north-west aspect. 2, Pears are not suitable on account of the heat in winter. 3, A flow and return 4-inch hot-water pipe along both sides would be sufficient, the pipe not needing to be highly heated. 4, The pipes may be fixed about 6 inches from the wall. 5, A 3-feet wide border would answer for cordon or "U" trained trees, and it would then be a better arrangement as regards the Chrysanthemums, as they would then have the centre of the house.

Mineral Constituents of Pears, Plums, and Strawberries (Diss.).—The differences between the per-centages of ash and mineral (Diss.).—The differences between the per-centages of ash and mineral matter have no connection whatever with each other, as they referentirely to different subjects. To give a detailed analysis of Apples would enhance the value and add to the expense tenfold, which no analytical chemist, as a rule, gives, for the simple reason that few care to pay for so elaborate an analysis of fruit. Pear: Potash, 54.69; soda, 8.52; magnesia, 5.22; lime, 7.98; phosphoric acid, 14.28; sulphuric acid, 5.69; silica, 1.49; iron, 1.96; chloride of sodium, trace. Plum: Potash, 59.21; soda, 0.54; magnesia, 5.46; lime, 10.04; phosphoric acid, 12.26; sulphuric acid, 3.83; silica, 2.36; iron, 6.04; chloride of sodium, trace. Strawberries: Potash, 21.07; soda, 27.01; magnesia, trace: lime, 14.21; phosphoric acid, 8.59; sulphuric acid. magnesia, trace; lime, 14 21; phosphoric acid, 8:59; sulphuric acid, 3:15; silica, 12:03; iron, 11:12; chloride of sodium, 2:78. The percentages of potash and sodium vary in fruit from different soils as they are interchangeable by the Strawberry. The albuminoids in Pears are 0.3; mineral matter, 0.3. In Plums: Albuminoids, 0.5; mineral matter, 0.4. In Strawberries: Albuminoids, 0.3; mineral matter, 0.2.

Vines for a House without Fire Heat (G. B.).—The variety you name is not desirable for the purpose indicated. Chasselas Vibert, Early Smyrna Frontignan, and Foster's Seedling (white Grapes), also Black Hamburgh, Black Prince, and Madresfield Court (black Grapes) succeed in unheated houses farther north than the Midlan's in favourable localities and seasons, under judicious management. This mainly consists in husbanding the sun's heat after the Vines start into growth, allowing them to do this naturally—that is, not coddling them in the spring, but ventilating fully, so as to prevent growth before April, then pushing them ahead by judicious early closing, especially after the Grapes are set and until they are well ripened. At the same time we

consider that structures for growing Grapes in are incomplete if provision is not made for affording artificial heat.

Names of Fruits.—Notice.—We have pleasure in naming good typical fruits (when the names are discoverable) for the convenience of regular subscribers, who are the growers of such fruit, and not collectors of specimens from non-subscribers. This latter procedure is wholly irregular, and we trust that none of our readers will allow themselves to be made the mediums in infringing our rules. Special attention is directed to the following decision, the object of which is to discourage the growth of inferior and promote the culture of superior varieties. In consequence of the large number of worthless Apples and Pears sent to this office to be named, it has been decided to name only specimens and varieties of approved merit, and to reject the inferior, which are not worth sending or growing. The names and addresses of senders of fruit to be named must in all cases be enclosed with the specimens, whether letters referring to the fruit are sent by post or The names are not necessarily required for publication, initials sufficing for that. Only six specimens can be named at once, and any beyond that number cannot be preserved. They should be sent on the first indication of change towards ripening. Dessert Pears cannot be named in a hard green state. (T. J., Watford.).—We think the Apple is Warner's King. (H. D.).—The most careful dissection does not reveal the name of the Apple, and it may be a local seedling. (W. G.).—Wyken Pippin undoubtedly.

Names of Plants.—We only undertake to name species of plants, not varieties that have originated from seed and termed florists' flowers. Flowering specimens are necessary of flowering plants, and Fern fronds should bear spores. Specimens should arrive in a fresh state in firm boxes. Slightly damp moss, soft green grass or leaves form the best packing, dry wool the worst. Not more than six specimens can be named at once, and the numbers should be visible without untying the ligatures, it being often difficult to separate them when the paper is damp. (F. H.).—Anthurium Andreanum. (Young Gardener).—1, Agave americana; 2, Yucca filamentosa; 3, Kentia Canterburyana; 4, Seaforthia elegans. (Amateur).—Jasminum nudiflorum. (H. P.).— Impatiens Hawkeri.

OOVENT GARDEN MARKET .- DECEMBER 13TH. FRUIT.

TRADE very quict.

Cobs	· 2 · 35	0 to 0 4	s. d. 7 6 40 0 2 0 15 0	Peaches, per doz	-	d. 0 to 0	0	đ 0 0
		V	EGET	ABLES.				
Beet, Red, dozen	0 1 0 2 1 2 1	d. 3 to 0 4 0 0 0 0 0 3 3 3 2 9 9 9	g. d. 0 4 0 0 0 6 3 0 1 3 4 0 3 6 1 6 0 0 1 0	Mustard and Cress, puunet Onions, bunch Parsley, dozen bunches Parsuips, dozen Potatoes, per cwt. Salsafy, bundle Scorzouera, bundle Shallots, per lb. Spinach, bushel Turnips, bunch	0 0 2 1 2 1 1 0 8	3	0 3 0 4 1 0 0 0	00066500

AVERAGE WHOLESALE PRICES.—OUT FLOWERS.

Orchid Blooms in variety. Chrysanthemum blooms very plentiful this season, hence the price is very low.

	g.	d.	8.	d	1	g.	a.	s.	ď.
Arum Lilies, 12 blooms	3	0 to	5	0	Narciss, White (French),				
Azalea, dozen sprays	1	0	1	6	dozen bunehes	2	0	to 3	0
Bouvardias, bunch		6	ï	0	Orchids, per dozeu blcoms	3	0	12	0
Camellias, dozen blooms	ĭ	ŏ	3	ō	Pelargoniums, 12 bunches		0	9	0
Carnations, 12 blooms	ñ	6	2	Õ	Pelargoniums, scarlet, doz.				
	v	U	-	v	bunches	4	0	6	0
Chrysanthemums, dozen	0	0	6	0	Primula (double), dozen	-	•	_	•
bunches	z			ő		0	6	1	0
Chrysanthemums, doz. bls.		6	2		sprays	_	ŏ	4	ŏ
Eucharis, dozen	4	0	6	0	Pyrethrum, dozeu buuches		6	1	6
Gardenias, per dozen	2	0	4	0	Roses (indoor), dozen		_	1	
Lilac (French) per bunch	3	6	6	0	" Tea, white, dozen	Ţ	0	2	0
Lilies of the Valley, dozen					"Yellow, dozen		0	4	0
sprays	2	0	4	0	Roses, Safrano (French),				
Lilium laucifolium, dozen					per dozeu	0	9	1	6
blooms	1	0	3	0	Roses, Safrano (French),				,
Lilium longiflorum, per	-	•	•		per 100		6	3	0
	6	0	0	0	Tuberoses, 12 blooms		4	0	6
dozen	U	v	U	•	Violets, Parme (French),	-		-	
Maidenhair Fern, dozen		^	c	0	per buuch	2	6	3	0
bunches	4	0				~	•		•
Marguerites, 12 bunches		0	4	0	Violets, Czar (Freneh), per	2	0	0	6
Mignonette. 12 bunches	3	0	6	0	bunch	2	V	2	O
Narciss, Yellow (French),					Violets (English), dozen	,	•		0
dozeu bunches	3	0	4	0	buuehes	T	6	2	0

PLANTS IN POTS

		P.	ואו	LIS	IN TOIS.				
	s.	d.	g.	d.		s.	d.	s.	d.
Arbor Vitæ (golden) dozen			0 12		Ferus (small) per hundred	4	0	to 6	
Aspidistra, per dozen	18	0	36	0	Ficus elastica, cach	1	0	7	6
Aspidistra, specimen plant	5	-		6	Foliage plants, var., each	2	0	10	0
Chrysanthemums, per doz.	4	Õ	9	0	Lilium Harrissi, per dozen	12	0	24	0
, large plants, each	î	ŏ	2	ō	Lycopodiums, per dozeu	3	0	4	0
Dracæna terminalis, per		•	_	•	Marguerite Daisy, dozen	6	0	12	0
dozen	18	0	42	0	Mignonette, per doz	6	0	9	0
Dracæna viridis, dozen	9	ō	24		Myrtles, dozen	6	0	9	0
Ericas, per dozen		ŏ	18		Palms, in var., each		0	15	0
		ŏ	18		" (specimens)	21	0	63	0
Euonymus, var., dozen		ŏ	24		Pelargoniums, scarlet, doz.	2	0	0	0
Evergreens. in var., dozen	4	ŏ	18	ŏ	Solanums, per dozen	9	0	12	0
Ferns, in variety, dozen	-	•		•					



PROFITABLE LIVE STOCK.

LESSON OF THE CATTLE SHOW.

FOR an easy, enjoyable, and instructive comparison of breeds in full development, or far on the way thither, the winter show of fat stock at Islington is altogether preferable to the summer meeting of the "Royal," simply because at the Agricultural Hall the classes are so near each other and are so accessible that comparison is easy, and a useful critical inspection really possible.

Among the cattle the chief points of interest are early development, symmetrical forms, and large size. Taking the dictum for our guide of Sir John B. Lawes, that as a certain amount of food is consumed every day by an animal for respiratory and other vital functions, it is evident that the quicker an animal is fed for the butcher the less total amount of food he will consume, weight, age, and general appearance all have attention. Among the Shorthorns in class 11 for steers not exceeding two years old, the Queen's first prize handsome steer, weighing 14 cwt. 9 lbs., and one year eleven months three weeks old, was a marvellous example of early development. The weekly average weight from birth to show entry being about 151 lbs., bears favourable comparison with that of another of Her Majesty's prizewinners, Prince Charlie, weighing 201 cwt. at the age of three years six months two weeks, or a weekly average of about $12\frac{1}{2}$ lbs. This grand beast was so symmetrical that it not only took first prize in the class for Shorthorn steers above three and not exceeding four years, beating Mr. J. W. Rowland's huge second prize steer, weighing 22 cwt. 2 qrs. 18 lbs., and Lord Tredegar's third prize beast, weighing 20 cwt. 3 qrs. 21 lbs., but it was awarded the breed cup, the £50 cup as best male among the cattle, and the reserve ticket for the championship. A marvellous sight were these three magnificent animals, each of them over a ton live weight, but apart from prizewinning, and regarded strictly from a commercial point of view, the younger steer bears away the palm from all of them.

That the judges were not influenced by mere weight was also evident in the contest for the championship between Prince Charlie and Mr. J. D. Fletcher's polled Aberdeen, Angus heifer, Pride of the Highlands, two years and eleven months old, and weighing 17 cwt. 2 qrs. So excellent were both of them that it was only after the most deliberate inspection and discussion of every point that the judges decided in favour of Pride of the Highlands, which was also first in its class, and winner of the breed cup.

Excellent examples of early maturity were there in other breeds, as, for example, Mr. T. H. Risdon's first prize Devon steer, one year eleven months two weeks old, weighing 11 cwt.; Lord Coventry's first prize Hereford steer, one year seven months old, weighing 11 cwt. 25 lbs.; Mr. J. Godman's first prize Sussex steer, one year ten months three weeks old, weighing 12 cwt. 26 lbs.; Mr. R. Turner's first prize polled Aberdeen-Angus steer, one year ten months old, weighing 11 cwt. 2 qrs. 2 lbs.; and a cross-bred steer, for which Mr. John Ross had first prize, a very compact polled beast, black and white in colour, with Aberdeen-Angus blood largely predominant, one year eight months one week old, weighing 12 cwt. 1 qr. 12 lbs. All of them were in the classes of their respective breeds for steers not exceeding two years. Though the crossbred steer has some advantage over the pure-bred animals in weight, we were not favourably impressed by the appearance of it or any other cross-bred cattle in the Show. They had an inferior appearance that suffered very much by comparison with the pure breeds.

For condition, form, and finish there was nothing to equal the attractive and picturesque Herefords. Their white faces, red coats, evident ripeness, and symmetry showed how entirely they were worthy of the high rank assigned them among our best cattle, and how well they repay for careful tending and judicious feeding. We were probably more impressed by them because we had seen many of the same breed out of conditionvictims of the drought-at Guildford Market on the previous day. One of the most handsome beasts in the Show was Mr. John Wortley's first prize Hereford, in the class for steers not exceeding three years old. It was two years seven months old, and weighed 16 cwt. 26 lbs., gaining also the breed cup. Our note of it was "a fine compact beast—a picture!" Very handsome, too, was the Queen's first prize Hereford heifer, weighing 12 cwt, at the age of two years seven months. Mr. R. Edwards' second prize heifer, a month younger than Her Majesty's, weighed nearly 2 cwt. more, and was, we thought, the finer animal of the two; and the heaviest Shorthorns had no mean rival in Mr. F. Platt's Hereford steer, weighing 20 cwt. 2 qrs. 24 lbs. at the age of three years ten months.

WORK ON THE HOME FARM.

Recent inquiries about eggs in winter show how little progress is made in a matter wherein success depends upon details of management, and not upon exterior influences. Where the supply has fallen off for want of pullets coming in to lay now, nothing can be done till next season, unless, indeed, more pullets were purchased at once, which would prove to be an expensive affair. But if there is a cessation of laying by the April or May hens of the current year, it is probably owing to the use of improper food and a want of shelter for the poultry both by day and night. Remember that fowls go to roost early now, often by or before 3 P.M. At least, on alternate days, preferably daily, they should have some warm food about 2.30, consisting either of oat meal or barleymeal, or both in mixture. In Sussex it would probably be oatmeal, in the eastern counties barleymeal; which of them has preference is immaterial, the point of real importance is that they have the food warm. Some very successful poultry keepers prefer whole corn. We do not object, only the meal can be prepared simply by mixing it with hot water, while the whole corn require a saucepan in which it is placed, almost covered with cold water, which is then made to just boil, then withdrawn slightly from the fire for an hour so as to keep hot, and cause the corn to swell without any more boiling.

When they come down in the morning they have a warm breakfast, and then run into a long shed open to the south, having plenty of dust on the earthen floor. Here they have some corn, Wheat, Maize, or Barley thrown among the dust to busy them, but this is only in calm weather. On very rough cold days they are kept in the snug poultry house, which is quite clean, has plenty of light, not a chink or hole of any sort, nor openings along the eaves to admit draughts; warm food is then given them at dawn of day at about clean, and accir food is then given them at dawn of day, at about eleven, and again about three hours before they go up to the perches.

We have now an excellent supply of rich-looking brown eggs from Wyandotte pullets, which are excellent. Minorcas and White Dorkings have also supplied us well with winter eggs, mainly because of shelter and warm nourishing foods.

METEOROLOGICAL OBSERVATIONS.

CAMDEN SQUARE, LONDON. Lat. 51° 32' 40" N.; Long. 0° 8' 0" W.; Altitude, 111 feet.

DATE.			9 A.M	•			IN TH	E DAY.		
1893.	Barometer at 32°, and Sea Level.	Hygrometer.		Direc- tion of	Temp. of soil at	nera	Tem- ture.	Radi: Tempe	Bain.	
December.	Barc at 32 Sea	Dry.	Wet.	Wind.	1 foot.	Max.	Min.	In Sun.	On Grass.	
Sunday 3 Monday 4 Tuesday 5 Wednesday 6 Thursday 7 Friday 8 Saturday 9	Inchs. 30·422 30·220 30·366 30·172 29·747 29·480 29·358	deg. 24.5 41.1 39.9 43.4 45.9 45.2 39.9	deg. 23·8 40·4 37·6 42·2 44·4 43·9 38·9	S.W. S.W. N.E. S.W. W. S.W.	deg. 39.7 38.3 38.9 39.1 41.0 41.3 41.9	deg. 41·3 46·5 43·8 49·3 46·9 49·6 44·2	deg. 20·1 23·9 37·9 37·1 43·1 36·2 39·6	deg. 45·3 53·1 49·4 55·2 66·9 50·8 63·1	deg. 20·5 24·4 30·9 32·4 39·9 29·4 35·9	Inchs. 0 010 — 0.058 — 0.441 —

REMARKS.

3rd.—Frequent bright sunshine in morning, and at times in afternoon; fair evening;

3rd.—Frequent bright sunshine in morning, and at times in alternoon; last evening, cloudy night.
4th.—Cloudy with occasional faint sunshine in morning; bright for about an hour at midday; dull and drizzly from 8 P.M. 5th.—Fair, but almost sunless.
6th.—Fair with occasional faint sunshine; drizzle and spots of rain in evening.
7th.—Showers early; bright sunshine from 9 A.M., and almost cloudless from 11 A.M.
8th.—Overcast early; frequent drizzle from 8.30 A.M.; rain from noon, and heavy rain at 2 P.M.; fair after 3 P.M.
9th.—Rain from 0.30 to 2.30 A.M., and at 5.30 A.M.; cleared after sunrise, and bright sun from 10 A.M.; almost cloudless night.
Barometer and wind variable, temperature slightly below the average.—G.J.SYMONS.



As the festive season of Christmas approaches, bringing with it feelings of universal gladness, long-parted friends and relations gather once more around the family board, or perchance lift up their voices in thankfulness and praise within the sacred walls of the church of childhood's days. On these befitting occasions it has long been the widespread custom to embellish the interior of our sacred edifices with evergreens, berries, and flowers. In so many instances the execution of the lion's share of this kind of work falls to the gardeners that it may without further explanation be classed among their multitudinous duties. Having had a considerable amount of experience at this work, I trust a few remarks on the subject may prove useful to many at the present time.

A prominent feature in church decorations, especially in those instances in which stately pillars or beautiful Gothic arches abound, is produced by tracing the outlines of the latter, and encircling the former, with wreaths made of evergreens of various descriptions. These, if well made, are always effective, even if many kinds of foliage are mixed up in an indiscriminate fashion; but in order to avoid sameness and produce distinct features, if the work is carried out on an extensive scale, certain portions of it should be done with one or two kinds of foliage only, and others with entirely different material. In this way special features are created, for the lack of which many examples of decorative work are greatly marred. I will here give a few illustrations of my meaning, which of course are not advanced as the only methods of securing the desired effect, but are given to show the plan of action by which monotony may be avoided.

The dark coloured oak of which choir stalls are frequently constructed may be effectively decorated by employing Variegated Holly or shoots of Aucuba japonica formed into wreaths and fastened around their outlines. Stone pillars, which are generally light in colour, look exceedingly well if encircled with wreaths made of sprays of Ivy surmounted with berries. Holly with green leaves and red berries, or a combination of Portugal Laurel and light sprays of Yew, are equally suitable for the purpose. The angles formed by the outer walls and ceiling require as a rule the heaviest wreaths. These may, therefore, have a great variety of materials employed in their construction. Laurel, Yew, Box and Holly answer the purpose admirably. Whenever there is a considerable amount of bare wall below the base of the roof, wreath festoons should be arranged from it at intervals of from 3 to 6 feet. The wreaths to fit in the angles ought to be made flat; those for festooning round, and be so arranged that they are fullest in the centre, gradually tapering to the point where they are fastened to the wreath above. Arches which have a series of grooves cut in the stone of which they are made, generally require a rather heavy wreath fitted round the outer groove, and a much smaller and round one made of Box, arranged in the groove nearest the under side of the arch.

A most finished way of decorating large arches is to treat them as already described, and in addition procure stout iron rods, have them bent to the shape of the arch, and by means of iron clips at the base and apex fasten them in position so as to join the framework of another arch 1 foot below the arch proper. Before placing finally in position, these irons should be covered with Holly or other stiff evergreen, and when fitted up have baskets of Ferns

suspended from the apex and base. The effect is then exceedingly good. Those who have not yet tried this plan, I would strongly advise to do so.

In making wreaths of all kinds the thickness of string should be regulated by the diameter of the wreath to be made, and in all instances I prefer wire for binding the shoots to the string. The kind of wire obtained on reels is scarcely thick enough for the purpose, but I have no difficulty in obtaining rolls of iron or brass wire of exactly the right thickness. It is wound on reels as required, being much handier for use in that form. Bunches of Helichrysums of various colours are extremely useful for fastening at intervals along wreaths in the most conspicuous positions.

One of the most tedious branches of the work of church decoration is that of arranging letters in the form of texts on substances of various descriptions and shapes. A framework of board with scarlet cloth stretched across it is a favourite and effective method of forming the groundwork, and letters cut out of stiff white paper look well upon such a groundwork. I used to find it a rather difficult matter to cut out the letters in good form; that difficulty has, however, been overcome by getting the printers to stamp the required letters on paper with their largest type, it is then an easy matter to cut them out correctly. Perhaps the most effective white letters are those formed of cotton wool which has been split asunder, so as to leave a rough side to the front. When these are used I cut out the letters in paper, and then mark the wool under them. Letters may also be formed of gilt paper, as well as paper of other colours, Holly berries, Holly leaves, or leaves of many kinds, gum, cotton, or tacks being the material employed for securing them to the groundwork. Holly leaves or small twigs of Yew are generally employed to form a border round devices on which texts have been fastened. Rough wooden frameworks formed of laths crossing each other in such a way as to form a series of diamonds, if covered with Laurel leaves, which may easily be fastened with tin tacks, provide an easy method of covering bare spaces of wall, or for making temporary screens of an ornamental character. Holly berries or bunches of Immortelles should be fastened at the points where the laths cross each other.

The pulpit and lectern require especial attention in the matter of decoration. To do this effectively whatever materials are employed for the purpose should be so arranged as to trace the outline of panels and beading. Strips of brown paper or canvas are the most generally useful for fastening the materials to. I have sometimes secured an excellent effect by covering such strips with Holly or Laurel leaves, and then dotting them at intervals alternately with small circles of red berries and tufts of grey lichen (obtained from old Apple trees), the centre of the panels being covered with cotton wool, supporting interwoven letters worked out in red Holly berries. The berries and lichen are easily fastened in position by the aid of rather thick gum.

Many fine examples of windows of various types may be met with in our ancient Churches. These when tastefully decorated add much to the general effect from an artistic point of view, yet strange to say, the embellishment of windows usually receives but scant attention, beyond encircling the surrounding rim of wall in a wreath of evergreens. When all of them cannot be well done, a few of the most prominent should receive special attention. The largest and most conspicuous is usually immediately above the Communion Table. This has generally a wide sloping ledge, upon which a most pleasing effect may be produced by the employment of cut flowers and pot plants. A shallow tin about 2 inches wide should be fitted along the front of the ledge, and a groundwork of Ferns in pots be arranged over the remaining space. This groundwork may be dotted thinly with graceful Palms, some plants of Poinsettia, or Scarlet Pelargoniums, and Roman Hyacinths; but few will be required even for the largest windows, as overcrowding is the great thing to avoid. This finished, the tins may be filled with water and arranged with flowers and greenery; scarlet is the most

suitable colour. Smaller windows may be quickly done by placing a Palm or Dracæna in the centre, covering the foot, and the remainder of the window-ledge with a mound of moss, dotting this with berried Holly, Immortelles, or flowers. In doing this work to the best of our ability something is contributed towards the happiness of others, which helps both worker and beholder to realise the hidden meaning of the time-honoured greeting—"A Happy Christmas!"

Much more might be written on this subject, but I have endeavoured to set the inventive faculties of Journal readers at work in such a way as to enable them to create novel and beautiful combinations for themselves.—Decorator.

THE FRUIT-KEEPING QUESTION.

FOR one reason do I again return to this question—namely, to point out to "A.D." (page 527) that he has not shown his usual perspicacity in looking at the arguments of those with whom he appears to differ, or exhibited that impartiality of judgment that generally characterises his writings. He has been so anxious to demolish his neighbour's theory that he has not made himself thoroughly conversant with it, or if so, he has not been generous enough to give his neighbour the benefit of that aquaintance. I leave the defence of the theory set up by your other correspondents and myself in better hands than mine if they care to go over the ground again, or to enlarge the question by other arguments.

It will be sufficient for me to call "A. D.'s" attention to this fact that I did not "jump to my conclusion as to the sap theory with a real rush," but that I arrived at it by slow and painful degrees; and for this reason, because it was those early Pears which swelled "after the rains came," and which, by their season, had to be gathered whether or not, that were the soonest decayed, and deficient in quality. Having, as he thinks, tripped me up about Pears, he attempts to do so as to Apples. I said Apples were keeping well, and so they are, the late ones, and for that very reason I said we gave them as long a time to mature as we could, in order that the rush of sap into the fruits might be converted from the crude watery elements of its first stage into the ripened juices of the perfect stage. Is there anything wrong in that?

Fruit gathered with sap in it which had not been elaborated would mean an early corruption of it, just as fruit gathered after the elements had by time chemically changed that crude sap into conservative juices would keep, unless fungus or other decaying agencies were at work. That is how I look at it. It is perhaps a very simple way of doing so, and not quite that of these fin de siècle days. Nevertheless, as a gardener of the older school, and one that has been a reader of the Journal of Horticulture for forty years this very year, I am not ashamed of it, because I gathered it first from my early teachers in the old Cottage Gardener, and have seen no reason in all that time to alter it by a long fruit experience. I think if "A. D." will read back he will see that his charge against me of hasty, illogical, and unpractical deductions of a theory is not a sound one, and if he will kindly re-read my notes, I think even he will agree that it is scarcely a generous one. As I said before, so say I again, "A. D." is usually so fair in his judgment that I am sure he will do me this justice.

As the blessed time of "Peace on earth" is here—sentimentally, if we do not make it practically so—I wish him, and all readers of the Journal of Horticulture, but especially our chief and his most efficient assistants, and the old writers (not many left now!) and the young writers (more power to them!), a very Merry Christmas and a Happy New Year, when it comes. We of the generation which looks back along the years we have been together, and miss the old names in the pages of our Journal, do so with a deepening sadness at the remembrance of the loss of their steadfast lives and practical teachings; but also with much satisfaction that their "prophet's mantle" has fallen on to most worthy shoulders of the present day; and so with calm cou age we settle down to doing the day's duty as best we can in our coming days, be they many or few.—N. H. P.

[We are sure that both old friends and new writers and readers will reciprocate the kindly sentiments so felicitously expressed, and hope that "N. H. P." has yet many happy new years to come]

My opinion for Apples not keeping well in some instances this year is the rain came just at the time they were maturing, and, therefore, unable to assimilate the superabundant moisture contracted by absorption from the humid atmosphere as well as through

the cellular tissue of the tree. Is there at y remedy to prevent the early decaying of Apples? or is it possible to build a fruit house that will be every year satisfactory? I am afiaid not. Potatoes, Turnips, and other roots sometimes decay to all appearance the same as Apples are doing. The cause, I believe, is some sort of ferment, which, owing to a certain amount of water being present, overcomes the antiseptic properties of sugar, converting it and the starch into carbonised matter much in the same way as sulphuric acid acts upon sugar.

Shrivelled Apples are frequently more delicious to the palate than plump ones, and are in a better state of preservation if the shrivelling be moderate. Had these juicy Apples been thoroughly desiccated there would not have been premature decay, and in the other extreme, plunged into water, they would in all likelihood remained fresh for a longer period. I have known Apples and Pears to keep well when damaged slightly by a small piece being

cut or chipped from them.

Fruit to keep well should have a certain proportion of water to the amount of sugar present, and when in excess ought to be evaporated by being kept in a warm fruit house. To know the right proportion of water experiments should be made to learn that, and the weight of sugar to the bulk of Apples ascertained.

—W. T.

AMERICAN APPLES.

BOTH Mr. Bunyard and Mr. Watkins (page 528) are somewhat down on American Apples, and they should be able now to estimate their true value. I grew Northein Spy for many years on stiff clay in a bed on the Crab stock, and never had a fruit; on the other hand, with Mr. Turton at Maiden Erlegh, on almost as stiff soil, but worked on the Paradise stock, and in bush form, it fruits freely, some of the fruits being exceptionally handsome, rich coloured, and good. Against that success we have to set the fact that it is a variety that displays far more of failures than successes. I had given me the other day, grown on the chalk at Titsey Park, Surrey, by Mr. J. Dean, a couple of much larger samples, and the fruits look as if they would keep firm till the end of January. Still the past season has been so exceptional, as all admit, that varieties that under ordinary conditions seldom fruit have borne good crops are fine samples.

At the Drill Hall last week Mr. J. Smith, of Mentmore Gardens, invited me, with others, to taste samples of the American Baldwin he had from trees grown at Mentmore. The samples were good, skin clear golden, not highly coloured, the flesh soft, and particularly sugary, but not specially flavoured. I wonder whether persons who praise this Apple so much sometimes mistake sugar for flavour. Whenever any doubt prevails as to whether a variety has flavour or not, it is wise to refresh the palate with a taste of Cox's Orange Pippin, and a standard of excellence is found that admits of no disputation. It will be interesting to learn how the Baldwin does at Mentmore in ordinary seasons. Practically we have little room in this country for American Apples, and less need for them. Our wealth of varieties literally covers all our needs. Any advance, if it be possible, should not be found in adding so much to our present plethora of early dessert and huge cooking sorts, of which we have legion, but rather in improving our late-keeping or winter varieties, for these afford most scope for development.—A. D.

HARDY FLOWER NOTES.

Snowdrops.

So long has the Snowdrop seemed to us the "early herald of the infant year" that to many the introduction of the varieties which bloom in late autumn and early winter appears somewhat unwelcome. Our ordinary Galanthus nivalis has always been eagerly looked for as the harbinger of spring, betokening the coming of the host of flowers which that season delights to display to our admiring eyes. Yet to those who grow the autumn and winter Snowdrops it is wonderful how soon they entwine themselves into our affections, and equally wonderful how eagerly they are watched for as they peer through the soil, and gradually attain their flowering period. It was with the keenest pleasure that I recently lingered before a few of these chaste flowers, when a partial recovery from a severe attack of influenza enabled me once more to venture into the garden to see what was left to us in these gloomy days.

GALANTHUS OCTOBRENSIS (?) FROM ALBANIA.

One of these autumn Snowdrops which will, in all probability, prove one of the hardiest of its race is one introduced from Albania by Mr. Van Tubergen of Haarlem. The flowers are not, perhaps, the largest, but the plant shows every sign of a good constitution; my few bulbs, which were planted in the summer of 1892, all showing offsets this season. The first flowers of this Snowdrop became fully expanded on October 22nd, and continued in beauty

for a long period. In my garden it has attained a height of only 4 inches, and the sepals or outer segments are rather less than 1 inch in length. In this species or variety, which an excellent authority on Snowdrops has recognised as only a variety of G. octobrensis, the sepals appear to be more deeply fluted than any of the others in flower here. The leaves, which are narrow, present the great characteristic of the autumn and winter Snowdrop—the glaucous line down the centre—which adds much to the appearance of the plant. The flower scape, which is cylindrical, is of a beautiful glaucous green.

GALANTHUS CORCYRENSIS PRÆCOX (?).

In a small consignment of G. corcyrensis which reached me through an Italian firm in 1892 was a fine Snowdrop, that flowered much earlier than the others of the same parcel last winter, and this year the same bulb produced a flower which was fully expanded on October 22nd, the same day as G. octobrensis flowered. As it is undistinguishable from the typical G. corcyrensis, except from its earlier period of blooming and its handsomer flower, I have named it provisionally G. corcyrensis præcox. It has broader leaves than the species already spoken of, and grows to the top of the spathe valves to between 5 and 6 inches in height, while the floral segments, which are of good form and substance, are considerably over 1 inch in length. Last year this bulb produced two flowers, and this season it will produce the same number, but is as yet showing no signs of any offsets.

GALANTHUS RACHELÆ.

I have to acknowledge, on the part of Mr. F. W. Burbidge, of Trinity College Gardens, Dublin, an act of great kindness in his sending me, quite unsolicited, a bulb of the true G. Rachelæ, and also one of the true G. Elsæ. I appreciate Mr. Burbidge's kindness all the more highly in consideration of my being a total stranger to him, and the stock of these two rare Snowdrops being so small. Up to the time I write, while G. Elsæ has made its appearance above the soil; G. Rachelæ has not yet shown, but I am in hope it is still in existence. In 1892 I, however, received from the same source as the G. corcyrensis præcox, mentioned above, a Snowdrop under the name of G. Rachelæ. Last year I was very sceptical as to its truth to name, knowing as I did that it could not have come from the small stock brought from Greece by Professor Mahaffy. This year, however, it flowered about October 29th, and I am more inclined to think that it may after all be from the same habitat as Professor Mahaffy's plant. In G. Rachelæ the flowers should appear before the foliage, and in the plant under notice the leaves are only noticeable when the flower appears. Whether correctly named or not, this Snowdrop is a very pretty one, of excellent form and colour, with sepals of 1 inch in length on a scape about 5 inches high, and with the pretty leaves just showing. Various other autumn Snowdrops have reached me this season, but they cannot be spoken of with any confidence at present.

CROCUS HYEMALIS VAR. FOXI.

In walking round my garden a welcome greeting seemed offered by a clump of this pretty Crocus, which had come into flower while I was confined to the house. I have mentioned it before, but the fact of its thorough hardiness being well proved, and the beauty of its white flowers with black anthers and gold wire-like stigmas, make it worthy of this further passing notice.

ANEMONE FULGENS.

This is at present in leaf here, and, attracting my attention, I was reminded that for some time I have intended writing a brief note upon this undeniably fine Anemone. For some time past complaints, which have been in accordance with my own difficulties, have reached me with regard to the non-flowering of A. fulgens after the first season from purchase. Generally speaking it proves satisfactory enough the first season, and the pleasure experienced at the sight of the brilliant scarlet flowers only intensifies the disappointment the following year. The obvious remedy for this unsatisfactory state of matters is to lift the roots when the foliage has died off, to dry them well, and replant in autumn. In many cases, however, my own being one of these, this involves too much work. Growing, as I do, a large collection of plants it is found exceedingly troublesome to grow many which require annual lifting, drying off, and replanting. By accident I have, I am glad to say, discovered how to flower Anemone fulgens annually without lifting.

In planting a number of roots a few years ago I placed one on a high position on a dry rockery fully exposed to the sun. This alone of the number I had has continued to flower from year to year, and I purpose increasing the number thus planted. I am aware that in many gardens no difficulty is experienced with this beautiful Windflower, but where this is felt the plan of planting on dry rockwork might be adopted with advantage. I refer, how-

ever, to properly constructed rockwork in terraces which, while securing perfect drainage, do not allow the rainfall to run off without reaching the plants.—S. Arnott, Dumfries.



LYCASTE IMSCHOOTIANA.

At the last meeting of the Royal Horticultural Society for this year, Messrs. Linden, L'Horticulture Internationale, Brussels; exhibited, amongst other Orchids, two very distinct new Lycastes, on which more than ordinary interest was centred. One of these,



FIG. 79.—LYCASTE IMSCHOOTIANA.

L. Imschootiana, is depicted in the illustration (fig. 79). This is a hybrid from Peru, and is said to be the result of a cross between Lycaste Skinneri and Maxillaria nigrescens. In habit of growth it resembles the former parent, the flowers also being about the same size and shape. As regards colour, however, they are very distinct. The petals and sepals are pale yellow densely spotted crimson, whilst the lip is also yellow of a brighter shade. An award of merit was adjudged for this fine hybrid.

LÆLIA FINCKENIANA.

THE illustration (fig. 80) published on page 557 represents a plant of this beautiful Lælia, which was exhibited by C. W. Fincken,

Esq., Hoyland Hall, Barnsley, at the meeting of the Royal Horticultural Society on Tuesday, December 14th. It is supposed to be a natural hybrid, and appears to be allied to L. anceps. As will be noticed in the engraving, the plant exhibited had one spike, on which were six flowers. The sepals and petals are white, with a deep violet-tinted blotch on the lip. The flowers are medium-sized, but of an attractive appearance, and the plant merited the first-class certificate which was awarded on the above-mentioned

ORCHID LESSONS FOR YOUNG GARDENERS. ROOTS AND THEIR REQUIREMENTS.

WHEN Orchids were first brought into British gardens, and for a considerable period afterwards, they were regarded as mysterious plants, most difficult of cultivation and beyond the powers of any but trained specialists. Mysterious Orchids still undoubtedly are, but only in their structural peculiarities, for most of the unfounded notions respecting their culture have been removed, and there are few members of the family that can be said to still afford serious puzzles to the grower. The fact is that every well trained gardener can soon master the requisites of success in Orchid growing, and it is quite possible for a man with no special knowledge of gardening, if he be intelligent, observant, and attentive, to perform under good direction all the operations needed. In the early stages of my experience I was requested by my employer to visit a nursery where Cattleyas had for some time been grown with much more than ordinary success, and the object was to pick up a few hints to guide me in my work. Like many young men in starting who are very anxious to give satisfaction I had invested Orchid growing with imaginary difficulties, and I was prepared to find that the grower in charge was a kind of horticultural genius, and to admire him accordingly. The manager took me into the spacious house where the grand Cattleyas were flourishing, and gave a brief outline of their routine, which I found to be as simple and reasonable as nursery management usually is. "But of course the man in charge has had considerable experience with Orchids," I ventured to remark, and the reply rather surprised me. "Certainly our grower has had good experience here," he said; "but when I brought him into this house I do not believe he had ever seen an Orchid. I knew he was a careful and attentive workman. I gave him a week's instruction and close supervision, found he was to be trusted, and I have never had any trouble since; in fact, he knows more about the plants now than I do.'

It must not be supposed that I wish to lessen the credit due to any successful grower by making too light of the work, but I desire to remove the idea that there is anything in Orchid culture which a careful gardener cannot overcome, and many could be pointed out who have gained no mean degree of fame as cultivators who were appointed to their charge solely because they had proved their skill and care in general gardening. The qualities needed to render a man successful in any department of horticulture are exactly those which applied to any other branch would give similar results. It is a long experience and a full conviction of the truth of this which has awakened in me a respect for specialists, as I have never known a man who had made a name with Chrysanthemums, Orchids, fruits, or vegetables, either as a private grower or as an exhibitor, who had not also proved himself the possessor of valuable qualities that would have rendered him a formidable opponent in whatever he undertook. The phrase "know something of everything and everything of something" is a good one for gardeners to bear in mind.

One quality which is of the greatest importance to a gardener is observation, and as it is of equal importance in the cultivation of Orchids it cannot be too strongly impressed upon young men that the best training, experience, and opportunities are lost unless they learn to use their eyes, note keenly, and remember carefully whatever bears upon their work and the welfare of the plants in their charge. Some of the most famed horticulturists of the present day freely admit how much they owe to the faculty of observation, which is essential alike to the beginner and the overseer, and those who would distinguish themselves as cultivators of Orchids or other plants must strive also to cultivate this quality in themselves. It was my good fortune to have a long and careful training under a practical gardener of the old school who had had too much experience to depend upon "rule of thumb" practice, or to think that a young man could be made a good gardener by learning rules by rote. His lessons sunk deeply into my mind, and much of the satisfaction and pleasure I have derived from my calling since then is entirely due to the direction given to my thoughts. Most earnestly was it always impressed upon me that observation and attention, combined with a genuine interest in the

work, were indispensable to anyone engaging in gardening, and as I have proved the advantage derivable from a development of those qualities it is given as portion of this preliminary lesson, not only for the benefit of beginners in Orchid culture but for young

gardeners generally.

Advancing one step farther, an early lesson given me by my old and respected instructor was founded on the horticultural text, "Take care of the roots." This seems so simple and obvious a precaution in plant growing, that it is always difficult for experienced men to understand how it can ever be disregarded; but the simple things are often neglected, and thus it is we too often find that only repeated instructions will induce young men to attach to it due importance. It is painful to see the roots of plants treated as barbarously as they frequently are, and just as surprising that anything like success can be expected to follow. Whether we are dealing with fruit trees, Vines, vegetables, or Orchids, with plants generally, it is not possible to be too careful in impressing the axiom, "Take care of the roots."—ORCHIDIST.

(To be continued.)

LONDON CITY GARDENS: PAST AND PRESENT.

(Concluded from page 526.)

NOTABLE amongst the open spaces of Old London were its numerous churchyards; even in the limits of the City proper there was considerably over a hundred of these after the Great Fire led to the remodeling of the metropolis. Few of them presented a garden-like aspect to our ancestors; some shrubs or trees grew in them, but could not be said to flourish. If these were, to use a modern phrase, the "lungs of London," they must have been unhealthy ones, for the way in which burials were ordinarily carried out made the graveyards far from sanitary. Many of these have now been built over, or lines of streets cross them, others have become yards used for business purposes, and some have been turned into private gardens, these being of small dimensions mostly, and difficult to find amongst the blocks of huge buildings which frequently surround them. Chiefly by the exertions of the Metropolitan Public Gardens Association, which has done so much for the preservation and increase of London's open spaces, several of the long-closed churchyards in the City have been turned into pleasant and much appreciated resorts, and there are still a number of them, at present closed, which we may hope some day to see turned to account, and planted with shrubs or flowers.

The City churchyards have still amongst them a fair sprinkling of trees, and some are conspicuous in other parts, though none of great age are to be seen. London trees have not only its atmosphere to contend with, but even there insect foes are active. In a contemporary in 1877, one of the contributors supplied a calculation of the number of trees growing in central London, and he was able to count up about 1200, which was rather surprising, and if some have vanished, others have been planted since that will replace them. Though the soil of the City is less moist than it used to be, the Poplar may still thrive, and the Willow too, only the goat caterpillars will persistently molest them. But the principal tree is the Plane. This observer reckoned 520 of these, almost half the total of the City trees, and mostly of the western species, one of Tradescant's introductions during the reign of Charles I. But the Oriental Plane had preceded that, as it was planted about London by the middle of the sixteenth century. In busy Cheapside, the large Plane at the corner of Wood Street yet continues to mark where once was the churchyard of St. Peter le Chepe. Not very many years ago it had six rooks' nests; the number diminished to a single pair, then none. It was in Gray's Inn Gardens that the rooks tarried last, after they had quitted other rookeries near the heart of London. Visitors to the City have a good sample of its Planes in those to be seen along Queen Street, and indeed hardly another species can be said to grow better in London air than the Plane does, as witness the noted specimen at Stationers' Hall still existing; but the Lime and Ash bear smoke fairly well; the Elm also. Around Smithfield, for instance, were rows of Elms. The solitary tree of St. Paul's Churchyard was, I believe, an Elm. This is the one made memorable by Leigh Hunt, who tells a story of some City child that had never seen any tree but this. He would be glad, if living, to notice a number of young trees around the precincts of the cathedral, and the churchyard is one of the favourite resorts of those seeking a change of scene during the intervals of their daily work near. Its extent is nearly 2 acres, and the space is turned to good account. There are well kept flower beds, and a fountain adds to the attractiveness.

Others of these City gardens also exhibit fountains, and we may likewise see rockeries, sometimes well contrived, but I feel inclined to object to one or two, where fragments of old tombstones have been used partly in their construction. Pigeon-houses have also been introduced to give a semi-rural aspect, and possibly by-and-by we may see aviaries. A variety of flowers is displayed in the summer season by the bedding-out system, and in spring by the flowering of bulbs, and most gardens have a few herbaceous or perennial plants, upon which less reliance is placed now. London gardens of the old type had these in predominance, the spaces between them being yearly sown with annuals, not to much profit; in fact annuals, as a rule, cannot advantageously be sown in London, the cats and sparrows being much against them, and the soil of the ordinary bed is apt to cake upon the surface if watered, so that the seedlings have difficulty in breaking through.

Many shrubs have been planted in the former burial grounds of the City, and some that seem unlikely to thrive amid smoke have grown fairly well. The calculation of trees in 1877 did not include shrubs, of which the City has always had a number, both of deciduous and evergreen species, such as the Elder, Privet, Lilac, and Laburnum, also the Holly, Aucuba, Portugal Laurel, Box, and Euonymus. It is curious to note how stationary some of these appear to be from year to year, making no appreciable increase in size. One singular effect of the drought of 1893, and the late rains of autumn, was that many London trees and shrubs put forth a crop of leaves at a time when they are usually bare, and retained

these till nearly the end of October.

St. Botolph's garden, Aldersgate Street, is another garden of about an acre in the heart of the City, and so popular on fine summer days that the ground is often crowded with visitors, the conduct of young and old being generally good. The grounds of two other City churches of like name being also much appreciated, especially the half acre of St. Botolph, Aldgate, at the junction of the City and East-end. About the same size is the churchyard of St. Botolph in Bishopsgate, which was laid out as a garden last year. Of smaller size (only a quarter of an acre) are the gardens of St. Mary Aldermary, and St. Katherine Coleman; also those of St. Bride's, Fleet Street, and St. Sepulchre, Holborn Viaduct, just beyond the City boundaries. As an example of a most valuable East London garden, not far from the Tower and St. Katherine's Docks, we might visit St. George's-in-the-East garden, formed from two old burial grounds of 3 acres, where we find a capital display of flowers from spring to autumn, looking little the worse for the murky atmosphere. When I went there one autumn day, the scene was enlivened by a number of white butterflies, which delighted the juveniles, though the gardener demurred to the mischief they had done as caterpillars.

Farther eastward larger gardens occur in crowded neighbourhoods, such as that of St. Dunstan's, Stepncy, 7 acres in extent. Spitalfields, many centuries ago real fields attached to the old hospital, now an over-populous and squalid district, has at least one garden of 2 acres attached to Christ Church, which is much visited by those who cannot reach broader spaces some distance away. Moorfields, once an extensive open space just beyond the north wall of the City, is not all built over, for we have the gardens of Finsbury Square and Circus of nearly 10 acres; upon its ground, though not as yet open to the public, are the Bunhill Fields enclosure of 7 acres, which, however, retains its character of a cemetery, and is not garden-like. On the west of the City is one of the finest spaces of central London, the 12 acre expanse of Lincoln's Inn Fields, well timbered; and along the Embankment

the familiar but smaller Temple Gardens.—J. R. S. C.

SEASONABLE HINTS ON FLORISTS' FLOWERS.

THE closing weeks of the year always more or less bring anxiety to the growers of those, which we of the older generation call florists' flowers. As I have often said, it is almost an impossibility to define what is a florist's flower, but there are certain plants which are always associated with that term, while in later years a few have been generally admitted in the same rank; although we can give no valid reason why a Pansy should be so called, and a Phlox not, yet so it is, and, like many other arbitrary arrangements in horticulture, we must be contented to let them bide. I, therefore, confine my remarks, as usual, to a few out of the many kinds of flowers that have sometimes been so designated. This time of the year is, as I have said, an anxious one, not so much from the dread of frost and snow as from the prevalence of damp; when the atmosphere is heavy and charged with moisture, plants under shelter, whether in the greenhouse or frames, are apt to suffer from it, and the greatest care is necessary.

AURICULAS.

The past season has had, I fear, an unfavourable effect on many Auriculas. They love a cool atmosphere, and hence the long terrible drought of the past summer has had a deleterious effect upon them in two ways; in the first place, their vitality to seems have suffered, and the summer losses were in consequence larger

than usual. Stating this, I am not detailing my own experience, only the same thing has been told me by more extensive growers of this class of plants than myself. Another is that there has been a larger number of autumn blooms than usual. The mild and open weather, also, has tended to increase the number of aphides, many of which may be found snugly sheltered in the upper part of the foliage. With regard to any present work connected with Auriculas, it will be simply that of removing the dead or decaying leaves, and the plants, after this is done, will present a somewhat diminished appearance. These leaves are those which have clothed the plant with beauty, and having fulfilled their task, gradually die off and must be removed, and nothing is more injurious to the well-being of the Auricula than any decaying matter of this kind; at the same time it would be well to look both in the heart of the plant and on the under side of the leaves for aphides, which should be removed when the collection is small with a soft brush. When, however, a large number are grown, this will be too tedious a process, and fumigation may be done. Where Auriculas are grown in frames and not in houses or pits, there is often great danger from There may be some small leakage in the glazing through which the wet comes, or there may be condensation, which has very much the same effect, and in a frame it is not oftentimes easy to see where the injury is; which is, however, easily discovered when grown in a house or pit. Watering will be, of course, necessary, only very occasionally; once a week being quite sufficient in dull weather.

CARNATIONS AND PICOTEES.

Here again we have to repeat that damp is the great enemy we have to contend with; when black spot, which is a fungus, appears on the leaves it is a pretty sure token that something is wrong. Affected leaves should be cut away and the plants well dusted with sulphur, for it is very contagious. So far those who have trusted their border Carnations to the open ground have had a favourable time, but I believe for the greater number it is far safer to keep them in pots in frames during the winter, as has always been done with the florist varieties. I know of some growers who have recommended the former plan have, after the experience of two or three seasons, reverted to the latter practice. The milder weather will probably make aphides troublesome, and they may be eradicated in the same way as from the Auricula, or the shoot may be passed between the finger and thumb, so killing the aphides. Where the collection is large, fumigation had better be resorted to.

GLADIOLI.

Never during the thirty or forty years that I have grown these plants have I been so late in lifting them as in this season. Various causes have contributed to this, the chief one being the illness of my gardener, which has thrown me very much behindhand in many things, and I have not now (December 1st) lifted more than one half of my Gladioli. I have, of course, as I fear I must always have in this garden, a considerable loss of bulbs, but certainly not in any way equal to that of last year, while the sound ones I have lifted are very strong. My friends Messrs. Lindsell and Fowler give the same account of theirs. I am still as perplexed as ever at the cause of my losses. I find them, as in last year, amongst imported and home-grown bulbs, and as yet there seems to be no preventive or remedy. As I no longer exhibit, and grow only for my own pleasure, I am about to try this season the experiment of leaving some in the ground all the winter, giving them some slight protection either of ashes or cocoa-nut fibre. I want to see whether they will fare better that way than by being taken up and dried. That the disease has something to do with the character of the soil I have now very little doubt. Some kinds are more liable to it than others, but it is a sore trouble to all those who grow Gladioli. Some per centage of loss appears to be the misfortune of all growers, and to some, as with myself, in greater mcasure.

PANSIES.

The past hot summer was very unfavourable to those in the south of England who grow these plants; there is nothing to which they more strongly object than drought, and whether kept in pots or planted out, there were considerable losses among them this year. Mine have been put into pots, where they will remain until the spring. There will be the necessity for watching against damp, which they greatly resent, however much they may like moisture. It is a curious thing to notice the collapse of the show varieties, as they were called, for in writing of Pansies hardly anyone now seems to think of anything but the fancy kinds, their stronger constitution and greater variety of colour giving them a decided preference.

Roses.

One hardly likes placing these amongst florists' flowers, yet I suppose they must, strictly speaking, be called so. So much is written

in the Journal concerning Roses that it is almost unnecessary to say anything about them. One is, however, in a difficulty this year; I generally mulch my beds at this season, but this year, owing to the failure of our cereals, it is impossible to get straw, and I have been obliged to get moss litter instead. This will not do for mulching, and consequently all that I can do is to earth up the plants as if they were Potatoes, and in lieu of the nutriment they would get from the farmyard manure I must supply them with larger and more frequent doses of liquid manure later on.

TULIPS.

Of these I have little to say, as I am not in the strict sense of the term a Tulip grower. I possess a bed of fairly good kinds, and these I have been able to plant in good condition a little later perhaps than the orthodox time, which used to be considered the 9th of November. I hardly look forward to the resuscitation of the taste for Tulips which I remember to have been so general in my younger days; they are still much sought after and valued in the north of England, though about the metropolis and the south I see but little signs of a revival. I fear that they entail too much trouble to suit the style of gardening which is prevalent in our days.

There is one thing which must be carefully looked after as regards those plants of whatever kind which are wintered in cold frames, namely, their protection from frost; when this sets in the frames should be covered with mats or other warm material and the plants kept perfectly dry, and it will then be found that the frost does little or no injury to them.—D., Deal.

BLACKBERRIES.

The Bramble or Blackberry is a common shrub in the hedge-rows, copses, and woods of this country. It produces an abundance of fine fruits, which are oftentimes gathered and made remunerative. Blackberries are esteemed by rich and poor for their good qualities, either raw, cooked in pies or puddings, or preserved, the jam being wholesome and of a very rich flavour. They also furnish an excellent home-made wine. Several varieties of the Blackberry have been originated in America, either by cultivation, selection, or crossfertification, large, handsome, juicy, rich flavoured fruits, and withal very productive. These varieties, however, have not proved satisfactory in this country, they requiring warm weather in May or June, and good harvest weather to ripen their fruit and canes. The two most generally cultivated are the Parsley-lcaved and Wilson Junior. The former has large, black, juicy, richly flavoured fruits. It is an immense bearer, a vigorous plant of three or four years' growth trained to a trellis or wall, yielding 100 to 120 quarts of berries in a season. Its habit is very robust and trailing, producing canes 10 to 15 feet long, which push laterals the following year 2 feet long, bearing rose-coloured flowers in July, and splendid fruit in August onwards. It is hardy and reliable, a selected form of R. laciniatus, and superior to it. Wilson Junior has also large, black, juicy, and richly flavoured fruits. It is a medium grower and very prolific.

Blackberries are best increased from cuttings of the roots, and covering the joints of the shoots with soil. Root-cuttings are obtained by digging up the roots and cutting them into pieces about 2 inches long, placing these about 3 inches apart and the same depth in light soil in the autumn or early spring. Layering the points of the canes in August or September is soon followed by stocky young plants. As soon as the tips grow nearly bare of leaves and become dark in colour, peg them into the ground 3 or 4 inches at an angle of about 45°. In a month to six weeks they will form roots, and can be cut off and planted where required. To obtain strong plants, stop a vigorous young growth when 2 feet high, this will cause it to throw out several laterals, and the points of these layered early become well

rooted by the autumn.

The Blackberry neither likes cold wet clay nor poor dry soil, but a deep, free, fertile medium, and of such they are worthy. It must be free from stagnant water, yet moisture should be within reach of their roots. The smaller and younger the plants, providing they are ewell rooted, the safer they are removed, and more satisfactory they grow afterwards. They are best planted in the autumn, not exposing the roots needlessly, such exposure being one reason why a large per centage of these plants often die. Spring planting may be practised if the conditions named are carried out, subsequently watering and mulching to insure uniform moisture in the soil. The canes should be cut down after planting also in the second year if the growth is not strong. Wilson Junior may be planted in rows 5 feet apart and 3 feet between the canes in the rows Strong growing sorts like the Parsley-leaved require much more space—namely, the rows should not be less than 9 feet apart, and the plants $4\frac{1}{2}$ feet asunder in them, and trained to stakes or trellises. Trellises are best fixed about 48 inches from the line of plants, so that the fruiting canes may be thent over to them, thus allowing the young canes to come up

separate from the bearing canes, which facilitates picking the fruit. The Parsley-leaved variety is excellent for covering old walls and training over arches. Dispose the canes thinly and cut them out after fruiting, having a supply of strong summer growths which have not been crowded to secure in the place of those removed.

Blackberry plants, well treated in the first and second year after planting out, will afford considerable fruit in the third summer, some in the second, if the plants make good canes the first year, and in the third or fourth year, as the case may be, they will fruit bounteously. How long they will bear profitably depends on the soil and treatment. In good soil and with generous treatment the plants will continue bearing satisfactorily for ten years, but if the old stools become weak, the shoots are thin, and the fruit small, the Blackberry grower will anticipate this by making new plantations in advance of cutting out the old plants.—G. Abbey.

SETTING UP WIND-BLOWN TREES.

THE gale of November 18th was almost as noteworthy for the damage wrought by its influence on plantations as the one of October 14th, 1881. Some estates that suffered severely then were little the worse this one, while some that escaped last time have been all but ruined now. A feature of these gales, which may easily escape notice, is the harm they do to growing trees which apparently are unscathed but which may be loosened at the roots, or so torn at the forks or clefts in the main branches that they either die slowly where they stand, or in some gale in the near future are limbed or uprooted. I particularly noticed trees that succumbed this time which had been loosened years ago, and during the height of the last gale I saw many trees with loosened roots that it would be impossible to observe had received any harm directly the wind had fallen.

In portions of the pleasure grounds hardly a Conifer, Holly, or Yew escaped without being either loosened or blown more or less from the perpendicular. Two trees were laid prone. With one there was no difficulty in placing upright, as it had been only a dozen years planted; but the other, a Yew 45 feet in height, and with a spread of branches of over 30 fect, and of unknown age, could only be uplifted by means of powerful appliances. As there is certain to be many trees of large dimensions that their owners would gladly see placed in an upright position if sure it can be done, and the tree not suffer much afterwards,

the details of the method we use may be helpful.

In the first place it will be perceived that little more than one-half of the roots are torn from the ground, and that the chances of success with healthy, well rooted trees are therefore good. If the tree is old and many of the roots decayed the chance of the tree surviving is very slight. Another point is that the tree must either be set upright without loss of time, or if this cannot be undertaken at once, then the roots should be covered with moist material until it can be done. If there is a staff of men sufficient to allow them to work in two sections, so many may proceed to make an excavation 2 or 3 feet wider than the broken roots extend, and deep enough to allow the roots to be buried somewhat deeper than they had been growing. The reason for doing this is that they may have a wider range of good soil to feed upon for the first two years, and also that they may be less affected by dry weather, at the same time that the increased depth of soil is a help to keeping the tree more secure. A cartload of good fresh soil ought also to be placed in the bottom of the excavation for the roots to lay upon, meanwhile the other men are engaged in raising the tree. A powerful screwjack facilitates this operation, and two of these are much better than one, as there is then no need for propping the tree, as there is with only one jack every time that a fresh lift is made.

When the tree is raised sufficiently to work block and tackle, the jack is dispensed with, and the tree drawn into position by means of strong ropes. If there is no tree or other means of attaching the further end of the tackle to, an efficient "grip" is obtained by placing a cart filled with stones, side on, and about 50 to 80 yards away from the tree. The rope is run underneath the cart in a line with the axle and attached to the nave of the further wheel on the outside. The "pull" is downward, as well as toward the tree, and even without the aid of a strong stake driven in to keep the last from moving, I have seen large trees successfully drawn up. For moderately large trees, two strong stakes driven 3 or 4 feet into the ground, and lying at an angle of 45° away from the trees, the rope being attached close to the ground, is fairly safe and good. A double block and tackle is much better than a single one. Guy ropes are safe for keeping the tree from swaying, and as the stem is gradually drawn nearer the perpendicular, struts must be kept moved to support

the tree in case of accident to the tackle.

The Yew above referred to, owing to its great weight of branches and foliage. broke a rope three times before it was brought to an upright position. Through being securely supported with struts we did not lose anything, and at the same time saved the tree and other shrubs from further damage. I put four cartloads of good soil about the roots of this tree, and about six tons of stones above the roots to steady the tree, and in addition to three wooden supports tied to each other, four strong wire ropes guy the tree. These are secured to oaken posts driven into the ground. Keep the roots from drought, especially during the first year, and an occasional surface dressing of good soil or manure is of the utmost benefit to trees that have been uprooted and lifted to their old positions.—B., East Lothian.



MATTER FOR PUBLICATION.—Communications for insertion in our next issue should, where it is practicable, arrive at this office on Saturday, this week. Correspondents will oblige by noting this intimation.

- THE WEATHER IN LONDON.— The past week has been characterised by changeable weather. A frost occurred early on Sunday morning, followed by a fog. Monday was fine and mild, but it rained heavily on Tuesday. Wednesday opened wet, the rain continuing as we are going to press. It is very mild for the time of year.
- THE WEATHER IN THE NORTH.—The weather of the past week has been variable. There has been but little frost. High westerly winds have generally prevailed, and a good deal of rain has fallen. Snow fell on the mornings of the 12th and 13th, but thaw soon followed. Sunday was fine throughout, and Monday was wet in the former part, but fine in the afternoon and evening.—B. D., S. Perthshire.
- WE are informed that the Lord Mayor of London has undertaken to take the chair at the next anniversary festival of the ROYAL GARDENERS' ORPHAN FUND. The dinner will be held at the Hotel Métropole some time in May, the exact date not being yet definitely fixed.
- ROYAL GARDENERS' ORPHAN FUND.—As we are now on the eve of the season when it is believed that the human heart is specially open to generous appeals, kindly permit me to invite all subscribers to the Royal Gardeners' Orphan Fund to remember, in the marking of their voting papers for the February election, the most necessitous of those cases that last February failed to secure election, in preference to new ones. There are some that will start with a good number of old votes. These should have the best chance of election, and, so far as possible, where really meritorious, should not be allowed to endure two disappointments. Still only five orphans can be elected. That seems to be an additional reason why the non-elected of last year should have first consideration.—Subscriber.
- INDEX KEWENSIS. After a commendably short interval since the publication of the first part of the Index Kewensis, we are now presented with the second part, which extends from Dendrobium to Justicia. The character of the work is well sustained in every particular as to authorship, typography, and execution, reflecting the highest credit, both on the staff at Kew and that of the Clarendon Press at Oxford. As a work of authority it will long hold precedence, and be regarded as a necessary adjunct to every scientific library, being what Linnæus said of Caspar Bauhin's Pinax—another noted "Index."

Opus est hactenus sine pari Opus est quo, nullus carere potest.

- THE ROYAL HORTICULTURAL SOCIETY.—We learn that arrangements have been made to hold the Exhibitions and meetings of the Royal Horticultural Society during the year 1894 on the following dates:—January 16th, February 13th, March 13th and 27th, April 10th and 24th, May 8th; and Temple Show on May 23rd, 24th, and 25th; June 12th and 26th, July 10th and 24th, August 14th and 28th, September 11th and 25th, October 9th and 23rd, November 13th and 27th, and December 11th.
- DEATH OF MR. A. K. ANGUS.—We much regret to learn of the death of Mr. A. K. Angus, which occurred last week at the Carlton Hotel, Leicester. Prior to becoming the landlord of this excellent commercial house, where he lived for nine years. Mr. Angus was a gardener. He went from the gardens of the Royal Horticultural Society at Chiswick to in a large measure form and furnish the fine gardens of C. H. Wilson, Esq., Warter Priory, Pocklington, which he managed with great success. He was very able, and attained a good and much-respected position in Leicester, as was testified at the funeral. Mr. Angus always gave an hospitable welcome to horticultural friends. His love for gardening never left him, and he bought a walled-in space, wherein he could dig the ground and cultivate crops. The cause of death was rheumatic fever. Mr. Angus was born in Aberdeen in 1853, and was thus only forty years of age. Much sympathy is felt for his widow in her great bereavement.

- NATIONAL AMATEUR GARDENERS' ASSOCIATION. The members of this Association held their third annual dinner at the Holborn Restaurant, London, on Thursday, December 14th, under the chairmanship of Mr. T. W. Sanders. Nearly a hundred ladies and gentlemen were present, and a most enjoyable gathering resulted. In proposing the toast of the evening, the Chairman remarked that there were about 500 members on the books, and several affiliated societies, including one in Tasmania. Numerous silver and bronze medals, also certificates, were presented to members who had won such during the year. A feature of the evening was the presentation of a handsome silver tea and coffee service, with an illuminated address, to Mr. D. B Crane, the energetic Honorary Secretary.
- The Royal Botanic Society.—We understand that the exhibitions held under the auspices of the Royal Botanic Society for 1894 will take place as follows:—Spring Shows, March 14th and April 18th; Summer Show, May 23rd; Special Floral Fêre, June 20th; Evening Fête, July 4th. Musical Promenades will also be held on Wednesdays in May, June, and July, with the exception of fête days. Lectures are to be given on Fridays in May and June at four o'clock. General meetings will be held January 13th, 27th; February 10th, 24th; March 10th, 31st; April 14th, 28th; May 26th; June 9th, 23rd; July 14th, 28th; November 10th, 24th; and December 8th. The Society's annual meeting is arranged to take place on August 10th, at one o'clock P.M.
- SULPHATE OF IRON FOR FRUIT TREES. A foreign paper states:—Professor Sachs of Wurzburg asserted, and the Royal Institute for Fruit and Vine Culture at Giesenheim has tried experiments and is apparently satisfied, that sulphate of iron is a valuable stimulant to plants that are suffering from chlorosis, or absence of the proper green colour. They gave small trees 2 1-5th lbs. of copperas, and large trees 4 and 2-5th lbs. The results, it is said, were most gratifying. Strange to say in some cases where the trees were suffering from the attack of aphides as well as deficiency of colour in the leaves, the aphides disappeared, and frequently the leaves became healthy within a few days after the treatment. The sulphate of iron was dissolved in water, and applied near the roots. Early spring is the best time to try the experiment. Some soils do not require the addition of sulphate of iron.
- THE PERFUME OF FLOWERS.—Mr. E. Mesnard has been making researches into the origin of perfume in flowers, and comes to the conclusion that (1) the essential oil is generally found localised in the epidermic cells of the upper surface of the petals or sepals. It may exist upon both surfaces, especially if the floral parts are completely concealed in the bud. The lower surface generally contains tannin or pigments derived therefrom. (2) The ehlorophyll seems in all cases to give rise to the essential oil. (3) The disengagement of the perfume of the flower makes itself perceptible only when the essential oil is sufficiently disengaged from the intermediate products that have given rise to it, and is found, in a manner, in a ratio inverse to the production of tannin and pigments in the flower. This, says Mr. Mesnard, will explain (a) why flowers with green petals have no odour; (b) why white or rose-eoloured flowers are most often odoriferous; (c) why the Compositæ, which are rich in tannin, have the disagreeable odour that they are known to possess; and (d) why the white Lilac and forced Roses take on a finer perfume.
- ROYAL CALEDONIAN HORTICULTURAL SOCIETY.-The annual meeting of this Society was held on the 7th inst. in Edinburgh, Mr. R. Lindsay, President, in the chair. Mr. Fraser, the Treasurer, submitted the accounts for the year ending 30th November, which showed that members' subscriptions had amounted to £108, special subscriptions to £37, and the drawing at the shows to £1044 —the total receipts for the year having been £1549. On the other hand, the expenditure had been £1578, the show expenses having been £604, the amount of prizes paid £854, and the general expenses £80. At the 30th November the funds of the Socie y amounted to £1183 6s. 9d., as compared with £1261 0s. 8d. at the corresponding date last year, being a decrease of £80 13s. 11d. The income for the year had been £28 17s. 9d. short of the expenditure. The accounts were approved of. Sir Thomas Gibson Carmichael was appointed a Vice-President in room of Lord Balfour of Burleigh. Messrs. D. Mitchell, Comely Bank, Edinburgh; C. Buchanan, Penicuik; and James Morrison, Archerfield, were elected to fill vacancies in the Council. Mr. Maleolm Dunn, Dalkeith, in moving the re-election of Mr. Fraser as Treasurer, and Mr. Charles Stewart, W.S., as Sccretary said if the funds were a little less than hitherto this year it was due wholly to exceptional expenditure.

- —— It is reported that BARON DE GOLDSTEIN, the newly appointed Dutch Ambassador to this country, is the President of the Royal Netherlands Horticultural Society.
- THE AMERICAN DEWBERRY.—An Asiatic contemporary says that among exotic fruits recently introduced into India, one of the most promising seems to be the American Dewberry, which bears fruit profusely in the Shaharanpur Botanic Gardens.
- —— BOLTON HORTICULTURAL AND CHRYSANTHEMUM SOCIETY. —Mr. James Hicks, Secretary, informs us that the next exhibition of Chrysanthemums and other flowers, fruit, and vegetables under the auspices of this Society will be held on November 16th and 17th, 1894.
- THE DEATH OF MR. J. WELLS took place on Saturday, 9th inst., at Osborne Park Nurseries, Potter's Bar, Middlesex. He was considerably over eighty years of age, and in former years was for a long time gardener at Holme Lacy, Hereford, where his services were highly appreciated by the late Lord Chesterfield, who was Sir Henry Scudamore Stanhope in Mr. Wells' time.
- RAILWAY GARDENING.—Some years ago the Midland Railway directors decided to set aside £150 annually, to be allotted as prizes among the station masters throughout the system as an encouragement to them to render their platform garden borders as attractive as possible. This year's awards have just been distributed, and range from £6 to 5s. Matlock Bath takes the first prize, and amongst other Midland stations securing prizes are Sandal and Walton and Woodlesford.
- A NARCISSUS (DAFFODIL) SHOW will be held in the Botanical Gardens, Edgbaston, on Wednesday and Thursday, 18th and 19th April, 1894, under the auspices of the Birmingham Botanical and Horticultural Society. A liberal prize schedule has been prepared, no less than seventeen classes being provided. Any intending exhibitors must give notice in writing of the classes in which they intend to exhibit, and, in the case of honorary exhibits, the table space required, to Mr. W. B. Latham, Curator, Botanical Gardens, Edgbaston, Birmingham, on or before April 13th. F. W. Burbidge, Esq., F.L.S., Trinity College Gardens, Dublin, has been invited to act as judge.
- —— PACIFIC COAST IRISES.—A correspondent writes to an American contemporary:—"Oregon collectors are offering Iris macrosiphon, and describe it as having a cream-coloured flower. It is common on the coast range of Northern California and North Oregon, and where it is generally a lilac-purple. I have seen detached clumps which were pure white. In the range east of Ukiah it frequently varies to cream colour, and in one locality, within a half mile, it runs from purple through bronze-purple to rich bronze and to cream colour. Like all the Pacific coast species, the masses are dense, with rootstocks hard and rather slender. It prefers a gravelly soil in open woods. I have naturalised Iris Douglasiana with success in my Fern beds, where it shows well with its yellow purple-lined flowers. It runs through the eastern edge of the Redwood belt. I. Hartwegi is a somewhat similar species with yellow flowers, found in the open woods of the Sierra, flourishing in the peculiar dry, red, granulated soil."
- ANCIENT SOCIETY OF YORK FLORISTS. The annual dinner of the Ancient Society of York Florists was held on the 13th inst. at Harker's Hotel, York. The Lord Mayor of York (Mr. Alderman Clayton) presided, and was supported by a large number of other gentlemen. Mr. Alderman Rymer in proposing the "Ancient Society of York Florists," said they had a right to lay claim to their title, for they knew that the records of the Society went back 100 years, and tradition took it back further. There was no doubt that the Society had had its ups and downs, but it was never more prosperous than at present. It deserved to prosper, seeing that its aim was to cultivate and encourage the cultivation of all kinds of flowers. The Chrysanthemum Show had had the effect of resuscitating their funds, and had placed them on their legs financially speaking, and had given incalculable pleasure to numberless citizens of York. Mr. J. Key replied, and spoke of the rapid progress of the Society during the past twenty years. They had now in round numbers about 600 members. Mr. Lamb said that their total receipts for the year had been £680, and the expenditure about £528, leaving a balance of about £160. Mr. J. B. Sampson offered a standard work on botany as a prize to scholars, and hoped the Society would take the matter up. Mr. J. J. Hunt also offered £5 as a special first prize for dessert table decorations at the next Chrysanthemum Show, which doubtless will take place on November 14th, 15th, and 16th.

- —— SEAWEED, though not the diet for an epicure, is, when dry, says an Australian writer, richer than oatmeal or Indian corn in nitrogenous constituents, and takes rank among the most nutritious of vegetable foods.
- —— EARLY SNOWDROPS.—Colonel Mesham writes from Pontryffydd, North Wales;—"In most years I have been able to gather some Snowdrops on Christmas Day, but this year I have found several in bloom under the trees in my shrubberies on the 17th inst."
- WE are informed that the Russian traveller, M. POTANIN, who has spent more than a twelvementh in a botanical exploration of Thibet, is expected in St. Petersburg in January next. M. Dobrotworsky has arrived at Jenisseisk on the Jennissei, on a botanical expedition.
- LADY HUTT AND APPLEY TOWERS GRAPES.— "S. W. F." writes:—"I should be interested in hearing the experience of your Vine-growing correspondents with the Grapes Lady Hutt and Appley Towers. They were sent out with a great flourish of trumpets, but since that time I have not seen a reference to either variety in the horticultural press."
- ARISTOLOCHIA SIPHO SEEDING. Miss S. C. Smith, New Galloway, Kirkcudbrightshire, wishes to know through the *Journal of Horticulture* if it is usual for the Aristolochia Sipho to seed in this country, because hers did so this season. The seed pod is like a small Vegetable Marrow and well ripened, and her plant was five years old. Miss Smith has been told by gardeners in her neighbourhood that they had not heard of such an occurrence before.
- THE MIDLAND CARNATION AND PICOTEE SOCIETY.-A copy of the Report for 1893 of the Midland Carnation and Picotee Society has come to hand, and this asserts that the popularity of the Society is proved by the large increase of members, which rose from 152 in 1891 to 204 in 1892; the number still further increased in 1893 to 242, and twelve new members have already promised to support the Society for 1894. The season of 1893 was one long to be remembered for its prolonged drought and great heat, and cultivators experienced much difficulty in keeping down the ravages of thrips and other insect pests; and it was feared for a time that the date fixed for the exhibition would be too late owing to the flowers being driven into bloom so rapidly and prematurely; but to the surprise and intense gratification of the Committee the entries and exhibits were far beyond their expectations, no less than forty-six members bringing flowers, and a very fine exhibition was secured. The success of the exhibition again enables the Committee to give a donation of £5 each to the Gardeners' Royal Benevolent Institution and to the Royal Gardeners' Orphan Fund, and they hope to be able to continue this help each year. The financial statement shows a balance of £50 7s. 3d. The schedule for 1894 will be published in January, when the Committee hope to increase the prize list to £120.
- INSECT PESTS.—An Australian nurseryman referring to the three common pests on fruits and flowers-viz., scale, aphis, and mildew, gives some practical hints from his own experience. In the case of the coccus or scale insect and the aphis or green fly, he recommends kerosine emulsion as the most simple, effective, and the easiest applied. The following is the recipe: Boil softsoap in just sufficient water to dissolve it (1 lb. soap to 12 pint water), then add 1 pint of kerosine. When thoroughly mixed 1 quart will be sufficient for 3 gallons of water, and the mixture should be applied with a fine nozzled syringe. In the case of the aphides one good dressing is generally effectual, but when applied to the scale the greatest care should be exercised, so that every part of the tree gets thoroughly saturated, more especially underneath the leaves, for if this is neglected all the insects so secured will remain untouched, and form a new stock for further destruction. The oïdium or mildew, different from the two preceding pests, is due to a fungus, and in its early stages consists of a white coating over all parts of the infested plant. The superficial position of the fungus renders direct treatment comparatively easy, and a thorough application to the diseased part of flowers of sulphur or sulphide of potassium in weak solution (which is also recommended for green fly and red spider) will be found sufficient to put an end to the fungus without injuring the plants. But it has also been found that the same remedy as has been recommended for scale and aphides with the addition of a little flowers of sulphur, applied during the period of rest, has been found a good preventive; loose bark and the soil immediately round the plant should at the same time be removed and burnt, and every part of the plant thoroughly washed. If this treatment is adopted once a year, as a rule, it will destroy all traces of mildew.

CRYSTAL PALACE SEPTEMBER FRUIT SHOW.—Referring to this question, Mr. W. H. Divers, Ketton Hall Gardens, Stamford, writes:—"I am not surprised at the correspondence which appeared on pages 508 and 531, as I have heard many regrets expressed by fruit growers in various parts of the country on this subject. As an exhibitor there for many years I have no hesitation in adding that I should be very pleased to support the exhibition as much as possible if it is revived. I know of no building so suitable as the Crystal Palace for shows, and I must certainly add the management of all the shows which I have attended there has been all that could be wished for under Mr. Head's supervision. It is a pleasure to an exhibitor to go. The display of fruit has always been most interesting and instructive, and with the daily increasing interest in fruit culture, might reasonably be expected to advance."

BEGONIA GLOIRE DE LORRAINE.—This is a hybrid between B. socotrana and B. Dregi, the latter a Cape species in the way of B. caffra and B. natalensis, with a tuberous rootstock, annual stems bearing soft green leaves and numerous bunches of white flowers. According to an English correspondent in our excellent transatlantic contemporary, the "Garden and Forest," the hybrid was raised by Mons. Lemoine of Nancy, and exhibited in flower at the Paris Exhibition. It has been flowering at Kew for some time, and recently a few well-flowered examples of it were exhibited from the garden of L. de Rothschild, Esq. It is dwarf, rarely exceeding a foot in height, with numerous short branches, which are literally smothered with bright rose-pink flowers, which last a long time, a character peculiar to B. socotrana and all its progeny. This is the seventh distinct hybrid of which B. socotrana is one of the parents, and every one of the seven is worth a place in all good gardens. They flower very freely, usually in late autumn or winter, and their flowers are always pretty in colour and last a long time.

THE RINGS OF TREES.—The annual rings in trees exist as such in all timber grown in the temperate zone, says the "Builder's Gazette," Their structure is so different in different groups of timber that, from their appearance alone, the quality of the timber may be judged to some extent. For this purpose the absolute width of the rings from year to year, and the proportion of spring wood to the autumn wood, must be taken into account. Spring wood is characterised by less substantial elements, the vessels of the thin-walled cells being in greater abundance, while autumn wood is formed of cells with thicker walls, which appear darker in colour. In Conifers and deciduous trees the annual rings are very distinct, while in trees like the Birch, Lime, and Maple the distinction is not so marked, because the vessels are more evenly distributed. Sometimes the gradual change in appearance of the annual ring from spring to autumn wood, which is due to the difference in its component elements, is interrupted in such a manner that a more or less pronounced layer of autumn wood can apparently be recognised, which again gradually changes to spring or summer wood, and gradually finishes with the regular autumn wood.

- FRUIT PRESERVING AT SINGAPORE.-The Netherland Consular report on Singapore for last year, published a short time ago in the Java "Government Gazette," gives the following particulars regarding the preserved Pine Apple trade: — "The preparation of preserved tropical fruits, chiefly Pine Apples, increased again during the year under report, the export being estimated at 1,670,000 Pine Apples against 1,600,000 in 1891. This increase of 70,000 units is, almost exclusively, to be ascribed to the augmented export of 30,000 units to Great Britain, and 40,000 units to the Continent of Europe, mostly to France. The steady extension of this branch of industry is in consequence of the article becoming better known abroad, and of the considerable increase of Pine Apple cultivation in Singapore, Johore, and adjacent places, as also on neighbouring islets in the Rhio Archipelago. The Pine Apple crop was, moreover, very satisfactory during the past year. The price realised, on the average, fell to 2 cents for each Pine Apple against 6 cents in 1891, and this, too, in spite of an increase in preserving factories. During the year under report, at Singapore, five Europeans and five Chinese carried on the preserving business against four Europeans and three Chinese in 1891. From the above mentioned increase in the export it need not, however, be made out that the consumption abroad has grown in proportion. An inconsiderable portion of the export, indeed mostly to England, had to remain there unsold owing to a glut in the market, as also in consequence of inferior quality and less careful preparation of the product. These last mentioned consignments were largely from Chinese factories, of which during the past year several stopped business, while others were set up."

NOTES ON EUPHORBIAS.

No lengthy description is necessary to add to the charms of these beautiful plants, for when well grown they are certain to be noticed, the rich glow of colour, together with their gracefully arching branches, rendering them very attractive. Although a large genus, only a few species are worth cultivating for general decorative purposes. Those most frequently met with are Euphorbia jacquiniæflora, E. pulcherrima, and E. splendens. The last named, although very ornamental and nearly always in flower, is nevertheless not much appreciated on account of the stout sharp thorns which cover the stems. It succeeds best when planted out in the stove and allowed to remain undisturbed. The finest plant I have ever seen of this variety was growing under similar treatment to that described in the gardens of Dale Park, Arundel, Sussex. It had been there many years, and was never known to be without a flower.

EUPHORBIA JACQUINIÆFLORA.

Viewed either as regards its general usefulness or for the exquisite beauty of its bright orange-scarlet flowers, which are produced in long racemes all along the upper parts of the shoots, Euphorbia jacquiniæflora stands quite unrivalled as a winter-flowering plant. Although the individual blooms are small, they are so elegantly arranged, and produced in such profusion, that for general decoration they are invaluable either on the plants or when used in a cut state. The long, graceful, arching branches, thickly studded with flowers, also form a most charming wreath for personal adornment, for which purpose they are valued by ladies. No fear need be entertained in reference to removing a good portion of the stem with the flowers, for, unlike the majority of hardwooded plants, no damage is done by cutting, and its value is not deteriorated in any way other than by the loss of its flowers.

This Euphorbia is not very hard to cultivate after it has fairly started, but it is frequently found very difficult to establish. I find the best way to propagate it is to prepare a sufficient number of small pots by filling them with sandy peat, then place about three or four cuttings in each pot, making the compost quite firm, afterwards placing under a bell-glass or hand-light in a temperature of 65° to 70°. It is very essential that the glass be removed every morning owing to the condensed moisture congregating on it, which if not wiped off is liable to cause the cuttings to damp. When well rooted tilt the glass slightly every day, so that the young plants may not experience a severe check in removing. Where a sufficient number of cuttings can be obtained I should recommend that they when rooted be transferred from the pots in which they were inserted to larger ones, without disturbing the roots in any way. By this means much stronger shoots may be obtained, which will be a decided advantage at the flowering period. Although the general practice is to give this plant stove heat I think much better results may be obtained by growing it in an intermediate house, as flowers that expand under such conditions invariably possess more substance and last much longer in perfection than those which are subjected to a higher temperature. As the plants go out of flower the supply of water should be gradually curtailed, eventually withholding it altogether and allowing them to remain quite dry for two or three months.

EUPHORBIA (POINSETTIA) PULCHERRIMA.

This species, which is more frequently met with under the name of Poinsettia pulcherrima, differs very materially from the foregoing. The best bracts are produced on plants which are grown from cuttings every year. The cuttings should be inserted singly in small pots. When the plants are established, free growth should be encouraged by maintaining a warm moist atmosphere with plenty of light. Where space is available, I should recommend growing them in a cool house during the summer, in preference to cold frames. The advantages obtained by devoting a house to their culture are multitudinous, for not only are they more easily managed, but during a wet dull season they may be assisted by employing a little fire heat. If the roots are checked through cold or any other cause, the plants are liable to lose their bottom leaves, in which case they are disfigured for the remainder of the season. Plenty of air must be afforded them at all times, providing the weather is favourable. I have known some growers shade them lightly during the hottest part of the day, but I prefer letting them have the full rays of the sun, provided plenty of air is afforded, merely shading for a day or two after repotting. It is very important that the ends of the growth be kept near the glass, lowering them as occasion demands, as by this means much sturdier plants are obtained.

A gentle dewing with the syringe every morning and evening during the summer is very beneficial to the plants, and keeps down red spider and other insect pests. When the bracts appear more heat may be given, and an occasional application of manure water at this period will also prove very advantageous to the plants. Judicious watering is essential, as much depends upon the manner in which this is performed.

It has been repeatedly notified in previous issues of the Journal of Horticulture that there are two distinct varieties of Euphorbia pulcherrima, I will, therefore, restrict myself to merely one or two references on this point. Although both varieties are invaluable for intermixing with other plants, or where a succession of bloom is required, I should advise growers whose object is to obtain a mass of colour at one time to confine themselves to the earliest variety only. This is decidedly the better and most valuable of the two; the bracts are much paler in colour and produced with great freedom. A considerable number of plants are grown here annually under similar treatment

to that described. When the bracts appear the plants are placed in a group, filling half of one of the houses, where they produced an imposing effect.—G. PARRANT, Ashby Lodge Gardens, Rugby.

JUDGES AND JUDGING. A NEW CATECHISM.

As we gave prominence to a letter of an extraordinary character and accompanied it with pertinent comments on page 503, December 7th, and as the matter created much interest, we think the letter of another correspondent is entitled to a little more than ordinary attention in our columns.

"Berks" writes: "You wish me to give more information regarding this case. The exhibits were not pointed till the second day of the Exhibition. I think Mr. R. Laird's article settles the whole question, with the exception of who asked this expert to point the exhibits. He ought to come forward and say who appointed him. I am glad you make the remark on my note on page 529, that you carefully refrained from pronouncing the judges incompetent. Then what about the heading of your leading article, page 508, "Judges Judged—Verdict Guilty." I notice you also make remarks on Mr. R. Laird's article, page 530, stating you did not know the name of the society. I ask, why then did you send nearly every member of Committee a gratis copy of your Journal of December 7th, 1893? I regret you should publish such a charge against any society without making inquiry as to the truth of the charge.—Berks."

We are much obliged to "Berks," who takes us a step onward, and an important one too. If the exhibits were not pointed by the "expert" till the second day his figures can have little, or indeed no, weight. Perhaps the "expert," whose identity is not quite unknown to ns, may, as suggested, state hy whom he was engaged to point the blooms—the "second day?" We do not see why he should decline to do this, though he is at liherty to withhold his name from publication.

"Berks" has evidently not read our article carefully. We have had far too much experience to pronounce judgment on a case after hearing one side only, and we should he the less likely to decide against duly appointed officials, hecause we helieve that competent adjudicators are correct in nine cases out of ten when protests of misjudgment are entered; but as even judges are human, they are liable to err occasionally. The correspondent whose letter we published clearly stated, "The Committee so far entertained the protest as to appoint a competent expert to point the different stands," and he sent us the tabulated results, going on to say, "The Secretary afterwards told the 'protestors' that the Committee acknowledged the misjudgment." What could be more precise? We then said, "If the writer of the letter had made no mistake," we had a case of judging the Judges, and finding them guilty; and if the allegations were true, undoubtedly that would be so. That is our reply to "Berks" on that clanse in his catechism.

We pass to another in which he not obscurely implies that we published a statement which we knew to be false. Does he appreciate the seriousness of his inuendo? We stated we did not know the name of the Society when we published our article on December 7th. We neither knew it nor wanted to know it, preferring to present the subject on its merits as presented to us, and to guard ourselves against any charge of prejudice or hias on the part of persons who appear to be so constituted as to be unable to refrain from attributing unworthy motives.

"Berks" conveys the impression that he has found the Editor of the Journal of Horticulture guilty of falsehood. That is "judging" with a vengeance. What are his grounds? The sending of copies of the Journal of December 7th to the members of the Edinhurgh Committee! "Berks" is a gardener of great ability, intelligence, and acumen, but even he is liable to err, and has most assuredly erred in this case. We received a list of names hours after the issue was published on December 7th, for the very purpose of sending the copies in question, and previous to that neither the Edinburgh Show, nor any other show, had heen mentioned to us. "Berks" will now see "why" they were sent. The desire that they should be was, however, a very proper one, as every gentleman on the Committee was entitled to see what was said, for the purpose of making any counter-statement, which we specifically promised to insert. We kept our promise, as "Berks" very well knows, not hy publishing his note only, but a far more explicit denial hy Mr. Laird of the two cardinal allegations of the correspondent whose letter we inserted on page 503. As at the moment of writing we have not received any reply from this correspondent to the Secretary's letter on page 530, we presume he has sent his name to Mr. Laird as invited. If he has no reply to this gentleman, he will tacitly confess that he is guilty of false assertions.

Returning to "Berks." He regrets we should have published the letter of an exhibitor, who sent his name and address, without making inquiry into the truth of the charges. If "Berks" knew as much about editing newspapers as he does about gardening he would not let such "regrets" trouble him. Why should we not have made roundabout private inquiries, and obtain documentary evidence relative to the accuracy of one of his own inaccurate suggestions before publishing his letter containing it? On matters of public interest nothing hrings out the truth so well as publication, and nothing so much strengthens those who are right in their action, and weakens those who are wrong in their assertions.

Our article excited wide interest, and brought out valuable comments and suggestions on various phases of exhibiting—reckless protests, unseemly conduct by losers, judges' qualifications and methods, show managers failing to comply with their own rules, with other collatera matters were discussed, all of which require thoughtful attention with a view to the avoidance of errors, and making, as far as is possible, the shows of the future better and more agreeable to all than some of the past have heen.

N.B.—Just as we are preparing for press a letter arrives from the original complainant in this case, in which he states he intends sending a reply to Mr. Laird next week. We shall be obliged if he can let us receive it not later than Saturday this week, as our pages have to be advanced in preparation for adjournment over Christmas.

INTO the special merits or demerits of the particular case which has given rise to the present correspondence I do not desire to enter. I write simply with the object of emphatically endorsing certain remarks of your correspondent "E. K." (page 530) concerning "judging" in the abstract. Truly, the science of judging is in a condition verging on chaos. No definite principles or rules exist, and the personal tastes and idiosyncracies of the individual judges dominate the situation of the moment, and offer to the exhibitor a standard which is ever varying, and which he can never hope to retain, even if he can grasp it.

and which he can never hope to retain, even if he can grasp it.

This essential peculiarity of "present day" judging was well hrought out in your columns a few weeks ago. A correspondent and two other judges—not suggested to he less competent than himself—had to judge Dahlias. Your correspondent took one view of the consideration which should influence the award of prizes, the other two judges took another view. Who was right I do not know, neither does it matter; hut here we are shown that it was hut a matter of chance that the majority that day went the one way. Possihly at a later show your correspondent found one of his fellow judges of his way of thinking upon the point at issue, and so the verdict was reversed. But here, again, we have chance as the dominating element, and not judging on systematic and definite lines, in accordance with a standard created by authority, and in the light of which all competitors may cultivate their flowers.

"E. R." suggests "that the National Chrysanthemum Society should formulate and publish a clearly defined code of rules for the help and guidance of the judges which would understable he recorrised as the

"E. R." suggests "that the National Chrysanthemum Society should formulate and publish a clearly defined code of rules for the help and guidance of the judges, which would undoubtedly be recognised as the standard of all societies." This is exactly the suggestion made by me in the paper on "Judging Chrysanthemum Blooms," read before the General Committee of the National Chrysanthemum Society on the 11th inst. Until such a standard shall he created judging can never be completely satisfactory, even at the hands of competent judges. At the hands of the incompetent it hecomes little hetter than "confusion worse confounded."—CHARLES E. SHEA, The Elms, Foots Cray, Kent.

Some of your capable correspondents having in my opinion given conclusive evidence re the two difficulties lately mentioned in the Journal I will not trouble you with my view. What I wish now mainly to refer to is "point judging." I have no desire to be egotistical when I say that during the twenty-seven years I have acted as a judge I have frequently adopted the practice as being a great help in assisting me to form a correct judgment on the matters before me. I learnt the idea from a Hampshire horticulturist, who told me he had used the method for many years when judging, what him and me were then doing—viz., cottage gardens situated in different portions of a scattered parish. The gentleman in question has been dead some years now, and was over eighty years old when he died. I mention this to show that judging hy points is by no means a new idea. After all that has been and can he said in favour of point judging, it never can be mathematically correct. Some people speak of it as if it were so.

"E. K." (page 530) expresses my ideas best on this matter when he

"E. K." (page 530) expresses my ideas best on this matter when he alludes to the different spec acles we weak human mortals are necessarily compelled to see mundane matters through. After all, point judging is hut a help to an otherwise well halanced, well informed mind in forming a correct decision. I am not writing to run down point judging in the least, knowing full well the great value of "notes" in judging the many objects brought hefore the Judges at horticultural exhibitions, and the usually very limited time allowed them to do their work. In conclusion, allow me to say that the "experts" now so frequently spoken of as necessary at exhibitions will be likely in time to cause managers of such exhibitions much expense and trouble. Wby not have a separate "expert" to judge, say, Turnips, Carrots, Cahbages, and Cauliflowers? We have them for Onions and Potatoes, not to

mention in the same breath our reigning queen of the winter flowerthe Chrysanthemum. As an old-fashioned practical gardener on the other side of my Jubilee year, I almost dread going to act as a judge at a show nowadays, not considering myself an "expert" in anything.— YORKSHIRE GARDENER.

At the Birmingham Chrysanthemum Show, in a conversation with Mr. Robert Owen, I remarked what a blessing it would be if at flower shows the arrangements should be completed and plants in position overnight, with only the cut blooms admissible early next morning, so that judging could commence promptly at nine o'clock, or at the latest at ten o'clock. I have had considerable experience of flower show work, and have known instances at Edinburgh when everything was completed overnight, and judging commenced before breakfast. In Belgium I have seen this done, and at Shrewsbury the principal portion of the plants are to a great extent in their position overnight. I hold strongly the opinion that all award cards should be placed on the exhibits properly and legibly filled up before the public are admitted; and this and careful judging can only be done by giving more time for the work. Then, also, there should be a heavy fine of 5s. or 10s. for anyone entering in any class and not filling it, unless notice to the contrary is in the Secretary's hands twenty-four hours before the morning of the day, so that the Superintendent of the staging of the morning of the day, so that the Superintendent of the staging of the exhibits may be able to have all spaces closed up, and himself saved much trouble and worry.—W. D.

NEW VIOLAS.

(Concluded from page 439.)

IT appears to me, so far as I can judge at present, that at least fifty new varieties will be shortly sent out for the first time, and although it is strong evidence of the popularity of the Viola, I am



FIG. 80.—LÆLIA FINCKENIANA.

Notwithstanding the magnitude of this Exhibition, everything is obliged to be ready by ten o'clock on the morning of the show, and the judges start at their work immediately, and have invariably finished by

the time the public are admitted.

Birmingham is alluded to in page 530 of last week's Journal, and the rule is strictly enforced of clearing the hall at eleven o'clock. Still, that does not allow of sufficient time for the judges to do their work with ample time for consideration, and for the officials to get the prize cards properly filled up, which I regret to say at some exhibitions is done in a very slovenly manner. This is not the case at Birmingham, for at no exhibition in the kingdom is this work better done. And then the award books have to be made up for the reporters of the local daily papers, certificates and special awards made to honorary exhibits, and many little details seen to, so as to let matters run in a pleasant groove.

very much inclined to think that others will agree with me that these are far too many new ones for one season. These are in various hands, Messrs. Dobbie & Co., Smellie, Irvine, Pye, Paul, Forbes, and others, and many of the finest have been raised by Mr. J. D. Stuart of Belfast. My descriptions of the new ones must be necessarily brief, and I shall confine myself to those I have seen and know to be good. Of their bedding out properties I am unable to speak, excepting Duke of Clarence, and this is a fine variety for that purpose. All are more or less beautiful as outdoor plants, although some bloom more freely than others.

The following are the new varieties which are to be introduced in the spring, and which I have seen, and arranged alphabetically with the

raiser or introducers' name appended-viz.,

Blue Garter (J. D. Stuart).—Very like Skylark, but with lighter coloured margin.

Carissima (J. D. Stuart).—Veined rosy lilac and white; fine.

Cherry Park.—I saw this at York, and it is very like Annie King. Commodore (J. D. Stuart) .- A distinct shade of pale blue, evidently a fine variety for forming masses.

Con O'Neil (J. D. Stuart).—White with rich stripes of violet purple;

extra fine.

Diva (J. D. Stuart).—Pure white, small bloom, and entirely rayless; a charming flower of good form.

Duchess of Rothsay (Dobbie & Co.) .- A much improved Countess of Kintore, and very fine.

Duke of Clarence (Irvine). - Rich black with deep blue blotches; a very handsome and distinct variety.

Erin (J. D. Stuart).—A rich coloured striped flower; fine.

George Lord (Steel).—Sulphur yellow, with a deep orange central blotch; a very fine rayless variety.

Hibernia (J. D. Stuart).—Rich purple striped, distinct and fine.

Jane Bell (Irvine).—Heliotrope clouded with mauve, fine and

Lady Borthwick (Irvine).—A charming variety, and distinct.

Lady Dufferin (J. D. Stuart).—White, marked with pale mauve or heliotrope; distinct and fine.

Lillie Langtry (Dobbie & Co.).—A fine and rich coloured striped variety of good substance and form.

Lovelight (J. D. Stuart).—White, with a distinct Picotee margin of blue lilac, and very pretty and distinct.

Maggie Todd (Irvine).-Rich violet clouded with purple, lighter

coloured top petals; a handsome variety.

Mahogany (Smellie).—Bronzy crimson veined with lemon; bright and fine, and very distinct.

Mary Stuart (J. D. Stuart).-White, a little tinted with cream: an extra fine, quite rayless, variety of good form.

Miss Emily Reuk (J. D. Stuart).—A bright carnation-striped flower;

distinct and fine. Mrs. Joseph Chamberlain (J. D. Stuart).—Rose clouded with lilac;

a distinct variety. Mrs. C. Kay (Dobbie & Co.).—Raised by Mr. C. Kay of Gargunnock. White bordered with heliotrope; a distinct and pretty variety.

Mrs. Joseph A. Olliver (Irvine).—A very fine variety.
Mrs. Scott (Steel).—White, with a yellow blotch below the eye, and quite rayless and of excellent form.

Pride of Etal (Steel).—White, bordered with pale lilac, retaining the "Violetta" style of flower; a bright, distinct, good variety.

Prince of Orange (Dobbie & Co.).—A rich, deep golden yellow self; a decided acquisition in every way, and reported to be a good bedding

Venus (Steel).—Creamy yellow of "Sylvia" type.

William Dean (Irvine).—A grand flower, of fine form and substance, very rich black violet, blotched and clouded with pale blue.

William Jones (Irvine).—A Countess of Kintore style of flower, but

smaller and of exquisite form.

I have also seen other finc varieties raised by different growers, but as I have no knowledge of an intention to introduce them until the autumn of 1894 or spring of 1895, there is no necessity for alluding further to them now. There are likewise many other varieties which are being introduced for the first time by Messrs. Dobbie, Irvine, Pye, and others which I have not seen, and therefore they are not mentioned here.

It will be noticed, as before mentioned, that many of these new varieties have been raised by Mr. J. D. Stuart and Mr. McKee, both of whom often send me blooms of their seedlings, and both are on the right track in raising some very fine varieties, and they pass into other hands for distribution. I am unable to allude to Mr. McKee's new varieties, as their distribution is so uncertain, but I think Mr. Irvine will be offering some of them, and I can safely say that his Tara, The Clown, Decorator, Spray, and Charm will be acquisitions. Mr. McKee's Countess, Duchess, and Magnet (the latter especially, and already in cultivation) gave him fame as a raiser. Mr. J. D. Stuart has been most successful, and at the great Pansy shows of the midlands has making a many good goodlings contificates were granted to some of exhibited so many good seedlings, certificates were granted to some of them, only real merit being recognised. Messrs. Dobbie also have other new varieties, but I have not seen them.-W. D.

IT will be clearly noted by those persons who read the notes on recently introduced varieties by your correspondent "W.D." (page 438) we have now arrived at a period when these plants are very popular. I cannot speak as an old cultivator myself, but I certainly do grow the majority of the catalogue varieties, both new and old. My object in sending these notes is to protest mildly against the constant influx of so called novelties. A glance at the list furnished by your correspondent will suffice to show the practical growers that, at least, half of the varieties should never have been brought before the public. It would, of course, be very unwise on my part to particularise, but I know at the present time many of the varieties introduced three years ago are now discarded from some collections. I would not have my name associated with a Viola I knew would be ultimately discarded; neither would I as a trade grower introduce a worthless variety. The time will come when our Viola specialists will have to exercise the same discretion as the rosarians do at the present time.

Viola growers are now sacrificing everything for large flowers, losing sight entirely of the habit of the plant, a point, I take it, as of equal importance to the flowers. What is the use of a Viola plant that will grow a foot or more in an upright direction like a Pansy? yet how many of our modern varieties come under this head. Exhibitors to

some extent are responsible for the introduction of these unsightly growing varieties; so long as the flower is large and distinct, it would appear they do not mind any other defect. I saw several of our new varieties last season that were more than a foot high tied to stakes, and this in a dry season. While the exhibitors make size the principal point in their flowers, or appear to do so, we shall continue to receive the annual quota of these "leggy" varieties. We have many dwarf forms to work upon, and I think we should do well to discard this class of leggy plants which is now in the ascendant. The Ardwell Gem family of Goldfinch, Duchess of Fife, and White Duchess, are all models as far as habit is concerned, the foliage being on the surface of the ground, forming a pretty carpet.

We want the hybridiser to persuade the blooms of the tufted plants to look up. Dr. Stuart of Chirnside appears to be on the right track, for his Sylvia, a creamy white with good habit, possesses nearly all the characteristics that go to make up a fine Viola. Blush Queen, by the same raiser, is of good quality, while the Violetta type certainly opens up a new field for Viola raisers. The foliage and habit are all that can be a new field for Viola raisers. The foliage and habit are all that can be desired, now we want larger flowers, to make almost an ideal Viola, with a tendency to early flowering added thereto. I should like other Viola growers to give us their opinion on this most important matter, for I think it only wants pointing out to start the raisers of new varieties

on a different track.—J. B. R.



BURNSIDE'S BIJOU ON TEA ROSES.

IF there be any royal road to a knowledge of Rose culture it has certainly been discovered by the Rev. F. R. Burnside, Birch Vicarage, near Hereford. It is an age of expansion in literature, but it is also one of precis, compendiums, and compression. Even the English literary sentence has shrunk from fifty words in the Carolian era to twenty-five in the Victorian. Those who love to meander through the reams of text that are printed in gardening papers upon Rose cultivation will not get much of this linked sweetness long drawn out in Mr. Burnside's work on "Tea Roses: How to Grow and Exhibit Them." He very soon comes to the point. He has accomplished a feat which, so far as we know, is unparalleled. He has compressed all he considers necessary to be known on the cultivation of Tea Roses, on which he is an admitted authority, in the space equal to about a page and half of the Rose matter in our columns, the remaining pages, one-third of the book, being devoted to a good descriptive list of varieties. Mr. Burnside's Bijou is published by Messrs. Jakeman & Carver, Hereford, and Simpkin, Marshall, Hamilton, Kent & Co., London.

ROSES COMTE ALPHONSE DE SERENYE AND COMTESSE DE SERENYE.

THE above have been confused in more than one instance by friends of mine, and it may be well to note their great dissimilarity. Comte A. de Serenye was introduced by Louvais in 1866, and is now almost extinct in this country. No nurserymen's list that I have contains it. The shape is good, but the flower is small; colour bright clear rose, with a tinge of lilac and purple. It flowers very early, and almost always produces a fair bloom in the autumn from the point of late growths. At one time it was a great favourite with me, and is still

most distinct from any others.

Soon after Comtesse de Serenye came out, in 1875 (Lacharme), I had an instance of its confusion with the older Rose, and this by a trade grower, who said he had had it for years. He had mistaken the name. Lacharme's Rose is very double, and a bad opener during any but a dry and cool season. I did not get a bloom in 1893. The colour is a light rosy-peach, petals thin in texture, and very numerous, easily spoilt by wet, but a magnificent Rose occasionally. The shape of these two is different; so, too, are the growth and foliage, while in colour they are most distinct. I cannot help thinking a little more care in avoiding names too suggestive of other varieties might be an advantage. We have Duke and Duchess, Comte and Comtesse in so many varieties, to say nothing of La France and La France of 1889, advantage. that one not thoroughly conversant with Roses, or exceedingly careful about names, is apt to confuse them at times. There is a Comte de Paris in Hybrid Perpetuals and again in the Teas, and a Comtesse de Paris also in the former class.—PRACTICE.

THE WINTER PROTECTION OF ROSES.

THERE is an old saying in regard to the cooking of hares, viz, "first catch your hare, &c." "W. R. Raillem's" note (page 540) in reply to "A Lover of Roses" (page 510), rather reminds me of this old saw, as his advice in regard to mulching Rose plants with leaves would be a troublesome matter to such of us as live in big towns or on the borders During and since the recent stormy weather I think I could more easily have collected a good mulching of the debris from roofs, in the shape of broken slates, than an equivalent amount of fallen leaves. Nevertheless, I quite agree with "W. R. Raillem" that if you can get an ample supply of leaves and then have sufficient persuasive power over

these erratic particles of vegetable matter to induce them to remain quiescent, there can be nothing better or more satisfactory.

But, unfortunately, both I and many others do not live in or near sylvan glades, where there are more than enough for everyone of the fallen leaves of autumn, so we must adopt some other plan to circumvent the machinations of Jack Frost, and, faute de mieux, we must adopt what is really the only other effectual mulch, i.e., either earthing up or the use of long or short manure.

I do not think it is absolutely necessary to dig in this mulching after its primary use is over, nor do I adopt or advise so violent a method with the risk to roots involved therein, but in the spring I spread out the manurial covering over a larger surface than that on which it has rested in winter, and later on, during the early summer months, this mulch gets gradually absorbed and amalgamated with the soil in the process of gently hoeing or forking over of the surface.

I know some advise the complete removal of the winter mulch and the use of strong manurial water as a stimulant, but I adopt the plan I mention, although I also give artificial watering and help the Rose roots with concentrated manurial stimulants applied to the surface.

I believe that on the question of watering I am not in agreement with "W. R. Raillem," but here again I can claim there is good reason on my side; it is an absolute necessity for me to water, as if I did not clean my trees by artificial watering the foliage would get clogged and suffer from the impurities which are inseparable from the atmosphere of a town so large as Croydon.—CHARLES J. GRAHAME, Croydon.

HAVING tried "J. A. W.'s" (page 539) suggestion of burnt refuse as a protection for Teas I can thoroughly endorse all he says, and I think it is improved if mixed with road scrapings. I adopt three kinds of protection in the autumn for established dwarf plants. With the very tender sorts I put three or four spadefuls of soil in the centre of the plants; with those of a more robust nature I hoe the bed roughly, and gather a few inches of soil round the stem; and with the very hardy Teas I hoe the ground, but do not stop here, as over all I place a protection of long manure. My plan is to put the manure on fairly thick, and to occasionally lightly fork the top, and so keep it as dry and sweet as possible, the nutriment being washed down by rain and snow to the surface of the soil. Then in the spring I take off about two-thirds, and fork in the remaining manure lightly.

"W. R. Raillem's" remarks are always valuable, but I think he

"W. R. Raillem's" remarks are always valuable, but I think he under-estimates the value of manure so applied as instanced in his reply (page 540), to "A Lover of Roses" on page 510. My experience is that a winter top-dressing of manure can and does act both as food and protection; also as the manure is not then too fresh I do not see how it can injure the roots, and the slight forking can surely do very little harm to the surface roots. In fact experience has convinced me that the more the surface is lightly disturbed the more the thread-like roots seem to grow and revel in the liquid manure and mulching which

they receive when the buds are forming.

Is "W. R. Raillem" really serious when he advocates a covering of leaves? If so how many feet in thickness should they be put on, as dry leaves have a habit of blowing away, and how would he overcome this difficulty? I very much doubt whether leaves would act as a suitable protection, as they hold the moisture and tend to make the ground sodden and sour when put on in a dry state. I wish my leaves would all fall in a fortnight, but having Limes, Chestnuts, Elms, Oaks, Beech, and other trees, I think in my case it would be nearer the mark if I sail two months.—R. M. D.

MANURING AND TRANSPLANTING ROSES.

I HAVE read both of the interesting notes upon pages 510 and 540 touching on this question. I cannot say that I entirely agree with either; but "W. R. Raillem's" remarks against the use of short manure as a winter mulch I can endorse from many years' experience. We all endeavour to avoid surplus moisture at the roots of Roses during the winter; why, then, place short manure around the most vital portion of our plants? Few materials will retain the wet more than the thoroughly decayed manure so frequently recommended as a mulch, and we should bear in mind that frost is doubly injurious when combined with wet; yet many still advocate a saturated substance as a winter protection. "W. R. Raillem" does well to call attention to the little use of forking-in an exhausted dressing during the spring, it being of small service except the ground be naturally heavy and with the object of lightening it.

I would also like to know in what way the juices washed into the soil by rain can benefit Roses while at rest. We should not think of following this plan with pot Roses; always affording stimulants while growth is being made, and the plant is in need of it. Winter manuring seems to me a great mistake. In the first place much of the juices are absolutely wasted, while all of the benefit derived from the rising ammonia is lost. By allowing the air and frost greater action upon the soil, and then mulching and forking in the manure carefully during spring, I am convinced that the same amount of labour and stimulants may be applied to fuller advantage. Wet manure is no protection to the base of a Rose. It is not needed excepting during severe weather, and at these times the whole body of the manure is frozen. The "long" or strawy manure is liable to be no more or less than a sodden mass in a very few days after application. It also blows away, and makes the whole place untidy if dry; and this at the very time when its presence is most needed. A quiet frost does little harm compared to the same when accompanied by keen, frost-laden winds. These

search the whole wood, and are particularly trying, and they demand a great deal of sap from the roots if the wood is to be kept plump. In proof of this, note how quickly unestablished plants shrivel during their prevalence. My observations have given me the impression-that severe frosts, with a quiet or still atmosphere, do little harm provided the plants surrounding are not wet, This, and the waste already pointed out, has caused me to cease mulching with decayed manure during the winter.

A little of the ordinary soil drawn around the base of dwarfs, and a few branches of Birch, Spruce, or Gorsc fixed in the soil around the more tender varieties is far more rational. As "W. R. Raillem" points out, the roots are already protected by the soil, and the wood is the chief part to shelter. The amount of wind and frost which a few branches will keep off is scarcely credible by those who have not tried this plan. They are so easily applied and removed, and they answer their purpose when most wanted, not being found yards away, brought up by the first impediment to their flight before the very trost-laden

wind we wished to protect the Roses from.

I have seen Roses wrapped up with fern and litter as carefully as if they were some occupant of the sub-tropical garden; far more protected than the same person's Myrtles and Magnolias. This is unnecessary, as well as being harmful. The wild Roses are among our hardiest shrubs, and none of our garden varieties need more than the severe brunt of a sharp winter turned from them. When over-protected the wood cannot be exposed to sharp spring frosts with impunity, while if covered too long we get premature growth of no value whatever; in fact, only a severe drain upon the plants. My plan of placing a few boughs among them admits air and light freely, while acting as sufficient break to severely keen winds.—PRACTICE.

WINNERS WITH SEVENTY-TWO ROSES.

WE regret having to trouble you again, but as you will perceive from our last letter, we merely wished to correct a mistake on page 494 in "D, Deal's," remarks, where he distinctly states that Messrs. Harkness and Sons carried off every first prize for "seventy-two's" in the kingdom. Messrs. Harkness, in replying to our letter, state on page 540 that the prize offered at Tibshelf was for fifty varieties. Now the wording of the schedule is as follows, viz., "Roses, seventy-two blooms, fifty distinct varieties;" whilst the wording of the Elland schedule is, v z., "Seventy-two Roses, twenty-four or more varieties." We herewith enclose the two schedules referred to, and whatever Messrs. Harkness make of it, we still maintain and claim these prizes to be two of the "seventy-two's" in the kingdom, and the Tibshelf "seventy-two" was the best and keenest contested of the season.

We cannot perceive where Messrs. Harkness' seven firsts come in in competition with us, and we still maintain having sixteen firsts to their two. If they had more firsts, then they were in class in which we did not compete. We trust this will now be sufficient to show that we won at least two of the seventy-two's in the kingdom, and the only two for which we competed.—James Cocker & Sons.

[Our correspondents have quoted correctly from the Tioshelf and Elland schedules referred to. We have returned them to Aberdeen.]

HYBRID TEAS.

THE report of the Committee of the National Rose Society says of the new catalogue that it appears to have been much appreciated, and that several foreign trade growers have already followed the Society's lead in introducing into their own catalogues a separate section for Hybrid Teas upon similar lines to that adopted in the Society's catalogue. As a member of the Catalogue Sub-Committee I might be reasonably supposed to be in thorough accord with the new classification adopted, or at all events to have nothing to say against it; but, unfortunately, I do not think the arrangement satisfactory. I said at first I did not think I could attend the meetings of the Catalogue Committee; and, in fact, I was not present at any of them. Undoubtedly I was in fault, in that I ought to have declined altogether, or resigned later. Mr. Mawley was also so extremely courteous as to send me a proof of the matters decided on, so that I could give my opinions, and they were, I am told, duly laid before the Committee. Under these circumstances I am either an outsider who has a right to criticise, or in the position of a judge who is in a minority on the Bench, and who in such cases has the right of stating his own opinion, wherein he differs from his colleagues. I have also the assent of the Secretaries of the N.R.S. to my stating my views on the matter, it being understood that I wish to be quite loyal to the decision of the majority, and to be fair and accurate in every way. I think the catalogue is, and always has been, open to criticism on other points, but I will confine myself here to the classification question. The Committee seem to have made a change on an opposite principle to that which prevails in another part of the catalogue. On the one hand they retain the placing together of Teas and Noisettes in one class, and on the other they separate Hybrid Perpetuals and Hybrid Teas into two. This

other they separate Hydrid Perpetuals and Hydrid Teas into two. This seems to me inconsistent, and acting without principle.

It appears to me to be impossible to classify by drawing lines of demarcation without definitions. What is a Hydrid Perpetual, a Hydrid Tea, a Tea, or a Noisette? At least, as H.T.'s are now set up in a separate division, it may be asked, What is a Hydrid Tea? Is it the first cross only between a true Tea and a Hydrid Perpetual? If so, can it be proved that La France and Captain Christy are such first crosses? or is it any cross? If so, why are not Margaret Dickson (which through Lady Mary Fitzwilliam is a quarter Tea), Her Majesty (which is even said to be a first cross), and others, classified as Hydrid

Again, if La France and Captain Christy are to be considered Teas? H.T.'s, why stop there? Does not the whole of the Victor Verdier race

show the cross as much as Captain Christy?

Once more, if we take certain from the H.P.'s strongly suspected of being H.T.'s, should we not do the same with the Teas? Will anyone deny that there is as much cross in Gloire de Dijon to separate it from the true Teas, as there is in Grace Darling to separate it from the H.P.'s? To take such well-known Roses as La France and Captain Christy from the H.P.'s, where they have been sollong, was a strong step; not necessarily wrong in itself, but I think that definitions should have preceded it, and that future results should have been considered. must be prepared, now hybridising is so much in vogue, for a H.T. to be crossed back with the Teas, and its produce back into the H.P.'s, and so on backwards and forwards till, as the coachman said of the railway accident, "Where are you?"

For these reasons, which I have made as brief as possible, for there is a good deal to be said on the matter, I think the new classification of Hybrid Teas to be unsatisfactory, and unlikely to be permanent.-

W. R. RAILLEM.

A RECENT SLANDER.

HAVING been referred to on the subject, I should like, with your permission, to write a few lines relating to an important personal matter mentioned by Mr. Frank Cant at the annual meeting of the N.R.S. The subject is mentioned in the admirable report of the Society's meeting published by you on pages 540, 541, but some other remarks made at the time in connection therewith are omitted. Mr. Frank Cant stated at the meeting that there had been unfounded reports in circulation for some time past in regard to his supposed aiding at Rose Shows his intimate friend and neighbour, Mr. O. G. Orpen of Colchester, and Mr. Cant said he wished to give a most unqualified public contradiction to this slander.

I suppose that jealousy will at times make people blind to the merit apparent to others, and we are aware, as Mr. Cant said, that when mud is thrown some of it will stick. Other slanders have also been in circulation, and it was time that they should all be brought to an end. A matter of this kind may be more serious in its consequences to a professional rosarian than to an amateur; but everyone values his good name, and we can all understand the annoyance given to both the

gentlemen interested in this particular matter.

Mr. Frank Cant, as a rosarian, stands second to no one in the kingdom. Mr. Orpen is less known except to those of us who are exhibitors. We who know both gentlemen personally have not given much heed or attached importance to the reports in circulation, and I may say that although, probably. I have run second more frequently than anyone else of late to Mr. Orpen's first (being truly a "Ravensbury" to his "Isinglass" in five recent Rose contests), I have never attached the slightest importance to the depreciatory and untrue remarks made about him, as I have always felt confident that he won by sheer merit, and deserved his success.

In the cultivation of Tea Roses Mr. Orpen has almost discovered the philosopher's stone of Rose growing. I look to his being one of our amateur champions in the near future, and he will be a worthy one. "Honi soit qui mal y pense."—CHARLES J. GRAHAME, Croydon.

GARDENERS AND GARDENING.

[Read by Mr. J. DAVIES before the Chislehurst and District Gardeners' Mutual Improvement Association.

GARDENING is one of those arts which enables us to make the most of Nature's gifts. It has been said over and over again, He that makes two ears of corn grow where only one used to grow, is a public benefactor; in other words, whosoever can increase the produce of the land does a real service to the country. Gardening, however, takes a higher stand; its object is not only to increase, but to improve the produce. It is for the gardener to learn from Nature what a plant requires, and to afford that in proper quantities, and if the soil does not contain its proper requirements, it is for the gardener to step in and supply the want. It is well understood that what succeeds in one place may be a complete failure a few miles away. Sometimes in the adjoining garden crops that succeed with your neighbour may be a complete failure with you, so different may be the aspect and soil, and so this is one of the many reasons why gardening is never learn.

Study your employer's interest in commencing your duties as gardener, endeavour to find out the requirements and tastes of your employers as soon as possible, and having done so, lose no time in carrying those wishes out, for it must be remembered that it is they who find the sinews of war. It often happens that a gardener has some special favourite flower of his own; it may be the herbaceous Calceolaria or Cape Pelargonium, or perhaps Chrysanthemum on the large flower system in preference to the smaller, and to most minds more useful blooms. Be that as it may, endeavour to fall in with the new order of reasonable employed, and if found that tastes and temperament are at variance with each other, it is better to seek "fields afresh and pastures new."

Interchange of friendship and paying visits to other gardeners is of the utmost benefit, independent of the pleasure socially. always something worth taking note of to an observant man, however small the garden might be. This reminds me how often one is struck with the fact that in small gardens, with perhaps only one or two glass

houses, that much is done with very limited means; on the other hand, many men who are thoroughly practical and produce fine examples of their work as long as ever convenience is at hand, and have an unlimited purse at command, are altogether at sea when they have to manage a garden under difficulties and on strictly economical lines.

Hybridising and making experiments are interesting, but however laudable this branch of gardening may be it has its drawbacks. Many employers have a wholesome dread of experimental gardeners as being the most expensive, and are often paid high wages for simply amusing themselves. There are many theorists who lecture here, and write there, and talk everywhere; but if you visit their places, to say the least, you would feel disappointed. I am, though, willing to admit that there are men who write for the press continually who are thoroughly practical in every branch of their profession. Hybridising and experiments in my opinion are better suited to the well-to-do nurseryman and affluent amateur, for in many cases it is not a very profitable occupation, however interesting it might be. An old friend of mine annually produced a great number of seedlings of Zonal Pelargoniums, hoping by a systematic fertilisation to have a blue flowered variety. I used to visit him pretty frequently, and he always fancied he was getting nearer his ambition; but to this day, now some twenty years, I do not think he has succeeded. Fortunately for him he had a very indulgent employer, and one who to a certain extent encouraged him in his hobby, though his garden suffered terribly through lack of attention. I rather like a man with a hobby; he is a very interesting individual, but do not ride your hobby too hard, or disastrous results will probably accrue.

No doubt many gardeners will remember the late Mr. Mechie of Tiptree Hall, Essex, and London some twenty or thirty years ago-with what spirit and energy he entered on the task of converting a rather barren spot into a model and fertile farm; true, it had some natural advantages in climate and aspect. I am now writing from memory altogether, so am open to correction. He was considered to be a great Everything that Mr. Mechie did was taken note of and reported in various papers, and was thought to be a great success; but notwithstanding that he had a splendid London business to feed these experiments they were not a success. Then Mr. Peter MacKinley some twenty-five years ago gave us such interesting reports in a tabulated form as the results of his experiments with various kinds of Potatoes. These were carried on for several years, but became very expensive. Most of you will remember the late Mr. Clarke, of Magnum Bonum Potato fame. He, too, spent the greater part of life in raising new varieties of Potatoes, but died by no means a rich man. Mr. Laxton, who worked most perseveringly for years in producing new varieties of Strawberries and other things, did not make a fortune. I mention these facts to show how much we owe to these men, who spent whole lives in their endeavours to benefit the world at large. I think such sacrifices as these should be recognised in some substantial way.

Exhibiting is the ambition of many gardeners, and a very laudable one too. It has been said, however, that the best exhibition board is your employer's table. Be that as it may, be quite sure that its owner is with you in your desire to show, then all will be well, for it entails much expense in labour and materials, and unless this is well thought out before it will rather surprise you when bringing it into practice. Then there is the thought sometimes that everything is neglected for the plants you are going to exhibit. Watch very carefully your employer's inclination. Directly you see he shows signs of being tired of the business, fall in with his views, then all will be well; but if you continue your hobby trouble will follow most assuredly.

Order is one of Nature's first laws. It is wonderful how much can be done by a proper system of working. One man in commencing some work will scatter his tools and material everywhere. The work will be begun at all points and finished nowhere. Another man will well consider where the work should be commenced and where it ought to be finished, endeavouring all the time to keep it completed as close up as possible, so that whatever occurs the work is practically finished as far as you go. I fancy I hear someone saying, "It's all very well to talk, much easier than doing." That might be so, but it is surprising what can be done by keeping these ideas before you. It is a good maxim. If you have anything in particular to do measure the time it will take, and if you think it can be done in one day try and do it; if it will take a week endeavour to do it in that time, and if a month the same; it gives a sort of stimulus to the work.

The rubbish heap is a necessity in every place, and often consists of stones, weeds, leaves, pruning of trees, pot plants that are no longer required, sweepings of paths, and so on, all in one confused mass. I remember one gentleman remarking that there was no reason why a rubbish heap should not look tidy. I think this is worth remembering. It is a good plan to keep everything that will burn apart from rubbish which will not; also put stones by themselves for making roads or paths. I have often seen what trouble there has been when mixed together; the attempts to burn or separate this mass, finally, perhaps, disposing of them by trenching a piece of ground and so burying the whole, to be turned up again at some future time.

In concluding this paper on "Gardeners and Gardening," I urge all young men to make the most of their time at their disposal, for assuredly much more will be required of them in the future than in the past. There are many advantages now which did not exist a few years ago, and if gardeners do not embrace these opportunities they will have much cause to regret it. Mr. Stanford said, "In the young man; firstly, be industrious; secondly, have a settled plan; thirdly, be everlastingly persistent in both. These, applied to fair ability, will win."



NATIONAL CHRYSANTHEMUM SOCIETY.

THE last of the Floral Committee meetings for the present season was held on Wednesday, the 13th inst., at the Royal Aquarium, when Mr. C. Harman Payne presided. The exhibits were bright, in good condition, and numerous, considering the lateness of the meeting, which was rendered attractive by a large contribution of cut Chrysanthemums from Mr. R. Owen, to whom a silver medal was awarded for his collection. Secretary Farson, a large incurved Japanese, a deep globular flower of a dull rosy bronze, was commended. John Noble, another of the same type, colour carmine crimson, with a paler reverse, tipped yellow, the Committee wished to see again, together with W. G. Newitt, a white Japanese, with long drooping florers flushed yellow in the centre. An ingenious expanding show-board was exhibited by Mr. C. E. Shea; it is made in sections, each of which can be moved in any direction, so that the board can be used for staging incurved as well as the largest of Japanese. The Committee highly commended the exhibit, as it would apply a shibitors to use their granted that it would be a shibitors to use their granted that it is not the same than enable exhibitors to use their present show-travelling boxes.

First-class certificates were awarded as under :-

Owen Thomas .- A Japanese incurved of large build. The florets

owen Thomas.—A Japanese incurved of large build. The florets are of medium width, curly at the tips, and of a bright, clear canary yellow. One of Mr. Owen's seedlings, who was the exhibitor.

Good Gracious.—A Japanese, with tubulated florets of remarkable length. They are curly, twisted, and intermingled, forming a globular and apparently solid bloom. Upon close inspection, and without support, the flower falls open rather loosely. Its colour is blush pink, passing to white in the centre. An American seedling shown by passing to white in the centre. An American seedling shown by

Mr. Owen.

At the close of the meeting Mr. Kendall called attention to a bloom of Henry Perkins, which some time since was certificated as an incurved Chrysanthemum. It was resolved that it be transferred to the section of Japanese incurves in the official catalogue of the N.C.S. At the close of the meeting the Chairman, in the name of the General Committee, thanked the members for their attendance during the season, and hoped that the meetings for 1894 would be as interesting in every way as those this season, which he ventured to think would be the case, considering the remarkable progress the flower had made during the past few seasons.

NEW CHRYSANTHEMUM EVA KNOWLES.

Mr. Knowles of Headlands, Pontefract, is the fortunate raiser (from American seed) of a grand new Japanese variety. It is a sturdy grower, and the blooms were good both from crown and terminal buds. In colour it is crimson carmine, in size equal to Viviand Morel, in growth as good as Etoile de Lyon.-W. S.

ROOTING CHRYSANTHEMUM CUTTINGS.

A WELL-KNOWN grower referring to best method of securing a good strike of cuttings said that it was better to place several into a 5-inch pot than to put them singly into small pots, as in the latter case the soil will become somewhat soured through frequent waterings ere the roots were fully formed. I called upon a gardener the other day who said that suggestion was no doubt good when the pots were stood on stages or shelves in houses where, of course, the soil would soon dry, and need frequent waterings. "I, however," said he, "root mine in small pots singly, and stand them in a close frame on an ash floor, where from the time of putting in after once watering, and give them only light sprinklings with the best results." I saw his cuttings so rooted, and they were looking all that could be desired .- A.

INCURVED JAPANESE CHRYSANTHEMUMS.

\$1 WISH to correct the error I made on page 497 by stating that Leon Frache and Mdlle. Marie Hoste were in the first prize stand at the Reading Chrysanthemum Show. I should have said that the varieties mentioned were in one of the prizewinning stands.—BEGINNER.

BEING one of the judges at the Reading Chrysanthemum Show, I have been somewhat interested in the discussion on the above question in the Journal. I cannot understand "Beginner" (page 497) accusing the winer of the first prize exhibiting unfairly. I am glad to notice Mr. Lane (page 537), the winner of the prize, offering to give the names of the twelve varieties he exhibited. Though by mistake he mentioned Gaspard Rozain for Leon Frache, I have since had his word he staged neither variety. I consider this class should be revised before another season. With so many varieties now before the public there should be no doubt, either to exhibitors or judges, what constitutes a Japanese incurved. For example, why should Boule d'Or be allowed in that class? In judging at a show this season, where it was largely exhibited as a Japanese incurved, I could hardly bring myself to be ieve it would be found in the National catalogue classed as such.—EDWIN BECKETT.

[We have heard many expressions of surprise that Boule d'Or should be classed as an incurved in the Japanese section of the N.C.S. catalogue.]

NEW CHRYSANTHEMUMS.

I NOTICE that Mr. E. Molyneux, in his useful notice of new Chrysanthemums (page 514), refers to my seedling, Miss Dorothea Shea, as having been sent out last year. This is a slight error, for as a matter of fact, it was not sent out until the season 1893. Of course in a first season a variety does not, as a rule, appear in its best condition; it is, therefore, the more gratifying to me to learn that, in this, its first year, the variety in question furnished, in Mr. Molyneux's opinion, "the finest individual bloom" that he saw "this season in a rather extended tour."—C. E. SHEA.

THE "SHOESMITH" CUP AND TUBE

INVENTED by Mr. George Coppin of Croydon, and named in compliment to an excellent gardener and Chrysanthemum grower, this

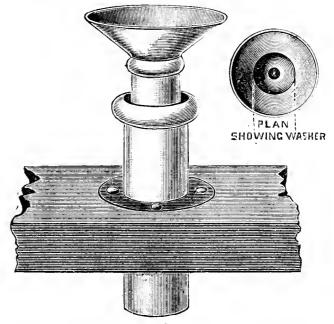
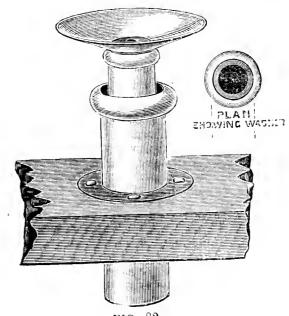


FIG. 81.

receptacle for blooms, including Roses and cut flowers generally, is as neat as it appears effective. The material is white pottery-ware, light Just within the cup is an indiarubber washer that grips the tube and holds it where wanted, high or low, as the case may be. There is also a washer in the neck of the tube that grips the stem of the bloom, holding it in position without the aid of pegs or wedges. From the cup and tube we tried there was no escape of water when held upside down. The washers may be expected to relax their grip in the course of time, but they must cost next to nothing, and can be inserted in a moment. The material is breakable under rough usage, the same as cups and saucers and flower pots, yet both have come into fashion and are



F1G. 82.

not likely to go out. It remains to be seen whether the "Shoesmith" cup and tube will become and remain a favourite with exhibitors of cut blooms. The appliance is ingenious, yet simple and worth trying. example shown in figure 81 is for incurved blooms, that in fig. 82 for Japanese. The invention is "protected."

HAIRY CHRYSANTHEMUMS.

I AM afraid your correspondent "P." (page 515) is not very favourably impressed with these Chrysanthemums. Many of us thought they would form a very valuable addition to our lists, but 1 fear the majority of growers, like myself, have been sorely disappointed. The advent of Mrs. Alpheus Hardy was hailed with delight, but very few exhibitors place any reliance on it. In Louis Boehmer we obtained a plant with a fine habit and good growth, but the less said about the colour the better, unless the plants are grown naturally; under such

culture the colour is far more attractive, and its floriferousness is remarkable. I regard it as one of the best Chrysanthemums we have for decorative purposes. Miss Annie Manda is said to be an improvement on Mrs. Alpheus Hardy. I ask where is the improvement? In W. A. Manda we certainly do get a good decided colour, but its hirsute character is not too strongly developed. It is an excellent decorative variety. H. Ballantine has nothing to recommend it, so far as I am capable of judging. Like your correspondent, I have grown White Plume during the past season, and am so favourably impressed with it I shall grow a larger number next season. It possesses the true Louis Boehmer habit and floriferousness, while the colour is pure white. I certainly think it will make a good decorative variety. Sautel 1893 is a variety of pleasing colour.—J. B. R.

CHRYSANTHEMUMS IN BASKETS.

At the late Windsor Show substantial prizes were offered by the Dowager Duchess of Sutherland for twelve blooms, any kind, arranged in a basket or vase, to be cut with a stem not less than 1 foot in length, retaining the foliage with the blooms. Seven competed, and a very effective display this class produced. Where the colour of the blooms, mostly Japanese, was chosen with a view of harmonising them with hardy foliage, such as Cryptomeria japonica, various forms of Spiræa, Mahonia, Bramble leaves, and such-like, the effect was pleasing. This appeared to me as being an excellent way of utilising these large blooms for decoration, and worthy of imitation.

CHRYSANTHEMUM MARS.

Anyone requiring a really good decorative variety should lose no time in adding this to their list. As exhibition blooms go nowadays, this Japanese is too small for the "boards." The best blooms are of medium size, very full in the centre, the florets are broad and flat. The colour is its great charm, being rich orange yellow, heavily suffused and spotted with chestnut bronze. The habit of growth is most desirable, being dwarf and carrying good foliage.

CHRYSANTHEMUM MRS. A. HARDY.

This variety seems to be a free seeding one, judging from the number of new sorts obtained from it in this way. Mr. Godfrey sends me a bloom cut from a seedling plant which exhibits a marked improvement upon its parent in the massiveness of its florets, which are of greater length, and possessing much more substance. The hirsute appendage, perhaps, is not quite so striking as it is in well-developed blooms of Mrs. A. Hardy, but the extra thick petals coupled with the purity of its colour is an equivalent to the loss of its hair-like addition.—E. M.

DAMP-RESISTING JAPANESE CHRYSANTHEMUMS.

MR. E. MOLYNEUX (pages 514 and 537) gives us such a good account of new varieties that I should be glad if he, or some of your correspondents with knowledge of the new varieties, would give a selection of varieties up to show size that are the best damp resisters. Many gardeners are expected to maintain a display in the conservatory, and whether a bloom will keep three days or three weeks is a matter of consequence to the grower. The following varieties are the best keepers in my collection:—Mons. Freeman (hest of all), Beauty of Castlewood, Mrs. Wheeler, E. Molyneux, Japonaise, J. Shrimpton, Lord Brooke, Princess Victoria, W. W. Coles, Mrs. C. Harman-Payne, Waban, and J. S. Dibbens.—F. GEESON.

HABITS OF CHRYSANTHEMUMS—A SUGGESTION.

It is now too late for the following suggestion to be carried out this season, but in good time for the consideration of nurserymen and others who may see fit to adopt it next autumn. It is this, namely, that if the character and habits of the different varieties of Chrysanthemums—the newer sorts, especially—were given, and less said about the splendid colours, which rarely appear in the blooms when they are open, it would be a step much valued by intending purchasers of plants and cuttings. When a grower advertises a certain variety for sale and states its price, it is presumed that the vendor or introducer has tried the plant first, and, consequently, has a fairly full knowledge of the peculiarities of it as regards growth. When customers at present buy a new sort they have to devote the first season to the work of finding out the proper way to grow it; but if a few hints only were given in the first place, a practical grower would be able to treat the variety with some assurance of success. I have seen many catalogues of Chrysanthemums, and take the following from one of them as being the nearest to what I mean.

"Mrs. C. Harman Payne (Jap. Inc.).—Rosy blush, of immense size and substance; one of the best of the present season's introductions. First-class certificate. Very vigorous grower, 10-inch pot, at least five shoots should be left on each plant, pot firm, use manure water sparingly.

Crown bud."

"President Borel (Ref. Jap.).—Brightest possible rose, pale golden centre. One of the handsomest and most welcome of the season, grand, vigorous grower, 8-inch pot, liberal supplies of manure water. Crown and terminal bud."

A grower cannot, with every variety, find out its proper treatment during one season, but the time is sufficient to prove whether the sort is very late, medium, or very early, and also whether it gives the best flower from the crown or terminal bud. I will not take up your space further than to say that if nurserymen gave some such description as the above with all new sorts which they offer as worthy of cultivation, they would earn the gratitude of hundreds of Chrysanthemum growers.

—G. GARNER.

FRENCH CHRYSANTHEMUMS.

EVER since I can remember the French raisers of new Chrysanthemums have been seriously taken to task for the large number of worthless varieties they have sent out, not perhaps without good reason at times; but, on the other hand, nobody can deny that many of our leading show varieties are of French origin, and still continue to occupy a most important position in the winning stands of the leading exhibitors at Many of us expected a few years ago that the new seedour shows. lings from America would in a short time eclipse the French ones, and that the latter would be practically excluded from our shows in future by the high quality of those from the States; but I cannot help thinking we are as yet a long way off such a consummation. It would perhaps take a very patient man to tabulate the lists of English, French, and American seedlings, so as to show precisely their relative value at say a dozen of our leading shows, and even if this were done I feel sure that the French seedlings would occupy anything but an unimportant position in such a compilation. In looking over the reports of a few of the early shows, it is most remarkable to find how many Japanese Chrysanthemums of French origin have been staged, and how frequently some of them, like Viviand Morel, Mdlle. Marie Hoste, and Etoile de Lyon, appear in all the shows.

I have had the curiosity to put down roughly the names of the French flowers reported to have been staged in two or three of the large classes at Liverpool, the Crystal Palace, the National, Kingston, and Brighton Shows only, with the result that twenty-three varieties are still considered worthy of finding a place on the show boards of those who may be considered leading exhibitors. As there are some people who fancy our French friends have almost reached the length of their tether, these names may be of interest to them, especially as the flowers are of modern date in several cases, and do not include sports which have been obtained from varieties received from the French. They are as follows:—Etoile de Lyon, Viviand Morel, Mrs. C. Harman Payne, Mdlle. Marie Hoste, Boule d'Or, M. Bernard, Bouquet des Dames, President Borel, Madame E. A. Carrière, Condor, Alberic Lunden, Pelican, Van der Heede, Madame J. Laing. Beauté Toulousaine, Mdlle. Thérèse Rey, V.P. Calvat, G. Daniels, V.P. Darquier, Marquis de Paris,

Val d'Andorre, Madame Baco, and Louise Leroy.

These may be all regarded as established varieties, and in the hands of the general public; but there are others in the hands of the trade which will be distributed next year, and consequently swell the list. Many of these novelties are distinctly promising, and although the French raisers, who have hitherto kept us well supplied, do not shine this year, there are one or two new ones who may take their place, and thus maintain the credit of their country for new Chrysanthemums. Of these I consider Mr. Ernest Calvat is destined to take the leading position as a raiser of new Japanese Chrysanthemums, for although he has only been engaged in the work for a period of three years there are more of his seedlings now in the English trade than most of us are aware of. Those which have been exhibited at the meetings of the Floral Committee or which have been seen in good form at the importers, are worth naming. It is unnecessary to attempt descriptions for the present purpose, as they can easily be had from the trade catalogues. They are Madame Calvat, Mdlle. Marie Recoura, Dr. Gaché, Exposition de Grenoble, L'Ami Etienne, Le Drac, L'Isère, Louise, Madame Ed. Rey, Madame Ch. Molin, Commandant Blusset, Madame Ad. Chatin, Madame Ch. Capitant, M. Aug. Perrin, Mdlle. M. Ricoud, Madame Zurick, of which there are sure to be some that will be seen in good form next season.—C. H. P.

DESSERT TABLE COMPETITIONS.

I AM pleased to find that in answer to my inquiry (page 519) as to the proper interpretation of the words of the schedule of prizes of the Hull Chrysanthemum Show, as it relates to the dessert table class, the answers of your numerous correspondents are so overwhelmingly in favour of the judges who made the award. Mr. W. Iggulden (page 532) describes my letter as a "queer nut to crack," but does he not also extract the kernel when, after supporting the judges, he says, "If I intended to compete for the prizes at Hull, I should certainly feel justified in using four good dishes of fruit, both because the wording admits of this being done, and more especially because I am certain that would gain me a few points with the judges?"

"A Yorkshire Bite" (page 532), however, attributes to me two quite

"A Yorkshire Bite" (page 532), however, attributes to me two quite opposite opinions, a ludicrous mistake which an ordinary careful reading of my letter would have saved him from. If I thought the first prize was "rightly awarded" I should scarcely be so foolish as to believe that "if a protest had been entered it would have been disqualified." I expressed no opinion, but stated the case from opposite points of view for the purpose of having openly settled a point which had been raised by numerous visitors to the show. The instructive and interesting replies of your able correspondents will, I think, dispel any misunderstanding that has arisen, and I hope help to secure a good competition next year.—EDW. HARLAND.

WHETHER the adjudicators at the Hull Show were right or wrong in their interpretation of the conditions which guided them in the awarding of the prizes in the dessert-table decoration competition is not a matter which I wish to enter into. I have pondered over the views given as to what is the difference between a "dessert table" and a "dinner table." Evidently "A. D." (page 531) thinks there is a difference. If he had much experience as a decorator in large establishments he would

think differently. The remarks of Mr. Iggulden I fully agree with, wherein he states that if his brother gardeners are well advised they will endeavour, to the best of their ability, to keep up the old custom

of placing some of their best fruit upon the table.

If the framers of the schedule at Hull did not intend dessert to be placed on the table, why was it described as "desscrt?" This latter word quite as much settles the business as "only" Chrysanthemums with any hardy foliage to be used in its decoration. If dessert was not placed, then there should have been spaces left for the number of dishes intended.

I am well aware it is a different matter to arrange a table at a show than at home, but at the same time these decorations are supposed to lead to ideas for home decoration, although it is rarely they can be so adapted. There is the silver to display, and which the majority of owners take a pride in, and the decorations have to be so arranged to fit in with this. The number of dishes of dessert are arranged according to the size of the table. "Yorkshire Bite" oversteps the bounds of argument entirely, wherein he asks "Was every exhibitor to load her table with all the known wines and cordials also all the home and her table with all the known wines and cordials, also all the home and foreign fruit, both fresh and dried, that our fruiterers could supply?" What a "bite" they would have! A table could be laid out "completely" with four dishes or six dishes of fruit, to be varied according to its size. A dessert table could be "completely" laid out with only preserved fruits, although the lady or the gentleman of the house, as the case may be, would think perhaps it would be a poor dessert to be placed before their guests, that is, if they had a garden where fruit was expected to be grown.—A DECORATOR.

AT page 519 of Journal of Horticulture for December 7th, Mr. Harland, one of the Hon. Secretaries to the Hull and East Riding Chrysanthemum Society, solicits the correct view of the following stipulation in the society's schedule, viz, "Dessert table 8 feet by 4 feet completely laid out for six persons, only Chrysanthemums with any kind of foliage to be used in its decoration."

Following Mr. Harland's request is the Editor's desire to publish the opinions of table decorators or show judges upon the subject, and having assisted in adjudicating on table decorations at shows, as well as a fairly large experience in that particular art of gardening, I venture an opinion as to the only construction it appears possible for either exhibitor or judge to put upon the wording of the schedule. The table of proper dimensions as required by the schedule is of necessity provided by the Society, the competitor being requested by strict stipulation to convert the same in a "dessert table" completely laid out, that is to say, everything that is necessary to a fully prepared dessert table, for six persons, must be placed upon it, the character of the dessert used resting entirely with the exhibitor.

That the Society attaches primary importance to a well prepared dessert table is evidenced by the words, "completely laid out," as mentioned by Mr. Harland, subordinating other adjuncts such as floral decorations, so that any deviation from the strict wording of the schedule must assuredly suffer disqualification in the event of a protest to that effect. The following would appear more practicable in such cases:—"The most tastefully decorated dinner table, laid out for six persons, only Chrysanthemums with any kind of foliage to be used in the decoration, dimensions of table 8 feet by 4 feet."-J. P. LEADBETTER,

The Gardons, Tranby Croft, Hull.

[Many persons who have had much experience in judging and the interpretation of ambiguous terms would in this case differentiate between "laying out" a table tastefully and artistically, and furnishing it with comestibles. The condition of "laying out" the table for six persons appears to have been complete in the number of necessary articles for use; the "placing on" the table of fruit and wine was not a specified condition. In cases of doubt in law "custom" becomes the determining factor, and it is undoubtedly the custom to specify that fruit and wine must be placed on a dessert table when that is the intention of show authorities.]

OSIERS.

(Concluded from page 542).

INSECT AND OTHER ENEMIES.

THE green fly, a species of aphis allied to the Pea aphis, does considerable damage to the Osier in certain seasons. If the plants are much affected the tender shoot at the top is killed and the growth is stunted, lateral shoots are thrown out, making the rods "snaggy," and

so injuring the sale. Some kinds are more affected than others.

The "black smother fly," another of the aphis family, in certain seasons also injures the rods in the same way as the green fly. The tops of the rods are completely covered with them, the growth of the Osiers is stopped and the crop injured. This aphis has a preference

for Glibskins, white new kinds, and all rods with a sweet skin.

The "scab" is a disease of the bark: the effects of an injury made by an insect in the early growth. The injury shows itself in the form of a scab or bad place in the rod, going through the bark and some way into the wood; at these places the rod will break when being peeled, or if left brown will break, when being worked, therefore if a crop is much affected it is a very great loss to the grower.

The larvæ of some moths and beetles, which are wood borers, are sometimes found in the heads and in the rods themselves when left for two-year-olds, viz., the goat moth, leopard moth, musk beetle, and the long-horned beetle. The larva of the goat moth, however, requires two or three years to mature, and the moth almost always chooses trees of larger growth.

A great enemy of the Osier is a small round beetle, the Willow beetle (Phratora vitellinæ), which bites the young rods close to the head so severely that they break down with their own weight and come to The beetle is rather more than a sixth of an inch in length. It is somewhat variable in colour, from blue to green, with metallic lustre, having faint spots upon the wing-cases. The body beneath is of a reddish hue, the antennæ are black. It is most tenacious of life, and difficult to kill with water and pungent and poisonous solutions and fumes. It comes forth in May from its winter retreats in the earth, in rubbish, under the bark of trees, in the chinks and crannies of buildings, posts, and rails. Fences, especially fences made of "brush" woven between stakes, form admirable shelters for it. In short, any refuge near the Willow beds seems to be suitable to keep the beetles from birds and from the weather, for they are not affected by cold. Having strong wings, they can fly considerable distances. The eggs are placed under the leaves in groups and without any regular arrangement. In ordinary circumstances the larvæ are found on the Willow plants towards the end of June. They are about half an inch long, dirty white in colour, with black heads and rows of black spots along their bodies; they have six feet. In this country, as in Germany, there are two attacks, one in the spring, and the other in September and October. To prevent the attacks of these beetles, flooding the Willow beds has been resorted to where this can be done artificially. Though they are difficult to drown, this tends to decrease them, or at least those below the water level. Many arc ensconced under the bark of trees, in posts, and hedges above the water mark. Flooding with sewage has been found to be far more effectual than flooling with water. As far as possible, rubbish, and any other possible refuges for the beetles, should be removed from the Willow beds and their neighbourhood. Many things have been tried to dislodge these insects, such as soot, sulphur, and other unpleasant materials. Those who have seen Willow plants growing luxuriantly in beds will appreciate the difficulties of applying insecticides or insectifuges either in dry or liquid form. Paris green and London purple have been experimented with and found of some benefit. These require to be applied early, upon the first appearance of the beetles and before the plants have made too much headway. Care must be taken not to make the arsenical washes too strong, as the Willow leaves are tender. Not more than 1 oz. to 20 gallons of water should be used at first. Some Willow-planters have taken to picking the beetles off by hand, and shaking them into vessels held beneath the plants; this operation is said to have been effectual in small plantations.

The larvæ of the eye hawk moth and the bufftip moth are found feeding upon the Osiers, and also those of the puss moth, but not in sufficient numbers to cause any real injury. The bufftips may perhaps in some localities do mischief, as they are numerous at times and strip

where they feed.

A fungoid growth of the Osier is a kind of rust, similar to the rust on Wheat. It comes off upon the clothes of persons moving amongst The growth of Osiers would be retarded if severely affected the Osiers. by rust.

Rabbits, when numerous, are very injurious, biting off the young shoots and injuring others. Hares are to some extent injurious in the same way, but not so much complaint is made about them as of rabbits. Water rats in some districts do a certain amount of damage by cutting a road through the young growth. Mice on fcn land injure the heads by biting them close to the ground, causing them to die.

PURPOSES TO WHICH OSIERS ARE APPLIED.

The following are the principal purposes to which Osicr rods are applied:

Agriculture.—Nearly 25 per cent. of the supply of Osiers is used for hand baskets for twitch and Potatoes, root and Potato skips, chaff skips, riddle and sieve bottoms, hampers, flats, peds and baskets for fruit, Potato hampers and sieves, and fowl baskets.

Manufactures and Trade.—About 40 per cent. of the supply of Osicrs is utilised in the manufacture of baskets used by cotton spinners, lace makers, hosiers, confectioners, wine and spirit merchants, brewers, carriage makers, fruiterers, gardeners, bakers, grocers, butchers, hawkers,

coal miners, and coal whippers.

Domestic Purposes.—About 10 per cent. of the Osier supply is used for clothes baskets, cradles, wicker chairs, market and other baskets,

and small fancy articles.

Post Office. The manufacture of baskets used to collect and carry letters in the office, and of parcel post hampers, absorbs about 7 per cent. of the supply of Osiers.

Railways. - Railway companies use about 10 per cent. of the supply

for luggage barrows, meat and other hampers.

The remaining 8 per cent. is used for herring peds, baskets for unloading herrings and other fish, smelt hampers, salmon baskets, anglers' hampers and baskets, creels, eel hives, and jugs.

In addition to the above summary of Mr. Little's report, it may be useful to direct attention to an article by Mr. W. J. Cochranc of Hetton-

le-Hole, Fence Houses, Durham, on the cultivation of Osiers as a profitable method of utilising boggy or marsh land, published in the Journal of the Highland and Agricultural Society of Scotland (5th Series, vol. v., 1893), from which the following remarks have been reproduced :-

Provided there is a constant supply of moisture, any soil is suited to the Willow, assuming, of course, that it be of such a nature as to supply the requisite amount of plant food; but the most favourable land is a drained bog, rich in "humus" or decayed vegetable matter, and situated in the vicinity of water, either in the form of dykes, ponds, or the sea.

All the varieties of Osier require a large amount of moisture as compared with ordinary farm crops. Stagnant swamps, however, are not suitable for Osier growing, and such spots would require draining, hut not to such an extent as to cause the land in a few years to become dry; for it must be remembered that it is just as unreasonable to expect a good bed of Osiers on a dry soil as on a too wet swamp. In the first case they soon dwindle down, become stunted in growth, and in a short time yield no return to the grower; whilst in the second case, if too much water be present, the frost and hoar-frost resulting therefrom tend to destroy not only the tops and young shoots but also the roots. The great objection to a too dry Osier hed is that during the spring the plants make too great a call upon the moisture existing in the soil, and thereby reduce it to such an extent as to cause a deficiency in the summer and a check to the growth of the trees.

If hasket work is the main use to which the Osiers are to he put, perhaps the test kind to grow is the common White Willow, Salix alba, which grows fast and attains a large size, yielding tannin and salicin, while, in addition to its utility for hasket making, its wood is suitable for wattles, fuel, and chip. The common Willow, Salix viminalis, is a very good Osier for general purposes, heing suited alike to rough and to delicate work; while a taller variety, the Long-leaved Willow, Salix triandra, growing to a height of 20 feet, is one of the most useful of all Willows. Amongst others, S. ruhra and S. laurina may he recommended. The Crackling Willow (S. fragilis) is rich in salicin, and at the same time yields a fair amount of very good timber.

The method by which Willow-growing is extended is by means of cuttings or slips, not less than 6 inches long, and having at least two healthy huds, taken from good strong plants before the sap has risen, that is, during the month of March for preference. Usually such cuttings may he obtained dressed ready for planting at the rate of about 10s. per 1000, but when they have not been previously prepared, it is necessary to make a clean cut with a sharp knife completely round, and immediately helow a hud, just as you would treat slips of Rose trees or other garden plants. All the huds and young shoots hut three should be carefully removed, one of them only will he required to grow, hut in every case three should he left, to allow for the possibility of any of them failing to produce a shoot.

The slips should be put into rows, singly, about 2 inches deep, and a few inches apart each way, and the soil should he very firmly trodden down against the stem. This is done as soon after the cuttings have heen taken as is practicable—i.e., in March. During the summer they will not require much attention heyond an occasional hoeing, except in very dry weather, when they will be greatly henefited by judicious

However the soil of the future plantation may have been occupied in previous years, it will be necessary to either plough it over and harrow it level, or dig it, which latter plan, if well executed, is the best, though it is the most expensive. If there has been a sward of grass or other herhage, it must be pared off and hurned, the resulting ashes being spread over the land. If it is considered that drainage is required, the tiles must not be placed less than 3 feet deep; in the majority of cases this will be unnecessary. If digging is practised, the land may be trenched into beds 6 to 20 feet broad, according to the size of Osier to be cultivated—cross furrows or narrow ditches heing formed to carry the surplus water. If the plough has been used, the trenching and hedding up should be done soon after the harrows have completed their work.

Transplanting should be left until the spring following the year in which the cuttings were planted, when it may he done without fear of injury. It is at this period that great care is needed to insure a successful hed or "holt," for it must be remembered that the plants have to remain here for the rest of their life, and no amount of trouble should be spared in their proper planting and establishment. Rows should be struck out 3 feet apart on the higher ground (a good distance between each water furrow heing about 10 feet), so that the rows will he at even distances throughout the plantation. The plants should be placed uniformly 1, 2, or 3 feet apart (for general purposes 2 feet is the best distance); the larger species require more room than this, but in some parts of England the smaller kinds of Osiers are planted 12 inches apart, the distance between the rows being only

Before the plants are finally placed in the ground the shoots which have formed from the extra buds may he cut off as close as possible to the stem, allowing two or three huds to remain for the next year's growth, hut all those shoots which would go below the ground must be entirely removed. A spadeful of earth should be put round the young tree, and firmly trodden down, so as to give it stability; finally, the land should be cleared up and thoroughly dressed for the ensuing

Flooding with sewage water, if skilfully and carefully practised, is a great boon to the Osier grower; hut unless the plants are growing in the immediate vicinity of some populous town or village this is impossible.

On sewage farms, the number of which is rapidly increasing, it has been the custom to grow grain and other crops, notably Cabhages; but the reluctance manifested among the inhabitants to vegetables grown with the aid of sewage is so great that consumers prefer to huy an inferior article from the market garden. To remedy this the attention

of the sanitary authorities has been directed to the growth of a morsuitable and as productive a crop to take the place of others which are no longer profitable; and in the industry of sewage-farming, Osiers now take a leading place on the list of products recommended to be grown.



FRUIT FORCING.

Peaches and Nectarines .- Earliest House .- When the flowers show colour cease syringing the trees, maintaining, however, moderate moisture in the house hy sprinkling the floors on bright days in the morning and in the early part of the afternoon. The temperature may be maintained at 50° to 55° by day, ventilating from the first degree upwards, and closing at the latter. Fifty degrees at night is admissible in mild weather, 40° to 45° from fire heat being more advantageous than a higher temperature. Directly the anthers show clear of the petals the temperature must be raised in the morning to 50°, and kept between that and 55° through the day, with ventilation, more or less, according to the state of the weather, allowing an advance to 60° or 65° from sun The principle is to get stout blossoms, sturdy stamens with bold pollen-laden anthers, and well-developed pistils; then resort to fertilisation on fine days after the house has been ventilated some little time. If the trees are in good condition, and they are brought into blossom under favourable circumstances, the pollen will be freely discharged, and when this is the case the set generally is a good one, even without artificial impregnation. It is desirable, however, to aid fertilisation by shaking the trellis daily, or brush the blossoms over with a plume of Pampas Grass, or a rabbit's tail mounted on a small stick.

Second Early House.—The trees to afford ripe fruit in May or early in June must be started without delay. Fire heat need only be employed to keep out frost at night, and to insure 50° hy day, ahove which ventilate freely. The main point is to bring the trees on slowly. The trees should be sprinkled on fine mornings and afternoons, but damping the house occasionally in dull weather will suffice, for a close moist atmosphere tends more to leaf growth than a sturdy blossom. Examine inside horders, and give, if necessary, a thorough supply of water slightly in advance of that of the house. Outside horders should he protected with leaves or litter, so as to prevent the soil becoming

Succession Houses .- Proceed with the pruning and dressing of the trees, thoroughly cleansing the house. Dryness at the roots will cause the huds to fall, so if there is any doubt give a thorough watering. It will not do any harm in properly drained borders. Keep the temperature as cool as possible to insure a long and complete season of rest for the trees.

Pines.—Preparations must now he made for producing ripe fruit in May and June. As Smooth-leaved Cayenne, Black Jamaica, and Charlotte Rothschild, which failed to show fruit in October and November, will not now throw up in time to ripen at the period named, attention must be directed to such varieties as Queen, Enville, and Providence. Choose at once those plants which have an enlarged base, with a tendency to open at the centre, indications of the fruit being shortly visible, and place them in a light house or pit, affording a hrisk bottom heat of 85° to 90°, a top heat of 60° to 70° at night, 70° to 75° by day, with 10° more when the external conditions are favourable. Maintain a genial atmosphere hy damping surfaces other than hot-water pipes on fine afternoons, and syringing the plants lightly once or twice a week. Examine the plants for watering once a week, pply it copiously when required, which will be about every ten days, using tepid water, with a little guano or some fertiliser in it.

Figs.—Early Forced Trees in Pots.— As mentioned in previous calendars early Figs are hest secured from trees in pots, Early Violet and St. John's ripening first, and are followed by White Marseilles and Brown Turkey. A slight warmth at the roots is highly beneficial, this being furnished by two-thirds leaves and one-third stable litter, standing the pots on 9-inch pedestals of loose bricks to prevent them settling, and bringing up the fermenting materials so as to maintain a temperature of 60° to 65° about the pots in the early stages. When the heat at the roots is 70° or more during the early part of the forcing process the growth is too rapid, and it may cause the first-crop fruit to fall at a later stage. Where the trees were started last month for affording fruit in April they will now be unfolding their leaves, and the temperature of the bed at the base of the pots may he 75°. The temperature of the house should also be increased gradually to 60° at night, 65° by day by artificial means in severe weather, 5° more in mild weather, 70° to 75° with sun heat and moderate ventilation, closing at 75°. Supply water to the roots as required in a tepid state. Syringe the house and trees in the morning and afternoon of fine days, damping the floors instead of syringing the trees in dull weather.

Cherry House. — To insure a supply of ripe Cherries from the middle of April onwards the house containing the trees employed for that purpose must now be closed. Be sparing of fire heat at the commencement, not employing it unless absolutely necessary to maintain the temperature at 40° at night, 40° to 45° by day, ventilating at 50°, and closing at that temperature. Syringe the trees early on fine afternoons, omitting it if there is danger of the buds not becoming dry before nightfall. The border will be sufficiently moist through the removal of the roof lights, water seldom being required under those circumstances until the fruit commences swelling. If not in a healthy state supply water to bring it into a thoroughly moist condition. If dry trees in pots will require repeated supplies of water to secure the thorough moistening of the soil to the base. In a light, airy, properly heated structure Cherries are readily forced when established in pots and grown under glass a year previous. Early Rivers, Black Tartarian, and Governor Wood are excellent varieties. Half-standards are the best for pots, or such length of stem as will give heads well up to the glass.

Cucumbers.—The weather has been favourable to Cucumber plants, there having been a fair amount of sunshine. Light is very important in the cultivation of the Cucumber in the winter, and now the days are so short keep the glass as clean as possible both inside and outside. Do not supply strong liquid manure too freely. It should be tepid, and is better varied than always the same. Top-dressings of sweet rich compost applied to the roots promo'e vigour, supplying a little at a time and often, always previously warmed and in a moist root-favouring condition. Do not overcrop the plants, and do not allow the fruit to hang too long. They keep fresh several days after being cut if the stems are inserted in saucers of water in moderate heat. Remove superfluous fruits and growths as they appear, and tie the shoots as necessary. Red spider and white fly are best subdued by painting the hot-water pipes lightly with a cream formed of flowers of sulphur and skim milk. It is also effectual against mildew. It is a good plan to sponge any infected leaves with a solution of softsoap on the first appearance of red spider, 2 ozs. to a gallon of water sufficing, and dust flowers of sulphur on any parts affected with mildew. Green or black aphides succumb to dusting with tobacco powder, or careful fumigation on a calm evening, repeating in the following morning early.

Where early Cucumbers or Melons are obtained from frames, and there are no other means of raising the plants, some fresh Oak or Beech leaves with one-third of stable litter ought now to be thrown together, and, if necessary, be moistened so as to induce fermentation. The heap should be turned when warmed through alike to sweeten, to bring all into a genial condition by turning the outside to the inside.

THE KITCHEN GARDEN.

Asparagus, Seakale, and Rhubarb.—Where a regular supply of Asparagus has to be kept up with the aid of mild hotbeds in pits or frames, fresh roots have to be lifted and introduced into this heat at least every three weeks, shorter intervals being desirable if the demand is heavy and the roots plentiful. Should we once more experience extra severe frosts of long duration during January, this will greatly interfere with the work of lifting the roots, especially if no precautions have been taken of either heavily covering a portion of the old bed or that of lifting enough roots, storing them in a shed or other place where they can be covered with fine moist soil and plenty of litter. On no account ought the roots to be long exposed to frosty air or be dried in any way, as this will have the effect of greatly weakening the top growth

as this will have the effect of greatly weakening the top growth.

Seakale should also be lifted and stored in moist soil in readiness for placing in the Mushroom house or a warm dark corner. The crowns of the old purple-topped form are usually quite hardy, but not so those of the Lily White, and these ought, therefore, in particular to be either lifted and protected or be covered with ashes or litter where they now are. Rhubarb requires no protection, but a severe frost may render it impossible to lift the clumps when most wanted for forcing, and some of these again should either be got up in readiness for forcing or be protected where growing. If any roots of either Seakale or Rhubarb are being forced in the open ground, the heating material should be examined frequently. When largely composed of leaves these may become cold and saturated, and require livening up with a little stable manure or fresh drier leaves. If stable manure has been principally or solely used, then overheating, especially after a change from cold windy to mild weather, may occur. Remedy the latter dangerous occurrence by opening out the heating material, banking over the tubs or pots again according as this can safely be done.

Ridney Beans—These require a brisk heat, or say that of a Cucumber house or Pine stove, as much light as possible, and should be carefully watered. Syringing is not necessary, but if the pots are fairly well filled with roots a little soot water or other liquid manure may well be given occasionally. Sion House is one of the best for early forcing; Ne Plus Ultra and the dwarf Osborn's Forcing also being suitable. New seed will always germinate the most quickly and strongly, the plants throughout being of superior vigour to any obtained from old seed. If wanted up quickly set the pots direct on the hot-water pipes. Not less than twenty-five pots should be filled at once, the sowings being divided by intervals of from a fortnight to three weeks. Nine-inch pots answer well when properly drained, and nothing better than old Chrysanthemum soil can be used.

Salading.—If there are any signs of the Endive not holding out well, or if Lettuces are always in demand, seed of any White Cos form may be sown moderately thickly in pans or boxes of fairly rich soil, and placed in heat to germinate. Before the plants become drawn and damping sets in, transfer to shelves near the glass in a warm greenhouse or other structure where a gentle heat is constantly maintained. There should be no thinning out, the aim being to have a number of plants for cutting over Mustard and Cress fashion when about 4 inches or rather more in height. Sow seeds in two or three boxes at a time every

fortnight for succession. Early raised plants of either Golden Queen or Early Paris Market Cabbage Lettuces force admirably in beds of good soil on the top of a gentle hotbed, excellent hearts being had late in March or early in April. Sow some seeds soon, and treat very much as advised in the case of the Cos varieties for cutting young, only there should be no crowding of the plants. Much Endive ought not, therefore, to be introduced into these warm dark places at one time, but rather a few plants each time at fortnightly intervals. Sow Mustard and Cress rather frequently, or every week; perfectly fresh good soil should be used every time. Sow the seed thickly, the Cress on the surface and the Mustard nearly so; keep the soil uniformly moist, and cover with mats or brown paper till the salading is $1\frac{1}{2}$ inch in height, when it may be gradually exposed.

Seed Potatoes.—These ought from the first to have been separated from and treated differently to the ware or cooking Potatoes. Should all have been stored together then ought the first favourable opportunity be taken of separating them, or otherwise those intended for planting will, in common with the rest, sprout prematurely, and be greatly weakened accordingly. It has been repeatedly proved that much the best results attend the practice of planting medium-sized whole tubers in preference to either small or cut sets. Therefore select and store the requisite number of medium-sized tubers rather thinly, and in a cool light place. They ought not to be stored in deep baskets or boxes. If there are no suitable sheds let the seed Potatoes follow Apples on the shelves in fruit rooms. The Ashleafs ought to be stored in a single layer on smallest ends in shallow boxes or trays, as should they lose their first strong sprout their value will be greatly reduced. If a severe frost be anticipated all ought to be well protected, but uncover after the frosts are over. If it is intended to force Potatoes early either in pots, boxes, or pits, select a good short-topped early variety, such as Mona's Pride, Old Ashleaf, and Sharpe's Victor, and start them into active growth in a vinery or Peach house.

Ware Potatoes.—Allowing these to form long sprouts greatly detracts from their quality when cooked, and should be prevented as much as possible. When outside work cannot well be proceeded with, the men may be employed in turning heaps of Potatoes, any that are diseased being thrown out, and sprouts just beginning to form on the rest rubbed off. Avoid storing them in great heaps, keep them dark, and protect heavily whenever severe frosts are imminent. Potatoes in clamps ought also to be examined, and if need be turned and treated as just advised. A dry mild day should be chosen for this work, and the heap be again heavily covered with dry straw banked over with soil.



APIARIAN NOTES.

THE WEATHER AND BEES.

The weather for the past few months has been of a most changeable nature, calms and storms following one another in quick succession, the same with high and low temperatures. On the 8th, 9th, and 10th of December the thermometer ranged between 9° and 32°, and on the 11th it stood nearly all day at 51°. Storms were even more sudden, a main feature in them being their eccentricity in blowing furiously in narrow and diversified tracks. The great storm on the 17th ult. that devastated some parts in the north of Scotland, was with us, comparatively speaking, very moderate, but the one on the 8th inst. proved of a more furious character. Fortunately, however, our hives were unmoved, although fully exposed to the full force of the gale.

Since October bees have not been long confined to their hives, but at the beginning of November, early in the season as it was, several hives of bees that came under my notice showed signs of abdominal distension, and there were more dead bees at each than were at the whole of my hives last winter. The cause was not far to seek. These hives had young queens hatched in August. They were bent on breeding, and did so to a great extent. longest wintry weather at one stretch being the end of October and beginning of November, the young bees did not get an airing in time, hence their succumbing to the protracted confinement. I have repeatedly shown the fallacy of the doctrine that aged bees constitute a dwindling apiary, and that one of increase can only be insured by having late bred bees, also that bees live during working weather six weeks only. I possess at least half a dozen hives that have had very few bees bred in them since June. The aged bees are numerous, and I have no hesitation in saying many of them will be alive next May, yet I never experienced a more trying time for bees during the two months they were at the Heather than I did this year. The first month was very stormy, and the other windy, if with less rain, and often the bees had great difficulty in reaching their hives. But they are still alive, although according to the theory propounded every one should have been dead by the middle of July. Bees are never old and prepared to die until their wings become ragged and unable to bear their bodies aloft.

As all my hives have had good flights, I have no fears of further calamity from any form of distension; but owing to the changeable weather they have lessened their stores, and some of them feel much lighter than I would have expected. Only a few of them may suffer from short stores, but these will be supplemented the first opportunity in January after their first flight of 1894. This is necessitated, too, by the fact that young bees are sure to be hatching by the middle of the month, or perhaps earlier. A lesson from the foregoing should be valuable to beginners, showing as it does the stupidity of stimulating bees to breed. The bees in the hives mentioned never were fed, and, contrary to my wishes, bred much, when I would have preferred them to be quiet. Feeding bees, if they have sufficient stores, does more harm than good, and crown feeders militate against progress, and increase the labour of the bee-keeper.

Before despatching this letter I went to have a peep at the bees. It is midday of the 16th, the thermometer is standing at 54° in the shade; every hive is busy, pure Carniolans the least. Punics are busy carrying pollen, mostly from pea meal, but from flowers as well. Hellebores are in bloom, Snowdrops and Primroses are on the eve of opening, while a few of the hardy Chrysanthemums near the house have their flowers fresh. The barometer in two days has risen from 28·10 to 29·80.—A LANARKSHIRE BEE-KEEPER.

HUMBLE BEES.—A correspondent writes from New Zealand:—There was a very noticeable increase in the number of humble bees last year, and this season it is more noticeable, much to the regret of all who keep hives of the ordinary bees, for it is believed the large bee is depriving them of honey, and that in a few years apiaries will contain no honey. Last season some found that their honey was not nearly so plentiful as formerly. The same complaint is heard everywhere, and I have not yet heard a good word said on behalf of the humble bee, and it is said that efforts are being made to reduce their numbers. If all that is said against this importation be true, it is to be regretted that they were brought out to fertilise the Clover.

TRADE CATALOGUES RECEIVED.

Sutton & Sons, Reading.—Amateurs' Guide in Horticulture. E. Webb & Sons, Wordsley, Stourbridge.—Spring Catalogue. B. S. Williams & Son.—Flower, Vegetable, and Agricultural Seeds.



*All correspondence should be directed either to "THE EDITOR" or to "THE PUBLISHER." Letters addressed to Dr. Hogg or members of the staff often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Bee subjects, and should never send more than two or three questions at once. All articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post, and we do not undertake to return rejected communications.

Chou de Burghley (R. C. W.).—The specimen you send is fairly representative of Chou de Burghley, and although there is no Broccoli head in the centre, we can see a very distinct difference in the divided head from that of an ordinary Cabbage. The miniature heads do not usually form till the spring, and not then in all the plants. We think too early sowing is often practised with this vegetable, the month of May, in our experience, being soon enough. When well cooked Chou de Burghley is quite distinct in flavour from the ordinary Cabbage. We have found it both hardy and good in the spring.

Early Forced Lily of the Valley (A. H. E.).—In order to have Lily of the Valley in flower by the middle of November forcing should commence fully three weeks before the spikes are wanted. If the crowns will not start within a fortnight of being introduced into a strong heat it is very doubtful if they will grow at all. Well prepared home-grown crowns are fully equal to the best imported, but as a rule are not sufficiently matured to force so early as desirable in your case, and you ought to procure some of the earliest Berlin crowns imported, or say directly some of the wholesale importers get them. If you have a propagating frame over a tank of hot water that is the place to force Lily of the Valley. Do not pot the crowns, but merely place them thickly in cocca-nut fibre refuse. The latter should be kept constantly moist, and the frame closed and darkened by mats. A strong heat, or say about 90°, will be needed, and you will have to be content with comparatively small spikes with weak stems and no leaves.

Limewashing Vinery Wall (F. J.).—A limewashed wall is more favourable on the score of light and more pleasing to a cultivator's eye than a dingy cemented one; the first indicates cleanliness, and the latter dirt—disease germ infestation. The wood, iron, and trellis work should be thoroughly cleansed with softsoap, hot water, and a brush, and the glass with c'ean water. The walls also may be washed with hot water, and when dry dressed with a solution of sulphide of potassium, 1 oz. to a gallon of water, using a rather stiff clean painter's brush. The sulphide of potassium may be procured of any chemist. It is commonly known as lime of sulphur.

Bone Ash as a Manure (J. B).—Bone ash is a phosphatic manure, supplying the soil with phosphates and about 1 per cent. of alkaline salts. It contains no nitrogen, the element forming it being lost in the burning. The manure may be used for all garden crops, including flowers, fruits, and vegetables, at the rate of 2 to 4 ozs. per square yard. It is a permanent manure—that is, it lasts longer than the year in which it is supplied, and is more calculated to promote a sturdy floriferous or fruitful habit and a fibrous root formation than free growth; but this can be induced by supplying nitrates of potash or soda, or sulphate of ammonia when the plants or trees are starting into growth, about one-fourth of one of these substances being sufficient to mix with the bone ash for plants in pots, also for Vines, Roses, or vegetables. Alone it should only be given at intervals during the growth of plants and crops.

Resting Lælia anceps (A. E.).—This is one of the most serviceable and attractive Orchids for flowering during midwinter, and we presume yours are now in flower. It will not hurt the plants, and the flowers will last the best part of a month if they are placed in a cool house, provided this is kept dry and just enough heat maintained in the hot-water pipes to insure a gentle circulation of air. After flowering return the plants to the house in which they were grown, an ordinary stove temperature, or such as suits Cattleyas when at rest, answering well. Keep the soil only just moist, enough water being given to prevent shrivelling, and not sufficient to excite growth. March will be quite soon enough to start them afresh, what repotting or top-dressing there may be needed being done then. Keep Cælogyne cristata in the house in which the plants formed and matured their growth. The flower sheaths ought to be already showing at the base of each strong young pseudo-bulb, but should not open for another month or rather longer. If freely wa ered now many of the flower spikes would damp off, and only enough water should be given to prevent the soil becoming dust dry.

Preventing Cucumber Root Disease (Reader).—The grower

referred to does not use horse or any animal manure with the soil when it is of a fibrous nature, and only about one-fifth of fresh horse droppings when it is ordinary loam and not containing a large percentage of the remains of previous dressings of manure. It is quite possible to grow as large a crop and of as good quality in Cucumbers by the use of artificial manures alone as by mixing farmyard manure with the soil. The soil, however, must contain a fair amount of humus, and be of an open nature so as to encourage a free root action. Kainit is an excellent dressing for land liable to produce some kinds of club in the plants grown upon it. It may be applied at the rate of 2 lbs. per rod, or if you want to mix it with the soil, 2 ozs. is sufficient for an ordinary barrowload of soil with farmyard manure added, and double the amount may be used without the farmyard manure, but an excessive use of kainit is liable to sterilise the soil, therefore it must be used in moderation. The following is a good chemical manure for Cucumbers: three parts bone superphosphate, two parts powdered saltpetre, and one part ground gypsum, mixed. Keep it dry, and apply 2 to 4 ozs. per squarc yard at fortnightly intervals as a top-dressing, and wash in.

Diseased Carnation Plants (An Old Subscriber). — The plant with roots (No. 1) is infected with a fungus (Helminthosporium or

with roots (No. 1) is infested with a fungus (Helminthosporium or Heterosporium echinulatum). It was first described in England on Carnations twenty-three years ago by the late Rev. M. J. Berkeley. It was introduced into this country from the continent, and in America it is considered a recent importation from Europe. The flocci (mycelial threads) are irregular, simple or slightly branched, bearing here and there multiseptate spores; these are brown in colour, and when produced in abundance, together with the threads, darken the spot upon the leaf. The spot then possesses different shades of colour, according to the number of spores produced. The growth of the fungus from the centre of the spot is centrifugal, and the dark colour is frequently arranged in concentric rings, of which your plant affords excellent You may dip the plants affected in or syringe them with a solution of sulphide of potassium, half an ounce to a gallon of water, and repeat at intervals of a fortnight to three weeks. The other plant (No. 2) is attacked by the Carnation rust fungus (Uromyces caryophillinus), the presence of which is indicated by a slight swelling on the leaf or stem, one-eighth to a quarter of an inch long, and in some cases The surface of the swelling soon becomes pale or nearly as broad. nearly colourless, since the green colouring matter at that point is destroyed by the growth of the fungus, and is obscured by the crowded fruiting threads (mycelium) and young spores of the fungus. fungus matures these spores become brownish in colour, are roundishoval in shape, and so close together as to impart a dark brown colour to the colony or sorus (fructification part). The epidermis (skin) of the leaf or stem is ruptured by the growth of the fungus within the tissues and turned on one side, where it usually clings as a whitish ragged looking film by the side of the now exposed mass of spores. The rust fungus attacks the Carnation at all stages of its growth, not sparing the young cuttings, but they were probably infested before insertion through being taken from a rusted plant, which, as regards the cuttings, showed no trace externally of the threads within the tissues.

most approved by growers is to destroy all affected plants, remove the soil, and disinfect the surroundings—that is, thoroughly cleanse the house. This means the loss of valuable seedlings, and as yours is one we recommend your quarantining it and all infested plants, spraying them at intervals of ten days to a fortnight with Bordeaux mixture, made as follows: -4 ozs. of sulphate of copper dissolved in a vessel by itself in 2 gallons of water, 4 ozs. quicklime (light lumps) slaked in another vessel, and formed into a thin whitewash by adding water. When cool pour the whitewash into the mixture containing the sulphate of copper solution slowly through a hair sieve, stir, and add enough water to make 7½ gailons, stirring well. The mixture must be used at once, it being preferable to lay the plants on their sides on a floor, spraying them so as to wet every part of them. This can be done easily by turning them, and taking care to only coat the parts with the finest possible film of the mixture. The house may be sprayed, wetting every part, and any spores lurking about will be destroyed directly they push their germinal tubes, whilst the coat on the plants will render them invulnerable to any spores alighting on them. The mixture must not be kept over twenty-four hours, therefore take such proportionate part of the ingredients each time as is needed for spraying the plants. Illustrations of the above-mentioned diseases attacking Carnations, with descriptive

notes, were published in the Journal of Horticulture for July 13th, 1893.

Celery Decaying (Constant Reader).—In most gardens a few "sticks" of Celery are found with completely decayed hearts when lifted; but your experience is a more serious one, five bad "sticks" out of every six being an extraordinary loss. Unfortunately, it is very doubtful if we can suggest either the actual cause or the remedy. It is not merely Celery grown in trenches that is liable to behave in this way, but the same thing occurs in America, where the bulk of Celery grown is planted on the level. Nor has the past hot summer anything to do with it, as, according to your letter, the losses have been quite as heavy in previous years. American authorities state that it is the most rapidly destructive disease that affects Celery, and add that it has not yet been fully investigated and classified. It is most probably some form of bacterial disease, the germs being powerless against fully matured outer stalks, but are quickly at work when washed down into the heart. Anything that is to operate against the disease germs must the heart. Anything that is to operate against the disease germs must also find its way down to the hearts, though if the leaves were very lightly sprayed with the Bordeaux mixture the amount that would reach the eatable portion of Celery would be infinitessimal and quite harmless. One recipe for mixing and applying this remedy is as follows: Dissolve 2 lbs. of powdered sulphate of copper in 4 gallons of hot water, adding another 4 gallons of cold water. Slake 1 lb. of caustic lime, then diluterit to the thickness of milk in 2 gallons of water. When the copper solution is quite cold add the limewash, and well mix all together by repeated stirring. It should be sprayed very lightly over the rows of Celery within twenty-four hours of mixing, and must be kept constantly stirred while being used. An earthenware or wooden vessel should be always used. Dry weather should be selected for the spraying, and there ought to be not less than three applications during the summer months. It is somewhat strange that you should have lost so much Celery every year lately, and in all probability the severe attacks are due to neglect in burying deeply or mixing the decayed Celery with quicklime. None should be left lying about, and the site chosen for the Celery trenches next season ought to be well away from where this crop has been grown of late.

Names of Fruits.—Notice.—We have pleasure in naming good

typical fruits (when the names are discoverable) for the convenience of regular subscribers, who are the growers of such fruit, and not collectors of specimens from non-subscribers. This latter procedure is wholly irregular, and we trust that none of our readers will allow themselves to be made the mediums in infringing our rules. Special attention is directed to the following decision, the object of which is to discourage the growth of inferior and promote the culture of superior varieties. In consequence of the large number of worthless Apples and Pears sent to this office to be named, it has been decided to name only specimens and varieties of approved merit, and to reject the inferior, which are not worth sending or growing. The names and addresses of senders of fruit to be named must in all cases be enclosed with the specimens, whether letters referring to the fruit are sent by post or not. The names are not necessarily required for publication, initials sufficing for that. Only six specimens can be named at once, and any beyond that number cannot be preserved. They should be sent on the first indication of change towards ripening. Dessert Pears cannot be named in a hard green state. (Devon).—1, Dumelow's Seedling; 2, Blenheim Pippin; 3, Not known. (Knebba).—1, Not known, no flavour; 2, Swan's Egg; 3, Hunthouse; 4, Orange Goff. (J. E. Kelly).—1, Adams' Pearmain; 2, Kerry Pippin; 3, Margil; 4, Winter Hawthernden; 5, Knight's Monarch. 6, Round Winer Nonesuch.

Names of Plants.—We only undertake to name species of plants, not varieties that have originated from seed and termed florists' flowers. Flowering specimens are necessary of flowering plants, and Fern fronds should bear spores. Specimens should arrive in a fresh state in firm boxes. Slightly damp moss, soft green grass or leaves form the best packing, dry wool the worst. Not more than six specimens can be named at once, and the numbers should be visible without untying the ligatures, it being often difficult to separate them when the paper is damp. (J. J. S.).—1, Libonia floribunda; 2, L. penrhosiensis. (H. M.).— Echeveria retusa. (C. P.).—Adiantum formosum. (L. B.).—1, Ardisia crenulata; 2, A. mamillata. (Amateur).—Cyperus alternifolius. (H. M.).—Cypripedium insigne Maulei. (Orchid).—A good form of Lælia anceps. (C. H. D.).—Dieffenbachia Bausei.

COVENT GARDEN MARKET .- DECEMBER 20TH.

TRADE slightly brisker for Christmas.

Grapes per lb	40	6 to 9 0 42 6 2 0 15	6 0 0	Peaches, per doz Plums, per half sieve St. Michael Pines, each	0	0 to 0	0
		VE0	JET/	ABLES.			
Leeks, bunch	0 1 0 2 1 3 2 3 1	3 to 0 0 0 4 0 0 3 0 1 0 4 0 7	0 6 0	Mustard and Cress, punuet Onions, bunch Parsley, dozen bunches Parsnips, dozen Potatoes, per ewt. Salsafy, bundle Seorzonera, bundle Shallots, per lb. Spinach, bushel Tomatoes, per lb. Turnips, bunch	0 0 2 1 2 1 1 0 8	2 to 0 3 0 0 3 0 0 0 4 0 1 6 0 3 0 0 0	0 6 6 5 0 0 7

AVERAGE WHOLESALE PRICES .- CUT FLOWERS.

Orchid Blooms in variety. Chrysanthemum blooms very plentiful this season, hence the price is very low.

the price is very low.									
•	g.	d.	g.	d		8.	d.	s.	d.
Arum Lilies, 12 blooms	4	0 to	6	0	Nareiss, White (French),				
Azalea, dozen sprays	1	0	1	6	dozen bunehes	2		to 3	
Bouvardias, bunch	0	6	1	0	Orehids, per dozen blcoms	3	0	12	
Camellias, dozen blooms	1	0	3	0	Pelargoniums, 12 bunches	6	0	12	0
Carnations, 12 blooms	1	6	3	0	Pelargoniums, scarlet, doz.				
Chrysanthemums, dozen					bunches	4	0	6	0
bunches	2	0	6	0	Primula (double), dozen				
Chrysanthemums, doz. bls.	0	6	2	0	sprays	0	6	1	0
Eucharis, dozen	4	0	6	0	Pyrethrum, dozen bunches	2	0	4	
Gardenias, per dozen	2	0	4	0	Roses (indoor), dozen	0	6	1	6
Hyacinth, Roman, dozen					"Tea, white, dozen	1	0	2	0
sprays	0	6	1	0	"Yellow, dozen	2	0	4	0
Lilae (French) per bunch	3	6	6	0	Roses, Safrano (French),				
Lilies of the Valley, dozen					per dozen	0	9	1	6
sprays	2	0	4	0	Roses, Safrano (French),				
Lilium longiflorum, per					per 100	1	6		0
dozen	6	0	9	0	Tuberoses. 12 blooms	0	4	0	6
Maidenhair Fern, dozen					Violets, Parme (French),				
bunches	4	0	6	0	per bunch	3	0	5	0
Marguerites, 12 bunches	2	0	4	0	Violets, Ozar (French), per				
Mignonette. 12 bunches	3	0	6	0	bunch	2	0	3	0
Narciss, Yellow (French),					Violets (English), dozen				
dozen bunches	2	0	4	0	bunehes	1	6	2	0
		-	. A N	me	IN POTS.				
					IN TORK		d		d.
		d.		d.	Haliana mlanta man asah			to 10	
Arbor Vitæ (golden) dozen	6	0 t c		0	Foliage plants, var., each.	Δ	U	10 10	v
Aspidistra, per dozen	18	0	36	0	Hyacinth, Roman, dozen	12	0	18	0
Aspidistra, specimen plant		0	10	6		12	ő		0
Chrysanthemums, per doz.		0	9	0		3	ő		ŏ
" large plants, each	1	0	2	0	Lycopodiums, per dozen	6	0		
Draeæna terminalis, per	10	^	40	0	Marguerite Daisy, dozen	6	0	9	0
dozen	18	()	42	0	Mignonette, per doz	O	v	J	v

		T.T	1477	T'O	IN IUIN			
	8.	d.	s.	d.		d.		
Arbor Vitæ (golden) dozen					Foliage plants, var., each 2	0 to	10	0
Aspidistra, per dozen	18	0	36	0	Hyaeinth, Roman, dozen			
Aspidistra, specimen plant			10	6	pots 12		18	
Ohrysanthemums, per doz.			9	0	Lilium Harrissi, per dozen 12	0	24	
" large plants, each	1	0	2	0	Lycopodiums, per dozen 3		4	-
Draeena terminalis, per					Marguerite Daisy, dozen 6		12	
dozen	18	0	42	0	Mighonecoc, per depris	0	9	-
Draeæna viridis, dozen		0	24	0	bijities, dezen	0	9	-
Ericas, per dozen	9	0	18	0	Palms, in var each 1	-	15	
Euonymus, var., dozen	6	0	18	0	" (specimens) 21		€3	
Evergreens. in var., dozen	6	0	24	0	Pelargoniums, scarlet, doz. 6		.9	0
Ferns, in variety, dozen			18	0	Poinsettia, per dozen12	_	15	
Ferns (small) per hundred	4		6	0	Solanums, per dozen 9	0	12	0
Fieus elastica, caeh	1	0	7	6				



PROFITABLE LIVE STOCK.

How to feed to profit is a matter concerning which some of the best stock breeders are at variance, sides being taken for and against extreme early maturity. Some there are who would limit the age to three years. Their views had powerful support at the annual meeting of the Smithfield Club by Mr. J. D. Fletcher, who had at the Cattle Show tangible proof of their importance in his first prize Shorthorn heifer, weighing 16 cwt. 3 grs. 24 lbs. at the age of two years nine months, and his champion polled Aberdeen-Angus heifer, Pride of the Highlands, two years eleven months old, weighing 17 cwt. 2 qrs. Other graziers advocate an extension of the term of maturity to four years on the score of economy of feeding. It is altogether a question of profit and loss, and that is the test to apply to it. Extravagant feeding for the mere winning of a prize will not bear such a test, nor will much stall feeding, if profit has to be looked for in the manure, as it often has been. But if straw used for litter is to be regarded as an equivalent for the manure, then the margin of profit is often a very narrow one indeed. In proof of this we quote from a pamphlet on "The Early Maturity of Live Stock," published

some six years ago by the Field, a complete record of the dietary of a beast sold as prime beef at seventy-one weeks old :-

	20	٥.	u.
Purchase of a calf	2	0	0
Four weeks' new milk, 6 quarts daily, at 2d. per quart	1	8	0
Eight weeks' skimmed milk, 6 quarts daily, at 3d. per quart, and 2 lbs. meal,	-	·	•
	_	_	_
at $1\frac{1}{2}$ d. per lb	1	5	8
Seventeen weeks in June, July, August, and September on a daily diet of 2 lbs.			
linsced cake, 2 lbs. beanmeal, Mangold, hay, grass, Clover, &c	3	19	4
Twenty-six weeks to end of March, 5 lbs. cake and meal daily, 3 bushel of	•	10	^
	_	• •	
roots, hay, and straw for fodder	6	16	6
Sixteen weeks to harvest 8 lbs. cake and meal daily, Mangold, grass, Clover;			
total, 7s. $2\frac{3}{4}$ d. a week	5	15	8
444. 3	ĭ	15	
	•	_	
Insurance, interest, and rent of shed	L	5	0
-			
£	24	5	8
	_		٠_
Dr. £ s. d. Cr.		s.	d.
A bullock, seventy-one weeks old 24 5 8 A bullock sold at seventy-one	,		
	24	17	0
Value of manure		17	ő
varue of manute	J	14	U
600 14 0	000	1.4	_
£28 14 0	$\pounds 28$	14	U

The value of the manure was estimated at 20 per cent. on the cost of the food (£19 5s. 2d.), but, taken as the straw equivalent, we have then only a profit of 11s. 4d. remaining.

The dietary is instructive as showing amounts and the progressive scale of feeding a young beast calved in spring and sold at harvest in the following year. In the dietary something might be gained by the substitution of corn for cake, both to avoid cake bills and to utilise home-grown produce, in the guise of a mixture of crushed Oats, Wheat, Barley, Beans, Peas-all or any of them, it matters not-for it has been proved by the Woburn experiments of the Royal Agricultural Society that bullocks thrive equally well upon corn or cake; and we are disposed to favour the corn on the score of economy, and also because a mixed dietary is always the most wholesome.

On the other hand, it is worth while considering if we cannot do better where rich pasture is available by finishing beasts either at two or three years on the grass, avoiding stall feeding altogether. In doing this the calves would only be let run out in favourable weather; all exposure to gad flies, cold, or wet would be avoided. Crushed corn would be given in pans on pasture if required; they would be pushed steadily on during the winter, and if intended for market by the second autumn they would have some corn all the summer. If kept over a second winter they could be so cared for as to go on pasture in the following spring in such fresh condition that they would come out fat by September or October.

The treatment of such beasts must always be tentative and not by line and rule. When kept till the third autumn corn would be used during the winter, but it would hardly be required at all with a full bite of rich grass in the spring and summer. The fattening property of the best grasses and Clover is simply marvellous; be it our care to see that the young stock leaves the yards for it in spring in such fleshy condition that the grazing tells quickly, and the beasts are kept going steadily on to early ripeness and fair profit. Very different this to the progress of those wretched starvelings, leaving the yards at turn-out time, with every rib so clearly defined with hollows between them, that one might suppose the idea of ridge-and-furrow roofing was suggested by them. Nothing can be more deplorable than their miserable plight, and it is difficult to see how any reasonable person can expect anything like profit from them. By all means pay heedful regard to economy, but see that it is an embodiment of judicious expenditure with avoidance of waste. Spend freely when it can be done to good purpose, and remember that waste avoidance includes the wise prevention of loss of condition in our stock during winter.

WORK ON THE HOME FARM.

The pickling and smoking of bacon and ham are now being done as the pigs fed specially for the purpose become ready. We intend writing a special article on this important part of home farm economy shortly, and only mention the matter now as a reminder to home farmers that their method of bacon curing is for a supply from, say, New Year's Day till Christmas at the least, and the process must be altogether more deliberate and thorough than that of the bacon factory men, who accomplish in a few days for what the home farmer requires two months. Their bacon is intended for speedy consumption and not for long storage; it is, therefore, obviously unwise to introduce their method at the

Fatten and sell all sows becoming old or of large size; the only exception we ever make is with sows that are exceptionally gentle and quiet. But no sow should be kept for breeding after she becomes large, or rather approaches a size which involves risk of her lying upon her progeny. It is also evident that very large breeding sows must consume much more food than those of moderate size. It is at her second litter or farrow that a sow is at her best; this is our guide to breeding early, and the first farrowing should be when the sow is ten months old, the period of gestation being sixteen weeks. Bear this in mind in your scheme for the coming year, so as to have an ample store of porkers ready for corn stubbles; and when a young sow proves to be a bad mother, biting or eating her young, she must be fattened and sold. Temper in the sow often arises from soreness of teats, for which reason. and by way of prevention, the four sharp temporary teeth which yourg pigs have are broken off at birth by many breeders.

In any case we have always found it answer to have a few extra sows to make certain a full supply of pork and bacon for home requirements. Superfluous pigs of any age or size always find a ready market, fatten quickly, and are soon out of band. Place sows about to farrow in comfortable quarters—a commodious sty with a frame round the sides to protect the young pigs when the sows lie down. Use only a moderate amount of short litter, shut in sow and pigs in very cold weather-it is then that a passage at the back of the sty is so useful. Do not wait for the weaning before feeding the pigs, but as soon as they are able to eat raise the slip board along one side of the sty, so that the pigs can get out to a low trough placed near it outside. Barleymeal, ground oats, or wheatmeal, with milk, answers well for them.

SPRATTS' ALMANAC.—Spratts Patent, Limited, send us a copy of their Almanac for 1894. It contains an illustrated sheet, with calendar for each month, with notes explanatory of the subjects illustrated. It will be acceptable to fanciers of dogs, poultry, and domestic pets. It is supplied to customers who apply soon enough and enclose a stamp for postage to Henry Street, Bermondsey, London.

LIVE STOCK HANDBOOKS.—Messrs. Vinton & Co., London, proprietors of the well-known "Handbooks of the Farm," have, in response to numerous applications, commenced the publication of a new series, entitled "Live Stock Handbooks." The first volume is devoted to sheep, and has been written by Professor Wrightson. There are twentyfour full-page engravings, and the price is 3s. 6d. This will be followed by handbooks on light and heavy horses, cattle, pigs, and other animals.

"LIVE STOCK JOURNAL" ALMANAC FOR 1894.—Once more is the high standard of this useful annual well maintained. Each leading class of horse, cattle, and sheep has its special article recording its progress for the year, and so possessing an historical as well as a practical value. Pigs and poultry also have attention, besides which there are interesting and valuable contributions on Horse Breeding, Horse Shoeing, Influence of Food on Milk, Feeding Live Stock, Milk Records, Wool and its Preparation, Bacon Curing, Management of Pigs, and the Fattening of Poultry. This brief notice will suffice to show what a useful publication it is, useful alike for reference and for its special information upon matters of interest to everyone connected with agriculture. The work is illustrated and published by Messrs. Vinton & Co., London, 9, New Bridge Street, Ludgate Circus, E.C.

METEOROLOGICAL OBSERVATIONS. CAMDEN SQUARE, LONDON.

Lat.51° 32′ 40" N.; Long. 0° 8′ 0" W.; Altitude. 111 feet.

DATE.			9 A.M	•			IN TH	E DAY		
1893.	rometer 32°, and a Level.	Hygrometer.		Direc- tion of	Temp.	Shade pera	Tem- ture.	Radi: Tempe	Rain,	
December.	Barom at 32°, Sea Le	Dry.	Wet.	Wind.	1 foot.	Max.	Min.	In Sun.	On Grass.	
Sunday . 10 Monday . 11 Tuesday . 12 Wednesday 13 Thursday . 14 Friday . 15 Saturday . 16	Inchs. 29.505 29.426 29.555 29.176 29.723 30.416 30.532	deg. 39·7 47·1 46·4 53·4 39·1 40·9 48·1	deg. 38.8 45.2 43.9 52.6 36.9 38.1 46.6	S.E. S.W. S. S. N. S.W.	deg. 40·5 40·2 40·0 41·1 43·1 41·0 42·0	deg. 47.7 47.8 53.3 57.8 43.3 50.7 51.6	deg. 30.7 38.9 33.2 4).9 38.4 31.1 40.7	deg. 49·1 57·4 54·2 68·9 65·6 58·9 62·0	deg. 27·7 33·0 28·1 36·1 35·6 27·9 37·8	Inchs. 0 094 0 028 0 346 0 426
	29 762	45.0	43.2		41.1	50.3	36.3	59.4	32.3	0 892

REMARKS.

10th.—Overcast till noon; very squally, with heavy rain from 0.30 to 1.30 P.M., and at times in afternoon; fair again in evening.

11th.—Rain at 5 A.M., and overcast early; sunny from 11 A.M. to 1 P.M.; fair afternoon and bright night.

12th.—Squally southerly gales. Occasional gleams of sun in morning; heavy rain from 1.45 P.M. to 4.30 P.M. Gale very severe from 4.30 to 5.30 P.M., and dropped suddenly at 6.30 P.M.

13th.—Overcast, with squails and showers till 10.30 A.M.; fine and generally sunny from 11 A.M. to sunsct; heavy shower at 7.30 P.M., and heavy rain from 11 P.M. to 2.30 A.M. on the 14th.

14th.—Heavy rain till 2.30 A.M.; overcast till about 10 A.M.; bright sun from 11 to sunset, and bright night.
15th.—Fine, with a good deal of bright sunshine in morning; generally cloudy in afternoon. 16th.—Fine, and generally sunny.
Milder, southerly winds and gales, low barometer, nd rain.—G. J. SYMONS.



PROBABLY there are few men except the ultra self-conceited who will not admit the existence of certain shortcomings in their year's record. Those who have apparently done the best, and, in fact, accomplished much on which they may dwell with satisfaction, will be the first to acknowledge that on certain points their judgment may have led them somewhat astray. Those are really the strong men of the day. Strong, because of their clear perceptions, and not shrinking from the recognition of facts, even when these were not in harmony with their prepossessions. Men who, in their own view, are ever in the right on every conceivable topic, who can see nothing wrong in what they say or do, and little that is good and true in others, unconsciously, yet very clearly, exhibit their own frailties.

Is not the present a good time for each to try and determine in which category he is rightly placed? The conduct of masters to servants and servants to masters, of parents to children and children to parents—has it all been right? all as it should be, and as each may wish it to be again? In rivalry has all been honourable, in controversy has all been fair, in government—the superintendence of man over man—has all been just, in duty have all been diligent, in trust have all been faithful? We know, all know, there have been sad, even fatal, departures from the line of right in cases that have been "found out." But what of the shortcomings yet more or less obscure? Let them be sought out, thought over, recognised and diagnosed. No one can be the worse for this self-searching, and it may reveal what was not apparent, leading to a better line of thought, and a safer course to follow.

Has all been right in gardens, or as nearly as it might have been? Has there been undue austerity by those who direct or provocation by those who serve? Gardening is credited with having a soothing influence, yet it is not a panacea for wrong, not to say hot-headedness; it is also credited with the love that begets watchfulness and devotion to it as a pursuit, yet it is not a complete antidote to carelessness, laxity, even laziness. On these matters it will, perhaps, not be quite treasonable to suggest that blustering managers in gardens are, like weeds in flower beds, out of place; and equally so are the listless slippery lookers-for-night, who cannot hope to prosper in the calling into which they have pushed themselves or been pushed by their friends.

Nor does the mere possession of gardens by persons, no matter how wealthy, make all of them gentle and kind. There are gardens which could be named in which men are tormented and the right name for their houses is jails. There they are chained, for only men with large families are sought for, and who cannot, dare not, move and face what might be penury or destitution. Happily such examples of intolerance are few-chance weeds in the garden of humanity, making the flowers of the flock, the great mass of our nobility and gentry, "the country's pride," shine the brighter by the contrast. Which are served the better, those who repel by their severe exactions, or those who attach by just yet considerate ways? There is only one answer. Faithful service follows dutiful attachment. Of this we have thousands of pleasant examples over the length and breadth of the land, the exceptions being a miserable minority, soon it is hoped to become obsolete and forgottten.

Then are there not shortcomings in the literary aspect of

gardening—pens as if made to wound in controversy rather than elucidate and instruct? There appears to be a good deal of character in pens, and the makers might give them new names, to wit the "stinger," to make opponents wince; the "cynic" to tantalise; the "snarler" to demean; the "grumbler" to despise; the "dullard" to drive away readers, and so on. It is true some of them have a recoil, and it is as well so, perhaps better, or the wrong men might get hurt the most. Even pens it will be seen, and as some of their victims have felt, are not all they ought to be, but have their shortcomings, needing rectification. The one now in use is apt to be refractory, and can only be exercised under a sharp rein, but it seemed to want a run before the year was out, and is having its way for once, to end possibly in the ditch known as the W. P. B.

Occasionally the attentive reader may fancy he detects shortcomings in the logic of literature—lines of reasoning that puzzle him somewhat, yet which he enjoys all the same. Sometimes it would seem the best of pens are prone to be "erratic," and surely the "D., Deal," is one of the very best, yet what does it make the good man say on page 552? "Tulips entail too much trouble" to become popular. They need planting in November and taking up in June. No other troubles are mentioned; but what "picking, smoking, sheltering, and brushing" are advised for Auriculas? What trouble the fungus is on Carnations, and the attendant doctoring, potting, and finger-and-thumbing? While as for Gladioli, the instructions read almost like a wail of despair. Yet these flowers must be grown; the hardy Tulips are not even honoured with a malady, they only entail "too much trouble." Oh, that pen !--and this! Into its sheath then mine shall go (but oh, not his!) perhaps, for a final rest; all depends on the fate of this its maiden effort; if its shortcomings are so flagrant as to meet condemnation the end will have come. The attempt-well meantto have a tilt at the seamy side of human nature will have failed, and nothing will be left for its incompetent guide but to retire into silence.—WATCHMAN.

AN EAST LOTHIAN GARDEN IN 1893.

THE year that is closing has been so exceptionally good from a gardening point of view, that before it is gone it may be worth while to chronicle some of its outstanding features. And yet, good as it has been, there have been certain times during its course when much uneasiness was felt. At its beginning the frost was very intense and trying, the times of drought in the summer, and also the gales towards the end. Exceptions to the rule, therefore, occurred, and all kinds of garden crops have not flourished equally well. Fruit and flowers fared best, much better than usual; but vegetables on the whole have not been so good.

The severity of the frosts early in the year destroyed many vegetables. Hardly anything in our garden was left save Leeks and Brussels Sprouts. Spinach was severely checked, but it grew well with the advent of warm weather. All kinds of Broccoli succumbed. If there was one kind hardier than another it appeared to be Methven's June, but that also was so much damaged as to be not worth retaining. Even the hardy and profitable Sprouting Broccoli was killed to the ground, so were the Curled Kales, and the Globe Artichokes were badly damaged. Later in the year the second crop of Cauliflowers was entirely destroyed by root maggots, and indeed all round this district the mischief worked on Cabbages and Cauliflowers by these was very great. Many cottagers had their green crops destroyed. However, later sowings of Cauliflowers were all that could be desired, King of the Cauliflowers and Magnum Bonum were particularly good. I saw beautiful specimens of a late variety twelve months ago named Drummond's Favourite. This I tried, and have found it to be an excellent kind; but so far as I can determine it is identical with Veitch's Autumn Self-protecting Broccoli. However that may be, both are

No. 2361.—Vol. LXXXIX, Old Series.

superior strains, and for cutting late in the year they are indis-

Spinach did moderately well up to the sowing made about end of August, of which most of the plants died out of the ground, so that we are depending for a winter supply on two earlier sowings. I have for many years past raised three distinct crops of winter Spinach, as it is not uncommon for that sown at the time which is suitable in general to fail as it has done this year. Paresseuse de Catillon is a French variety, which did well during the severe drought. It is also good for winter sowing, and so is Lent, a slow seeding variety. Peas proved generally unsatisfactory. The late crop was past earlier than ever I recollect it to have been. Mr. Eckford sent me a selection of his seedlings to try. Of these I was greatly pleased with Fame, which appears to be an improved Ne Plus Ultra. Epicure and Censor I also liked, but none of the sorts impressed me so much as the first named, of which I hope to grow many in the coming season. Regarding Potatoes, all that need be said is that they were of excellent quality, but small of tuber. Brussels Sprouts are very good. Spring-sown Onions were maggoteaten almost to the whole crop, and we have had to depend up till now on bulbs of January-raised Cranston's Excelsior, an Onion which is a good keeper as well as being large in size.

A noteworthy feature of the year is the manner in which lost time has been made up by autumn and winter crops. Seeds sown during the drought germinated rather badly, and in consequence many crops had to be sown again, making the plants much later in being set out than usual. Broccolis, the seeds of which germinated well, were long in making growth, and also seemed likely to be but of small size. But in every case plants have made an almost abnormal growth, the result being that there has been an abundance of succulent produce and a promise of plenty to follow. London Coleworts happened to be a "miss at first," but I never remember later ones of these to have been finer in quality, and still there are

many of green heads to use.

Despite an unpromising spring, the hardy fruit crops were above the average in bulk, and in quality they were generally superior. The two crops which were the least promising-Pears and Strawberries, finished good average crops, though they were both of short duration, the latter ripening all at once, and the later sorts of the former are ripening abnormally early. Small fruits were also over earlier than usual. We, as a rule, have Currants and Gooseberries well into October, but these were all past in the beginning of September. No doubt the fruit would have hung much longer, but they were literally cleared off the bushes in the course of a few days by wasps. I think of all crops Apricots were the most satisfactory. The trees blossomed abundantly and set an enormous crop, which required to be freely thinned. The season was much longer than usual, the earlier fruits ripening in the commencement of August, and the crop continued until the middle of September. I do not remember Apricots ever to have ripened so well all the season through. In 1867 and 1868, in 1875, and again in 1887 Apricots ripened well, but not, as a rule, so perfectly as during the present year. The largest cropping sort was the Royal. The earliest fruits were gathered from trees of Breda and of Kaisha. One of the latest and best was D'Alsace, a variety well worthy to be recommended. Shipley's and Peach were also good. Hemskerk did not bear a crop. autumn added the following kinds-Angoumois Hatîf, an early ripening variety; Powell's Late, and La Delicieuse, the latter a new variety from Syria.

I was also greatly pleased with the Plum crop. The trees blossomed but sparsely, and on old trees the crop was not large, in no case requiring to be thinned; but generally there were sufficient fruits for the trees to perfect, and all the varieties ripened better than usual. The season began with Rivers' Early Prolific and The Czar in July, and ended with Coe's Golden Drop in October. The Czar is a grand acquisition, when fully ripe being very rich in flavour. Kirke's was also good. I had a grand crop on a young tree of Cox's Emperor. Strings of fruit set all over the tree, and after severe thinning a very large crop remained. Fruit was gathered off this tree during a period of seven weeks, and it was appreciated both for dessert and for cooking. Victoria was, as it always is, grand, and so was Jefferson. Green Gages were particularly good this year, so also was Magnum Bonum This is a Plum which is highly esteemed in our case both for cooking and for dessert, and during several weeks this year we were able to supply good fruit. A particularly good late Plum which fruited well this year for the first time is Monarch. The perfection of Plums is, doubtless, Coe's Golden Drop when at its best, as during the past summer, and whoever is without a tree in his garden ought to make good the deficiency at once. I have added, among other sorts, Archduke, a late variety, and Purple

Pears were like Plums, inasmuch as old trees did not bear

well, while on the other hand young trees bore an abundance of fruit. The first good Pear to ripen was Clapp's Favourite at the end of August. Since that time we have had an uninterrupted supply of better fruit than we have ever had previously, and nearly all from young trees. As mentioned all varieties have ripened earlier than usual, and as the season progresses this abnormal precocity in ripening becomes more pronounced. The best flavoured Pears we have had during November and December were Doyenné du Comice, a most delicious sort, the well-known Marie Louise, Winter Nelis quite six weeks earlier than usual, and now past, and Knight's Monarch, which will keep till the beginning of 1894. Beurré Rance is now ripening, and I notice that Easter Beurré is also softening, though in most years it is towards the end of February before these begin to ripen. Nec-Plus Meuris, however, is still hard. I have added a few cordon trees to our collection, including Alexandre Lambré, Baronne de Mello, the old Beurré Bosc and Beurré Hardy, Nouvelle Fulvie, and Marguerite Manilard.

Apples were a full crop, but they did not set so freely as to require thinning; at least, very few trees did. The quality of the fruit in some sorts was, perhaps, as good in 1887, but as a whole the present was a better Apple year. In 1875 we had a larger crop, but not equal in quality. Warner's King, Nelson Codlin, Tower of Glamis, Ringer, Keswick Codlin, Blenheim Pippin, Frogmore Prolific, and Dutch Mignonne were exceedingly fine. As regards the keeping qualities of the fruit I see there is now scarcely any turning bad. I have had Tower of Glamis, Nelson's, and Stirling Castle in as good condition as I ever saw them. The wood on the trees is beautifully budded, and the prospect of a heavy crop next year is most promising. Selected Apples brought a high price, and that at a time when inferior fruit was all but unsaleable. Perhaps the most abnormal feature of the year was the behaviour of an old Fig tree, which, not satisfied with presenting us with some splendid fruit at the usual period, yielded a second crop in October. The fruit was very small, but of good flavour. A second crop of Figs is, so far as I am aware, a very uncommon occurrence in Scotland.

I transplanted a large number of trees during the autumn, these mainly Plums and Apples. The roots, as a whole, were in prime condition, and taking these as a standard I conclude that the growth of roots in the soil has been as favourable as the growth of

the wood.—B.

(To be continued.)

NOTES ABOUT PARSLEY.

THE brilliant emerald green of the Parsley, so pleasing at this season and so good to have in abundance, emboldens me to add a little to a subject which may appear to have been already thrashed out in the Journal of Horticulture; but I propose to go a little way off the beaten track of good culture, where even breakdowns will occur, to say something about no culture at all, viz., to have it as a weed, and it is probably better to have it that way than to not at all.

The way it will grow as a weed (for when out of its place it comes under that definition) is, I think, noticeable more or less in all gardens, until the conscientious "scuffer" cuts short the career of these stray plants, though one may escape to point a moral with its sturdy luxuriant foliage. On this I take my text, off the beaten tracks; but nothing new, oh! no; "there is nothing new under the sun," though a good deal we do not see, and some things we will not see.

Now for my way; it is scarcely a plan or a method. Take, say, 2 ozs. of seed of any good curled variety—there seems to me but little, if any, difference in the kinds—though they be somebody's Pride or someone else's Perfection, all are good; time, from the middle to end of June; position, here, there, and everywhere; aspect, north, south, east, and west, close up under the walls in small nooks and corners where the autumn zephyrs carry the leaves, in the open, between lines of fruit trees, any place where there is not room for anything else, and particularly in those spots you think it will not grow. Take a pointed stick, scratch the face of mother earth, scratch it deep, she likes it; drop in a few seeds sparingly as if they were gold, close in with your feet; so go on till your seed packet is empty. Nothing more, only keep off the genius with the "scuffer," or his zeal may result in wiping out your labours as effectively as a fresh hand in a certain garden who was sent to fork up all the Horsetail (Equisetum), which he did, and a good bed of Asparagus besides, remarking to his horrified chief, who arrived too late, "Master, I ha' dug up all they durned puttock pipes."

Granted that such catastrophes are averted, and you feel on seeing the plants that Art must assist Nature, take equal parts of

soot and guano and sprinkle them well with it, letting a "gossoon" (Anglice, boy) go after you with a watering pot and wash it in, and when you are laughed at for having too much Parsley grin and bear it.—E. K.

RASPBERRY JOTTINGS.

There were rumours of phenomenal prices for Raspberries in the early summer, £35 and £40 a ton being freely talked about, as though such figures only needed mentioning to be realised; but either the returns were not secured, or else those who were lucky enough toget them have kept their own counsel. It is always wise to allow a liberal percentage for contingencies when such figures are quoted, for they are abnormal; but after making all reasonable allowances, the snm is not whittled down below a fair and profitable margin. Raspberries have paid many growers very well this year, much better than Strawberries in some cases; and indeed where this fruit does well, it rarely fails to give a good return.

When at Knockholt a short time ago, I met Mr. Waterman, who was formerly the head of the gardens at Preston Hall, Mr. Brassey's beautiful mansion near Maidstone, now ably managed by Mr. Jarman. Mr. Waterman has gravitated into the trade, having become the possessor of a compact nursery; but in addition to this he grows small fruit for market, chiefly Raspberries and Strawberries. I mention his name in connection with the former, because he makes an emphatic stand against the general opinion that "there's nothing like Carter's," having a variety which, he contends, is better, while at the same time partaking of the dwarf character of the great market sort and consequently needing no stakes. Now if there be in cultivation a Raspberry of the Carter's Prolific style of growth which is as good a grower and fruiter, and which wears better, it ought certainly to be known.

The name of the Raspberry referred to is Dr. Maclean, and Mr. Waterman tells me he has known it for many years. He has several acres of it at Knockholt growing side by side with Carter's Prolific, and thus a glance suffices to show the similarity in their styles of growth. They are both dwarf and sturdy, needing no extraneous support. This season of the year is not the best for comparing the points of Raspberries, and the most that can be said about them is that Dr. Maclean is rather cleaner and brighter in the cane than Carter's. Such a difference might easily be brought about in the same variety by varying soil, but the two are growing

on the same ground in this case.

Dr. Maclean is a name that has a familiar "smack" about it, but perhaps this is through the well-known Pea. I have not met with a Raspberry of that name before, and do not see it in the "Fruit Manual." There is a variety there called McLaren's Prolific, and between McLaren and Maclean there is not a great gulf fixed, but Dr. Hogg describes the former as a "double-bearing variety, of robust growth, and producing immense second crops on the young shoots of the same season." Dr. Maclean is not robust in the same sense as Superlative and Hornet, nor from what I gather has it marked double-bearing proclivities, although, like most other sorts, it has borne a second crop during the past extraordinary season. I should like to learn more about this Raspberry, of which Mr. Waterman has a fine stock, and which pays him, he tells me, very well.

Despite their taller growth, which is against them from the market grower's point of view, there is every sign of a large demand for Superlative and Hornet, the former more particularly. The young canes of this grand Raspberry were bearing heavily in Messrs. Veitch's nursery at Slough in the autumn, but that, of course, is not a very weighty point. What are chiefly to be remarked are its merits as a summer sort. It is of very free and robust growth, tall enough to require outside support, but a prolific fruiter and bearing splendid berries. It is rather significant that, although the market men look askance as a rule at a Raspberry which is not self-supporting, several of them are anxious to

get Superlative, being convinced of its high merits.

The fact of Hornet doing so well at Chiswick in comparison with the best sorts should cause attention to be given to it, and it is not there alone that it has given abundant satisfaction. A Herefordshire grower, about whom "J. B. R." knows more than I do, finds it the best sort which he has tried, and does well with it in the market. It is unquestionably immensely prolific, while the fruit is of large size and splendid colour. It requires support, growing to a great height in good soil, and this is supplied in the form of strained wires. Either as a garden or a market variety it is doubtful if there is a Raspberry which gives finer crops of large fruit than Hornet. It is pretty safe to prophesy that it will grow rapidly in popularity as time goes on. At the same time, so far as my observation goes, Superlative is being asked for much more frequently by the large growers, but this is perhaps owing to the fact that Hornet is as yet very little known.

The old Semper Fidelis is, I see, cropping up again. I saw a very large order executed for it quite recently, the canes going to a grower who wants the fruit for jam. Unlike most Raspberries the ever faithful one retains its form in the boiling, and as whole fruit jams are much more in demand now than the pulpy "brands" it is valuable on that account.

What may be termed the columnar system of growing the taller Raspberries seems to be very little practised, but when speaking about it to an Essex market grower ou a small scale recently, he told me that he had always found he got more fruit by shortening some of the canes in a stool to 18 inches or so, others to 3 feet, and then merely topping the others, than by the common plan. Naturally I asked him why, if he had found it good, he did not practise it now, and the response was, "Oh! well, I suppose it is because I have so many other things to do that I don't trouble about it." This is mild for Essex, and, after all, one cannot blame a man who is his own labourer for neglecting matters of this kind in favour of others which must be attended to when he is hard pressed; but the system is worth practising by those who are not in the difficult position of having to make a living out of about an acre and a half of ground. That any man can achieve such a result in the face of the fierce competition with growers having large capital to turn over, strikes me as being greatly to his credit, and a proof, moreover, of what a hard worker can do who feeds his ground well and crops it judiciously.—W. P. W.

ENRICHING THE SOIL DURING AUTUMN AND WINTER.

(Continued from page 416.)

When much of the soil of the garden or the field has been cleared of its exhausting crops, then comes the golden opportunity of enriching and otherwise preparing it for yielding an abundant harvest in the coming year. Heavy dressings of manure are of the utmost importance in maintaining the fertility of the soil by returning to it those constituents which previous crops have drawn out; but of at least equal importance is the time-honoured practice of deeply stirring it, so that the rain and air may penetrate, and carry with them those elements of fertility which are ever present in the atmosphere, and which all may turn to profitable account, with no greater outlay than that which is involved in the employment of the labour necessary to carry out deep culture. It is, therefore, apparent that every inch which is added to the depth of the soil renders it capable of drawing a proportionately greater amount of plant food from Nature's storehouse. These undoubted facts, to my mind, show conclusively the economy of deep digging, and the unwisdom of relying on mere surface-scratching.

Few will remember an autumn so fine, dry, and open as the past one, which has been exceptionally favourable for carrying out the work of manuring and digging vacant quarters. Should this satisfactory state of affairs continue for a few weeks longer, better opportunities will have been present for dealing with land of all descriptions than we have experienced for some years, during which time extended frosts have left but short periods for giving the soil that thorough preparation it ought to receive betore the

time for sowing and planting arrives.

Heavy soils should be the first to receive attention, as it is only by throwing them up roughly, so that the sun, air, and frost may pulverise the lumpy spits, that heavy soils of many descriptions can be gradually brought into good working order. When once these adhesive soils become thoroughly ameliorated, they prove uncommonly productive on account of the power they possess of retaining moisture and the food of crops. In many instances, however, it is unwise to attempt to do too much at once. The top spit ought first to be thoroughly worked before any attempt is made to deepen it. The earliest opportunity should be taken to wheel upon such land, whenever it is dry or frosty, a heavy dressing of partially decayed strawy manure; that obtained from the stables is the most suitable for the purpose. This manure may be left in heaps till digging commences, when it can be spread in patches as the work goes on; this will to a great extent prevent the loss of valuable manurial properties, which quickly escape into the atmosphere, if the manure is spread upon the land, long before being buried beneath it.

In digging heavy land, a strong fork, such as they use in the Kentish Hop gardens, is better than a spade, as the work is less laborious, and large rough spits can be upturned. The workmen should, however, be impressed with the absolute necessity of stirring the soil to the whole depth of the fork when thrust into the ground in a vertical position. A coating of from 3 to 6 inches of the manure ought to be placed in the trenches as the work proceeds. By using this in the rough state above described decay

is gradual, and the soil is kept open, so as to receive the full benefit from the action of winds and frost.

In cases where the soil is of an unusually retentive nature a commendable practice is to throw it up in sharp ridges about 2 feet asunder, by so doing a greater surface is exposed to the influence of the weather. In the spring these ridges should be levelled, and a coating of burnt refuse, coal ashes, leaf soil, old mortar, or sharp sand from the roadside be spread upon it and forked in, the forking again being repeated before planting. This practice was persistently followed in a garden in which I was employed some years ago, with the result that a stubborn clay was converted into a rich friable loam. Especial care should at all times be taken to keep off the land when it is in a wet condition. Any soils which have been thrown up roughly, but not ridged, ought, if possible, be forked over several times during the spring, and some of the opening materials above named be well worked in as the work

Lime is also an excellent agent in effecting the better working of heavy soils, as well as in sweetening those which are over-rich in vegetable matter. It should be covered with soil till slacked, and then spread upon the land at the rate of half an hundredweight per rod, and be properly forked into the surface. When the top spit has been improved in this way the work of deepening the soil should begin. This is best accomplished by double digging, by which means the soil is loosened and enriched to a great depth without changing the position of that on the surface. Commence by marking off a width of 2 feet at one end of the quarter to be operated upon. Take out the soil one spit deep and wheel to the opposite end, next place a thick layer of rough manure in the bottom of the trench, and mix it thoroughly with the soil as it is turned up another spit in depth. Then mark out another 2 feet strip, and place the top spit of it, as well as the shovellings, on the top of the subsoil first broken up, mixing manure with it as the work proceeds. When the end of the quarter is reached, the last work proceeds. trench can be filled up with the soil previously wheeled back. Land treated in this way will speedily exhibit a marked improvement if abundance of rough manure is used, but no half measures in this direction must be relied upon to ensure satisfactory results. -H. Dunkin.

(To be continued.)

HARDY FLOWER NOTES.

LUBINIA ATROPURPUREA.

THE lover of hardy flowers has, above all others, most cause to look with suspicion upon what are called "reintroductions"—that is, plants which have at one time been grown in this country, but have from various causes been lost to cultivation. This is, of course, not an invariable rule; but, as a rule, one may look with suspicion upon the "reintroduction" as having "either an old fault or a new one," the fault in most cases being that the flower is either not quite hardy or that it is worthless from an ornamental point of view. In his is attraptive has been recently ornamental point of view. Lubinia atropurpurea has been recently again offered to the flower-loving public, and I fear the experience of those who are induced to purchase will not be such as to render them enthusiastic in its praises. I have had the opportunity of thoroughly examining the Lubinia, and I fear I cannot speak so favourably of it as I should willingly do. It comes under the list of those which possess the two great faults of the reintroductions being neither very hardy nor very ornamental.

L. atropurpurea, which belongs to the natural order Primulaceæ, was introduced from the Cape of Good Hope so far back as 1820, and a pretty full account of it will be found in Maund's "Botanic Garden," vol. iii., page 52. Maund, while speaking generally in high terms of the Lubinia, admits its sombre appearance unless when the sun shines upon it and goes on to speak of the beauty of when the sun shines upon it, and goes on to speak of the beauty of the Lubinia as seen through a microscope, the petals and filaments being gemmed with minute Pear-like substances which, when viewed through a more powerful instrument, are seen to be glands "each a little gland on a cylindrical pedestal." As the specific name would lead us to infer, the flowers are of an intense dark purple. The plants grow about 2 feet in height, and may be increased by division or seeds. The latter do not appear to germinate well, and some protection in winter will be found advisable for plants left in the

open ground.

STOKESIA CYANEA.

It is seldom that this fine composite is seen in gardens, due no doubt to its late flowering habit and its doubtful hardiness north of London. I should, possibly, not have mentioned it now had it not been that some time ago I saw in a greenhouse a plant of it just coming into flower, and which was intended to be cut for exhibition in a stand of hardy herbaceous flowers. I cannot say

that I approve of this system of growing hardy flowers for exhibition, but there the plant was, and I am doubtful, if the way schedules are generally worded, a judge would be justified in excluding a stand in which the Stokesia appeared. At all events the few flowers which were open showed how beautiful they would be with their brilliant blue Cornflower-like heads.

September is its nominal time of flowering, but we cannot get it in bloom until much later, unless by growing it under glass in spring, and planting out then, lifting in the autumn, and flowering under glass. I do not care for either system, but if we wish to grow this beautiful Stokesia some such method must be adopted. S. cyanea comes from Carolina and other Southern States of America, and grows from 18 inches to 2 feet in height. The spatulate leaves, which are slightly hairy, are stem-clasping, and the flower heads which are large are of a deep sky blue. Were it not for the fault indicated—truly a grievous one—this would be one of the best of our garden plants.—S. Arnott, Dumfries.

MARGARET CARNATIONS.

THE above-mentioned Carnations are very useful for providing cut flowers. Ours were raised from seed sown in March, and when large enough the seedlings were pricked into pans filled with light soil. When sufficiently strong the young plants were placed singly into 60-sized pots, kept in a frame until established, and then put out of doors in a sunny position. They were subsequently shifted into 5-inch and 6-inch pots, using good loam with a little leaf mould and sand and a sprinkling

of horn shavings, making the compost rather firm.

When the pots were filled with roots the plants were fed with soot water and liquid manure about every third watering. They commenced flowering about the end of September, when they were placed on the shelf in the greenhouse. From about seventy plants we are able to gather an abundance of flowers every week.

We have tried the planting out system during the summer, but it did not answer half so well as keeping them in pots.—W. S.

SOME GOOD APPLES.

MAGNUM BONUM.

THIS is an Apple not much known, having flesh of the Golden Spire type. The fruit is quite conical in shape, skin smooth and of a deep golden yellow when ripe, at the end of September or early in October. In habit of growth the tree is upright, requiring but a small amount of space.

GREENUP'S PIPPIN.

I find that Counsellor, Yorkshire Beauty, and Red Hawthornden are simply synonyms of Greenup's Pippin. It is a pity that Apples almost a century old should be re-named, thereby misleading the inexperienced. Apart from this, however, I wish to call attention to the Apple under notice, not only for its good appearance, but for its quality as a cooking variety. I know of no Apple that when reasted preserves its form so well and is apparently quite hard, but it is, nevertheless, just the reverse. The flesh is white when cooked. In shape the Apple is faultless, having a smooth skin and a rosy cheek. For home use or for market this cannot fail to be a profitable variety to grow. It is in use in September.

KIRKE'S FAME.

This Apple is seldom mentioned in the horticultural press. According to Dr. Hogg in the "Fruit Manual" its proper name is Pomeroy of Herefordshire. After describing it, the above mentioned authority remarks that it is a very richly flavoured dessert Apple. With this description I quite agree. From its appearance I should say that the proper season for it is in October. It is an excellent cropper; the tree is of upright growth, not requiring much space, therefore all the more to be encouraged as a garden variety.

PECK'S PLEASANT.

This is an Apple not largely grown or widely known. The skin is of a russety dull red thickly covered with large white spots, which renders it somewhat remarkable in appearance. The eye is deeply sunken, the fruit rather flat. Altogether it appears to be an Apple worthy of extended cultivation.

CARDINAL

As an early culinary Apple for market this is to be recommended, coming to a large size at the end of August. In addition, its colour and perfect shape are sure to command a ready sale. The tree is a vigorous grower, the foliage is really handsome, so luxuriant is it. For a small garden Cardinal is just the Apple to plant, bush trees requiring but little space.

Cox's Pomona.

I would draw attention to this culinary Apple as a market variety. Not only is it a good cropper, but the colour which it carries is all in its favour. As a rule the colour spreads entirely over the fruit, and is less affected by non-exposure to the sun than the bulk of other sorts. With me the colour, streaks of bright crimson on a yellow base, is as much defined at the base as the apex.—E. M.



CYPRIPEDIUM INSIGNE VAR. ILLUSTRE.

THERE are many varieties of Cypripedium insigne now in cultivation, and these vary much in character. During the past few months three or four different forms have been adjudged awards of merit by the Orchid Committee of the Royal Horticultural Society, this number including the variety depicted in the illustration (fig. 83). This was exhibited at the Drill Hall, Westminster, S.W., by R. J. Measures, Esq., Cambridge Lodge, Camberwell, on Tuesday, November 28th. It is a very distinct kind, and attracted more than ordinary attention. The upper sepal is yellowish green, unusually heavily spotted brown, and has a well defined white tip. The netals are similarly marked, and the a well defined white tip. The petals are similarly marked, and the lip dark shining brown.

ORCHID LESSONS FOR YOUNG GARDENERS.

ROOTS AND THEIR REQUIREMENTS.

(Continued from page 550.)

Before pointing out the requirements of Orchid roots we must devote a few words to explaining in what respects they differ from those of most other plants, as a good guide is obtained in our practice if we understand with what we are dealing. In the first place, Orchids can be divided into two natural groups for the purposes of cultivation, as the requirements are very different. The largest group is that comprising what are termed "epiphytes" -namely, Orchids which are mostly found growing upon trees or other plants, or on decaying vegetable matter, and but seldom in the ordinary soil; the other includes the so-called terrestrial Orchids, which are commonly deciduous, losing their leaves and growths every year, dying down to a fleshy tuber, which remains under the soil through the period of rest. With the epiphytes Orchid growers are mostly concerned, and to them first attention must be devoted. The principal point that will be noted in considering these plants is that the roots are naturally seldom covered with much material, and this is of a light character, being formed of such decayed vegetation as may accumulate where the Orchids find a suitable spot for growing. As the plants are not parasites—that is, they do not derive any food support from the sap of the stems on which they live, it is therefore obvious the principal nourishment of the epiphytal Orchids must come from the rains and atmospheric moisture surrounding them. So it is that the roots perform two functions—one being to hold the plant in position, and the other to extract the requisite moisture from the air or some light substance, which shall not bury them deeply. As might be expected, the roots are very different from those of plants which derive their support from soil in the ordinary way. If examined they will be found to be comparatively thick and fleshy, free from the numerous minute fibres characteristic of other plants, while the roots produced on the stems, and therefore entirely exposed to the air, are frequently found to be covered with a whitish, ashen, or leaden coloured kind of bark, except the young tips, which are usually of a greenish tint, and the condition of these afford one of the most reliable indications of the health and activity of many Orchids, especially those producing large leafy stems.

Three cultural hints can be derived from the facts mentioned, first, that the roots being thick and fleshy are easily injured and not readily renewed, pointing to the necessity of great care in all operations; secondly, that very little material is required about the roots of the epiphytal Orchids, consequently it is a mistake to bury them deeply in large pots under a mass of close substance, excluding air from them, and leading to a sourness most antagonistic to healthy growth; thirdly, that gross nourishment is not required, but a regular supply of moisture, and that the appearance of the stem roots often gives us an excellent idea of the state of the plant.

In the case of the terrestrial Orchids the roots partake more of an annual character, for after each season fresh roots are produced, and the principal object of the cultivator is to encourage these to make free and rapid progress by a liberal supply of readily available food in a more substantial soil. Familiar examples of this class are afforded by the Calanthes of the vestita group amongst those grown under glass, and by Cypripedium spectabile amongst those which can be grown out of doors. The same fleshy moisture-loving character is, however, possessed even by these, and the only

temporary safeguard against carelessness is that the large pseudobulbs or tubers serve as storehouses from which the plant draws supplies in time of need.—Orchidist.

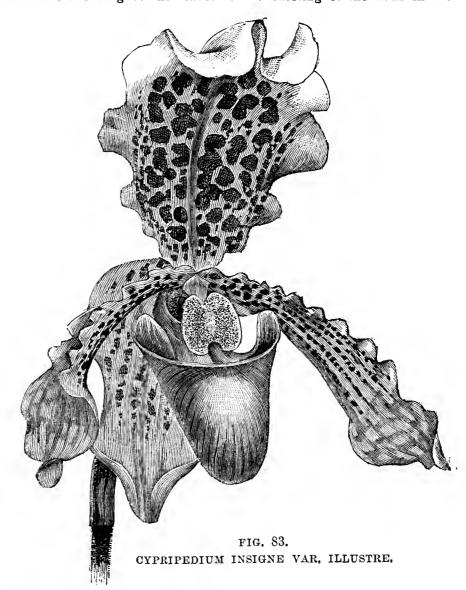
(To be continued.)

REMARKS BEARING ON FRUIT CULTURE.

HAVING received a letter from a correspondent, who is a member of a "Gardeners' Mutual Improvement Association," in which I am asked to answer five questions of a practical and very interesting kind; and in writing answers thereto, it occurred to me that the matter might prove as useful as it is opportune to readers of the Journal of Horticulture. The questions are given in my correspondent's own words, and are as follows:

(1), Is canker in fruit trees caused principally by the roots penetrating into bad subsoil, such as clay, sand or gravel? Yes; the principal cause of canker in fruit trees is the pushing of the roots into a cold, wet, poor, and perhaps, sour subsoil. Strong, vigorous growing varieties of the Apple worked on a free stock are rarely affected with canker.

(2), Are the roots of fruit trees (Vines in particular) under ordinary treatment inactive during the winter months? Practically, if not literally, the roots of fruit trees are inactive during the interval elapsing from the shedding of the leaves to the bursting of the buds in the



spring, or at any time that circumstance may occur under artificial treatment.

(3), Do the roots of the Vines start into growth before or after top-growth has commenced? I believe the roots of the Vine start growing generally after top growth has commenced. This is certainly the case where the roots are in outside borders, and I believe it is the fact when the roots are growing in inside borders too. The Vine grown under favourable circumstances has completed its functionary preparations for another year's work when it has shed its leaves, and so the plump well-ripened buds only await the necessary amount of increased light and warmth to push into growth in the spring in advance of root action. This is only reasonable, seeing that the temperature to say nothing about the great importance of light as a factor of growth—to which the top part of the Vine or tree is subjected, is uniformly

much higher than that of the soil about the roots.

(4), Is it beneficial to supply manure water to fruit trees just previous to their coming into bloom? It is most certainly beneficial to well water fruit trees with diluted liquid manure previous to their coming into bloom, then, or at any other time, always assuming that the condition of the soil about the roots is such as to render the application of water advisable. It is more important that the soil should not be allowed to approach the dryness at the period indicated than at any other stage (not excepting the time the fruit is stoning) of the tree's growth. Otherwise the fruit buds would be likely to drop.

Is it right when pruning fruit trees to cut "clean away" all growth (excepting leaders required for further extension of the trees) so as to leave no chance for any buds to start or form? No; certainly not. In the winter pruning of trees of the Apricot, Apple, Pear, Plum, and Sweet Cherry (the summer "pinching" having been duly attended to). all young lateral growths should be cut back to within one eye or bud of their bases. I am referring to established trees. In the case of young trees obtained from the nursery or home growers, every available shoot (excepting foreright shoots) should be spread out and trained regularly over the wall space, bending the strong unpruned leading growths towards the ground, and securing them to the wall in that position with nails and shreds, afterwards fastening the leaders thus operated on in their respective positions, and arranging the young growths over the intervening spaces. All the foreright shoots should be cut back to within one bud of their origin to induce and promote the formation of spurs and fruit buds. In the matter of hardy fruit culture, the main object should be to obtain large fruitbearing trees of approved varieties of the several kinds in as short a time as possible. Therefore, in starting with young orchard trees, the leading shoots should be pruned back to within 8 or 9 inches of their bases after they have shed their leaves in the autumn, and should the growths resulting from the shortened back shoots in the spring be likely to become crowded or to cross each other they must be pinched back to within 2 or 3 inches of their origin.—A FRUIT GROWER AND EXHIBITOR.

JOTTINGS FROM DUBLIN.

A JUDGING engagement took me to Dublin for a few days during the month of November. I determined to make the most use of the short time at disposal by inspecting the chief horticultural objects situated in or near the city. Gladly accepting the proffered guidance of an enthusiastic amateur horticulturist, a jaunting car was chartered. The first order the "jarvey" received was St. Anne's, the princely residence of Lord Ardilaun, situated some five miles east from Sackville Street. A telegram in advance made certain of finding Mr. Smith at home, who has had charge of these gardens for the last twenty-six years. A very pleasant hour was spent in his company.

Time did not permit of more than a cursory glance at each of the various departments, but sufficient was seen to show that high cultivation is the foremost object here. The first house we entered contained some well-grown winter flowering Carnations; White Cheer and Whipper In made a bright display with their scarlet blossoms. Mignonette for winter flowering is largely grown, the variety Machet proving to be quite as valuable for this season as it is for early summer. Cyclamens are more numerous and their wants better understood than I

had previously seen in any private garden.

A new and handsome structure is devoted to tropical plants, such as Palms, Bananas, Tree Ferns and the like, all bearing the stamp of good cultivation. In another house adjoining Crotons, Dracenas, and other similar plants suitable for house decoration are grown in large numbers, the demand for material of this class being a heavy one. Hardwooded plants are not neglected either. Camellias, Azaleas, Epacris and Heaths are admirably grown. Rambling freely under the roof in one of the numerous span-roofed houses, I noted a healthy plant of Bomarea Carderi, which is but seldom seen in private gardens. Orchids do not occupy a considerable space, but they have a healthy appearance. A very fine form of Vanda coerulea was flowering at the time of my visit. Forty guineas had been offered for one very small plant, so highly of was it thought by one of our greatest Orchid cultivators, so rich is it in its colouring. Cypripediums are well managed. Cattleyas, Lælias and Zygopetalums are also well represented.

In the fruit houses there was of course little to see, but judging from last season's growth the Peach crop must have been a good one. The Vines as far as could be judged from the appearance of the rods and buds give good crops of fruit, quality being the chief point aimed at and

obtained. Strawberries in pots are numerously grown.

Out of doors all departments are in keeping with the inside. Herbaceous plants are extensively cultivated. I was not a little surprised to hear that Salvia patens withstood the rigours of an Irish winter with but a protection of coal ashes, a layer being placed about the stems. As quite a dozen roots are growing in each clump the plants when in bloom must produce a good effect. Border Carnations are largely grown, they are mainly planted in wide beds in the kitchen garden, and rockery plants form a distinct feature. The best Yew hedges that I have seen are here, and some lessons in hedge-clipping could be had, so accurately is the work done. The square columns are 15 feet high, and many of the hedges are 7 feet, and in all cases these latter have perpendicular sides and flat tops.

Conifers and forest trees are not of particular merit, the situation being too near the sea and too much exposed to wind for luxuriant growth. Some perfectly formed specimens of Weeping Ash I noted by the side of the carriage drive. Evergreen Oaks were of uniform growth, the foliage being rich in its tone of colour. The general appearance of the place, which includes 60 acres of pleasure garden, reflected much credit on the able custodian, who is apparently held in great respect by his noble employer if one may judge from the handsome present of a silver tea service with suitable inscription, made him upon the comple-

tion of twenty-five years' service. After driving back to the city a change of guides took place, I being handed over this time to the charge of two enthusiastic

horticulturists, one as hearty and entertaining an Irishman as ever lived, as full of Irish wit and humour as the proverbial egg is full of meat, who could not if he tried have copied the "jarvey (who spoke hardly a word during the whole of the day), which to me was a surprise, as Irish "jarveys" were noted. I had been informed, for their volubility of tongue. Just one instance of my friend's native wit before I close this part of my jottings. Our spirited horse in going up a hill past the penal establishment took it into his head to turn suddenly and sharply round. The riding on an Irish car being new to me I was prepared for a jump upon the slightest sign of danger, which drew from my friend the remark, accompanied with a merry twinkle in his eye, "A sinsible man always sits still."

In my next I will refer to my pleasant visit to Mr. F. W. Burbidge at

the Trinity College Botanical Gardens.—E. MOLYNEUX.



THE WEATHER IN LONDON.—Bright and genial weather charactised Christmas day. With a clear sky four hours of sunshine were registered in Westminster, and there was an entire absence of rain in the metropolis until about nine o'clock at night, when it fell heavily for an hour or so. The temperature continued remarkably high for the season, the lowest reading of the thermometer during the night being 40°, whilst the highest in the day was 46°. Tuesday was also fine, but Wednesday opened dull, and as we are going to press a fog prevails.

- WEATHER IN THE NORTH .- With the exception of the 20th, which was a calm clear day, the weather has been disagreeable during the past week. There has been very little frost, but high winds and rain have prevailed, and there was a slight fall of snow on the morning of the 21st. Christmas Day was marked throughout by gusts of wind and cold showers. Tuesday morning was dull, but so far fair and calm. -B. D., S. Perthshire,

THE GARDENERS' ROYAL BENEVOLENT INSTITUTION.—The fifty-fifth annual general meeting of the members of this Institution will be held at "Simpsons," 101, Strand, London, W.C., on Wednesday, January 17th, 1894, at 3 P.M. The meeting is called for the purpose of rcceiving the report of the Committee and the accounts of the Institution, electing officers for the ensuing year, and other affairs; also for the purpose of placing fifteen pensioners on the Fund. The Committee request that all unpaid subscriptions for the year 1893 be forwarded to the Secretary, Mr. G. J. Ingram, at the office, 50, Parliament Street, S.W., before the 31st inst., the date on which the financial year of the Institution closes.

- WE have received Part 20 of the "DICTIONNAIRE PRATIQUE D'HORTICULTURE ET JARDINAGE," published by M. Octave Doin of Paris, and which is edited by MM. Mottet, Vilmorin-Andrieux et Cie, Alluard, E. André, G. Bellair, G. Legros, &c. It professes to be a French translation of "Nicholson's Dictionary of Gardening," but in many respects is quite a different work, both in the letterpress and the illustrations. To those who understand the French language it will be a most useful work, and we commend it very highly to those who are able to make use of it. We have not received Parts 17, 18, and 19.

"INDEX KEWENSIS."—"A. C." writes :—Relative to the notice of the "Index Kewensis" in the Journal of Horticulture (page 553), may I offer a free translation of the very forcible Latin couplet?

> Opus est hactenus sine pari Opus est quo, nullus carere potest. A Work, so far, quite peerless beyond doubt! A Work, this is, which none should be without!

- THE ST. BRIGID ANEMONES.—Mr. S. Arnott observes :—These beautiful Anemones can hardly be overpraised, and as one who has grown them for a number of years, and has often wished to know who "St. Brigid" is, I have been much interested in Mr. Burbidge's article on page 504. In mild seasons I cover a small bed with a frame, and am thus enabled to cut flowers occasionally throughout the winter. The method recommended of sowing the seed in March or April is an excellent one for autumn and winter flowering, or for gardens where the Crown Anemone does not succeed permanently planted.

—— LUCULIA GRATISSIMA.—Half a dozen plants of this Luculia were planted eighteen months ago in a border composed of loam three parts, the remainder leaf mould and peat in equal portions, with a little sand and charcoal added. They are trained against the wall of a large conservatory, and are now in flower, emitting a very sweet perfume. The flowers fade quickly after cutting if the stems only are placed in water, but if picked in rather small pieces and allowed to float in a bowl of water they keep fresh for a much longer period, and are a welcome addition at this time of year.—W. S.

— CRYSTAL PALACE FRUIT SHOW.—I should like to add a few words in support of the suggestion of "H. W. W." (page 508), which has been so fully endorsed by "An Old Exhibitor" (page 531). No matter what shows are held in that grand monument to Sir J. Paxton's memory, whether they be of Rose, Fruit, or Chrysanthemums, exhibitors and public alike speak in high terms of the effectiveness of the arrangements there. It is therefore much to be regretted that the great annual Fruit Show should have been discontinued during the last two years, and I join with other exhibitors in expressing the hope that the Crystal Palace Directors may be induced to resuscitate their September Exhibition. An excellent and practical method of approaching the Directors is suggested by "D." (page 531), and I entertain a firm belief that if "H. W. W." and the Editor will undertake the task their appeal on behalf of British fruit growers will not be made in vain.—A MIDLAND COUNTIES FRUIT GROWER.

—— SUNLIGHT SOAP COMPETITIONS.—Gardeners who make a practice of exhibiting usually regard competitions as a stimulus to the routine of everyday life, and as a deviation from these the "Sunlight Soap Competitions," inaugurated by Messrs. Lever Brothers, are worthy of notice. Particulars of these competitions are given in our advertisement pages. The enterprise of the proprietors of this domestic necessity has developed a world-wide trade.

—— RIPENING GREEN TOMATOES.—Compared with the customary methods in this country, some ideas of our transatlantic cousins appear strange, as witness the following:—"Among various plans for ripening green Tomatoes which are usually found on the plants when frost kills them, the 'Florists' Exchange' gives the advice to spade up a piece of ground which is protected on the north side, then pull up the plants with the fruits, spread them over the newly spaded ground and cover them with straw, leaves, corn stalks, or anything which is most convenient to keep them warm at night. The heat of the earth will ripen the fruits perfectly. The fruit does not wilt, and the flavour will be as good as if it ripened in the sun." Has any British Tomato grower tried this method?—A: B. C.

- ROOM PLANTS.—There are few plants of any description grown in pots that are of greater value at this time of the year than are those evergreens that will do well in fairly cool rooms, yet from which frost is excluded. By evergreens I do not mean shrubs, but Palms, Ferns, Aspidistras, Dracænas, Indiarubber, and Asparagus, all of great beauty now because decorative plants in cool rooms are scarce. I have in a room looking west a Kentia Fosteriana that was given me last spring. It is some 30 inches in height, and is in perfect condition. Other smaller ones are growing and doing well. Dracæna indivisa 2 feet high, is excellent, so also are variegated Aspidistras, which I obtained six months ago, and are as good as ever, perhaps better. The Adder's-tongue Fern does so well because its fronds clean so admirably. This, however, may be said of many others. I have a plant, dug up from a ditch in the New Forest some three years since, that does capitally in a room, and a more recent addition is a well-seasoned clump of Asparagus plumosus nanus, so fragile looking, so graceful, and yet so admirable for room culture, indeed one of the best. I think a cool room, in which fire and gas are used but once a week, is much better than is a room more frequently heated. It is true we have not had much frost so far, and the winter has been very favourable, still should the weather prove hard a little artificial warmth can easily be furnished. That there are many of these good green or variegated plants in cultivation, of which little as to their domestic usefulness is known, there can be no doubt. I am not referring to plants that are kept in rooms for a week, then out again; I write of those that will nearly always, but especially for several months, keep fresh and growing. What an interesting thing would be a competition at the Drill Hall of three, four, or six plants grown in pots in living rooms for a period of six months previously, having windows only to furnish light and air. That would be something novel in the way of plant exhibits.—D.

—— ROYAL CALEDONIAN HORTICULTURAL SOCIETY.—The flower shows of this Society will be held in the Waverley Market, Edinburgh, on Wednesday and Thursday, 4th and 5th April; Wednesday and Thursday, 11th and 12th July; Wednesday and Thursday, 12th and 13th September, 1894.

—— PARONA PANICULATA.—An American contemporary eulogises this Parona, and says it is an annual fast-growing, twining, high climbing, downy plant, with ample much-branched panicles of small, somewhat tubular, white flowers. The leaves are cordate, $2\frac{1}{2}$ to $3\frac{1}{2}$ inches long, smooth above but downy underneath, and rather suggestive of those of some of the small-leaved Aristolochias.

— London Gardens. — A correspondent writes:—Apropos of the interesting articles by "J. R. S. C." (pages 526 and 550) the following clipping from a recent number of the "Nincteenth Century," may be worth reproducing:—" London alone has, since the formation of the Metropolitan Public Gardens Association in 1882, increased her open spaces by 157, containing 4998 acres, while the entire number of public parks and gardens within easy reach of the inhabitants of the metropolis is 271, containing 17,876 acres, which include 6380 acres acquired and maintained by the Corporation of the City of London. We may roughly say that the cities and towns of the United Kingdom, including the metropolis, possess some 500 open spaces over 40,000 acres in extent."

DEATH OF MR. GEORGE THORPE.—We regret to learn from the American papers of the death of Mr. George Thorpe, the youngest son of Mr. John Thorpe, which occurred on the morning of November 23rd. For three weeks previous Mr. Thorpe had been confined to his room with typhoid pneumonia. He was twenty-one years of age, and was identified with his father in the latter's position as Chief of Floriculture at the World's Fair. The illness that caused his death was induced by exposure while attending to his duties at the Fair. He was in the habit of reaching the grounds every morning at four o'clock, and he often remained there until late at night. Mr. Thorpe was a promising young man, of a genial disposition, and made many warm friends. The funeral services were attended by numerous friends and societies, who followed his remains to Oakwoods Cemetery. The Chicago Florists' Club, of which he was a member, attended in a body.

- SHROPSHIRE HORTICULTURAL SOCIETY.—The annual meeting of this Society was held on Monday, the 18th inst., when there was a good attendance of members. His Worship the Mayor (W. L. Browne, Esq.), was voted to the chair. Mr. W. W. Naunton (one of the Hon. Secs.), read the annual report of the Committee, which included the following:-" The continued success which attended the exhibitions of the Society during the present year is a matter for congratulation, but there is nothing which calls for any special remarks. The accounts will be found very satisfactory, showing a profit for the year of about £850. Arrangements for 1894 are in progress, and there is every reason to hope that with the usual kind co-operation of the railway companies and the corporation, the previous successes of the Society will be fully maintained." Mr. W. Phillips (one of the Hon. Treasurers) then read the statement of accounts. In the statement for 1893 the receipts included: Interest on invested capital £110 9s.; subscriptions received, £404 18s.; cash taken at Spring Show, £15 13s. 9d.; received for rents, £57 19s. 6d.; cash for refreshment contracts, Summer Show, £354 18s. 9d.; takings at gate, first day, £504 15s. 8d.; second day, £1459 6s. 2d.; cheap tickets sold by Messrs. Adnitt & Naunton, £496 163. 10d. Total receipts for the year, £3631 12s. 5d. The disbursements included: -Spring Show expenses, £85 11s. 10d.; prize money, Summer Show, £645 11s. 6d.; sports and fireworks, £455 5s.; horse leaping, £101 5s. 3d.; bands; £286 18s. 9d.; hire of tents, gas, enclosing ground, &c., £321 19s. 3d.; printing, £143 11s. 7d.; advertising, £156 16s. 9d. The balance carried: forward is £694 3s. 8d. The statement showing the actual position of the Society was read as follows: -To balance as per last balance sheet; viz., at banker's on current account, £761 4s. 9d.; on deposit, £500-£1261 4s. 9d.; balance in hand on 1893 accounts £694 3s. 8d.; amount transferred from deposit account to current account, £1750; amount invested on Kingsland Bridge Debentures, £1000; investment on Police Station, £500. Total, £5205 8s. 5d. By amount paid for fields and gardens purchased from J. L. Burton Esq, £3150; paid for valuation? £10 17s. 6d.; solicitor's charges (half legal fees) £33 15s.; deposit on Circus Fields and other property £230; balance in banker's hands, £280 15s. 11d.; Kingsland Bridge Debentures, £1000; Police Station investment, £500. Total, £5,205 8s. 5d. It was subsequently remarked that since its inauguration the Society has contributed £5000 towards the charitable institutions of Shrewsbury.

— COLONIAL GARDENING APPOINTMENTS. — We are informed that Mr. H. J. Davies, who for some time past has been sub-foreman of the Orchid department at the Royal Gardens, Kew, will shortly leave England for the Calcutta Botanic Gardens. Mr. J. Ward, also from Kew, goes out as Curator of the Magpur Gardens in the Bengal Presidency. Mr. H. Millen, after a six months' holiday, has left England once more for the Lagos Gardens, of which he is Curator.

— IVY UNDER TREES.—Mr. E. Molyneux writes:—The best example of utilising Ivy for covering the ground under large forest trees, where but little else would grow that I have seen, is at Dove Park, Woolton, a suburb of Liverpool. A width of about 15 feet on each side of a long winding carriage drive, planted with Beech, Sycamore, and Lime trees, is covered quite thickly with Irish Ivy, making a charming green carpet fully 1 foot thick. True, the trees are not furnished with branches very near the ground, which is all in favour of the Ivy. One would think that the leaves falling from the trees would have an untidy appearance amongst the Ivy, but such is not the case; they seem to be thoroughly hidden by the Ivy covering. Mr. Carling told me that they always throw the leaves among the Ivy when cleaning the drive. In time they decay, and act as a surface dressing and manure for the Ivy. Examples of this kind are well worthy of imitation, the result being so satisfactory.

- BANANAS.—The Banana is not nearly so largely cultivated in English gardens as it deserves, one chief reason being the amount of space required when given full root room. We have had six plants of Musa Cavendishi growing in a bed 12 feet long by 6 feet wide, and about 3 feet 6 inches deep, in a compost comprising good turfy loam and decayed stableyard manure. When planted on April 1st, 1893, they had scarcely any roots, but by shading and frequently syringing the plants have attained enormous dimensions, and are all carrying tremendous clusters of fruit. One plant measures 3 feet in circumference at the base of the stem, and is carrying a bunch 3 feet long, and thickly packed with fruit. The other four measure from 2 feet 8 inches to 3 feet at base of stem, and are carrying bunches of similar dimensions. We cut one bunch about the 25th of November weighing 130 lbs., with 186 fruits on it, which we have been using for dessert. The plants have been watered occasionally with liquid manure, and assisted by night with a gentle fire heat. The remaining fruits are swelling fast, and promise a long lasting supply for dessert.—ARTHUR SMITH, Foreman, Knightshayes Court.

- ROYAL METEOROLOGICAL SOCIETY .- The monthly meeting of this Society was held on Wednesday evening, the 20th inst., at the Institution of Civil Engineers, 25, Great George Street, Westminster, Dr. C. Theodore Williams, President, in the chair. Mr. C. Harding, F.R.Met.Soc., gave an account of the "Great Storm of November 16th to 20th, 1893." This storm was the most violent of recent years, and so far as anemometrical records are concerned, the wind attained a greater velocity than has previously been recorded in the British Islands. The velocity of the wind was ninety-six miles in the hour from 8.30 to 9.30 P.M., November 16th, in the Orkneys, where the hurricane burst with such suddenness that it is described as like the shot of a gun; and the wind afterwards attained the very high rate of ninety miles and upwards in the hour for five consecutive hours. At Holyhead the storm was terrific. The anemometer recorded a wind velocity of eighty-nine miles in the hour, and it was eighty miles or above for eleven hours; while the force of a whole gale, sixty-five miles an hour and upwards, was maintained for thirty-one hours, and for four and a half days the mean hourly velocity was fifty-four miles. Many of the gusts were at the rate of 115 miles an hour; and at Fleetwood a squall occurred with the wind at the rate of 120 miles in the hour. The storm was felt over the entire area of the United Kingdom, and the wreck returns show that disasters occurred with almost equal frequency on all coasts. Four weeks after the storm the official records gave the total loss of life on our coasts as 335, while there were 140 vessels which had been abandoned or had foundered, stranded, or met with other severe casualty, involving either loss of life or saving of life by some extraneous assistance. There were 600 lives saved on our coasts by aid of the Life Boat Institution and other means. The author has tracked the storm from the neighbourhood of the Bahamas on November 7th across the Atlantic and over the British Islands to Central Europe on November 20th. The other papers read were "Rainfall and Evaporation Observations at the Bombay Waterworks," by Mr. S. Tomlinson, M.Inst.C.E.; and "On Changes in the Character of Certain Months," by Mr. A. E. Watson, B.A., F.R. Met. Soc.



Rose, Mrs. W. C. WHITNEY.

For the accompanying illustration (fig. 84) and description of this charming Rose we are indebted to "Gardening." Says our excellent transatlantic contemporary:—"This is a vigorous Rose of the American Beauty stamp, raised from seed by Mr. John N. May of Summit, N.J., who describes it as a Hybrid Tea. Its parents are Souvenir d'un Ami crossed with American Beauty. The flower is large and heavy, the colour is a deep clear pink, and the fragrance is delicious. It was obtained after several years' trial to obtain the same result. Seedling Roses are very difficult to raise. Oftentimes when desiring to reach a certain point the conditions are so that the seeds either fail to set, or after they have set and matured, fail to germinate; this was the case in this particular instance. Finally, however, success followed our efforts, and the Mrs. W. C. Whitney Rose is the result. It is one of the freest flowering Roses in existence, and it has handsome, heavy foliage."

CLASSIFICATION AND PROTECTION OF ROSES.

ALL your numerous readers at all interested in Rose growing eagerly read with pleasure all that "W. R. Raillem" sends to "our Journal." On his contribution in last week's Journal (page 559) I wish to make a few remarks. In my opinion there is no sure resting place for the classification of modern summer and autumn flowering Roses other than that of Hybrid Perpetuals. They are so much interbred that no other designation is true or logical in my opinion. Let any rosarian judicially consider the leaves and wood of Elith Gifford and Comtesse de Nadailac, or even Ernest Metz, and if they can, avoid the conviction that they are not pure Teas, but hybrids. And fancy the perpetual Gloire de Dijon being classed with Niphetos or Adam! Even a pure Bourbon is a "Hybrid Perpetual," we might add where needed, of "Tea stain" or "Bourbon strain," but Hybrid Perpetuals is the proper classification.

As to protection, burnt rubbish in a mound of 6 inches and then stable manure I have found best for some thousands of plants.—S. S.

PROTECTING TEA ROSES.

MR. GRAHAME, and other suburban Rose growers, if they have no leaves for the protection of their Teas, may yet congratulate themselves that they have not, in the large trees so often thickly present in country gardens, one of the greatest obstacles to the successful culture of the Rose, and they should also remember that walls and buildings which drop no seeds have no robbing roots, and refract and increase the heat, are the very best shelter against the wind, and are even in some small degree a protection against wind-frosts. If actually in the smoke-circle of a large town, no doubt watering, syringing, and even sponging of the leaves are sometimes processory.

of the leaves are sometimes necessary.

"R. M. D." (page 559) may rest assured that I have not only no objection to "slightly disturbing the surface," but even regard it (by means of a hoe, not a fork) as perhaps the most important point in what may be strictly called the cultivation of the Rose. But as I said last week, I do not at all know how manure can be got into the ground with a fork by only slightly disturbing the surface. I can further assure him that I am most serious in recommending leaves as the best protection from frost. That they are efficient I have thoroughly proved in the past hard winters, and recent correspondence in the Journal has shown how they even keep Apples in the open in good condition. I recommend their being placed in, around, and among the dwarf Teas 18 inches to 2 feet in depth, when they probably generate some very slight heat in themselves. It will be found that they do not blow away, the low thorny branches holding them. We have had severe gales from every quarter during the last few weeks; trees, chimney-pots, and palings have been blown down, but my Tea Roses are as well protected as before.

protected as before.

Let "R. M. D." examine any low thorny bush not under shade, but in an open field, provided there be trees any distance off in the hedges. Instead of the leaves having been blown away from the bush during the winter, he will find that they have been blown into it, and remain there thick and deep till the spring. He will also see, if he looks to page 540, that I said "the great bulk"—not all—"of the leaves fall in ten days or a fortnight." I think if "Practice" (page 559) had had practice in growing Tea Roses in low-lying ground in the eastern counties, he would certainly have had great losses during the past few winters if he had not protected his plants with the greatest care and precaution. He alludes to Magnolias: my plant has stood unprotected during the last eight years, and has suffered no harm whatever during winters which have sometimes swept away my Tea Roses, in spite of all my protection and care.—W. R. RAILLEM.

BLUE ROSES.

THE late Mr. Laxton, in reply to an inquiry I once made of him in the columns of the Journal of Horticulture, wrote—"A yellow Perpetual ought long since to have been evolved from Lyons or the sunny South. Now, however, that Rose-crossing in earnest is being taken up with skill, judgment, and the best appliances in this country and the United

States, I shall be a dishonoured prophet if we do not secure during the next decade not only a yellow but a violet and a white A. K. Williams.' This was in 1882. Our progress has not been what Mr. Laxton expected. We have had some admirable, I dare not say English, but United Kingdom Roses, not, however, what were predicted. A yellow H.P. did appear with a flourish of trumpets, but it is at present white. A violet A. K. Williams may come at any time, but we are no nearer to a sky blue Rose.

I have lately had the advantage of a conversation with the prime mover in the home of those wonderful Cinerarias, Cyclamens, and Primulas, which originate at Reading. He has described to me the birth of a blue Primula. A similar close attention to Nature, watching and adapting it, if it could be obtained, would surely bring about a blue What I gather is that white flowers, and to a certain extent pale blue, are a sign of weakness of constitution, and may come from adverse circumstances. The colouring matter in flowers is affected

by temperature, dryness, soil, and other recondite

causes. The Bride has a green tinge, I think, peculiar to its white, which if cultivated might lead on to something; but Mr. Martin considers a tinge of light blue more likely to be found in some of the other white Teas, the less robust ones rather than anywhere else, and that, if this could be obtained and followed, the colour required might gradually be procured. At the same time it must be admitted that possibly, in the eyes of some people, this flower if produced would be like that horse of notoriety, which was very difficult

caught worth only little. I may remark, speaking of comparatively Roses, that with new me Margaret Dickson has proved a remarkable climber, giving shoots 10 feet long even during the drought of the past summer.—A. C.

to catch, and when

HYBRID TEAS.

I COULD not help thinking of the quota-tion, "That in the captain's but a choleric word, which in the soldier is flat blasphemy," when I read the very true and pun-gent remarks of "W. R. Raillem" on the subject of Hybrid Teas in the Journal of last week (page 559), and it certainly caused a grim smile to flit across my face. I note that "W. R. Raillem," with due with due

discretion, got the assent of the Secretaries of the National Rose Society to his stating his views, and that he thinks, as I do, that "the catalogue always has been open to criticism." Some time ago I had the temerity to tell one of the Secretaries that I intended to criticise the new catalogue, as I considered it teemed with errors in wrong descriptions, and also that there were notable omissions. reply I received from him was that, having been a member of the catalogue Committee, it would be "presumption" to criticise my colleagues' work!

Having explained my quotation, I add a few comments. The Hybrid Tea class, as I said in the discussion on this classification at the annual meeting, is one of the worst blunders the Society has ever committed. Even the Rev. W. Wilks, the Chairman of the annual meeting, who looks, with good reason, on La France as "the Saul" amongst Roses, was unaware till I drew his attention to the fact that La France was now termed a Hybrid Tea. This year it was debarred from exhibition at the Earl's Court Show as a Hybrid Perpetual, and, as a matter of course, it could not be shown as a Tea Rose. Could the height of absurdity further go? The Hybrid Tea classification has simply been, and is, a mistake, and as "W. R. Raillem" tersely puts it, is inconsistent. As to the general opinion on its value, except by the few who introduced the division to the Society's arrangements, I have never heard anyone outside the Committee say a word in its favour, and one of our Secretaries has been throughout a consistent opponent of it; yet in this year's report it is referred to as if the arrangement had met with general and favourable acceptation.

A novice in Rose-growing who had heard of La France, Viscountess Folkestone, and Grace Darling as being amongst desirable Roses to grow, and being told they were not Tea Roses, would be puzzled on searching in some catalogues which follow the N.R.S. arrangement, not to find them mentioned in the great H.P. division. I notice that one of our greatest growers and exhibitors has in his catalogue this year, probably in despair, mixed up all his Roses, merely giving those he rows in alphabetical order, and denoted them by the initials H.P., T., or H.T. The plan he adopts seems a good and useful one, as experienced rosarians know all about the divisions, and those who are

inexperienced do not want conundrums when they are looking for

names of Roses.

I hope "W. R. Raillom" will further follow likely to be permanent." alteration the "open classes, the beautiful exhibits-J. GRAHAME, Croydon.

P.S. — To show the estimation in which the new Hybrid Tea class is held, I may mention there was not a single entry made in the class specially reserved for them at the Crystal Palace Show this year.

MANURING AND TRANS-

ANY remarks in connection with the subject of Rose culture from the fluent pen of "W. R. Raillem" are always interesting and original, and beneath the spirited style of a free lance lurks much information

up his criticism, as I am quite of his opinion that the new classification is "unsatisfactory and un-Unless Mr. Frank Cant's wording of the rule about H.T.'s had been accepted at the annual meeting there would have been grave dis-satisfaction, as the other suggested would have caused the practical disfranchisement of several of our most beautiful Roses in result which would be deplorable in view of of La France, for instance-which are usually sent by some of the great rosarians to our exhibitions. — CHARLES

-C. J. G.

PLANTING ROSES.

which is sound, though perhaps not always practicable. I can fully appreciate the force of his remarks on page 540, even though I form the target for his well-aimed shafts, which though they hit do not penetrate, because I can bring forward sounder reasons in support of the practice I advocate than your correspondent has yet advanced against them. My experience is altogether at variance with the idea that "it is a mistake to try and make a top-dressing of manure in winter act as both food and protection—as a manure and as a mulch." From a theoretic point of rious Ladauthan point of view I admit the most economical way of employing manure is to cover it with soil as soon as it is spread upon the land, so that as decay takes place the whole of its nutritious properties are absorbed by the soil; but our object in manuring Roses in the autumn is to give them protection and food in one operation. Of the soundness of this practice I am thoroughly convinced after trying various plans, especially during the last few years, during which time our winters have surely been severe anomaly anomaly and the severe anomaly anomaly anomaly are surely been severe anomaly anomaly anomaly anomaly anomaly are surely anomaly anomaly anomaly anomaly are surely as a severe anomaly anomaly anomaly anomaly anomaly anomaly are surely as a severe anomaly anom

been severe enough to prove a fair test. Although we are situated in a cold district of the Midland counties, the only extra protection any of our Roses receive during the winter is a muching of manule as previously advised. The tender varieties of Teas are planted only in sheltered positions or against walls, and our

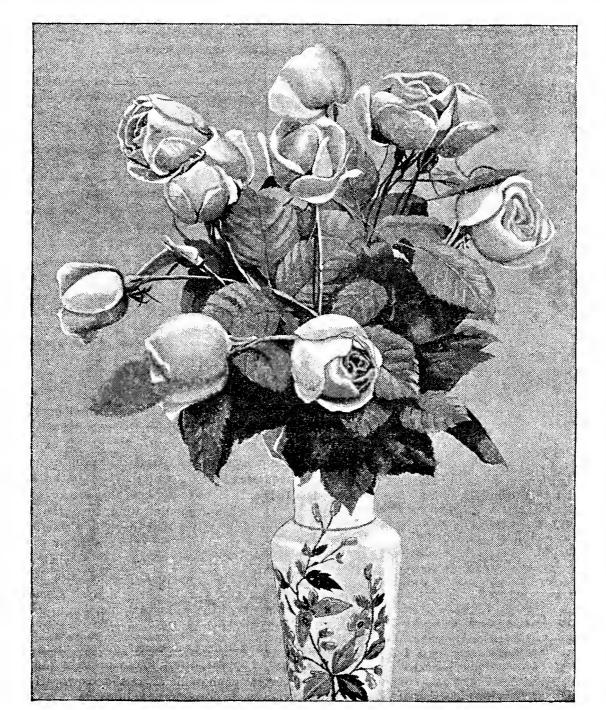


FIG. 84.—ROSE MRS. W. C. WHITNEY.

loss through frost is not more than 3 per cent. Let this, therefore, suffice as to the wisdom of giving manure as a mulch. Now, in regard to giving it in the autumn as a food. "W. R. Raillem" asserts that some good will be done by the rain permeating the manure, but not I maintain that a vast amount of good is the result, so much so, that I find no difficulty in maintaining the fertility of the soil to as high a state as is desirable by following the practice, because it is always advisable to give extra stimulants in the way of liquid and artificial manures during the growing and flowering periods. If, then, the matter is satisfactory from both points of view, why incur the labour of giving a rough mulch, which requires removal in spring, so that manure may be applied? The only advantage to be gained is a slight economy in the matter of manure. This is of little consequence in our own case, as we have unlimited supplies of manure, but labour is a matter for far greater consideration.

I will not, however, rely entirely upon my own experience in this matter, so I search to see what that successful rosarian the Dean of Rochester has to say upon the subject. In his "Book About Roses" (page 65) I find this significant passage: "The season when manure is applied is also a material circumstance. I have made many experiments, but I have come back to the plan which I adopted first of all, and I believe it to be the best-namely, to give the Rose trees a liberal stratum of farmyard manure in November, leaving it as a protection as well as a fertiliser through the winter months, and digging it in in

March."

"W. R. Raillem's" graphic description of the difficulties attending the simple practice of forking manure into Rose beds at springtime are rather imaginary than real. Three inches of manure put on during autumn or winter would by the action of rain and frost be reduced to little more than half that thickness when the time for forking over the beds arrived. A good workman would accomplish the task quite easily, without injuriously affecting the surface roots, and would have sufficient common sense to remove any very rough portions which could not be easily forked in. I am not one of those gardeners who are afraid to touch a root, as I consider the little damage done to them in the operation of forking in manure is altogether overbalanced by the great benefit both soil and roots derive from the admission of sunlight and air. This is the everyday teaching of both science and practice. I have now to deal with the concluding portion of "W. R. Raillem's" criticisms, in which he clearly shows that his knowledge of trees and their habits is so superficial as to proclaim its own weakness, otherwise the remark that the "great bulk of leaves fall in ten days or a fortnight" would scarcely have crept into print, because the time during which the bulk of leaves fall depends upon how great a variety of trees a garden contains, and the amount of wind or frosts which we experienced during the autumn. We have numbers of Sycamore trees which cast their leaves in shoals by the end of September or early in October. By the middle of November Oak and Beech are doing the same thing, and between these two dates they are continually falling in fluctuating numbers.

To a rosarian who is lord of his own domain it perhaps matters but little when the leaves are swept up, but how many head gardeners would keep their positions if they acted on this principle, just at the time when large house parties are the order of the day? But even if through the tolerance of their employers they managed to do this the green slimy condition of the walks, which would be the inevitable result, would require more expenditure to put them right again than would be incurred in daily sweeping.—A LOVER OF ROSES.

NOTES ON PEARS.

A VERY interesting communication was that by Mr. Abbey on "Fertilising Pears," page 506. For many years past I have devoted some attention to the question Mr. Abbey brings forward, and with the greatest possible good. Especially have I found it so on our arch of espalier-trained trees, which is about 120 yards long, nearly all the trees being over forty years old. I commenced the operation through observing the great scarcity of bees in some seasons over others whilst the trees were in blossom, and after the fruit was set the great number

of deformed fruit which were to be found on these old trees.

I had considered the free-setting qualities of some varieties to others, and came to the conclusion that much might be done in assisting fcrtilisation; but the camel-hair brush was too tedious a practice on these old trees, and to limit the time to the lowest possible minimum a rabbit's tail was procured, tied to the end of a long stick, and the work was speedily performed, with such good results that I have followed the practice now for the past seven years. To enter into details on the varieties would only be to make a repetition of most of those which Mr. Abbey has enumerated. One more word to say that with us Beurré Diel, planted against a south wall in soil 2 feet from the solid clay, is of very good flavour; but if Mr. Abbey could (and I know of no one more qualified to give an opinion, judging from the active researches in which he is always engaged) tell me why Beurré Diels crack in wet weather as well as dry I should esteem it a great favour, for we suffer from this evil to a great extent with our bush trees of this variety.

Never has the lesson of gathering Pears at intervals been placed before us with such a certain measure of success, and to keep up a good supply it cannot be ignored. We commenced with Citron des Carmes, which was almost useless. Williams' Bon Chrêtien and Jargonelle were good, but soon over. Beurré d'Amanlis was conspicuous by splendid fruit, and the quality really good. I join hands with "Northerner"

(page 495) in praise of Pitmaston Duchess. It has cropped well, been of good flavour, and so far from using it for stewing, regret was expressed when they were not forthcoming any longer for dessert. Glou Morçeau we are now using, and it is superior in flavour to those of former years. Doyenné du Comice has been good in every way, a point in its favour, having at the recent Liverpool Show the first and second prizes awarded to it for a single dish of ripe Pears. Easter Beurré and Beurré Rance are keeping well, the latter coming good in certain seasons. I agree as to the worthlessness of Beurré Clairgeau and Beurré Bosc for dessert. When well grown they are handsome fruits, but we only use them for stewing. Prince Consort I have once remarked upon in the Journal. The tree is a good grower and cropper with us, fruit of large size, pale russet and green spots, a grand keeper, and the most juicy Pear in cultivation. It is the one of all others for invalids, not being too sweet as in such varieties as Fondante d'Automne, or with the musky aroma of Nec Plus Meuris. In this precarious season there has not been a fault to be found with it.—R. P. R.



JUDGING AT EDINBURGH.

In answer to Mr. Robert Laird (page 530), I have to say-1, Regarding the appointment of an expert officially. The fact is that an expert" did point the four stands in question; not only so, but in my hearing Mr. Laird gave the expert instructions to proceed, as he was doing, in the pointing of the blooms, and to hand him the results after he had finished. The figures as appearing at page 503 were presented to the Secretary, and I also was presented with the same figures in the handwriting of the gentleman who pointed the stands, the document containing the said results being now in my possession, with the signature of the expert subscribed. Will you be surprised that I inferred that the said expert had an official standing? If I was mistaken in drawing this inference, I beg to express my regret, and accept Mr. Laird's denial on this head.

2, Regarding the second denial of Mr. Laird, I am much surprised to learn that he denies the acknowledgement of the misjudgment. I am strong in the recollection of his explicit statement of the error in the judgment, and immediately on his acknowledgement of the error I requested him to send the fact to the Press, but this he refused to do. It is only right to say here that the acknowledgement was verbal.

I had a communication from the Secretary, dated the 21st of November, stating that they (the Committee) "have no power to ask the Judges to show how they arrive at their conclusion in any case of dispute." There was no reference whatever in this communication from the Secretary as to any confidence being reposed in the skill and integrity of the Judges, which he seems to indicate was part of the contents of the said communication to protestors. - WILLIAM RUSHTON, Cochno Gardens, Duntocher.

We believe our correspondent wrote in good faith. He did not, it would appear, discriminate between the private and official capacities of some of the officials of the Show. He is not to be blamed for the step he took under the circumstances, as he was not the cause of the misunderstanding and disquietude. The "expert" informs us that if he had pointed the blooms the first day the points would have differed still more widely from the official awards. He was desired, but not officially appointed, to examine the collections.]

GRAFTING CHRYSANTHEMUMS.

EXPERIMENTS in grafting the Chrysanthemums on stocks of Anthemis frutescens have been highly successful in various localities this year. According to the "Garden and Forest," a specimen of the variety Val d'Andorre, exhibited at Brussels last month, measured 9 feet in diameter and bore 783 flowers. Other grafted varieties did not make such large bushes, but bore numerous flowers of great size and of unusually deep colours.

MRS. JAMES CARTER.

The value of this small flowered Japanese variety for decoration in a cut state is becoming more apparent, judging by the number of it seen in bouquets, baskets, vases, sprays, and fan-covered decorations at shows. The small thread-like florets, creamy white in colour, associate so well with other flowers other than Chrysanthemums. When the plants are cultivated to produce an abundance of blossoms in preference to fewer but larger specimens many of them are not more than 2 inches in diameter, which renders them all the more suitable for the form of decorative use to which they can be applied.

COMTE F. LURANI.

Apart from its value as an exhibition variety in a cut state, this is one of the best for grouping purposes. Really good blooms are produced upon plants under a yard high, which dispenses with the necessity of following the "cutting down" system to obtain dwarf plants. As a decorative plant, the stems being thickly clothed with dark green leaves, coupled with the semi-drooping character of the florets, it is difficult to The colour of the flower is a warm rose, frosted white, which gives it a novel yet pleasing appearance.—E. M.

ELSIE AND BUTTERCUP.

CULTIVATED in bush form with a view to produce a large number of cut flowers either for use in a cut state or as plants for the conservatory these are two excellent varieties. The former belongs to the reflexed The blooms are not of extra size, but quite large enough; the tips of the flat florets droop gracefully. In colour the blooms are pale yellow when opening, passing with age to a deep creamy white. This variety also makes a good trained specimen plant.

Buttercup is a single-flowered variety, in colour rich yellow, as its name implies. The florets are nearly erect, forming a cup-like bloom.

The growth is vigorous, and wonderfully free in flowering.

CHRYSANTHEMUM AMERICA.

This is a single-flowered variety, possessing considerable mcrit from a decorative point of view. That such a beautiful sort should have escaped attention so long is a matter for surprise and regret, and this remark holds good in reference to single varieties generally. I cannot say whether it is usually so late in flowering as it is with us this season; if so it would be a valuable addition to the Christmas display. It is now at its best, and arrests attention more quickly than any other in the house. The flowers are comparatively large, the florets wavy and narrow, and the colour a delicate shade of blush pink relieved by a yellow disc. For arranging in vases I know of few flowers so effective, and to see it at its best it ought not to have any other association, except perhaps some foliage of an approved kind. It does not appear to be so free as some varieties in supplying cuttings, nor is its constitution so vigorous, but its graceful blooms compensate any other failings.— W. S., Rood Ashton.

ABOUT ONIONS.

THAT pest, the Onion maggot crops up in all directions. "Nothing has given me so much trouble as the Onion maggot," said a gardener to me the other day; and he did but say just what is in the minds of thousands who have been troubled by this insect. "Did I think that sowing seed on the same ground two years in succession was harmful?" I answered, "From a cultural point of view, not so, if the needful Onion food was furnished; but so far as the maggot was concerned it was rather trying to court harm than endeavouring to avoid it." Still it is evident that dealing, not with a creeping insect but a winged insect, it would be very difficult to avoid it in the same garden, even when sowings took place as remote from each other yearly as is possible.

I advise in preference to sowing in the open ground in the spring at all, growing the best of our Spanish and Globe type Onions from autumn sowings, and then sowing seeds under glass early in April, growing in frames till hardened and strong, and finally planting out into the open ground thinly at the end of May. Plants so raised would be at that time as strong as any raised from seed sown in the open early in March. It is rare that plants so treated are affected by the maggot. Of course, I discriminate between the practices advised and the now common one of sowing seeds in midsummer, to give eventually, when planted out into very rich soil, large exhibition bulbs; that is another matter.

For the production of an ordinary crop of hard, well matured bulbs a sowing in shallow pans or boxes, giving several hundreds, or if need be, thousands of plants for dibbling out thinly, made early in April is certainly soon enough. So far as I have seen the maggot is always the most troublesome on light soil. That being so, ground for the reception of Onion plants in May should, after being deeply worked and manured, be well trodden, then rolled, and in that condition if dibbling be difficult it would be, no doubt, all the better for the plants in the end.—A. D.

NATURE'S HELPS TO GARDENERS.

LADYBIRDS AND THEIR LARVÆ.

As larvæ and perfect insects the ladybirds deserve our carc, for inboth conditions they revel on a diet of aphides. Fortunately the beauty of the perfect insects generally induces children and others to treat them gently. But though the beetle is well known, I am not at all certain that the larva or grub is recognised, at any rate by the gardening world, as a valuable friend. I remember once at a dinner of scientific men, supposed to know something of animal life, that during toast time, out of some flowers near me, one of these larvæ fell on the white tablecloth. I noticed our friend at once; but several were ready to give the "happy dispatch" to him, had I not interposed and begged them to "make a note" of him as one of our most useful insects. All declared they had never seen a similar creeping thing before, and yet though by no means so commonly seen as the ladybird itself, the larvæ are common enough.

Like the larva of the Lacewing fly, illustrated in the Journal of Horticulture, December 7th (page 517) the larva of the ladybird runs no risk of being mistaken for a grub, caterpillar, or maggot, as it has six legs and is quick and lively in motion. Danger, however, hangs over it, because most gardeners prefer to see their plants without any insect life upon them at all, and are apt to visit insect intrusion as a sufficient reason for death. There is, alas! in a jury of gardeners but slight prospect of "a recommendation to mercy" for any living creature when seen on a petted specimen plant; yet that is just the very place where a gardener, with knowledge of its habits of life, would place one of these larvæ if he found one wandering about. The larvæ are chiefly seen near the ends of shoots, where they know their food is to be found; often a curled up leaf is their haunt.

In colour these larvæ arc generally a blackish-grey, irregularly spotted. The head is comparatively very large, they have six legs, and the kinder

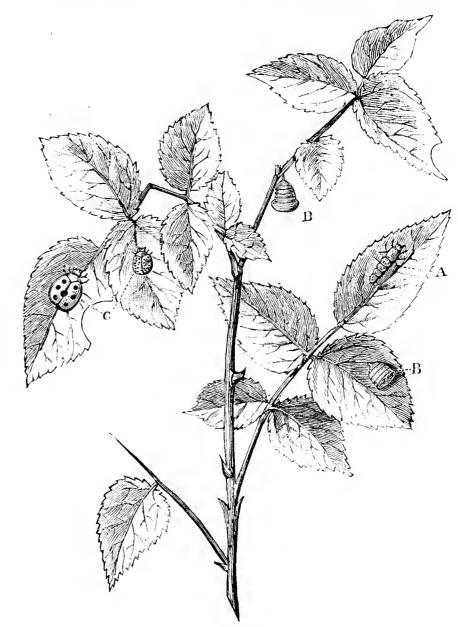


FIG. 85.-LADYBIRDS AND THEIR LARVÆ.

A, The larva or grub; BB, the pupa or chrysalis; c, the Seven-spot Lady-bird (natural size), and one of the smaller size, many-spotted.

part of the body, the abdomen, projects considerably beyond these legs. They are very active, and quickly reconnoitre the country in search of It is but right to say that some naturalists assert that some their prey. varieties of these larvæ feed on leaves of plants, but these are exceptions, and the plants they feed on are the Briony and common Heath; and, restricting themselves to this diet, they cannot be called enemies to the gardening class. The beetle commonly called ladybird or ladycow is well known in the ordinary variety, the larger seven spots and smaller two spots of black on the red wing-cases, but the sorts I have found most frequently on the Chrysanthemum are small, black with many red spots, and dull yellow, also many spotted.

The pupa or chrysalis might often be mistaken for a piece of earth or mud fastened to a leaf; it is almost a flattened g'obe with one side of the circle thus formed cut off. Sometimes we find it hanging to a leaf. By many it would be considered far from ornamental, and in removing it it would probably give way, and not till then would they think that it was some form of life. It is in this stage and that of the larva that the gardening world need to know and protect them. The larva, pupa,

and developed insects are depicted in the illustration fig. 85.

"Knowledge is power." This is a truth that touches us in every position in life. It may be a hackneyed phrase, but it is none the less true, and as far as the aphis pest is concerned, did we know how to increase these three friends of our gardens at will, we might defy the aphis hosts, rapid as is their development. As we cannot do this, let us at least learn to know these helpers when we see them, and not lessen their numbers in our ignorance.—Y. B. A. Z.

A NOTE ABOUT GLADIOLI.

APROPOS of "D., Deal's," remarks in your last number (page 551) giving his experience in the culture of these beautiful flowers, I would like to add mine. I grow only Lemoine's hybrids, both early and lately issued varieties, and have done so for the last ten years. I noticed that during the hot weather of last summer my plants flagged and stood still; the flowers that came out were poor, but after the rains came the plants grew apace, and produced some good spikes. Nevertheless, on the whole the spikes were fewer than usual, and the flowers smaller. They grew till very late in the season, and I did not complete taking up my bulbs till the beginning of December. The bulbs, however, were

the finest I have ever had, and mostly in splendid condition.

I do not know the disease referred to by Gladiolus growers, as I have never seen any fungus amongst my bulbs. I find it is important to change the bed every year, as they do best in new soil, and that a medium loam, which will hold moisture, gives better results than light warm soil. My experience is that 20° of frost continued will kill any Gladioli left in the ground without protection, but that 3 inches of spent hops, or 4 to 6 inches of hedge cuttings or Asparagus tops, or such like refuse is an efficient protection, and that bulbs planted in December or January, and thus protected, will do better than those kept out of the ground till March. I therefore do feel that "D., Deal's," experiences this winter in leaving his bulbs in the ground will, if he will give them slight protection lead him to continue the practice in future them slight protection, lead him to continue the practice in future winters.—ALEXANDER WALLACE, Colchester.

NEW MINIATURE VIOLAS.

THESE very interesting dwarf-growing Violas are fast coming to the front, and most deservedly so, and for them we are indebted to Dr. Stuart of Chirnside through his seedling miniature variety "Violetta" in the first place, and for other seedlings of the same type since introduced. We are also specially indebted to Mr. George Steel, late of Heatherslaw, and now of Etal, Cornhill-on-Tweed, for so perseveringly working with this section, and raising, so many pretty seedlings some of which will this section, and raising so many pretty seedlings, some of which will be sent out in the spring. Hitherto, Mr. Steel has cultivated a general collection of the best Violas, but he has now discarded all excepting the miniature section, so as to be able to devote more attention to this charming type, and working for rayless varieties. Having seen flowers of his various seedlings to be sent out I am able to speak confidently about them.

Of the miniature section, it will be as well to say for the guidance of those who have not grown them, that they produce an abundance of small, neatly formed flowers, generally with a strong Violet perfume; grow close to the ground, and are of compact spreading habit, and the flowers are rayless-that is, free from rays or dark markings in the centre of the flowers, the attainment of which I was the first to advocate years ago, and have persistently worked for, but we have as yet not many of the larger section of Violas entirely free from it. The following new varieties of miniatures raised by Mr. Steel will be in the hands of various florists in the spring for distribution.

Ethel Horsfall.—Delicate clouded lilac, of pretty form, and very

fragrant.

Steeli.—This, when the blooms were sent to me, I described as a miniature of miniatures; the lower petals are light yellow, the top petals cream coloured, entirely rayless, and a charming variety.

Ethel Buckley.—Deep heliotrope colour, with a deep orange eye, and

very pretty.

Pure Love.—Similar in colour to Ethel Horsfall, but smaller, and very_pretty.

Princess May.—Delicate lilac, with a yellow blotch underneath the

eye; a small, well-formed flower, very fragrant and pretty.

Beauty of Heatherslaw.—Light yellow, the lower petals a little deeper in colour, of good substance and form, and quite rayless; a charming variety.

Picco.—Creamy white with a narrow edging or border of lavender, and with a small yellow eye and distinct.

Miss Isa.—Lavender-tinted blue, distinct and pretty.

Mabel.—A pretty flower; white slightly flushed with cream, and uite rayless.—W. D.

THE APPLE BLOSSOM WEEVIL

(ANTHONOMUS POMORUM).

THIS insect very frequently causes much harm to the Apple and Pear crops, and in the last few years its injuries have much increased in fruit-producing districts, and have been often attributed to the caterpillars of the winter moth. Close examination of the blossoms, however, would show that the larvæ, or little yellow maggots, of the weevil were in the centres of the flowers, destroying their powers of fructification, though at the same time caterpillars might be feeding upon the blossoms and leaves. The action of this weevil upon the fruit blossoms of Apple and Pear trees is also mistaken for the effects of white frosts, when the petals have become brown or rust coloured; but if the blossoms are closely inspected, either the little yellow pupa of the weevil will be found in them, or a little round hole in the side of the withered flower bud will be noticed, showing that the perfected weevil has cut its way out of its cradle.

Incredible damage is often caused by this weevil in Apple and Pear orchards in France. In some Departments syndicates of defence against it have been formed ("Syndicats de défense contre l'Anthonome"), consisting of a committee in each Commune, to carry out a series of operations calculated to destroy this dangerous enemy, as it is felt that it is only by united action among cultivators that injurious insects of this and other kinds can be stamped out.

DESCRIPTION.

The Apple blossom weevil is very small, only the fourth of an inch long, and the eighth of an inch in breadth. It is reddish or chestnutbrown, with down or pubescence of a greyish hue upon its body. Occasionally specimens are found almost pitchy in colour. The wing cases have pale marks upon them below the middle. There is a conspicuous white mark, or scutellum, at the base of the wing cases. The legs are reddish; the thighs of the first (or anterior) pair are large, and furnished with a formidable tooth on each; the feet, or tarsi, are of a darker colour. The rostrum, or snout, is the most remarkable feature, being half as long as the body, slightly curved, with antennæ near its extremity furnished with oval clubs having four joints.

Like many other weevils it falls down when disturbed, tucks in its

legs and snout, and remains motionless, feigning death until the danger

has passed.

LIFE HISTORY.

In the first warm days of spring the weevils issue from their winter retreats, and find their way to the Apple and Pear trees. Some authorities consider that the females seldom use their wings, and that only the males fly freely. Others hold that both sexes fly equally well.

The female, either by flying or crawling, finds its way to the blossom

buds of Apple and Pear trees, and boring a hole either with its snout, as Curtis and others affirm, or, according to some observers, with a stylet placed at the end of its body, it places one egg within each bud, and carefully closes up the hole. A female lays from fifteen to twenty eggs, but places one only in each flower bud. The process of laying one egg takes about three-quarters of an hour. The egg is yellowish and oval. Authorities agree that oviposition in an individual female may extend over a fortnight at least. The eggs are hatched in from five to nine days.

The larva, or maggot, is without feet, and is about the third of an It is wrinkled, and white at first, gradually becoming It has a brown head, with two little brown spots on the inch long. yellowish. It lies in the bud in a curved form, and attacks the first segment. stamens and pistils, but rarely touches the ovary. It soon causes the petals to wither; the flower bud changes to a rusty hue, and decays.

The larva in from eight to ten days turns into a pupa, which is nearly a quarter of an inch long, of a yellow colour, with a long beak or rostrum, and feet folded on the under side of its body. This state lasts for about ten days, when the weevil appears, and escapes through a hole,

which it bores in the petals.

After this, the weevils live among the leaves of the fruit trees. It is not known whether they feed upon their leaves. A French savant, Dr. Henneguy, concludes from careful observation that they do not feed at all, but live upon a reserve of fat, corps graisseux, stored up in their bodies during their previous state. They are not seen after the end of September, retiring for hibernation to chinks in the bark of Pear and Apple trees, also in lichenous and mossy growths upon their branches, as well as under stones and rubbish beneath and around the trees, and in other similar refuges. They probably also pass the winter under the bark of other trees, as they have been found upon Oaks in the summer.

CIRCUMSTANCES OF THE ATTACK.

According to natural instinct, the weevils do not appear until the weather is mild and the flower buds have begun to swell. If the season is and continues warm and growing, the effects of the attack are usually of a slight character. But should the weather be cold and changeable, as is so often the case in Great Britain and the north and western parts of France, the flower buds are slowly developed, and the weevils consequently have time to lay their full complement of eggs, whose period of hatching is accomplished before the flowers are fully evolved.

Varieties of Apple trees which blossom very early and very late are more likely to escape the attacks of the weevil than those of the main

crop whose blessom comes late in May in ordinary seasons.

METHODS OF PREVENTION, AND REMEDIES.

One mode of prevention is to spray the limbs and branches of Apple trees, between October and February, with a solution of sulphate of iron, to destroy the lichens and mosses which serve as harbours for this weevil and other insects. One pound of sulphate of iron should be put to one gallon of water. This can be thrown up over the trees by means of a garden engine with a powerful pump.

Lichens and mosses upon fruit trees may be killed by throwing up freshly slaked powdered lime over the branches in damp weather in winter. This can be done by men having tin scoops, like small flour

scoops, fastened upon long poles.

All long grass, leaves, and rubbish should be cleared away underneath fruit trees on grass land, and on cultivated land it would be useful to apply lime, lime ashes, or lime and soot, and dig it in around the trees.

Assuming that Curtis, Schmidberger, and others are correct in their belief that the female weevils cannot fly, or rather do not care to exercise their power of flight, greased or tarred bands of paper put round the fruit trees would prevent their ascent.

It wou'd be well to adopt the practice of orchardists in Brittany, who

take off the rough bark of the trunks and large branches of the fruit trees with scrapers, and brush every part with stiff carpet brushes. They place cloths round the tree to catch the pieces of bark and the weevils that are dislodged; these are collected and burnt. Sometimes limewash is put on the trees after the scraping. Others apply compositions of lime and naphthaline or petroleum.

Limewashing the trees is not effective against insects unless the rough bark is cleared off, and the limewash thoroughly worked into

every cranny while it is fresh.

It is most difficult to use insecticides, and insectifuges, with advantage, as compositions that are strong enough to kill or drive away the weevils would probably injure the tender buds. After the larva is within the bud it is hopeless to attempt to reach it.

A mode of decreasing the number of weevils alopted in France consists in shaking the branches to make the insects fall on to cloths spread below. Cloths—old rick-cloths being best—are cut and arranged so as to fit close round the trunks of the trees. Labourers get into the trees and shake the branches violently, and others, with the aid of long poles with hooks at the ends, shake the branches within reach. The cloths are quickly swept with brooms, and the débris and the weevils are shovelled into sacks. This must be done rapidly, before the weevils can fly away. It is said that four men and two boys treated 110 trees in a day in this manner.

From experiments made, it has been found necessary to perform this operation two or three times on each tree, as all the weevils are not shaken off at once. From a tree, for instance, from which at the first shaking 1000 weevils had fallen, 385 were shaken off five hours later. In one orchard of 8 acres, having 347 trees, nearly 450,000 weevils were destroyed in three days, at a cost of £1. A satisfactory crop of Apples was obtained.

It should be pointed out that this operation must be carried out before the weevils have laid their eggs, and upon their first appearance,

commencing with the earliest varieties.

This mode of destroying the Apple blossom weevils might be advantageously practised in Great Britain. It might also be useful in case of attacks of winter moth and other caterpillars. It need hardly be pointed out that the fruit growers in districts should combine to wage war in this fashion simultaneously, and with care and energy.—(Board of Agriculture.)



HARDY FRUIT GARDEN.

Protecting Outdoor Fig Trees.—In all but the most favourably situated positions Fig trees require protection from the severest frosts. A ready method of insuring the safety of trees on walls is to unfasten the whole of the branches, tying them compactly together in bundles; and when severe frosts are imminent dry bracken or straw may be packed over them also, enclosing the main stem, which needs protection equally with the branches. Archangel mats nailed over all will make everything neat and tidy.

Heading Down Fruit Trees for Grafting.—Large-limbed fruit trees, which it is intended to graft in the spring with scions of better varieties, should now be headed down to points within a short distance of the junction of the branches with the main stem, leaving, however, a sufficient length to each stump so that a portion may be removed at grafting time, the bark adjoining a new cut working easier than that around an old one.

Preserving Scions for Grafting. — During the operation of pruning Apple and Pear trees well-ripened portions of the current year's wood may be selected for furnishing scions, laying them nearly the whole of their length in trenches made in a cool, shady position, where they will remain dormant until wanted. It is essential that the scions be cut before the least swelling of the buds takes place, and they are best secured in mild weather during the part for weaks.

best secured in mild weather during the next few weeks.

Hints on Winter Planting Fruit Trees.—There are many favourable opportunities when young new trees may be planted or specimens of several years' growth removed from one part of the garden to another. The best time is just when the leaves fall, but it is not always possible to accomplish the work then, and if carefully done now there is no reason why trees should not thrive afterwards. They will do so if the most important rules laid down for planting are strictly followed. The weather should be mild and comparatively dry in order that the soil may work easily without clinging tenaciously to the boots of the workman, or render his spade difficult to use. Soil in this state may be placed about the roots without fear. Its friability may be increased by mixing with it a small portion of dry wood ashes, which will favour the healing of the roots and an early commencement of root action. All broken roots must be cut smooth, and secure staking adopted along with the planting, afterwards a mulch of fairly short and dry littery manure will prevent the entry of frost. Newly planted trees ought not at the present time to be watered. The soil is moist enough in all cases, and quite sufficient for the requirements of roots in an inactive state.

Manuring Bush Fruit.—After the pruning of these is completed and the prunings cleared away, spread a coating of half-decayed farmyard manure under and between the bushes that need the dressing, lightly forking it into the ground wherever such is not occupied with roots. The soil immediately under the branches is, in well established bushes, mostly crowded with masses of fibrous roots which ought to be left undisturbed. Merely spread the manure over them, leaving it to decay, but, if desirable, it may be covered with a thin coating of soil. Gooseberry bushes that have been badly affected with caterpillars in summer ought, if practicable, to have the surface soil removed a couple of inches from under the spread of the branches, which will clear away the pupæ of caterpillars in hiding there for the winter. Such soil should be deeply buried between the bushes in the spaces free from roots, accompanied with a dressing of lime. If not convenient to remove the soil make the ground white with lime. The soil from the trench mixed with some short manure can be spread over the roots.

Dressing Fruit Trees.—Allowing insects and parasitical growths to infest fruit trees soon brings them into an enfeebled condition. Those pests which infest the branches and stems and once fairly established are always more or less in evidence if means to check them are not continually waged. Winter is the best time to carry on the work of

insect eradication.

Moss and Lichens.—To rid trees of these incrustations, lime used in conjunction with soot and sulphur is a good destroyer. In preparing a mixture of this kind add to four parts of hot lime two parts of soot and three of sulphur, mixing all together in strong soapsuds to the consistency of paint. On applying this with a brush to all affected parts of trees it will not only destroy the growths referred to, but insects concealed in the bark as well. Previously, however, the thickest of the growths should be carefully scraped off either with a wooden spatula or piece of hoop iron, being cautious not to injure the bark. The soda and potash mixture recommended on page 522 is excellent for cleansing the branches of fruit trees or bushes.

American Blight and Scale.—These insects require the use of strong and persistent measures to fully exterminate them from fruit trees. An emulsion of softsoap and petroleum at the rate of a wineglassful of the latter to a gallon of water in which 3 ozs. of softsoap has been dissolved will destroy all the insects it reaches. Combine the oil and soapy water with a force pump, applying it to the trees at a temperature of 100°. Badly infested trees ought first to be well washed with a stronger solution of softsoap, not less than 4 ozs. to the gallon, using it at the same temperature. If numerous, the scale insects should be scraped off with a blunt edged piece of wood, the trees afterwards

being brushed or syringed with the emulsion.

FRUIT FORCING.

Vines.—Earliest Forced in Pots.—The Vines started early in November in bottom heat are making rapid progress, growth having been freely produced and root action excited in consequence of the leaf development, which should be encouraged by top-dressings of artificial manures and supplies of water not less in temperature than that of the bed. The fermenting materials must not be allowed to decline in heat at this critical stage, augmenting them as required to maintain a temperature of 70° to 75° about the pots. It is a good plan to keep a heap of leaves and stable litter in reserve, from which supplies may be drawn as required. Particular attention must be given to the ventilalation, avoiding chills, such as those resulting from cold currents of air, supplying the Vines with cold water. Disbud and tie down before the shoots touch the glass, not being in too great a hurry in stopping, nor restricting to a certain number of joints beyond the banch where there is room. Yet there ought to be two, as well-developed foliage is essential to the proper swelling and finishing of the Grapes. Avoid overcrowding the foliage and overcropping by removing superfluous bunches as soon as choice can be made of the best. Maintain a night temperature of 60° to 65°, 70° to 75° by day artificially, so as to secure steady progress, and as the flowers open keep a rather drier atmosphere. Otherwise damp the paths two or three times a day, and where fermenting materials are not employed sprinkle the floors occasionally with liquid manure.

Planted-out Vines Started Early in December .- Where the house was closed at the beginning of this month the Vines will have started to grow. The temperature should be gradually raised so as to have it 60° to 65° at night when they come into leaf, 70° to 75° by day in mild weather, but 65° is more suitable when the weather is dull and cold. Air must be given judiciously, as cold currents cripple the foliage irreparably, yet moderate ventilation is essential to sturdy growth and well-developed leaves. As the foliage enlarges root action will be promoted, and it should be accelerated by supplying top-dressings of phosphatic manure, as bone superphosphate, say 4 ozs. per square yard. Defer disbudding until the bunches show in the points of the shoots, and allow these to grow up towards the glass. The growths also should be allowed to make two joints at least beyond the show of fruit before stopping, pinching off the points when the leaves at the stopping point are about the size of a halfpenny, removing laterals at the same time. Supply water when needed to the inside border at a temperature of 5° higher than the mean of the house. If the roots are partly outside, the border must be effectively protected from frost, and where they are entirely outside fermenting materials will materially assist root action and a steady supply of nutrition, but once used they must be added to from time to time to maintain the heat uniform at a temperature of 70° to 75° at the surface of the soil. This may be ascertained by plunging a thermometer with the bulb level with the base of the

fermenting material. Damp the paths and borders two or three times a day, sprinkling the Vines occasionally, but avoid excessive syringing or a confined moist atmosphere, as it only favours aërial roots from the

rods to the prejudice of proper root activity.

Houses to Afford Ripe Grapes in June—The Vines that are to supply these tshould be started at once. If the Vines are planted inside, the outside borders should be protected with a thickness of leaves sufficient to exclude frost; but the Vines being planted outside, the border will be advantageously covered with fermenting material, two parts leaves and one part stable manure, both as fresh as possible, mixed, and put on so as to maintain a temperature at their base of 60° to 65°, and 70° to 75° when the Vines start into growth. Supply the inside border with water at a temperature of 60° to 65°, bringing it into an evenly moist but not saturated condition. Fuel may be economised by the free use of fermenting materials placed inside the house, turning a portion of them daily, and adding fresh as needed, so as to maintain a genial warmth, and the giving off of ammonia-charged moisture. This will also lessen the necessity for damping; otherwise, damp the house and Vines two or three times a day when the weather is bright. In dull weather sprinkling the floor once or twice a day will be ample. The temperature should be 50° to 55° by artificial means and 65° from sun Yourg Vines or canes will need depressing to the horizontal line or lower, to insure their breaking regularly to the base.

Houses from which the Grapes Have been Cut.—The Vines should be pruned as soon as possible, as when this is deferred beyond the turn of the days bleeding is more or less liable to follow, but to a plump bud or eye as near to the main stem as practicable. Vines in good condition will give fruit enough when pruned to one bud; but where this has not been the case, or the bunches were too small in previous years, the bearing shoots (called laterals) may be shortened to two buds, or left longer if those are not round and plump. This will cause the spurs to become long in course of time, but it is easy to encourage growth from the base and cut the old spurs away, or train up young canes for the displacement of the old rods. All loose bark should be stripped off, especially on the spurs, no attempt at scraping being made, and the Vines washed with tepid softsoap and water (3 ozs. softsoap to a gallon of water). This is all that is necessary if the Vines are clean, otherwise follow with an approved insecticide. Cleanse the house thoroughly. Limewash the walls, adding a handful of flowers of sulphur to each pailful of limewash. Remove the loose surface soil or remains of mulchings, and supply fresh turfy loam, and sprinkle over it 4 to 8 ozs. per square yard of this mixture:—Three parts steamed bonemeal, two parts sulphate of potash, and one part ground gypsum, mixed. The house should be kept cool, but if utilised for plants the temperature artificially should not exceed 45°, as the Vines will be excited in a mean temperature of 50°, and that is fatal to complete rest. Plants only that require safety from frost should be placed in vineries when the Vines

Late Houses.—A temperature of 45°, with a dry atmosphere, should be maintained in houses where Grapes are hanging. assist in securing an equable temperature to cover the roof with mats or straw secured with tarred string. Some keep the Grapes in this way on the Vines until March, but due provision is made for ventilation, it being important to prevent the deposition of moisture on the berries, for that causes the germination of the spot fungus spores, or its near ally, the ripe rot fungus, and the berries speedily decay. The shade also prevents black Grapes losing colour nearly so rapidly as those exposed to strong light, and they do not lose weight to anything like the same extent. Examine every bunch carefully and frequently, removing all decayed berries. Ventilate the house on fine mornings, and keep it closed with a little warmth in the pipes when the weather is damp.

The better plan is to cut the Grapes, especially where they were ripened comparatively early, placing the ends of the stems in bottles of clear rain water secured in an inclined position so as to admit of the fruit hanging clear of the bottles. Any dry room free from dust, and where an equable temperature of 40° to 45° is maintained, will be a suitable place. This will admit of the Vines being pruned and the house cleaned. The Vines then have about a couple of months' complete rest before it is necessary to start them again.



APIARIAN NOTES.

BEES IN 1893.

THE closing year has been much talked about as an extraordinary one for honey. There was, however, not a single day throughout the whole year during which hives rose in weight more than from 4 to 6 lbs. daily. I have known them rise in weight 10 lbs. daily for a week, and extra strong hives gather from 14 lbs. up till 33 lbs. in one day. In all the records there is not an instance of any hive reaching the weight many did in 1863, and in some subsequent years. Some of my hives have never ceased breeding since August, and in most cases I see from their movements that water gathering has commenced for another year. One peculiar instance of the season is that bees hereabouts

never had an opportunity of gathering anything from Ivy. It used to flower with us in November, but this year very little was in bloom.

COMB BUILDING.

I have a number of queries to answer, but as the information will be embodied in "Hints for Beginners," I will defer them till the New Year. "C. R.," however, has one, among other questions, "Why bees refuse to build combs during the season." Although I have never written a special article on the subject, I have from time to time advised bee-keepers how to manage their stock to meet the difficulty, and to prevent swarming before the hives are filled. I cannot tell the reason bees will not build combs, but prefer swarming from a half or two-thirds full hive, though I may tell your readers that had my instructions been carried out disappointment on that line would not have happened. The following is a repetition of past instructions. Every colony intended as a stock should have its hive filled with combs during September or This prevents premature swarming if the queen is October. youthful and prolific, and an excess of drone comb. Of course it is understood that a full-combed hive can only be satisfactory with the Lanarkshire ventilating floor. Where that is absent the amount of decay in the combs is sometimes great, and is eaten out by the bees, when invariably drone combs are substituted, constituting a double loss to the bee-keeper. I have repeatedly removed brood combs during the months of June and July, substituting a frame having a narrow starter of foundation only, and in a year hence these frames remained empty. Although the seasons were good and supers were filled, yet the bees did all that, and swarmed without building the combs in the brood nest. It is stated Carniolans were the neglectful in "C. R.'s" case, but in my own experience other varieties were as guilty; but why they in some instances refuse to work combs in the places most essential to the bees' well-being is beyond my comprehension.

SPREADING BROOD.

This is another question. "A. M.," who has followed the advice given by other writers in the way of spreading brood, now finds his hives full of chilled brood, having failed to store surplus honey during the summer. He is afraid of foul brood, and asks my advice. I have from the first warned bee-keepers of the questionable practice as advised by inexperienced writers. Bee-keepers who prefer to throw aside the good old Scottish methods of managing bees, following the advice of book-learned bee-keepers, must just take the consequences. The pages of the Journal of Horticulture are open to all who care to give or ask for information, and those who depend upon it will neither have chilled brood nor foul brood in their hives, at least beyond an infected case.-A LANARKSHIRE BEE-KEEPER.



*All correspondence should be directed either to "THE EDITOR" or to "THE PUBLISHER." Letters addressed to Dr. Hogg or members of the staff often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Bee subjects, and should never send more than two or three questions at once. articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post, and we do not undertake to return rejected communications.

To Correspondents.—As, in consequence of the Christmas holidays, our offices were closed from Saturday to Wednesday, only those communications for which space was reserved could be inserted on Wednesday morning; also letters of inquiry which arrived after Saturday last cannot be answered this week.

Tuberoses to Flower in August (Reader).—Pot the bulbs early in March, and plunge in ashes in a cold frame. Placing a single strong bulb in each 5-inch or slightly larger pot is preferable to starting them in smaller pots, and shifting from these into larger ones. Use a rather rich loamy soil, and pot firmly, only about three-parts burying the bulb. Keep them in cold frames or pits, some being placed in the open air to afford a good succession. All may not flower, but the bulk will produce much stronger stems than will those grown in heat. Syringe frequently

Leeks, bunch Lettuce, dozen

Ficus elastica, cach ...

Mushrooms, punnet ... 0 9

in order to keep down red spider, give liquid manure when the pots are well filled with roots, support the flower stems with stakes, and the result will most probably exceed your expectations. Should, however, they fail to expand early enough forward by means of gentle heat, the

plants being given a light position.

White Antirrhinum (Reader).—Your pan of well rooted cuttings should be kept in a cool pit or frame for another six weeks, when they ought to be placed thinly or not less than 3 inches asunder each way in a box containing some loamy compost. Keep them under glass till well rooted and growing strongly, when they should be hardened off and planted where they are to flower next summer, the early part of May being a good time to do this. If you have kept the variety well away from any other Antirrhinum and saved seed, the plants resulting from this will almost probably closely resemble the parent plant. The seed being sown very early in the year, and the seedlings kept growing vigourously, they will flower freely next summer and autumn.

Apple Gascoigne's Seedling (H. F. B.).—You are quite right in assuming that "there are three Gascoigne's Seedling Apples described in 'British Apples,' as having been exhibited at the National Apple Congress, held in gardens of the Royal Horticultural Society some years ago." The one illustrated (fig. 86) is the best of them, and our description of the Apple is as follows:—Fruit roundish ovate, very prominently ribbed towards the eye. Skir lemon coloured when ripe, marked on the side next the sun with a crimson flush, and broken streaks of the

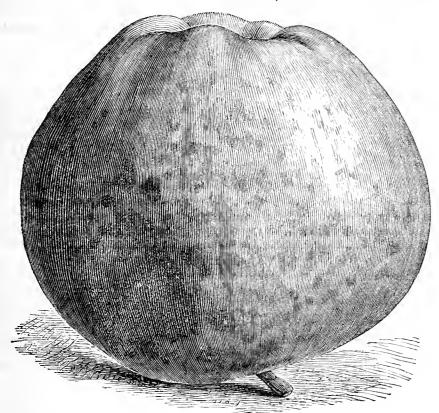


FIG. 86.—APPLE GASCOIGNE'S SEEDLING.

same colour; the base has a greenish-grey tinge and covered with a coat of thin russet. Eye closed, with incurved convergent segments set in a deep angular basin. Stamens basal: tube conical. Stalk upwards of an inch long, inserted in a deep funnel-shaped cavity. Flesh white, crisp, juicy, and briskly flavoured, with a pleasant aroma. Cells obovate, axile, or somewhat abaxile. Is a very handsome Apple indeed,

and may be used for dessert or culinary purposes.

Winter Condition of Black Fly (C. W.). — The black aphis (A. cerasi) lives through the winter on the young growths of Cherry trees under favouring climatic conditions, or in glass houses, and sometimes in warm situations outdoors. These continue to increase parthenogenetically under such circumstances for a number of years. This process of reproduction by gemmation or budding is distinct from that by eggs. These eggs consist of the outer wall or vitelline membrane, which is practically weather-proof, the yolk or vitellus, the germ vesicle, and germ spot. All these parts are easily determined anatomically, but it is extremely difficult to refer the egg under examination to the species. The eggs you have sent appear to be those of the Cherry or black aphis, the nucleus being well developed and spreading, so that they will presently become dark brown or black, and in due course the outer wall or shell will crack at the germ spot, and the virgin aphides emerge. The eggs (true) are produced by winged females at the end of the summer or n autumn, generally pale or yellow at first, but ultimately turning black.

Names of Plants.—We only undertake to name species of plants, not varieties that have originated from seed and termed florists' flowers. Flowering specimens are necessary of flowering plants, and Fern fronds should bear spores. Specimens should arrive in a fresh state in firm boxes. Slightly damp moss, soft green grass or leaves form the best packing, dry wool the worst. Not more than six specimens can be named at once, and the numbers should be visible without untying the ligatures, it being often difficult to separate them when the paper is damp. (Amateur). — Coprosma Baueriana variegata. (L. P. B.).—Cuphea platycentra. (Yorks).—1, Daphne indica; 2, Cyperus alternifolius. (C. H.).—1, Begonia Ingrami; 2, B. manicata. (Suburban).—

Asparagus decumbens.

TRADE CATALOGUES RECEIVED.

H. Cannell & Sons, Swanley.—Chrysanthemums. Dickson & Robinson, Manchester.—Garden Seeds.

Dicksons, Limited, Chester.—Vegetable and Flower Seeds.

Dobbie & Co., Rothesay, Scotland.—Catalogue and Competitors' Guide. W. J. Godfrey, Exmouth, Devon.—Chrysanthemums.

H. J. Jones, Ryccroft Nursery, Lewisham. - Descriptive Catalogue Chrysanthemums.

Stuart & Mein, Kelso, Scotland.—Amateurs' Gardening Guide.

J. Veitch & Sons, Royal Exotic Nursery, Chelsea.—Catalogue of Seedsand Horticultural Implements.

COVENT GARDEN MARKET .- DECEMBER 27TH.

FRUIT.

THE Christmas market was abundantly supplied and trade brisk.

THE CHISTMAN MATERIAL	-y cappine and times	_
s. d. s. d.		d. s. d
Apples, per bushel 2 6 to 9 0		0 to 0 0
Cobs 40 0 42 6	Plums, per half sieve 0	0 0 0
Grapes per lb 0 6 2 0	St. Michael Pines, each 2	0 6 0
Lemons, case 10 0 15 0		
V EC EU	ABLES.	
IADAY	ADLES.	
s. d. s. d.	s.	d. s.d.
Beans, Kidney, per Ib 0 3 to 0 4	Mustard and Cress, punnet 0	
Beet, Red, dozen 1 0 0 0		3 0 0
Carrots, bunch 0 4 0 6	Parsley, dozen bunches 2	0 3 0
Cauliflowers, dozen 2 0 3 0	Parsnips, dozen 1	0 0 6
Celery, bundle 1 0 1 3	Potatoes, per cwt 2	0 4 B
Coleworts, dozen bunches 2 0 4 0	Salsafy, bundle 1	0 1 5
	Scorzonera, bundle 1	6 0 0
	Shallots, per lb 0	3 0 0
	Spinach, bushel 8	0 0 0
	Tomatoes, per lb 0	3 0 7
	Turnips, bûnch 0	4 0 6
Oucumbers, dozen	Scorzonera, bundle 1 Shallots, per lb 0 Spinach, bushel 8 Tomatoes, per lb 0	6 0 0 3 0 0 0 0 0 3 0 7

AVERAGE WHOLESALE PRICES.—OUT FLOWERS.

Orchid Blooms in variety.	•	Ohry	san	the	mum blooms very plentiful this season, henc	e
ž -	2	d.	s.	d	s. d. s. d	d.
		0 to		Õ	Narciss, White (French),	
	ī	0	i	6		0
, and a second s	0	6	ī	0	Orchids, per dozen blcoms 3 0 12	0
Camellias, dozen blooms 1	Ĺ	0	3	0	Pelargoniums, 12 bunches 6 0 12	0
	L	6	3	0	Pelargoniums, scarlet, doz.	
Chrysanthemums, dozen					bunches 4 0 6	0
	2	0	6	0	Primula (double), dozen	
	0	6	2	0	spinjs	0
Eucharis, dozen	4	0	6	0	I JICOMI WILL GOLD DURING -	0
	2	0	4	0	100000 (1111001), 100001	6
Hyacinth, Roman, dozen					11 2011, 1111100, 2000011	U
	0	6	1	0	,, 1 cho ,, dozen **	0
	3	6	6	0	Roses, Safrano (French),	
Lilies of the Valley, dozen					por dozon	6
sprays 2	2	0	4	0	Roses, Safrano (French),	^
Lilium longiflorum, per		_	_		pot 100	0 6
dozen 6	3	0	9	0	Tubeloses, 12 blocks	0
Maidenhair Fern, dozen		•	_		Violets, Parme (French),	0
	4	0	6	0	por billion in the state of	U
	2	0	4	0	Violets, Czar (French), per	0
	3	0	6	0	bunen .,	J
Narciss, Yellow (French),	_	^		^	Violets (English), dozen	0
dozen bunches	2 _	0	4	0	bunches 1 6 2	U
		PL			IN POTS.	,
		d.		d.	1	d.
Arbor Vitæ (golden) dozen		0 to		0	Foliage plante, tari, easier = -	0
Aspidistra, per dozen 18			36	0	Hyacintli, Roman, dozen	0
Aspidistra, specimen plant 5	-	-	10	6	poes	0.
Chijsenien, pro-	4	0	9	0	Elliant Harrissi, per done	0
ii italgo pitanesi, etteri	l	0	2	0	Liyeopodiums, per delet it	-
Dracæna terminalis, per		^	40	^	Maigaette Datej (delet 1	ŏ
dozen			42	0	Mighonous, per dealer.	ŏ
Dracæna viridis, dozen			$\frac{24}{18}$	0		ŏ
Ericas, per dozen 9			18 18	0	I willing the state, outcome to	0
Euonymus, var., dozen 6 Evergreens, in var., dozen 6			$\frac{10}{24}$	0		ŏ
	4		24 18	0		ŏ
1 01115, 111 (01100), 0000		0	6	0		ŏ
Ferns (small) per hundred 4		ñ	7	6	Solutions, box donouts as - a man	



SOME LESSONS OF THE YEAR.

THE year draws to a close; its span of time will soon be complete; in a few days it will be numbered with the past; but its lessons-clear, incisive, and unmistakeable-will remain with us, and of all things which the old year leaves behind they will prove the most valuable if their meaning is fully graspedtheir teaching applied to the correction of specific faults, to the improvement of practice in farm management generally.

Failures-those dear-bought lessons of adversity which, taken aright, are stepping stones to success, have sprung primarily from two causes-imperfect autumn tillage and

poverty of soil; secondarily from drought. We say this plainly, with a distinct comprehension of the general opinion that drought, and drought only, was the cause of crop failure in hay, corn, and roots. But close observation on our long journeys, the inspection of many farms in different parts of the country, and the results of our own practice has shown that the effect of the drought was very much in proportion to the condition of the land. Of corn crops, Wheat sown early on good sound land was entirely satisfactory in ear, the only effect of the drought being visible in a certain dwarfing of straw growth. Late-sown Wheat on poor land was, on the contrary, a decidedly inferior crop. Where the land was clean and ridged in autumn the sowing of spring corn was, as usual, done early, and done well. The fine seed bed gave a full even plant, the manure drilled in with the seed gave vigorous growth, which had such a good and early start that Oats were a magnificent crop, decidedly superior to the best of the Barleys.

Compare this, as we have done repeatedly, with spring corn sown on poor land, ploughed late in spring under great difficulties, in so rough a seed bed that the plant was most uneven, some coming up so long before the other that, as harvest time drew on, there were patches of ripe and green corn all over the fields. Worse than this, much of it found so little sustenance in the poverty stricken soil that it dwindled and died. Many a corn field have we seen the miserable growth of whichunworthy to be termed a crop-ought never to have been left to ripen, but should have been folded off with sheep in its green state.

Root crops were affected very much in the same way. With the drought setting in so early in March, it was evident that special treatment was an imperative necessity if we would have a useful crop There was the land ridged the proper width in autumn for Mangolds and early Swedes, so it was left till the end of March; then the farmyard manure was carted directly from the heap to the furrows, where a double amount of it was used to make certain that the plant should have plenty of moisture, the ridges being split, and the seed sown at once, only as much dung being carted daily as was required for that day's sowing. By this method the seed (sown deeper than usual) had sufficient soil moisture to induce speedy germination, the plant became quickly established in the mass of rich moist humus, and passed through the drought with comparative impunity. Where, on the other hand, the ploughing was done late, only a mere scattering of manure being placed in the furrows and no special effort made to meet the emergency, there was a lamentable failure of plant and a proportionate shortness of crop.

Poor pasture was practically bare all the summer. Live stock suffered accordingly, and lean cattle were forced on the market in such large numbers that prices were ruinously low. On such land the hay crop is never a full one. This year it was less than usual by five-sixths. For example a grazier who last year made 60 tons of hay, this year had only 10 tons from the same area. Of course he and his neighbours are loud in complaints; would that they could be made to see the folly of their negligence of the land for which they pay rent and get such miserable crops from. With land in good heart, with fertility well sustained, and the annual dressing of pure chemical manure applied in February, there was growth early and strong, a good crop of hay, and it was only during the weeks of extreme heat that the herbage ran short, to come again with full vigour when the rain did come.

Never was there a summer in which the quick action of that king of nitrogenous manures, nitrate of soda, was so useful. A supply of it was kept in readiness, and advantage was taken of the first steady downpour of rain to give a dressing of about 12 cwt. to the acre on pasture becoming bare. The effect was almost magical, so quickly and strongly did growth follow. Green Maize, too, must have notice for its splendid growth and high value. Mention of it is a reminder of the outspoken opinion of dairy farmers of land all in pasture, that mixed farming is safe farming; that their difficulties would have been much less if they could have had some green crops

Earnestly do we hope that these and other lessons of the year may lead to better practice, that their teaching may be applied, that they may carry conviction into the mind of every farmer, and lead to improvements which are so possible and so much to be desired. Under judicious change we believe entirely in the possibility of a prosperous future for agriculture in this country, but it is a matter that must be considered with an open mind; prejudice and the blind following of custom must yield to the dictates of good sense. When we hear of conferences for the discussion of help from within, of thorough cultivation of the land, of a general improvement in breeding and feeding live stock, of a common standard of excellence for all land worthy of cultivation, of sustained fertility of soil, of a thorough knowledge of the comparative value and right use of manures, of the disposal of farm produce in the most profitable manner, and of a system of cropping and farm management adapted to requirements of the times, then, indeed, shall we believe that farmers

"Rise to higher things On stepping stones of their dead selves."

WORK ON THE HOME FARM.

On those estates where the horses of the home farm are used for the clearance of timber or underwood advantage should be taken of all open weather now for the carting, every effort being made to get through with such work before spring. The carting of gravel for repairing farm roads or carriage drives must also have attention, and if the gravel pit is upon the estate see that there is a sound and easy road out of it. have had such roads of an easy gradient, but we have one now up which no horse can draw a full load, and which, when the estate came under our control, had deep wheel tracks, showing that no care had been taken to keep it in repair or to improve it. The carters either went off with half a load or horses had to undergo much brutality. A sound road and a horse in trace harness at the pit set matters right.

Draining is now being got on with on land where many patches of Rushes clearly indicated the presence of superfluous water. This pasture has also much Carnation Grass and other poor herbage, and we must have the draining finished in good time for a dressing of chemical manure in February. A renovating mixture of strong growing grasses will be sown, the superfluous soil from the drain spread over the pasture, and the whole well rolled and bush-harrowed in due course. Pasture generally is wonderfully firm to the foot for this season of the year, and sheep folds are in full use upon as much of it as possible. We like a large flock; it enables us to keep down manure bills, sheep folding being used everywhere that it can be managed. Herein lies the special value of sheep, which gives them an advantage over all other stock, and renders them indispensable to the farmer. Avoid folding pregnant ewes on arable land; never forget the heavy losses which have followed carelessness in this matter, both from the strain made upon them in walking about in the sea of mud to which the soil in such folds is often reduced at this season of the year, but also from the chilling effects of the consumption of large numbers of frosty Turnips.

METEOROLOGICAL OBSERVATIONS. OAMDEN SQUARE, LONDON. Lat. 51° 32′ 49″ N.: Long. 0° 8′ 0″ W.: Altitude. 111 feet

DATE.			9 A.M	•			Ім тн	E DAY.		
1893.	Barometer at 32°, and Sea Level.	Hygro	meter.	Direc- tion of	Temp.			Rain.		
December.	Baro at 32 Sea	Dry.	Wet.	Wind,	at 1 foot.	Max.	Min.	In Sun.	On Grass.	
Sunday 17 Monday 18 Tuesday 19 Wednesday 20 Thursday 21 Friday 22 Saturday 23	Inchs. 30·378 30·108 29·553 28·965 29·490 29·856 30·164	deg. 36.5 40.6 45.7 42.7 36.1 41.9 38.3	deg. 36.4 39.4 43.9 41.4 34.3 40.0 38.1	Calm S.E. S.E. S.W. S.W.	deg. 42·0 41·1 41·5 41·9 41·3 39·9 40·1	deg. 42.6 46.4 48.9 50.0 43.2 51.1 46.7	deg. 33·3 33·3 41·2 39·9 34·3 33·0 35·2	deg. 51.0 49.3 57.7 56.9 60.1 50.3 60.4	deg. 29.4 29.9 35.3 34.9 29.6 27.6 30.3	0.216 0.252 0.160 0.628

REMARKS.

17th.—Fine and sunny till about 3 P.M., cloudy after.

18th.—Fair early, dull and misty from 9 A.M. to noon; fair afternoon, bright evening.

19th.—Overcast early. occasional sunshine from 10 A.M. to noon; continuous rain from 1.45 P.M. to 6 P.M., and showers later; high wind in afternoon.

20th.—Rain from 7 to 9 A.M., and showers after; bright sun from 1 to 2 P.M., then overcast again, and heavy rain from 3 P.M. to 6 P.M.; S.E. gale and squall, and very low barometer in afternoon; lunar halo at night.

21st.—Bright throughout, and brilliant night.

22nd.—Fair early, almost continuous from 9 A.M., with steady rain from 5 to 7 P.M.:

22nd.—Fair early, almost continuous from 9 A.M., with steady rain from 5 to 7 P.M.; fine night.

23rd.—Fair early, bright day, but damp; cloudless but misty at night.

A damp week, with average temperature. Barometer very low, 28:565 inches at 5 P.M. on 2 th.—G. J. SYMONS.



