

UMASS/AMHERST



312066 0333 2910 3

MASSACHUSETTS  
STATE COLLEGE

GOODELL LIBRARY

 Per

  
v. 30

This book may be kept out

**TWO WEEKS**

only, and is subject to a fine of **TWO CENTS** a day thereafter. It will be due on the day indicated below.







THE MAGAZINE  
OF  
HORTICULTURE,  
BOTANY,

AND ALL USEFUL DISCOVERIES AND IMPROVEMENTS IN  
RURAL AFFAIRS.

---

“Je voudrais échauffer tout l'univers de mon gout pour les jardins. Il me semble qu'il est impossible qu'un méchant puisse l'avoir. Il n'est point de vertus que je ne suppose à celui que aime à parler et à faire des jardins. Pères de famille, inspirez la jardinomanie à vos enfans.”—*Prince de Ligne.*

---

VOL. XXX.  
1864.  
(VOL. V., FOURTH SERIES.)

EDITED BY C. M. HOVEY.  
AUTHOR OF THE “FRUITS OF AMERICA.”

---

BOSTON:  
PUBLISHED BY HOVEY AND CO., 23 KILBY STREET.  
1864.

HENRY W. DUTTON & SON, PRINTERS,  
90 AND 92 WASHINGTON STREET.



# CONTENTS.

## ORIGINAL COMMUNICATIONS.

### GENERAL SUBJECT.

The Progress of Horticulture. By the Editor,	1
Notes on Architecture. By Wilson Flagg, .	14
Roman Architecture. By Wilson Flagg, .	49
Early English Home Architecture. By W Flagg, . . . . .	130
Seed Sowing. By the Editor, . . . . .	201
The Progress of Thirty Years. By the Editor, . . . . .	417
Ornamental Planting. From the Garden- ers' Chronicle, . . . . .	425

### HORTICULTURE.

Grafting Vines. From the Gardeners' Chronicle, . . . . .	22
Pear Culture in Massachusetts. By the Editor, . . . . .	41
Tree Protectors. By James Weed, . . .	60, 139
The Adirondac Grape. By J. W. Bailey, .	62
Grape Culture in Massachusetts. By the Editor, . . . . .	81
The Framingham Grape. By the Editor, .	93
Forcing Principally by Sun Heat. By Jas. Weed, . . . . .	95
The Yokohama Squash. By the Editor, .	100
One Hundred Fine Pears. By the Editor, .	121
Horticultural Gossip. By Bev. A. D. Grid- ley, . . . . .	136
The White Japan Melon. By the Editor, .	143
Horticulture in the West. By the Editor, .	161
Hardiness of the Adirondac Grape. By Col D. S. Dewey, . . . . .	208
The Merits of Various Pears. By the Ed- itor, . . . . .	241
St. Crispin Pear. By the Editor, . . . .	249
Hybridization of Fruits. By T. Francis Rivers, . . . . .	251
Strawberries. By W. G., Jr, . . . . .	287
Some Thoughts on the Pear and Apple. By D. W. Lathrop, . . . . .	289
Richardson's Seedling Pear. By the Ed- itor, . . . . .	293

Cherries. By T. Rivers, . . . . .	227
Pyramidal Pear Trees. By the Editor, .	332
Progress of Grape Culture. By the Editor, .	353
New Varieties of Blackberries. By Wm. Kenrick, . . . . .	358
Grape Vines on the Close Spurring System. By J. W. Russell, . . . . .	390
Muscat Grapes. From the Gardeners' Chronicle, . . . . .	392
The Ellis Pear. By the Editor, . . . . .	370
Gathering Pears. By the Editor, . . . .	385
One Hundred Varieties of Beams. By Miss Lucy S. Brewer, . . . . .	391
Orchard Houses. By T. Rivers, . . . . .	397
The Hovey Pear. By the Editor, . . . .	409
Suburban Visits, . . . . .	434
Pomological Gossip, 25, 88, 140, 171, 207, 247, 297, 330, 367, 404, 432	

### ARBORICULTURE.

The Magnolia. By H. H. Hunnewell, . . .	56
Japanese Trees and Shrubs. By the Ed- itor, . . . . .	281
The Rhododendron. From the Cottage Gardener, . . . . .	335
Arboricultural Notices, . . . . .	209, 295, 403

### FLORICULTURE.

The Mexican Zinnia. By the Editor, . . .	29
Roses. From the Gardeners' Chronicle, 67, 102	
The Tritoma. From the Gardeners' Chron- icle, . . . . .	175
The Indian Azalea. From the Gardeners' Chronicle, . . . . .	179, 214
Machaeranthera Tanacetifolia. By the Ed- itor, . . . . .	185, 255
Double Portulacas. By the Editor, . . .	219
Pæonies. From the Gardeners' Chronicle, .	301
The Pelargonium. By the Editor, . . . .	321
Floricultural Notices, 30, 106, 144, 220, 260, 307, 338, 435	
Garden Gossip, . . . . .	269

## LIST OF ENGRAVINGS.

TREES AND PLANTS.		FRUITS.	
<i>fig.</i>	<i>page.</i>	<i>fig.</i>	<i>page.</i>
9. Double Portulacas, . . . . .	219	GRAPES.	
8. <i>Macrorantha Tanacetifolia</i> , . . . . .	181	2. The Adirondac Grape, . . . . .	85
1. The Mexican Zinnia, . . . . .	29	PEARS.	
OPERATIONS.			
12. Pentagonal Method of Training Pear Trees, . . . . .	333	13. Ellis, . . . . .	371
DIAGRAMS.			
3. Section of Forcing Pit with Shutters Closed, . . . . .	97	14. Hovey, . . . . .	410
4. Section of Forcing Pit with Shutters Open, . . . . .	97	10 St. Crispin, . . . . .	250
VEGETABLES.			
		11. Richardson's Seedling, . . . . .	294
		7. White Japan Melon, . . . . .	144
		5. Yokohama Squash, . . . . .	101
		6. Inside of the Yokohama Squash, . . . . .	101

## LIST OF PLANTS.

In the body of the Magazine, a few errors occur in the spelling of the botanical names, the capitalizing the generic and specific names, their derivation and accentuation; these are all corrected in the following list of plants:—

Lists of Azaleas, . . . . .	255, 264	List of Perpetual Carnations, . . . . .	375
List of Bedding Dahlias, . . . . .	299	Lists of Roses, . . . . .	103, 313
List of Chrysanthemums, . . . . .	108	List of Spiræas, . . . . .	411
List of Dahlias, . . . . .	109	Lists of Early Flowering Bulbs, . . . . .	373
List of Gladiolus, . . . . .	350	List of Hardy Variegated Plants, . . . . .	311
List of Hollyhocks, . . . . .	109	Lists of New Plants, . . . . .	290, 196
Lists of New Japan Maples, . . . . .	210, 211	List of New Hardy Trees, . . . . .	212
Lists of Pelargoniums, . . . . .	109, 312, 325	List of New Varieties <i>Pyrus Japonica</i> , . . . . .	211
Lists of Pæonies, . . . . .	277, 305	List of Standard Epiphyllums, . . . . .	192
<i>Acer atropurpureum</i> , . . . . .	211	<i>Anemone japonica</i> Honoring Jobert, . . . . .	107
<i>cárneum</i> , . . . . .	211	<i>Anthúrium Scherzerianum</i> , . . . . .	262
<i>disssectum</i> , . . . . .	210	<i>Aphelandra Liboniána</i> , . . . . .	438
<i>japonicum</i> , Fredericki . . . . .	211	<i>Aquilégia spectábilis</i> , . . . . .	438
Gulielmi, . . . . .	211	<i>Aristolochia leuconæra</i> , . . . . .	265
jucundum, . . . . .	211	<i>Astrocarýum mexicanum</i> , . . . . .	263
princeps, . . . . .	211	<i>Athanasia ánnua</i> , . . . . .	235
sanguineum, . . . . .	211	<i>Aubriétia Hendersóni</i> , . . . . .	260
Meikita, . . . . .	210	<i>Aucuba aúreo margináta</i> , . . . . .	262
<i>Negundo variegátum</i> , . . . . .	429	limbáta, . . . . .	262
<i>píctum verum</i> , . . . . .	211	longifolia, . . . . .	262
<i>polymórphum disséctum foliosio marginátis</i> , . . . . .	263	japónica, . . . . .	341
<i>Wageneri laciniátum</i> , . . . . .	296	margináta, . . . . .	262
many varieties, . . . . .	210	<i>Azalea var. Beauty of Dorking</i> , . . . . .	108
<i>Achillæa Millefolium variegáta</i> , . . . . .	312	Criterion, . . . . .	255
<i>Ada aurantiaca</i> , . . . . .	267	Distinction, . . . . .	255
<i>Æchmæa distichántha</i> , . . . . .	340	Louise von Baden, . . . . .	108
<i>Agave schidigera</i> , . . . . .	263	Mad. Miellez, . . . . .	255
<i>Ajuga reptans variegáta</i> , . . . . .	311	Mont Blanc, . . . . .	255
<i>Alstroemeria Caldasii</i> , . . . . .	307	Suzette, . . . . .	255
<i>Amaránthus melancholicus rúber</i> , . . . . .	11	Triumphans, . . . . .	255
<i>Anchomanes Hookeri var. pallida</i> , . . . . .	33	many varieties, . . . . .	256, 264
		<i>Begonia incarnáta</i> , . . . . .	267
		Mannii, . . . . .	267
		<i>Biéta orientális aúrea</i> , . . . . .	296
		<i>Bomærea multifóra</i> , . . . . .	107
		<i>Bouvárdia floribúnda</i> , . . . . .	339
		grándis, . . . . .	339
		spléndida, . . . . .	337
		<i>Bowénia spectábilis</i> , . . . . .	107, 111
		<i>Bráhea dúlcis</i> , . . . . .	113
		<i>Browállia Jamesóni multifóra</i> , . . . . .	107
		<i>Calceolária Bijou</i> , . . . . .	108
		punctáta, . . . . .	32
		<i>Camellia álba ornatíssima</i> , . . . . .	438
		Carlotta Papudoff, . . . . .	108
		Duchesse de Nassau, . . . . .	113
		Fanny Sanchioli, . . . . .	145
		Filippo Parlatore, . . . . .	108
		Jubilee rosea, . . . . .	108
		Napoleon III, . . . . .	108
		Ninfa del Tebro, . . . . .	224
		Petazzi, . . . . .	309
		<i>Causcóra Parishii</i> , . . . . .	222
		<i>Ceanóthus aúreus latifolius</i> , . . . . .	295
		<i>Ceropégia Gardnèrii</i> , . . . . .	308
		<i>Chrysanthemum General Bainbridge</i> , . . . . .	31, 108
		Jupiter, . . . . .	31
		Lady elade, . . . . .	31, 108
		Lizzie Holmes, . . . . .	109
		Lord Clyde, . . . . .	108

Chrysanthemum Mrs. Edward Miles, 108	Gladiolus Charles Davis, 109	Pelargonium Diadem, 109
Prince Alfred, 31, 108	Mrs. Dix, 109	Dr. Lindley, 110
Princess of Wales, 31, 108	sericio-villosus, 222	John Hoyle, 312
Robert James, 31	Gloxinia maculata var. insignis, 146	Princess of Wales, 109
Venus, 108	Gnaphalium lanatum, 311	Tam O'Shanter, 322
Cineraria John Spencer, 109	Gymnogramma Pearcei, 263	many var., 110, 312, 326
Snow flake, 109	Gymnostachyum Verschaffeltii, 34, 108, 264	Petunia Duchess of Northumberland, 110
Clematis florida Standishii, 106	Gynërium argenteum, 262	Royalty, 110
Fortunei, 106	Hechtia Ghiesbreghtii, 114	striata purpurea, 312
Jackmanii, 106	Helicium atropurpureum var. grandicephalum, 113	Phœnum tenax variegatum, 263
languinosa, 307	Helipterum Sanfordii, 117	Phyrnium Vanden Hecke, 144
venosa, 307	Helichrysum Mannii, 267	Pitcairnia tabulariformis, 262
violacea, 307	Hibiscus Huegëlii, var. quinquevulnera, 112	Poinsettia pulcherrima, 190
Cláanthus Dampieri, 374	Homoianthus viscosus, 111	Primula alba plena fimbriata, 30
Coleus marmoratus, 263	Ilimea elegans, 225	atrorsea plena fimbriata, 30
Verschaffeltii, 11, 263	Ipomea filicaulis, 221	cortusoides anæna, 106
Cordyline Banksii, 262	Jacaranda digitatiflora, 268	rosea plena, 30
Corylopsis spicata, 437	Kalanchoe grandiflora, 437	rubella plena, 30
Cupressus Lawsoniana, 280	Lapageria rosea albilora, 439	Prununopitys elegans, 263
Cyanophyllum magnificum, 108	Lewisia rediviva, 33	Pyrethrum Delicatum, 110
Cycas Ruminiana, 438	Ligularia Hodgsoni, 147	Lycias, 110
Cypripedium Pearcei, 261	Lilium auratum, 10, 212, 283	Princess Alexandra, 110
Dactylis glomerata variegata, 311	canadense, 10	roseum album, 110
Dahlia Brunette, 109	lanceifolium, 282	many varieties, 110
Dwarf Queen, 228	Philadelphicum, 10	Potentilla Louis Van Houtte, 340
Echantress, 109	speciosum, 10	M Fouillard, 340
Erebus, 109	superbum, 10, 282	Dr. Andry, 339
Joy, 2 8	Lonicera aureo reticulata, 212, 283, 404	V. Lemoine, 320
King of Dwarfs, 229	Lychnis senno, 106	Wm. Rollison, 340
Little Wonder, 228	Lycopersium pubiflorum, 107	Quamoclit nationis, 266
Queen of Summer, 229	Machaerautha tanacetifolia, 186	Rœdia glaucescens, 267
many varieties, 109, 229	Macleania speciosissima, 436	Retinospora ericoides, 212
Delphinium Brunonianum, 437	Maclura aurantiaca variegata, 296	obusa, 212
Dendrobium barbátulum, 308	Magnolia acuminata, 58	pisifera, 212
infundibulum, 308	auriculata, 59	Rhododendron Batemanii, 32
luteolum, 308	cordata, 58	campanulatum, 32
Desmodium Skinneri var. albo lineata, 341	grandiflora, 58	catambense, 213, 274
Deutzia crenata flore pleno, 106, 223	glauca, 59	Baron Osy, 146
Diáanthus eincinnatus, 223	macrophylla, 58	maximum, 213, 274
Marie Pare, 109	tripetala, 58	var. Due Adolphe de Nassau, 34
multiflorus hybridus, 109	many varieties, 59	Prince of Wales, 107
striatiflorus, 109	Mahonia japonica, 270	Princess of Wales, 312
Dieffenbachia Baraquiniana, 223, 264	Maranta striata, 264	many varieties, 274
grandis, 264	Massonia cannaefolia, 262	Richardia æthiopica, 262
Diervilla multiflora, 145	Mecanopsis Aculeata, 436	Robinia Pseud-Acacia, 296
Dipteracanthus affinis, 147	Meyenia erecta, 32	Rodantea atrosanguinea, 150
Dracæna Cooperi, 263	Vogeliana, 32, 107	maculata, 150
latifolia pendula, 263	Miconia pulverulenta, 108	alba, 150
limbata, 263	Micranthella Candollei, 436	Russelia juncea, 224
robusta, 263	Mimulus repens, 265	Saxifraga Fortunii var. tricolor, 309
terminalis, 191	Ornithogalum capitatum, 261	japonica tricolor, 107
Echinocactus scopa, 308	thyrsoides, 261	sarmentosa, 309
Elegans japonicus, 212	Osmanthus illicifolius, 212	umbrosa variegata, 311
Epiphyllum Russellianum, 192	Oursia cocinea, 106	Schizostylis coccinea, 265
truncatum, 192	Pearcii, 106	Scrophularia aquatica variegata, 311
many varieties, 192	Pandanus elegantissimus, 108	Scutellaria aurata, 33
Eránthemum leuconeurum, 108	Peonia Charles Rouillard, 305	costaricana, 268
rubroneurium, 108, 264	Henri Pingard, 305	Sedum Sieboldii, 35
tuberculatum, 107, 112	Loi Verniory, 305	var. fol. variegatis, 35
Erica exquisita, 107	M. Andre, 305	medio variegatum, 106, 262, 310
Eucharis amazonica, 36	M. Malet, 305	Serissa foetida var. fol. adreomarginatis, 34
Euonymus radicans, 212	Moutan, Mad. Stuart Low, 113	Silene Elizabethæ, 106, 111
Fontanesia Fortuni, 226	Pres. Lambinon, 113	Skimmia oblata, 403
Forrestia hispida, 291	many varieties, 305	Solanum anthropophagorum, 221
Forsthaia Fortuni, 209	Pelargonium Achilles, 109	Sphaeralcea acerifolia, 112
suspensa, 210	Artist, 109	Sphærogyne latifolia, 108
viridissima, 210	Adonis, 110	Spiræa callosa alba, 296
Fuchsia grandis, 269	Beauty, 110	
Madame Wagner, 269	Bowkeri, 245	
Marquis de Bellefont, 269	British Queen, 261	
Monsieur d'Offoy, 269		
Fugosia cuneiformis, 147		
Genliana bavaria, 261		

Spirea'a many varieties, 411	Trichántha minor, 222	Valtívia Gaydna, 107
Stauránthera grandiflora, 107, 146	Trichinium Manglèsií, 340	Verbéna Banner, 221
Stenogáster multífloa, 224	Triteléa unífloa, 225	Compte Bernard Lechi, 111
Stephensónia grándifloa, 263	Tricyrtis hirta, 106	Lord Craven, 221
Stuártia grandiflora, 260	Tritóma Burchéllií, 179	Mauve Queen, 111
Tacsónia Van Volkemii, 145	grándis, 176, 178	Othello, 111
Táxus libérnica fastigiáta, 166	grándifloa, 176	White Lady, 221
Thibáudia sarcantha, 340	Roóperi, 178	Vienssièuxia fugax, 268
Thaja Héveyi, 270	Uvária glaucéscens, 176, 178	Wáitzia corymbósa, 307
Thujopsis dolobráta, 283	Tropæolum Coóper's Defiance, 178	Wébbia pinifolia, 147
boreális, 270	Tussilágo Farfara variegáta, 311	Weigéla horténsis nívea, 339
Thysacáanthus Schombúrgii, 225	Urecolina aúrea, 435	rósea álba, 106
		Zinnia Ghiesbrihtii, 29

## LIST OF FRUITS.

APPLES.			
All Summer, 406	May Duke, 329	Hartford Prolific, 8, 85, 94, 142, 143, 165, 357	
American Golden Pippin, 162	Nouvelle Royale, 329	Hyde's Eliza, 83	
American Summer Pearmain, 162	List of Cherries, 329	Iona, 8, 26, 83, 358	
Baldwin, 156	GOOSEBERRIES.		
Bellflower, 162	Antagonist, 172	Isabella, 8, 84, 142, 166	
Early Harvest, 162	Bratherton's Birchen Lane, 171	Israella, 93, 369	
Early Strawberry, 162	Bratherton's Foreman, 171	Lady Downe's Seedling, 25, 228, 405	
Fall Queen, 162	Eardley's Hannah, 171	Lenoir, 83	
Fameuse, 162	Leicester's Smoker, 172	Marion, 83	
Gilpin, 162	Leveller, 172	Martha, 26	
Hubbardston Nonsuch, 162	Pilkinton's Farmer, 171	Marchioness of Hastings, 405	
Jonathan, 162	Prophet's Diadem, 171	Maxatawney, 26	
Lady Apple, 162	Stinger's Edna, 171	Muscet Hamburg, 24, 227, 331, 405, 408	
Ladies' Sweet, 162	Shiner, 172	Northern Muscadine, 143	
Maiden's Blush, 156	Walton's Annie, 171	Norton's Virginia, 164	
Moore's Sweet, 162	Walton's Garibaldi, 171	Oporto, 83	
Newtown Pippin, 162	List of Gooseberries, 171	Pope Hamburg, 175	
Nonsuch, 162	GRAPES.		
Northern Spy, 156	Adirondac, 8, 25, 62, 140, 150, 206, 355	Rebecca, 8, 143, 165, 174, 209, 357, 369	
Peck's Pleasant, 162	Aiken, 83	Rogers's No. 4, 358, 368	
Pittstown, 406	Allen's Hybrid, 8, 84, 358, 368	Rogers's No. 15, 358, 368	
Pryor's Red, 162	Arkansas, 83	Simpson's Seedling, 297	
Rambo, 162	Bararossa, 408, 432	Trebhiana, 299	
Ramsdell Sweet, 162	Black Hamburg, 22, 25, 227, 298, 404	Trentham Black, 298	
Rawle's Janet, 162	Black Prince, 298	Underhill Seedling, 89, 93	
Red Astrachan, 162	Bowood Muscat, 363	Union Village, 8, 85, 165, 358	
Red June, 162	Brandywine, 83	West's St. Peter, 298	
Rhode Island Greening, 156, 162	Buckland Sweetwater, 298, 369	Wchester, 8, 174, 358	
Roxbury Russett, 162	Burcharde's Prince, 408	White Muscat of Alexandria, 228, 363	
Smith's Cider, 162	Cannon Hall, 363	Yeddo, 248	
Summer Queen, 162	Catawba, 8, 84, 142	List of Grapes, 8, 93	
Tompkins County King, 156	Chaptal, 299	List of New Native Grapes, 26	
Winesap, 162	Chasselas Musqué, 298	New Seedling, 405	
Winfield, 406	Chavoush, 173	List of Fine Grapes, 298	
Lists of Apples, 162, 423	Child of Hale, 405	List of American Grapes, 423	
	Clinton, 170	NECTARINES.	
BLACKBERRIES.		Elruge, 253	
Albion, 359	Concord, 5, 26, 85, 90, 94, 142, 150, 164, 357, 368, 407	Fairchild's Early, 253	
Col. Wilder, 360	Creveling, 26, 166, 357, 369	Newington, 253	
Dr. Warder, 360	Cuyahoga, 142	Stanwick, 253	
Orange's Crystal, 359	Delaware, 8, 26, 64, 86, 143, 164, 170, 357	Victoria, 207	
Kittatiny, 407	Diana, 85, 91, 94, 143, 166, 357, 369	PEACHES.	
CHERRIES.		Acton Scot, 251	
Archduke, 329	Duchess of Buccleugh, 172, 299	Bourdin, 253	
Belle d'Orleans, 329	Framingham Seedling, 8, 83, 93, 358	Early Anna, 252	
Bigarreau, 328	Frankenthal, 408	Early York, 252	
Black Tartarian, 329	Golden Hamburg, 227, 298, 369	Galande, 252	
Blanchoury, 329	Grizzly Frontignan, 298	Grosse Mignonne, 252	
Duchesse de Pallnau, 329	Grant's Anna, 88	Hale's Early, 207	
Early Purple Guigne, 329		Noblesse, 252	
Empress Eugénie, 329			
Knight's Early Black, 329			

Petite Miguonne,	252	Easter Beurré,	162	Vicar of Winkfield,	154
Petit's Imperial,	208	Edinouds,	7, 153	White Doyenné,	162
Red Nutmeg,	252	Ellis,	370	Winter Nelis, 162, 246, 254,	388
Royal George,	252	Excelsior,	7, 125	List of Seedling Pears,	90
Shanghai,	252	Flemish Beauty, 102, 154,	387	14 Varieties Pears,	92
Susquehanna,	369	General Kearney,	90	100 Fine Pears,	125
White Nutmeg,	252	Glout Morceau,	162	Lists of Pears,	244, 423
Walburton Admirable,	252	Howell,	162		
		Hovey,	409		
		Jargonelle,	253		
PEARS.		Josephine de Malines,	254	RASPBERRIES.	
Augustus Dana,	7, 91, 128	King Edward's,	254	Doolittle's Black-Cap,	175
Bartlett,	162, 244, 387	Kingsessing,	7		
Barry,	411	Kirtland,	154	STRAWBERRIES.	
Belle Lucrative,	154, 245	Lawrence, 7, 154, 162, 246, 388		Admiral Dundas,	27
Belle Williams,	153	Le Curé,	162, 388	Boston Pine,	288
Berganotte d'Esperen,	254	Louise Bonne d'Avranches,	253	Brighton Pine,	283
Beurré d'Anjou, 154, 162,	247	Louise Bonne de Jersey,	89,	British Queen,	27
d'Arenberg,	254	162, 245		Buffalo,	142
Langelier,	388	Mad. Treyve,	174	Carolina Superba,	27
Bosc,	162	Manning's Elizabeth,	386	Duc de Malakoff,	27, 288
Clairgeau,	254	Marie Louise,	254, 388	Elton,	27
Diel,	127, 388	Merriam,	387	Empress Eugenie,	27, 288
Giffard, 92, 154, 162,	253,	Moore's Pound,	7, 125	Hovey,	247, 248, 288
	386	Morel,	254	Jucunda,	27
Spae,	330	Muskingum,	125	Keens' Seedling,	27
Superfin, 245, 253,	387	Nickerson,	88	La Challowaise,	27
Bezi Mai,	254	Norfolk County,	90	La Constante, 9, 27, 248,	288
Bloodgood,	125	Oshand Summer,	154	Marguerite,	288
Bon Chrétien,	253	Peters,	408	Marquise La Tour Mau-	
Boston,	7, 125	Passe Colmar,	129	bourg,	28
Clapp's Favorite,	7	Crassane,	331	May Queen,	27
No. 12,	90	Pratt,	154	Oscar,	27, 288
No. 15,	90	President,	90	Prince Frederick William,	27,
Dana's Hovey,	7, 369	Richardson's No. 1,	91, 293	288	
De Tongres, 92, 153, 249,	369	No. 2,	91, 293	Prince of Wales,	27
Dearborn's Seedling, 154, 336		Rostiezer,	153, 162	Reeve's Eclipse,	300
Des Nonnes,	154	Seckel,	7, 162	Scott's Seedling,	288
Dix,	7, 128	Sheldon,	7, 339, 407	Sir C. Napier,	27
Doyenné Boussock,	162	St. Crispin,	249	Sir Harry,	27
du Comice,	339	St. Germain,	254	Sir J. Paxton,	300
d'Ete, 153, 162,	253	Swan's Orange,	7, 387	Triumph de Gand,	300
Duchess d'Angouleme,	433	Tyson,	153, 162	Lists of Strawberries, 287, 423	

LIST OF CORRESPONDENTS.

A. D. G., . . . . .	213	Flagg, Wilson, . . . . .	14, 49, 130
Bailey, J. W., . . . . .	62	Gray, W. Jr., . . . . .	287
Brewer, Miss Lucy S., . . . . .	391	Gridley, Rev. A. D., . . . . .	136
Bewey, Col. D. S., . . . . .	208	Hunnell, H. H., . . . . .	56
Editor, 1, 25, 29, 30, 33, 41, 81, 88, 93, 100,		Kenrick, Wm., . . . . .	358
106, 117, 121, 140, 143, 161, 171, 185, 187,		Lothrop, D. W., . . . . .	289
201, 207, 209, 219, 230, 237, 241, 247, 249,		Rivers, T., . . . . .	327, 397
260, 269, 281, 293, 295, 297, 307, 321, 339,		Rivers, T. Francis, . . . . .	251
333, 353, 367, 370, 381, 385, 403, 404, 409		Russell, J. W., . . . . .	360
417, 432, 434, 435		Weed, James, . . . . .	60, 95, 139

GENERAL INDEX.

Adirondac Grape, Hardiness of, . . . . .	208	Beans, 100 Varieties of, . . . . .	391
Arboricultural Notices, . . . . .	209, 295, 403	Beaton, Mr. Donald, Death of, . . . . .	33
Architecture, Early English Home, . . . . .	130	Blackberries, New Varieties of, . . . . .	358
Notes on, . . . . .	14	Boot, Francis, Death of, . . . . .	118
Roman, . . . . .	49	Brugmansia, The, . . . . .	37
Aucuba Japonica, New, . . . . .	341	Bulbs, Early Flowering, . . . . .	373
Azaleas, New, . . . . .	264	Calvert, Hon. Chas. D., Death of, . . . . .	237
Azalea, The Indian, . . . . .	179, 214, 255	Carnation Perpetual, Culture of, . . . . .	375

Cherries, . . . . .	327	Pears, Gathering, . . . . .	385
Chrysanthemums, . . . . .	31	Peach Tree and its Fruit, . . . . .	229
Clanthus Dampieri, . . . . .	374	Pelargonium, The, . . . . .	321
Dahlias, Bedding, . . . . .	228	Planting, Ornamental, . . . . .	425
Epiphyllums, Standard, . . . . .	192	Plant, New Decorative Garden, . . . . .	338
Floricultural Notices, 30, 106, 144, 220, 260, . . . . .	307, 338, 435	Plants, Hardiness of Japanese, . . . . .	372
Flowers, Seedling Garden, . . . . .	312	New, of 1863, . . . . .	106
Forcing, Principally by Sun Heat, . . . . .	95	New, . . . . .	260
Forsythia, New, . . . . .	209	Hardy Variegated, . . . . .	311
Fruits and Fruit Culture in Western New York . . . . .	91	Variegation in, . . . . .	309
Hybridization of, . . . . .	251	Poinsettia Pulcherrima, . . . . .	190
Garden Gossip, . . . . .	269	Pomological Gossip, 25, 88, 140, 171, 207, 247, . . . . .	297, 330, 367, 404, 432
General Notices, 35, 71, 114, 148, 189, 224, 273, . . . . .	309, 372, 411	Portulacas, Double, . . . . .	219
Gooseberry Culture in Great Britain, . . . . .	171	Potentillas, New Double Flowered, . . . . .	349
Gossip of the Month, . . . . .	150, 274	Primrose, The Chinese, . . . . .	30
Grape Culture, Progress of, . . . . .	353	Pyrus Japonica, New Varieties of, . . . . .	211
in Massachusetts, . . . . .	81	Reviews, . . . . .	187
Culturist, . . . . .	188	Rhododendron, The, . . . . .	335
Concord in Illinois, . . . . .	142	Maximum and its Varieties, . . . . .	213
New Seedling, . . . . .	297	Soils, . . . . .	114
The Adirondac, . . . . .	62, 141	Rhododendrons and Azaleas, . . . . .	274
The Framingham, . . . . .	93	Rose Information, . . . . .	313
Grape Setting, . . . . .	148	Roses, . . . . .	67, 102
Grapes, Fine, . . . . .	298, 404	Pegging Down, . . . . .	191
Grapes, Discussion on, . . . . .	405	Season in England, The, . . . . .	300
in Maine, . . . . .	143	Seed Sowing, . . . . .	201
in Horticultural Society's Garden, . . . . .	408	Seeds, Germination of Rodanthe, . . . . .	150
Muscat, . . . . .	362	Preparing and Packing, . . . . .	233
Gray, Wm Jr., Residence of, . . . . .	272	Raising Minute, . . . . .	148
Harding, W C., Residence of, . . . . .	269	Shrubs, New Ornamental, . . . . .	255
Horticulture in the West, . . . . .	161	Society, American Pomological, 151, 235, 367 . . . . .	275
Progress of, . . . . .	1	Belmont Farmers' Club, . . . . .	72
Horticultural Gossip, . . . . .	136	Brooklyn Horticultural, . . . . .	412
Horticultural Operations:—		Cambridge Horticultural, . . . . .	193
January, . . . . .	38	Fruit Growers' of Eastern Pennsylvania, . . . . .	116,
February, . . . . .	79	of Western New York, . . . . .	152, 314
March, . . . . .	119	Hampden County Horticultural, . . . . .	152
April, . . . . .	158	Illinois State Horticultural, . . . . .	72
May, . . . . .	198	Massachusetts Horticultural, 37, 73, 156, . . . . .	197, 236, 276, 318, 342, 376, 413
June, . . . . .	238	Address of the President, . . . . .	73, 343
July, . . . . .	278	Annual Exhibition, . . . . .	377
August, . . . . .	319	Donation of H. H. Hunnewell, . . . . .	318
September, . . . . .	351	Election of Officers, . . . . .	413
October, . . . . .	382	Laying the Corner Stone, . . . . .	343
November, . . . . .	415	Opening Exhibition, . . . . .	237
December, . . . . .	439	Report of Building Committee, . . . . .	157
Humea Elegans, Cultivation of, . . . . .	225	Finance Committee, . . . . .	77
Hunnewell, H. H., Residence of, . . . . .	269	New York State Agricultural, . . . . .	152
Hyacinths, Culture of, in Moss and Sand, . . . . .	116	Pittsburg Horticultural, . . . . .	116
Lily Bulbs, Transporting, . . . . .	375	Spiræas, Pruning, . . . . .	411
Lilies, Japan, . . . . .	372	Squash, The Yokohama, . . . . .	100
Machaeranthera Tanacetifolia, . . . . .	185	Strawberry Festival, Belmont, . . . . .	247
Mackintosh, Mr. Charles, Death of, . . . . .	117	Strawberries, . . . . .	287
Magnolia, The, . . . . .	56	in France, . . . . .	27
Maples, New Japan, . . . . .	210	Prize, in England, . . . . .	300
Melon, The White Japan, . . . . .	143	Suburban Visits . . . . .	434
Murray, Mr. Dennis, Death of, . . . . .	3-1	Ten Acres Enough, . . . . .	187
Obituary, . . . . .	38, 117, 237, 381	Thirty Years. The Progress of, . . . . .	417
Oranges, Tangierine, . . . . .	35	Tree Protectors, . . . . .	60, 139, 150
Orchard-House, . . . . .	115	Trees, Fruit, Influence of the Stock and Graft, . . . . .	231
Culture, . . . . .	71	Trees, Probable New Hardy, . . . . .	212
Trees, . . . . .	149	and Shrubs, Japanese, . . . . .	281
Orchard-Houses, . . . . .	347	Tritoma, The, . . . . .	175
Paeonies, . . . . .	301	Vegetation in the Dark, . . . . .	273
Pear, Best 14 Varieties of, . . . . .	91	Verbenas, New, . . . . .	220
St Crispin, . . . . .	249	Raised Beds for, . . . . .	116
Ellis, . . . . .	370	Vine Borders under Gravel Walks, . . . . .	190
Hovey, . . . . .	409	Vines, Grafting, . . . . .	22
Richardson's Seedling, . . . . .	293	Grape, The Close Spurring System, . . . . .	360
Pear Trees, Pyramidal, . . . . .	332	Stocks for, . . . . .	227
Pear and Apple. Some Thoughts on, . . . . .	289	Violet, The Russian, . . . . .	71
Pear Culture in Massachusetts, . . . . .	41	Wax, A New Grafting, . . . . .	189
Pears, 100 Fine, . . . . .	121	Woolen Refuse, . . . . .	149
The Merits of Various, . . . . .	241	Zinnia, Mexican, . . . . .	29
Seedling, . . . . .	90		

# THE MAGAZINE OF HORTICULTURE.

---

## THE PROGRESS OF HORTICULTURE.

ANOTHER year has come and gone, and we enter upon the 30th anniversary of the issue of our Magazine. The memories of these many years crowd thickly upon us, almost forcing expression, but we repress them to a more fitting time at the close of the volume, giving our attention to the general progress of Horticulture during the twelve months past.

Pleasant as it is to announce a greatly increasing zeal in rural pursuits during this period, it is mingled with sadness as we reflect how dearly this returning prosperity has been bought. The unholy war in which we have been engaged still holds on, and while we at home find pleasure, quiet, and luxury in the peaceful toil of tending our gardens, our brothers are fighting the treacherous foe, deprived of many comforts, exposed to sickness, suffering from wounds, and laying down their lives to secure for us the inestimable boon of peace.

The trials through which we are passing will end in one grand object, viz., to Americanize America. It will teach us, as a nation, to be independent in everything. Our art, science, and literature will no longer be the reflection of European ideas. Brought by the events which, in our connection with foreign powers, accompany such a severe ordéal, to rely upon our own resources, we have found a wealth not only of material means, but of thought, which only such events could have made known. Thus, confining ourselves to horticulture, we have discovered that we can produce our own fruit trees; that the imposition of a duty on them has had a good effect; it has prevented the importation of trees which annually, by hundreds of thousands, found their way to our market; and,

as a natural consequence, it has directed the attention of our cultivators to the growth of both seedling fruits and plants to supply the place of the novelties which are yearly introduced. Not that we would undervalue or reject a fine fruit or beautiful plant because of foreign origin; but because we recognize in the enterprise of American cultivators, and the material we have to work with, the sure means of securing all those objects that excel abroad. A continuation of the prosperity which we now enjoy, will soon show how great has been the change, and how rapid the advance, in horticultural art. Let our horticultural societies encourage the growing taste and zeal for new fruits and flowers, and we shall soon cease to ransack every European periodical and catalogue for novelties, satisfied with our own productions, and looking at the former only as recording the progress of the science abroad.

Commercial gardening, from the causes we have named, has recovered, to a great extent, from the depressed state it exhibited a year or more ago. There is a fair demand for trees and plants, and the stock is much less than at the former period, while the demand has increased, and the supply limited mostly to our own dealers. Wealth, resuming its accustomed course, seeks gratification in the possession of beautiful gardens and grounds, and plantations of fruit trees; while the increase of taste, and the influence exerted by horticultural societies, there is a good reason to hope, will give renewed activity to horticultural art.

We present a brief summary of the meteorological character of the year:

January was an unusually open and mild month, the temperature being several degrees above the average. The first week was as fine and pleasant as October; a week of cloudy and cooler weather succeeded, with the thermometer at  $8^{\circ}$  on the 8th. It was then mild and fine again to the 15th, when a warm rain took all the frost out of the ground. The 17th to the 22d was cooler, with the temperature at  $10^{\circ}$ . The remainder of the month was variable, but unusually warm, with a light snow, and scarcely any frost, for 10 days.

The month of February, as usual, brought with it snow and cold weather. The 3d was cool, with snow; and on the



4th the temperature fell to  $8^{\circ}$  below zero, the coldest night of the winter; the day was severely cold, the thermometer reaching only  $1^{\circ}$  above at noon,  $6^{\circ}$  below at night, and  $3^{\circ}$  below on the 5th. On the 6th, an easterly storm carried off all the snow, and it was very mild again, with more snow, to the 14th. Another week of mild weather, with rain, succeeded. The 22d was cold again, with the mercury at  $10^{\circ}$ , and a cold snow storm to the depth of five inches. The last three days of the month were warm and rainy.

March came in mild, with a week of cloudy and snowy weather, when the snow was a foot or more deep. The 13th it suddenly changed, and the temperature fell to  $2^{\circ}$  below zero, the 14th to  $4^{\circ}$  below, and the 15th at zero; the 12th to 21st were the coldest of the winter, the average of the temperature being about  $12^{\circ}$ , accompanied with dry, cold, cutting winds. The 22d was cloudy and warm, and the remainder of the month was mild, with rain and light snows.

April was a rather cool month. The first ten days the average temperature at sunrise was about  $32^{\circ}$ , with snow and rain and frosts. The 11th was warmer, with the temperature at  $60^{\circ}$ , and the 12th at  $70^{\circ}$ , the warmest day of the month. On the 14th there was frost; after this it was warmer; but the 22d and 23d were frosty again. The 24th an easterly rain commenced, which continued through the 25th, when an unusual quantity of water fell. After this it was cooler to the close of the month.

May was but little more seasonable. It was cloudy, showery, and cool up to the 7th, when a cold, easterly storm set in; after this, it changed to warm suddenly, and at noon on the 11th, the thermometer stood at  $83^{\circ}$ . It was then cool and showery, with a white frost on the 10th, when warm and fine weather set in; on the 21st the temperature was  $92^{\circ}$ , and the 22d,  $96^{\circ}$ , which gave a start to vegetation, and rapidly brought into leaf all trees and shrubs. The remainder of the month was warm and favorable.

June commenced warm, with the thermometer at  $88^{\circ}$ , it was then cool and showery up to the 10th, when it was warm again; another week of cool, showery weather followed, with the temperature varying from  $50^{\circ}$  to  $60^{\circ}$ . The 25th it was

warm and beautiful, which continued to the close of the month.

The month of July was mostly warm and dry, without any excessively hot days, as is usual. The first ten days the temperature varied from  $80^{\circ}$  to  $88^{\circ}$ ; no rain of any consequence fell until the 14th, when there was an easterly storm, which drenched the parched and suffering crops. The remainder of the month was moderate, with frequent light showers. The 27th the temperature was  $92^{\circ}$ , the highest during the month.

August was the warmest month. The temperature ranged from  $85^{\circ}$  to  $94^{\circ}$  the first week; it was then cooler and showery; then very warm again,  $94^{\circ}$  on the 9th and 10th, and  $90^{\circ}$  the 11th and 12th; two cool days followed, when it was fine and warm, varying in temperature from  $75^{\circ}$  to  $85^{\circ}$ . Warm weather, with warm showers, closed the month. Over 20 inches of rain fell in August.

The month of September opened showery and warm, with the temperature at  $80^{\circ}$  on the 8th, and  $80^{\circ}$  on the 16th and 17th. On the 18th a severe rain storm and high wind, almost a gale, occurred, damaging much of the very small crop of fruit. It was then cooler, with the temperature at  $32^{\circ}$  on the 22d, accompanied with a very light white frost, which, however, did but little injury. The remainder of the month was warm and fine.

October was a fine month. The first week the temperature was very even, ranging at  $60^{\circ}$  for five successive days. The next week it ranged successively at  $64^{\circ}$ , with fine showers. It was then cooler, the temperature falling to  $33^{\circ}$ . From the 17th to the 24th the thermometer again ranged successively at  $65^{\circ}$ , succeeded on the 22d by a light frost, and rain. On the 26th the mercury fell to  $26^{\circ}$ , which was the first frost to do any injury. The three following mornings were frosty.

November continued mild and pleasant throughout, with only two or three light frosts up to the last day, when the temperature fell to  $18^{\circ}$ . Fine and showery weather alternated and plants and flowers were blooming the entire month.

December opened mild, but the temperature fell on the 6th, and continued frosty, with the mercury at  $8^{\circ}$  on 10th and 11th. It was then rainy and warmer, and the ground free from

frost. At the time we write, (18th,) a heavy rain storm has carried off a light fall of snow, and the month may be considered very favorable.

This summary will enable all who observe the general characteristics of the weather, and their relation to vegetation, to compare the last year with the previous one. The season of 1862 was one of the most abundant for fruit for many years, while that of 1863, has been far below the average. It will be recollected that the winter of 1861 and '62 was mild, with the lowest temperature  $2^{\circ}$  above zero. That of 1862 and '63 had an average temperature but little if any less, yet the lowest range was  $8^{\circ}$  below zero. In fact, the winter was unusually open and variable, with but little snow; and, with the exception of the cold of December, 1862, there was no severe weather till the last of March. Undoubtedly, the variable weather was unfavorable for fruit trees. The pear crop was small, the apple crop very inferior, and of peaches there were none; yet a cold of  $8^{\circ}$  below zero, in some winters, has not injured the peach buds in the least; showing, conclusively, that it is the weather which precedes or succeeds the cold, which causes loss of the crop.

The year may be characterized as an open and variable winter, a cool spring, a warm and wet summer, and a fine warm autumn. Strawberries, and the smaller fruits, were very abundant, except that the former suffered during a fortnight of dry weather just at the critical season. Grapes were fine, and ripened everywhere; the frosts of September not being severe enough to do any injury.

From the delightful autumn, which has so fully ripened the wood and matured the buds of fruit trees, as well as from the invigorating influence of a year's growth with only a light crop, there is every anticipation that the coming year will be another one of plenty. The vicissitudes of our New England winter may destroy these anticipations, but excepting the peach, our fruit trees are of too hardy a nature to suffer only from very peculiar or severe weather, and the cultivator who has planted well, can have but little doubt of the result of his labors.

## HORTICULTURE.

It has been surprising to witness so much activity in horticultural improvement, at a period of so much excitement in national affairs. The exhibitions of the year have been well attended, and the interest in them evidently undiminished. Fine fruits, beautiful flowers, and magnificent plants, have found admiring visitors. It may, we think, be truly said that, as a whole, they were never better than the past autumn, particularly when we consider the rather unpromising year. This, however, is the sure indication of a healthy growing taste, for unless there is a pleasure derived from examining the specimens of the skilful cultivator, there will be little desire to possess what he is enabled to produce. It is, in fact, through the popular exhibitions of our horticultural societies, that the public taste is to be educated, and everything that they can do—the most liberal premiums that they can offer—to accomplish this should be zealously undertaken. It is from the magnificent shows of the London Societies, whether of fruits or plants, that, in recent years, so much attention has been given to their cultivation.

In fruits, it is true, there is less of improvement due to this cause than to plants; but, even here, grape growing has received a new impetus from the demand for superior specimens. An ordinary bunch or two, such as the market affords an abundance of, cut from ordinary vines, are sent as specimens of grape culture! No wonder superior specimens are so rarely seen, when these common products answer. The rule should be here as with other fruits, if they do not come somewhere near an acknowledged standard to reject them altogether. Where are the Hamburgs, weighing three pounds a bunch, jet black, covered with bloom, and berries as large as plums? Where the Muscats, of equal weight and size, with golden amber colored berries, the sure indication of the lusciousness of these superb grapes? And so of other well-known sorts. In their place we have red or purplish colored berries, no bloom, and straggling loose bunches of the former—and clear green half-ripe berries of the latter. We have given many accounts, in our last volume, of the beautiful specimens exhibited at the London Societies, and it is only

necessary to add, that nothing short of the excellence attained there should be admitted here. Everything is in our favor—but skill.

No subject, at the present time, is of more interest than the production of seedling fruits, and, in order to bring together all the valuable information bearing upon it, we have, in our last volume, given several articles by Mr. Rivers, whose long practical experience renders them of especial value. We have, in addition, copied the remarks of the learned French botanist, M. Decaisne, whose experiments, made with the object of testing the views of the old pomologists on raising seedling fruits, are highly important and instructive. Just as this valuable information appears, and following immediately upon it, we have the announcement of the production of an unusual number of seedling pears, larger in quantity, and better in the average quality than has before been brought to notice in one season. This establishes the importance of the information which shall lead those who are engaged in the useful and interesting work of rearing new fruits, in the right direction, that their labors may be rendered as successful as possible. A few years have caused an immense change in public opinion, regarding American pears. The late Hon. John Lowell, with his good judgment, said, in 1832 or 1833, that there were only four or five varieties of known American origin that were worth growing! How stands the matter now? In the short period of thirty years the number exceeds one hundred, and at the rate of recent increase will soon be two hundred, or more; and these embrace kinds whose excellence no European pear can equal. In fact, we begin to think foreign pears will soon be considered of as little importance as foreign apples, of which only half a dozen are thought worthy of a place in our orchards. Look at the results of the last dozen years, viz.: The Sheldon, Swan's Orange, Dana's Hovey, Augustus Dana, Excelsior, Moore's Pound, Kingsessing, Clapp's Favorite, and the Edmonds. No other ten pears of their season can surpass, if equal them. If every decade shall give us similar results, how rich in this delicious fruit will American collections be? We make no account of previous accessions, such as the Dix, Seckel, Lawrence, Boston, and other unequalled pears.

Nearly all these have been accidental productions, showing how much must be due to our climate, or some other unknown cause, for this excellence; and if so much has come from accident, what will be the result of skilful efforts made with a view to combine the merits of two varieties, under our present accumulated knowledge of hybridization? We do not doubt they will be as progressive as similar efforts with other fruits.

And of the grape, how immense have been the strides towards excellence. Had the Concord been but half the good grape it is, the impetus its introduction gave to the growth of new seedlings would be alone worth all the disappointment which must have ensued. But it has not only exceeded all that was promised for it—standing by all good authority at the head of popular grapes—but it has awakened an interest in grape culture that will not cease till even the Concord is as much surpassed as that surpassed its predecessors. Already we have the Adirondac, like it in size of bunch and berry, and color of fruit, a fortnight earlier, and superior in quality. It only remains to see if its growth, hardiness, ease of cultivation, productiveness, &c., are equal to its other acknowledged qualities. If so, for the present, at least, the Concord and Adirondac will be THE grapes. And now we have the sum of a dozen years' grape growing, viz.: The Concord, Adirondac, Allen's Hybrid, Rebecca, Delaware, Union Village, Crevelling, Iona, Winchester, Framingham Seedling, and Hartford Prolific. There are still others, among which some of Rogers's Hybrids might be named, but after a careful examination of them for three years, we can see nothing that should give them the name of hybrids; they are simply improved varieties of the kinds they were named from, and we cannot detect the least foreign blood in them. Who that cultivated the Isabella and Catawba so many years, rarely obtaining a sweet berry, but must acknowledge their indebtedness to the raisers and introducers of these valuable kinds, so hardy, and so early, that they can be grown anywhere, and so good that cold-house grapes can scarcely compete with them in the market. Liberal premiums for superb seedling grapes will find the above list doubled in number in another ten years.

So much information has been given in regard to new strawberries that we need not detain our readers with a rehearsal here. We need something more than mere reports to establish the character of these new seedlings. Unlike the pear or grape, which improve from year to year, the strawberry shows its best in the seed bed, and, in many instances, has never exhibited the same qualities a second time. It may be so with some of these new seedlings, but we will not prejudge them, preferring to await the result of another trial. *La Constante* still stands at the head of foreign strawberries.

The other small fruits have not been lost sight of; but there is yet room for great improvement, and the gooseberry, current and raspberry should receive more attention. Let us hope they will find zealous amateurs, who will do at least as much for each as Mr. Houghton did for the gooseberry, make one attempt to improve them.

Peaches, under glass, on Mr. Weed's plan, are well worthy of attention. He has stated all the facts plainly, and we should be glad to see an attempt made to thoroughly test its value. Such a delicious fruit is worthy of every attention. It is only by this mode, or in orchard-houses, that a crop can be relied upon. The latter mode will give a small quantity of superior fruit, the former will supply it in abundance. Of orchard-house experience we hope to give more in our present volume.

#### FLORICULTURE.

The prominent flowers of the year have been the gladiolus and lilies. Quite unexpectedly, we have been pleased to learn, many cultivators have been raising seedlings, and have already flowered a large number, among which are some really beautiful varieties, quite equal to the best imported sorts, while all have been good. This is a marked peculiarity of the gladiolus. If a quantity of seedling dahlias are raised, but a limited number will be worth saving, and so of many other flowers, but the gladiolus seem to sport into few inferior colors, and if but few are decidedly new in tint, they are at least as good as the average of the older kinds. Under the present almost total restriction to importation it is gratifying

to know that our own cultivators will soon supply the varieties which are sought for in European collections.

The introduction of the new lilies from Japan is attracting attention to the whole class of lilies, all of which are highly ornamental, and worthy of more extensive culture, particularly the Japanese sorts and their varieties. If *L. auratum* surpasses in size and general effect the *L. speciosum*, it does not excel it in brilliancy of coloring, delicacy of form, or abundance of bloom. They will, without doubt, hybridize with each other, and there appears a rich harvest in store for those who may take them in hand, and judiciously intermix them. We have had long experience with the Japan varieties, and have raised many thousand seedlings, and we have noticed somewhat carefully the results of various hybridizations; with so distinct a kind as *L. auratum* to work with there is every hope of procuring a new strain of seedlings of great beauty. When we consider how varied are the colors and forms of the different lilies, and how long a period they display their flowers—from June till October—as well as their delightful fragrance and easy culture, it is surprising they are not placed among the most prominent of garden ornaments. Few appear to be aware of the great beauty of our native kinds, the *L. superbum*, *L. canadense*, and *L. Philadelphicum*. The two former growing six or seven feet high, with showy orange and red spotted nodding recurved petaled flowers; and the latter with upright dark red blossoms. These, with the well known foreign species, and their varieties, make upwards of 20 sorts, all possessing merit enough to find a place in every collection.

The *Zinnia* is still improving under the hands of skilful cultivators. The first irregularly double blossoms are now brought to as symmetrical a form as the double dahlia, and the original crimson colored variety is sporting into shades of purple, scarlet, orange, and salmon. It is surprising to see how much has been made of this old and almost neglected plant. But these few changes are only the beginning of what is to follow; for there is no reason to suppose it will not in time give us as great a variety as the dahlia. A new species from Mexico has been introduced; it is single, like the



old zinnia, but its color is so brilliant, and its habit so neat, that even in its single state it is one of the most desirable of newly introduced annuals. So much do we value it that we present some account of it, with an engraving, on another page. As it will undoubtedly hybridize with the others it will still further increase the shades of colors.

Hardy perennial plants we again commend to the attention of lovers of beautiful gardens. These have been too much neglected for bedding plants; yet, when we consider the variety of form, habits, colors, periods of blooming, and particularly their hardiness, requiring only to be once planted, they afford an infinite amount of gratification. The Massachusetts Horticultural Society have recognized their merits, and have established some liberal premiums for the present year, which we doubt not will save them from the neglect they have so long received. We have endeavored to do our share in this work, and shall continue, in our present volume, to bring to notice several deserving plants.

The Pæony, too, is growing in favor, as it should be second to no other plant in the magnificent effect of its superb flowers, now brought to an astonishing size and elegance of form. A selection of twenty or more of the most distinct varieties should be, next to the rose, an indispensable requisite for every garden. The four weeks of June are made gay with them, even if there is no other plant, and the rose itself does not produce the grand effect of this superb flower in its more improved condition.

Something might be said in reference to the fine foliaged plants, so extensively used in England in ribbon gardening, but whose use is limited here, where there are few grounds sufficiently extensive to give an effect of this kind; but in most gardens they are very showy and effective. Those of recent introduction are the *Coleus Verschaffeltii*, *Amaranthus melancholicus ruber*, the former extremely rich with its dark velvety leaves, variegated with green; and the latter nearly equally so with its bronzy hued foliage. These, with the old *Perilla*, have a fine effect on a bed edged off with some silvery hued plants, such as the variegated leaved geraniums. The good taste of every lover of plants will suggest the

combinations which may be made for producing an effective display.

Our Floricultural Notices contain an account of all the new things introduced abroad, or produced at home. Ferns and foliaged plants appear to have been those which have been most attractive abroad; but, though not yet so popular here, we hope the taste is increasing that will soon make them equally sought after by our own cultivators.

#### ARBORICULTURE.

Ornamental tree planting is limited; a utilitarian spirit is yet too prevalent. Trees which do not return a profit, are neglected for those which in the current language "pay." Thus, every suburban garden is filled with pears or other fruit, to the exclusion of ornamental trees, and the larger demesnes are quite too sparing in their use of them. We would not deny any one who has a spot of ground the luxury of good fruit, but it should not be carried so far as to exclude a little that is ornamental. The large stories of the immense profits of pear culture has turned many of our suburban grounds into market gardens, where every tree was to yield almost its weight in gold. This is to be regretted, for besides the picturesque effect which ornamental grounds give to a town or village, the advantages are not commensurate with the loss of real pleasure of which they deprive the proprietor. A suburban villa hedged round with pear trees looks well in summer, but when winter sets in how dreary from the absence of a few spruces, pines, arbor-vitæ, junipers, and other evergreens, and how little shade in the hot days of summer from the overpowering sun?

The rhododendron, the azalea, and other American plants, too long neglected, are beginning to attract more attention, and their great claims to general cultivation more extensively recognized. As we have previously remarked, it has been thought our plants must come from abroad to possess any great value, those of our own country being necessarily common. But those who have entertained this opinion knew little of the wealth of our flora, or that many of our indigenous plants are far more rare out of their native locality

than many of the productions imported from Europe. The more we become acquainted with them the more we regret that they have so long been overlooked, and their place supplied by inferior objects from other climes.

The encouragement now offered for the growth of these plants, as well as all hardy trees and shrubs, by Mr. Hunnewell, is opportune. It comes at a time when the rates of exchange and duties almost amount to a prohibition of the introduction of trees from abroad, and so long as this state of things exists, it will divert attention to the production of new things at home; thus out of a seeming injury good will result.

Coniferous trees, so interesting to British planters that no expense is spared to introduce them from every quarter of the globe, have not yet, except in a limited way, found the same class of enthusiastic admirers, which commend them to such extensive notice abroad. Gradually, though slowly, the really hardy kinds are more sought after, and we hope, ere long, something besides spruces and arbor-vitæ will ornament every garden. Japan has furnished some very remarkable trees, but their hardiness remains to be tested. The introduction of seeds, by Mr. Hogg, is a welcome event, and likely to give us results much sooner than the importation of plants from Great Britain. Will our enthusiastic tree lovers and planters aid us in diffusing a more general knowledge of the merits of every hardy tree and ornamental shrub?

#### HORTICULTURAL LITERATURE.

Little encouragement has been extended the last year to horticultural literature. Our periodicals, devoted to gardening, have lost many of their subscribers, and the quantity of reading matter has been curtailed to correspond with the increased expenses of publication. In this state of things it could not be expected that new and elaborate works would appear. With one exception this has been the case; this exception has been Mr. Burr's elegant work on the *FIELD AND GARDEN VEGETABLES OF AMERICA*, which we have already noticed. It shows that in the midst of the great struggle now going on that the arts of peace have not been wholly

forgotten, and that it is more the state of the public mind than any real loss of zeal or interest that horticultural pursuits have not received far more attention. The Rural Annuals, from the respective offices of the Country Gentleman and Genesee Farmer, have appeared in their usual excellent style; and THE ANNUAL REPORT OF THE AGRICULTURE OF MASSACHUSETTS, by Mr. Flint, with the ANNUAL REPORT OF THE NEW YORK STATE AGRICULTURAL SOCIETY, by Col. Johnson, form two volumes of the greatest interest to all who would watch the steady progress of the agriculture and horticulture of our country.

---

## NOTES ON ARCHITECTURE.

COMPILED FROM VARIOUS AUTHORS.

THE object of the series of essays, of which this forms the first number, is to present the readers of this Magazine some of the views of the best writers on the home architecture of ancient and modern nations. The present essay is chiefly taken from the work on Architecture by Mr. Thomas Hope. The compiler will avoid expressing his own views on the subject, and will adhere to the words of the text, from which the notes are compiled, as literally as the concise form to which they are reduced will permit. The most of the works on architecture are voluminous, and comprehend a great many details, which, though important for the illustration of his subject, are omitted here, both for the sake of brevity, and to render the notes more interesting to the general reader. I shall take but little notice of the architecture of nations who preceded the Greeks, regarding the latter as the first civilized people of whom history gives us any perfect account.

The people from whom the ancient Greeks were principally derived, made their first settlement in the neighborhood of Dodona, a region renowned for its immense forests of oaks; and out of these the first ancient structures were made. The great quantity of oak timber in that country determined the general character of the primitive architecture of Greece.

The floor, according to Mr. Hope, required to raise the structure above the wet earth, was probably contrived with trunks laid transversely. The supports were branches raised perpendicularly at certain intervals, where only distant points of bearing were required for the roof, and apertures necessary for entrance left open! When for retirement, for protection, or for shelter, close and continued walls were wanted, the intervals were probably filled up with clay or wicker work.

The posts were, at their top, tied together, longitudinally and latitudinally, by beams, whose extremities rested on their summits, and whose interstices permitted light to penetrate from without, sufficient for internal purposes. The outer covering was formed by slighter rafters lying on these beams, supporting another layer of leaves or planks or straw, which from its centre received an inclination either way, to carry off the wet. Thus arose the hut, made entirely of wood, an edifice equally different, in materials and in form, from the tent made of hides, and from the grotto dug in stone, and holding a sort of middle station between the extreme lightness of the one and the massiveness of the other. Now the reason is obvious, why the Greeks, after the forests were consumed so far as to make timber a scarce and expensive material, and when they were compelled to use for their structures the different kinds of stone, should continue to build them after the model of their primitive wooden edifices.

It might be supposed that when it became necessary to change the materials used in building, those particular forms and combinations, which were at first required by the character of these materials, would be omitted. But such has never been the case with any people. In every country where new productions of nature were adopted in building, the shapes and modifications which were found necessary in those which were first adopted, still continued to be, in those of the new sort, preserved, or rather imitated. This custom served also to remind the nation of its past origin, and its primitive arts, and especially of its first structures and places of worship, and with all that could produce the most interesting associations.

Hence the buildings of the Chinese still resemble, in all their parts, the forms of tents, which were their original type. Chinese homes seem to cling to posts, which when planted in the ground, have struck root and become fixed. The palaces look like a number of collected awnings; and the very pagodas, or towers, in their loftiness, are nothing more than a number of tents, piled on the top, instead of standing by the side of each other. The aggregated dwellings, from the smallest village to imperial Peking itself, in their distribution, resemble nothing but a camp. When Lord Macartney, on the borders of Tartary, was received by the Emperor, in a real tent, he could scarcely perceive any difference between it, and the millions of stationary buildings he had viewed.

The buildings of the Turks enable us to retrace the form of the portable tent of their nomadic ancestors. Their private habitations, from the tent roof of the meanest cottage, to the porch of the grandest Kiosk or palace, in its low-spreading expanse, its widely-extended eaves, broken at various angles, and supported by numerous pillars, and almost reaching to the ground, still recall the same model, and differ but little in shape and distribution from the real imperial tent which on the breaking out of every new war is solemnly erected.

As the architecture of the Chinese, derived from a prototype, light and portable, still, in heavier material, reproduces the same original form, so the architecture of the Hindoos, even in forms somewhat less ponderous, represents the cavern dug in the solid rock, or the materials extracted from the bosom of that rock, when piled up in a pyramidal shape on the surface of the ground. The preservation of this same form, in the architecture of the ancient Egyptians, is peculiarly striking. Its temples, its mausoleums, all its existing remnants everywhere afford traces of the void cut in the native rock, and the dissevered fragments again raised round the ancient space. All the Egyptian edifices, of a private or public character, resemble the ridge of rock only partially pierced, or the insulated mountain rising from its wide base and tapering to a narrow apex.

In the Greek building of stone, however large its dimensions, however sumptuous in its details, the form of the primitive cabin of stems and foliage of trees in which it originated, was, to the last era of Grecian independence, preserved with scrupulous and religious fidelity. The hut of Pelasgus, the last entirely wooden cottage in Arcadia, remained the unvarying model of every subsequent fabric in stone and marble, which arose in Greece. Every later improvement for use, every more elaborate addition for ornament which was displayed in these, only appeared as a supplement to this fundamental form, in no way allowed to alter or conceal it. Nay, in proportion as the edifice was of a more public and important character, the resemblance to the wooden hut seemed to be more ostentatiously preserved.

But, however scrupulously the Greeks, during the period of their independence, continued faithful, in the essential members of their architecture, to the form of the wooden hut, it is not to be supposed that a nation so lively, so full of imagination, could be so slavishly restricted to that form, as not to bestow upon it all the additions and ornaments of which it was susceptible. Thus in the temples of certain deities, in whose honor garlands of flowers or fruits were hung round their altars, or the horns of peculiar animals sacrificed to them, these things were, as emblems, reproduced in stone and marble, and used as ornaments to the building. Thus the Temple of Apollo, in Asia Minor, was adorned with the lyre, the tripod, and the griffin; the Temple of the Winds, at Athens, in each of the eight compartments of its octagon, was the personification of one of the eight winds. Similar emblematic ornaments were affixed to all the Grecian temples. To these imitative additions, intended, as it were, for some direct useful purpose, were added many other modifications, either like simple mouldings and meanders, wholly unimitative, or, like foliage, flowers, parts of animals and of human beings, imitative, but offering in their imitation no allusion to the peculiar building to which they were annexed, and introduced merely to increase their elegance.

Some drops of rain distilled from the ends of the rafters that projected over an architrave, so pleased a certain archi-

tect, that he added them as permanent ornaments to his Doric triglyph. A few rams' horns suspended from the top of a pillar, so struck the imagination of another builder, that he formed out of them the Ionic capital. A wild acanthus, accidentally lodged on the top of an ancient sepulchral cippus, and with its foliage embracing a basket placed on the pillars, so charmed a third artist, that he substituted it as a new capital. The most essential of these additions to the form imitative of the wooden hut, became gradually consolidated into three distinct combinations, each taking its distinctive denomination from the races to which their origin was ascribed.

Of these, that peculiar one which is regarded as the oldest, the most primitive, and which reproduces the wooden hut most faithfully and minutely, was called the Doric. The second in antiquity, that in which the volutes were added to the capital, and the ends of the large cross-beams, called triglyphs, omitted in the entablature, or those of smaller rafters, under the name of dentiles, substituted, was called Ionic. The third, considered the last of all, in which the capital was again lengthened, and surrounded by foliage terminating in scrolls, was denominated the Corinthian. Mr. Hope contends that the Greeks did not admit those arbitrary rules of proportion which the moderns have assigned to the different architectural orders. And in many Grecian buildings of the best era are omitted some of those very parts which the moderns have been accustomed to regard as the essential characteristics of the peculiar orders, and as inseparable from their other features.

In Greece the mildness of the climate permitted much of the business of the individual, and of the public, to be transacted out of doors, under open porticoes, shady arbors, or the mere canopy of heaven; and the temperament and habits of the people seem naturally to have produced in them an indisposition to employment within doors. But what the temperature of the atmosphere permitted, and the manners of the nation rendered agreeable, the ignorance of the arch, and of the use of glass in windows, rendered necessary. Hence their temples, if destined to receive such a roof of stone as should be complete and durable, not having the support of



the arch or vault, must have a very limited area. Their space within, unavoidably narrow, was, therefore, as much as possible compensated for without, in those single and often double colonnades, which preceded and surrounded ancient temples, and which, though we are apt to regard them as mere ornaments, were, in fact, intended to shelter and protect the greatest part of the collected congregation. The temple, says Mr. Hope, became a small hut or kennel, contained in a prodigious envelope.

The interior of their temples, in which, for want of glass, much light could not be admitted without exposure to the weather outside, received no daylight but such as made its way through the vast entrance door, or, at most, through interstices left in the frieze, or through gaps in the awning spread over the open part. If more was required, it was supplied by lamps and torches; and this, not being sufficient to supply the whole space, was concentrated on the principal object—the image of the deity of the respective temples. The rest of the space within was not lighted; it could not, therefore, be supposed that the Greeks would employ in its decoration the same pains and expense as on the outside.

In the states of Greece every citizen shared by right both in the public debate and in the public diversion; entered by right both the agora and the theatre. Hence, though these states were small, the numbers that flocked to those places, and were to be accommodated in them, greatly exceeded that which, in our larger states, need be admitted into similar edifices. As in these, one half could not, as in the temple, be detained outside, while the other was admitted within, these buildings or places, necessarily of immense capacity, were as necessarily left uncovered, and their dramatic entertainments were displayed in the broad light of day. But, still in a country where the habits, religion, polity, and every other circumstance led to the fullest development of the imitative arts; and public edifices were decorated with all that sculpture or painting could furnish, especially the outer parts, because the clear atmosphere exhibited the full beauty, and the mild temperature insured the complete preservation of works of art.

There was one circumstance that is worthy of remark, as a method of accounting for the habits of the Greeks, to adorn their public edifices more than their private houses. That purely democratic organization of the Grecian States, which raised every citizen to a level with all the rest, caused individuals to be cautious lest an ostentatious display of their own pre-eminence in wealth should awaken the jealousy or mortify the pride of other citizens. This consideration—the fear of being envied and hated—tended as much to keep private habitations low and unassuming, as it contributed to render public edifices vast and pompous. So imperative was it held on every citizen to avoid in his abode all that might attract the public eye, that Demosthenes regarded the pre-eminence of the house of Midias over the other habitations of Elensis, as a just ground of accusation against him. While the place of worship or of debate displayed on all sides externally the most magnificent colonnades, the private dwelling only showed a mere blank surface; and, like a temple inverted, possessed not external columns, surrounding a solid body, but enclosed its pillars within its exterior walls.

But the citizen, fearing to give vent to his pride in his private habitation, only sought the more to gratify it in the structures destined for purposes of public magnificence or solidity. These have attained in greater number that size of posts, that splendor of decoration, that has made them the wonder of all succeeding ages, while their houses are not stamped with sufficient character to have attracted attention. When we hear of a Grecian house among the dwelling-houses of modern times, we find it to be constructed after the model of a temple, not of a private habitation of the Greeks.

Notwithstanding all that has been said of the nobleness of Grecian architecture, it was wanting in one of the most important of mechanical inventions,—that of the arch. The want of the arch necessitated, within and without, an approximation and multiplicity of columns, in all the large buildings, for the purpose of bearing masses of stone, at once necessarily short, and yet heavy. These columns were an essential part of such buildings, and caused those vast ranges, and various dispositions which give to Greek temples their peculiar

denominations, all taken from the quantity of columns in each range, and the number and arrangement of their different rows. To the last days of the independence of the Greeks, their architecture, like a bird still unfledged and incapable of soaring in the air, showed its deficiencies. To the last, their inability to place any upright supports—whether columns, pillars, piers, jambs, or continued walls, in places where a covered roof was necessary, at a greater interval than a block of stone or a beam of wood might span—generated a degree of narrowness and contraction in their enclosed buildings, and only permitted them to wall-in a larger area, leaving the edifice without a roof. To the last, their want of mechanical science produced an enormous amount of materials in proportion to the space obtained. To the last, the internal forms of their edifices must, with all the elegance that could be applied to their limited combinations of outlines, have displayed a want of height, an angularity, an absence of that curve and swell, which enables the arch, cupola, and vault to produce equal variety, connection, and harmony.

The want of glass windows, as well as an ignorance of the properties of the arch, was a great defect in ancient buildings. The ancients seem long to have manufactured vases and other portable objects of glass, before they thought of applying it to its most useful and agreeable purpose—that of excluding from apartments the cold and wet of the atmosphere, while admitting all the heat and light of the sun. The want of thin plates of glass now used for that purpose, only permitted them to throw into apartments a considerable body of light, by exposing them at the same time to every inclemency of the weather. In many cases they were obliged to omit windows entirely and depend on lamps, even in the daytime, to illuminate their houses. In general they sought a mean between the extremes, by suffering a few straggling rays of light to penetrate across the ends of the rafters that lay on the walls and formed the ceiling; or by introducing immediately under the shelter and projection of the eaves, a sort of wide low window, which afforded no view of external objects. These restraints influenced the whole of their architectural

system. The smaller temples received the requisite light through an enormous entrance door, always open; and the larger ones were necessarily little better than external courts. Such was not only the magnificent Temple of Minerva, at Athens, but even the Pantheon, at Rome, of which the round central opening only shows all the beauties by permitting every passing shower to deluge the gorgeous pavement.

It caused the dwelling-house for seclusion as well as for safety to shun all outside windows; to have every aperture for light, as for egress, turned inwardly to a vast open court, and to present to the street, instead of the numerous windows of modern houses, an impenetrable dead wall. It even caused many apartments, of every sort, to be left, for the sake of warmth and comfort, entirely destitute of apertures for daylight, of every description.

---

## G R A F T I N G V I N E S .

FROM THE GARDENERS' CHRONICLE.

THE following article is well worthy the attention of all lovers of fine grapes. It is well known that some grapes are of much stronger constitution than others, and grow freely in any good border where other kinds would be weakly or probably fail. This difference is often apparent, but its cause not familiar. Even when two sorts are equally strong, one will often fail to perfect its fruit. This arises from the natural habit of the vines, one growing well in an ordinary border, while the other requires one of particular construction, warm, well drained, and dry. When, therefore, the latter are placed in the conditions of the former, they do not succeed well. It is in such cases that grafting may be adopted, to save the labor, and often the great inconvenience, of making a suitable border. The Black Hamburgh will grow in almost any good border, and upon this, those sorts which do not succeed may be grafted.

The considerations of the writer, as to affinity of stocks, are well worthy of attention, both as to grafting grape vines and fruit trees generally :—

Ought we to graft the more tender or less vigorous varieties of the grape vine upon stocks of the stronger-habited sorts, or is there any advantage resulting from the practice? What says theory? The effect of grafting a plant upon an older stock, that is, upon one which has attained to something like the full vigor of growth, is in a general way to render the graft more vigorous than it otherwise would have been; but there are some collateral considerations. There must be a fitness in all the circumstances of the case. The stock must be such as to suit the conditions of soil in which it is to grow; and there must be a sort of constitutional affinity between the stock and the graft. These points bring this question entirely within the range of experimental cultivation. In the case of the vine, the fitness would depend upon the hardihood of the stock in respect to its roots, and upon its degree of vigor being such as to suit the constitution of the scion. In other words, the advantage to be derived from grafting a vine would be, that a tender delicate-rooted sort, liable to suffer from even the unavoidable coldness of the soil, might draw up its nourishment through a stem, the roots of which, belonging to a variety of hardier nature, would be less influenced by the amount of cold to which they might happen to be subjected; while, if the graft were of a sort deficient in natural vigor, a stock of moderately increased vigor would serve to impart to it the very strength it needed. We say, of moderately increased vigor, because there ought not to be too great a disparity of constitution between stock and graft, though this is perhaps of less importance in the case of the vine than in that of many other fruit trees.

Besides this influence, which it is well known to exert over the vigor of the graft, the stock also, in some cases at least, exercises an influence upon its productiveness, as well as upon the quality of the fruit. This latter result would lead us to prefer to use as a stock some sort which was known to produce fruit of good quality, as well as to possess the requisite degree of vigor in its constitution.

Such considerations as these indicate at least that grafting may be advantageous; and that beyond the benefit which it may confer by rendering possible the substitution of good for

indifferent varieties with comparatively little loss of crop—and that it will do this, by reason of the rapidity with which a graft united to a healthy-established stock will replace the bearing rods which may have been cut away to make room for it, is evident. They also seem to be suggestive, that a healthy, moderately strong variety, producing fruit itself of superior quality—such a variety, in short, as the Black Hamburg, is one of the best that can be selected as a stock where choice is possible; and this mainly because of the comparative root-hardiness, as well as vigor, which this most estimable grape possesses. This is very well expressed in the following passage from *Thompson's Gardeners' Assistant*:—"The hardiness of the stock is of great importance in the cultivation of trees and shrubs indigenous to southern climates, for many of such plants either perish or thrive badly on their own roots when planted in the comparatively cold soil of Britain. They are, of course, affected somewhat injuriously by the coldness of our atmosphere, but they are more than doubly so when the roots, upon which their supply of nourishment depends, are also in a colder medium than they are adapted to endure. But when grafted on a stock, the roots of which are not likely to be injured, in a properly drained soil, by the lowest ground temperature which occurs in this country, tender plants that can be properly grafted on such thrive tolerably, in consequence of being fed by roots uninjured by cold." The question of root-hardiness alone will probably explain the frequent failure of such tender-rooted sorts as the Golden Hamburg appears to be, and on the other hand the success of such varieties when grafted on a less tender-rooted stock. This may indeed suffice to account for the different estimates which are formed of the merit of this variety.

But what says practice in answer to the question with which we set out? No doubt we can find a few illustrative cases on record. The vineries at Dalkeith furnish one such case. In *Gossip of the Garden* (Nov., 1863, p. 372) we read of the Muscat Hamburg, with rods not quite ripe, bearing clusters of fruit of not less than four or five lbs. weight, far more like Barbarossa than the Muscat Hamburg as usually seen. These vines are planted inside the house, and are

grafted on the Black Hamburgh. The difference between the bunches on grafted plants, and those on plants on their own roots, repeatedly seen elsewhere, is so marked, that the writer does not hesitate to recommend Mr. Thomson's plan to all gardeners. In the *Florist and Pomologist* (Nov., 1862, p. 168), it is stated of the valuable late black variety known as Lady Downes's Seedling, that the fruit is greatly improved by the vine being grafted on the Black Hamburgh, as Mr. Hill grows it. And not to multiply quotations, our own columns have recently recorded (October 17, p. 991), some remarkably fine examples of the Buckland Sweetwater, produced on rods which had been grafted on the Black Hamburgh. Some of the advantages which, it would thus appear, certainly do result from the practice of grafting, may be attributable to the mere vigor imparted by the older and well-established stock; but it would also appear that there are in the cases of delicate-rooted and weak-growing, or perhaps even small-berried varieties, decided advantages to be derived from grafting on a comparatively hardy-rooted vigorous stock, and among these the Black Hamburgh appears to hold a prominent position.

The case is analogous to that of tender-constituted varieties of Indian azaleas, for example, which are well known to be improved by grafting on a more hardy and free-growing stock. We shall be glad, however, to hear further what is the practical experience of cultivators on this interesting question.

---

#### POMOLOGICAL GOSSIP.

THE NEW NATIVE GRAPES.—Mr. Hussman of Missouri, who made a visit to the East last autumn, thus alludes to some of the newer grapes. Mr. Hussman is an extensive grape grower, and his experience is entitled to great respect:—

ADIRONDAC.—Seen at the Grape Exhibition, New York, October 3. Exhibited by J. W. Bailey. Bunch, large, compact, not shouldered; berry, large oblong, black, somewhat transparent, without pulp; juicy and vinous; very good; the

nearest approach to a foreign grape I have yet found in a native. Said to be very early, but not more than ripe when I saw it; it was grown, however, in the extreme northern part of the state.

**IONA.**—A new seedling of Dr. Grant. Seen at the Exhibition, and also at Charles Downing's garden, Newburgh, N. Y. Bunch, large, long, somewhat shouldered, loose; berry, above medium, of a beautiful wine color; slightly oblong; transparent, fleshy, but not pulpy; vinous and sweet; sprightly flavor; quality, best; said to ripen with Delaware.

**MARTHA.**—A seedling of the Concord, originated by that zealous cultivator, Samuel Miller, Calmdale, Lebanon Co., Pa., and certainly a grape of great promise. Bunch, medium, rather loose, but will no doubt get larger when the vine gets older; shouldered; berry, large, round, pale yellow; somewhat pulpy; sweet, juicy, very slightly foxy; quality, very good. Most of the berries contain only a single seed; very strong grower, healthy and hardy. Promises to be very productive.

**MAXATAWNEY.**—Bunch, medium, long, compact, not shouldered; berry, above medium, oblong, pale yellow, with a slight amber tint on one side; pulp, tender, sweet, and sprightly; few seeds; fine aroma; quality, best; vine seems to be healthy and productive; the most promising white grape which has yet been sufficiently tried.

**CREVELLING.**—Bunch, long, loose, shouldered; berry, full medium, nearly round, black, with blue bloom; grape, tender, dark juice, sweet, very good. Said to ripen before Hartford Prolific, of better quality; hardy, healthy, and productive; promises to make a good dark wine.

Some other kinds are noticed, but they are too little known as yet to attract general attention.

Mr. Hussman states that the Concord, Delaware, and other grapes he tasted in New York, were not near so sweet as those raised in Missouri. The Concords looked well, but did not taste like the same grape; acid, with a tough pulp, quite unlike the Concords in Missouri. No doubt the longer season adds to the excellence of this grape.



STRAWBERRIES IN FRANCE.—The Count de Lambertye has published a work on the strawberry, more extensive and complete than any that has yet appeared, including the botany, history, and cultivation of the strawberry. The author recognizes eight species, distributed as follows: three European, *Fragaria vesca*, *F. elatior*, and *F. collina*; three American, *F. chilcensis*, *F. virginica*, and *F. Grayana*: two Asiatic, *F. Daltoniana*, and *F. nilgheriensis*.

The first and second parts refer to the botany and history, and the third part contains descriptions of 40 varieties, which the author considers proper for cultivation. These are arranged into several categories, according to different points of merit, as for example:—

1. Sorts possessing all the merits—goodness, fertility, beauty, and hardiness; of such, 28 are enumerated.

2. Sorts not invariably so productive as some, but of which the fruits are handsome and excellent; these consist of British Queen and Keens' Seedling.

3. Sorts which are of remarkably fine appearance: Admiral Dundas, very good; Duc de Malakoff, good; Jucunda, very middling.

4. Sorts remarkable on various accounts; Elton, late, promising all the desirable qualities were it not rather too acid; May Queen, the earliest of all known varieties; Prince of Wales, (Stewart and Neilson,) very early; Prince Frederick William, the earliest after the May Queen, and the first very large strawberry. Among those in the category of such as force well, we observe besides British Queen and Keens' Seedling, the names of La Constante, Empress Eugenie, Duc de Malakoff, Sir Harry, Sir C. Napier, and Oscar. According to Count de Lambertye's full and excellent descriptions, the following appear to be most highly deserving of cultivation: Carolina Superba, flesh white, solid, buttery, melting, very sugary, with a delicious perfume; excellent. La Challonnaise, flesh juicy, acidulated, very sugary and perfumed; excellent. La Constante, excellent. Duc de Malakoff, very large, weighing sometimes 1½ ounces; the flesh light red; juicy, acidulated, sugary, and perfumed. Elton, a variety of which M. Gloede

wished both Count de Lambertye and Dr. Nicaise to give up the culture, on account of its being too acid, but neither of them would consent to do so. A fault, the only one that can be ascribed to it, being easily corrected at table by a little more sugar; while, on the other hand, it has a handsome form, a superb color, and its flesh is juicy and perfumed, the plants immense and vigorous and very hardy; upward of 300 acres are devoted to the cultivation of this strawberry, in the communes of Verrieres, Sceaux, Châtenay, Fontenay aux Roses, &c. Marquise La Tour Maubourg, also called Vicountesse Hericart de Thury, very sugary and high flavored; one of the best. Oscar, excellent. Prince of Wales, very good. Sir Henry, flavor exquisite.

This extract of a notice of the work in the Gardeners' Chronicle, will give the best idea of strawberry culture in France, and allowing for the difference of climate, by which many of the English and French varieties, above named, cannot be successfully cultivated here, we can judge of the advance made in this fruit. Thus the May Queen is called the earliest, and the Prince Frederick William the *first* large early strawberry. Now the first of these is in reality worthless from its small size, which is much smaller, not so early nor so good as the old Early Scarlet. The Prince Frederick William is a week later than Jenny Lind, not near so large, nor half as good. Elton was given up years ago, being acid, a shy bearer, burning in summer and suffering in winter. M. Gloede was right in advising the abandonment of its culture. La Constante is the only strawberry named that is worthy of general and extensive culture in our climate. Thanks, however, to Count de Lambertye that he has reduced the number of varieties to 40. M. Gloede has an extensive collection of about 300 varieties, and it is pleasant to see the larger part of these trashy sorts consigned to oblivion.

## THE MEXICAN ZINNIA.

BY THE EDITOR.

THE recent introduction of the Double Zinnia, after so many years of cultivation in its single state, has been quite a surprise to lovers of beautiful flowers. It is now becoming very popular, and, with further improvement, will take its place with the Aster, among the most beautiful plants for general decoration. More recently a new Zinnia has been received from Mexico, *Z. Ghiesbrihtii*, quite single, like the



1. THE MEXICAN ZINNIA.

old Zinnia, but different in color, as well as in general habit and character. Though only single, it is likely to prove far more attractive than the old kinds, its bushy habit, abundant bloom, and bright golden hue, giving it the highest claims as a garden ornament.

We annex an engraving (FIG. 1) of this new species, which was found in Mexico by M. Ghiesbriht. A single flower does not, by any means, show its valuable characteristics, which consist in qualities we have already named. MM. Vilmorin of Paris, who have introduced it, describe it as follows: Stem, dividing at the base, into numerous branches, forming a tufted bush, of the height of fifteen or twenty inches. The leaves are long, lanceolate, much straighter than the *Zinnia elegans*. Flowers, terminal, upon all the branches and their subdivisions; these are large, about an inch and a half in diameter, composed of seven or eight large petals, a little recurved, of a bright golden orange, shaded at the base with dark brown. The flowers are numerous, resembling, in their shape, the Indian pink, and have a fine effect, from the vivacity of their color. They open, without interruption, from June until frost.

Last year we had this pretty species in great perfection, and the plants were prominent objects of admiration. Specimens exhibited before the Massachusetts Horticultural Society were thought very beautiful.

The culture of this species is very simple. The seeds should be sown like the Double Zinnia, in March or April, or even in May, and receive the same treatment, planting out in the open ground in May, or early in June, where they soon commence blooming, and continue till frost.

---

#### FLORICULTURAL NOTICES.

THE CHINESE PRIMROSE.—Great advance has been made in this beautiful winter flower. In addition to the old double white and purple, four other double sorts have been introduced, viz.: *P. rosea plena*, *rubella plena*, *alba plena fimbriata*, and *atrorosea plena fimbriata*, the last very large, dark colored and fine. New single ones have also been raised, which add variety, where before we had only the white and purple. *P. atrorosea plena* is figured in the Illustrated Bouquet, and when grown equal to the specimen represented,

is a superb plant. The flowers are large, very double, of a deep rosy purple, and the petals finely fringed. Though not easy to manage, they are all among the most ornamental winter blooming plants. We hope our enterprising plant cultivators will add these new sorts to their collections.

CHRYSANTHEMUMS.—The shows of this fine autumnal flower, around London, have been unusually fine the past autumn, and many new seedlings have been exhibited. Mr. Salter of Hammersmith, who has an extensive collection of two thousand varieties, has flowered no less than three hundred seedlings the past season, and among them are several superior varieties, which will become popular flowers. Among the number is one called Princess of Wales, a truly regal flower, the blossoms of which, as Mr. Salter grows his flowers, measure five inches in diameter, and which will, therefore, come up to the highest standard for size. This variety is also remarkable for the breadth of its florets, which turn inwards quite naturally, to form a full incurved flower head. The color is a pearly white, delicately tinged at the margin with peach color, which at length deepens into a soft rose. To the same class of flowers belongs Prince Alfred, a large sized variety, well deserving, from its excellence, to be associated with a royal name. It has broad florets, and fully incurved flower heads, and the color is a rosy purple, paler and silvery at the backs of the florets. Lady Slade is another of the same type, large, fully incurved, and having broad, well disposed florets. This is of a pale, clear rosy lilac, very distinct in color, very chaste looking, and every way commendable. General Bainbridge and Jupiter are further additions to the same set as the preceding; the first a very fine amber colored sort, the second a dark red chestnut, with golden tips. Robert James, a full sized variety, with yellow centre, passing off to a coppery tinge at the outside, and leaves a delicate pearly lilac, are still others amongst the desirable varieties of the incurved group. Of the shorter, stiffer, and less incurved florets are several sorts, and of the Anemones and Pompones still others, making a fine addition to this charming autumnal flower.

718. RHODODENDRON BATEMANII *Hook.* MR. BATEMAN'S  
RHODODENDRON. (Ericaceæ.) Bhotan.

A greenhouse shrub; growing four or five feet high; with crimson blossoms. *Bot. Mag.*, 1863, pl. 5357.

A noble plant, with large, broad, open flowers, of a clear rosy crimson, appearing in large heads. As a species it resembles *R. campanulatum*, and the foliage, which is thick and broad, has the same rusty coating beneath. It was sent from Bhotan to the late Mr. Nuttall, and was flowered by Mr. Bateman in his winter garden. It is a showy half-hardy kind. (*Bot. Mag.*, July.)

719. ORNITHOGALUM CAPITATUM *Hook.* CAPITATE ORNITHO-  
GALUM. (Asphodeleæ.) Cape Colony.

A greenhouse bulb; growing 8 inches high; with white and purple flowers; appearing in winter; increased by offsets. *Bot. Mag.*, 1863, pl. 5388.

A pretty species, from the Cape Colony, producing dense corymbs of white and purple flowers, which appear in February or March. It is of easy culture in the greenhouse. (*Bot. Mag.*, July.)

720. MEYENIA VOGELIANA *Beath.* VOGEL'S MEYENIA.  
(Acanthaceæ.) Fernando Po.

A greenhouse plant; growing 2 feet high; with purple flowers; appearing in spring; increased by cuttings; grown in leaf mould, loam and sand. *Bot. Mag.*, 1863, pl. 5389.

"A lovely plant," which, in many respects, has considerable affinity with the pretty *M. erecta*; but is far more beautiful, with much larger, and more serrated leaves, and larger flowers, with exceedingly large bracts, more than half the length of the corolla, and very thick and fleshy. It flowers copiously in May. This will be a fine addition to our greenhouse plants. (*Bot. Mag.*, July.)

721. CALCEOLARIA PUNCTATA *Vahl.* SPOTTED CALCEOLARIA.  
(Schrophularinæ.) Chili.

A greenhouse plant; growing 3 feet high; with violet and yellow flowers; appearing in spring; increased by cuttings; grown in light rich soil. *Bot. Mag.*, 1863, pl. 5392.

A very ornamental species, with opposite ovate leaves, deeply, doubly, and trebly toothed on the margin, of a shrubby habit, producing terminal panicles of violet and yellow flowers, remarkable for their form, the lips of the corolla being nearly equal. It was introduced from Chili, into the

collection of Messrs. Veitch, and is a distinct and pretty plant. (*Bot. Mag.*, Aug.)

722. ANCHOMANES HOOKERI, VAR. PALLIDA. HOOKER'S PALE FLOWERED ANCHOMANES. (Aroideæ.) Fernando Po.

A greenhouse plant; growing two feet high; with red and greenish flowers; appearing in summer; increased by tubers; grown in light peaty soil. *Bot. Mag.*, 1863, pl. 5394.

A most remarkable plant, whether in leaf or flower; the spathes open in May, raised on the summit of a slender prickly stem, blotched with purple and green. In the following July the single leaf appears, the petiole of which is more prickly and slender than the stem, and bears, horizontally, on its summit, the three parted lamina, each of which has two or three leaflets; these continue to grow till autumn, attaining a foot in length, when the whole dies down to the ground. (*Bot. Mag.*, Aug.)

723. LEWISIA REDIVIVA *Pursh*. SPAT'LUM OR REVIVING LEWISIA. (Portulacææ.) North-west America.

A hardy or half-hardy plant; growing three inches high; with rosy pink flowers; appearing in spring; increased by seed; cultivated in light soil. *Bot. Mag.*, 1863, pl. 5395.

One of our American plants from the North-west, described by Pursh, and named "rediviva," in consequence of the root, long preserved in the herbarium, and apparently dead, having been planted, revived in a garden in Philadelphia. The drawing was made from a plant which had been immersed in boiling water and dried, and more than a year and a half after it showed symptoms of vitality, and produced its beautiful flowers in great perfection, last May, in the Royal Gardens of Kew. It has a woody root, covered with glabrous and glaucous leaves, the whole not two inches high. From the centre appear the flowers, which are two and a half to three inches across, of a bright rose color, with many spreading petals. It is a beautiful plant, and should be introduced into our gardens. (*Bot. Mag.*, Aug.)

724. SCUTELLARIA AURA'TA *Noble*. GOLDEN-FLOWERED SCUTELLARIA. (Lamiacææ.) Brazil.

A greenhouse plant; growing two feet high; with yellow flowers; appearing in summer; increased by cuttings; grown in light rich soil. *Illustration Horticole*, 1863, pl. 368.

A pretty species of the *Scutellaria*, with racemes of yellow flowers, something, in general appearance, like the *Salvias*.

It blooms in autumn, and appears to be well adapted for bedding out. The leaves are rather large, and the flowers appear in terminal spikes. (*Ill. Hort.*, July.)

725. *SERISSA FŒTIDA*, VAR. *FOLIIS AUREO MARGINATIS*. VARIEGATED-LEAVED *SERISSA*. (*Rubiaceæ*.) Japan.

A greenhouse plant; with variegated leaves and white flowers; appearing in spring; increased by cuttings; grows in light rich soil. Illustration *Horticole*, 1863, pl. 369.

This is one of the pretty variegated-leaved plants, introduced from Japan by Fortune. The leaves are quite small, of a deep green, with a silvery nerve through the centre, and an edging of the same around the entire leaf, forming a beautiful contrast. This, with its neat white flowers, and bushy habit of growth, renders it a very desirable plant. (*Ill. Hort.*, July.)

726. *RHODODENDRON*, VAR. *DUC ADOLPHE DE NASSAU*. Garden Hybrid.

Illustration *Horticole*, 1863, pl. 371.

This is one of the magnificent hybrids, of which so many are yearly raised in Belgium by Messrs. Byls, Verschaffelt and others. It is truly a grand acquisition, perfectly hardy there. The color is a dark purple crimson, shaded with scarlet on the edge, and thickly spotted on the upper petals with black. The stamens and pistils are deep red. The habit of the plant is exceedingly vigorous, and it blooms abundantly. It is probably the finest of all the dark varieties yet produced. (*Ill. Hort.*, Aug.)

727. *GYMNOSTACHYUM VERSCHAFFELTII* *Nob.* *VERSCHAFFELT'S GYMNOSTACHYUM*. (*Acanthaceæ*.) Para.

A hothouse plant; with variegated leaves; growing eight inches high; increased by cuttings; grows in light leafy soil. Illustration *Horticole*, 1863, pl. 372.

A beautiful foliated plant, with regular roundish ovate leaves, of a bronzy green shade, all the larger and minor veins being of a bright crimson, like a ruby network. Its habit is dwarf, and the flower stems are tufted with a few whitish blossoms. It was found by M. Baraquin in Para, and sent to M. Verschaffelt of Ghent. A superb thing. (*Ill. Hort.* Aug.)



728. *SEDUM SIEBOLDII*, VAR. *FOL. VARIEGATIS*. SIEBOLD'S VARIEGATED LEAVED *SEDUM*. (*Crassalucae*.) Japan.

A hardy plant; growing six inches high; with variegated foliage and pink flowers; appearing in autumn; increased by division of the root; grown in good garden soil. *Ill. Hort.*, 1863, pl. 373.

This is a variegated leaved variety of the beautiful and well-known *S. Sieboldii*, common in our gardens, which has been introduced from Japan by Dr. Siebold. It differs from the parent only in the foliage, each leaf having a golden yellow stripe or blotch through the centre; but the distinctness of this stripe, and the contrast of green and gold, gives the whole plant, which is dwarf and spreading, a conspicuous appearance. *S. Sieboldii* is quite hardy, and we presume this variety is the same. (*Ill. Hort.*, Aug.)

## General Notices.

**TANGIERINE ORANGES.**—For many many years—nay for centuries—in England and France we have been cultivating for mere ornament large numbers of a race of fruit trees which Providence bestowed on us for their invaluable fruit. With here and there an exception, home-grown Oranges have been confined to Dreamland, and our best gardeners, misled by ancestral tradition, have not thought of turning their attention to their culture. We are however awake at last. We are now reminded that the kingdom of Do-nothing has passed away, and that we may soon expect our desserts to be furnished with well-ripened delicious Oranges from October till Christmas, long before any can be imported.

We are led to introduce this matter in consequence of having received from Mr. Rivers of Sawbridgeworth a basket of ripe Tangierine Oranges, of most excellent flavor, each fruit having attached to it a cluster of the bright green leaves of the tree; the fruit when cut emitting a most agreeable odor, and the juice having a delicious briskness never to be found in imported fruit.

There are, it seems, two modes of cultivating this kind of Orange; either by forcing it so as to ripen in a single season, or by greenhouse management, under which the fruit produced in June does not ripen till July in the following season, thus hanging on the trees upwards of a year. As the first method seems the most eligible, we extract from the 11th edition of the "Orchard House" the directions given for this mode of culture:—

"The best way is certainly by forcing so as to have the fruit ripe in October. Oranges, if properly treated, will then be in the highest perfec-

tion, their skins bursting with delicious juice. To carry out this mode of culture, the trees should be removed to the pinery or vinery where early Grapes are being forced, early in the month of January; the pots plunged in gentle heat in the high temperature of such houses. They will blossom towards the end of February, and should be treated as all other kinds of fruit trees are when in bloom, *i. e.*, the pots and the lower branches may be syringed, but the blossoms kept dry. They will set large crops of fruit, which if too much crowded should be thinned. If possible the pots should be kept plunged or stand on a heated surface all the summer in the temperature of the pinery or forcing vinery; they will then ripen their fruit early in autumn." We may add that the fruit may remain on the trees, even when quite ripe, till after Christmas.

In growing Tangierine Oranges for dessert it seems that we are only on the threshold of Orange culture, for Mr Rivers tells us that the thin-rinded St. Michael's Oranges, of which there are several varieties, ripen freely under the above treatment, the trees beginning to bear when quite young. The Maltese Blood Orange ripens equally well a few weeks after the Tangierine, and is also an abundant bearer, even when the trees are young. Nor can there be a doubt that in time we shall cultivate the large Pernambuco Oranges and other fine kinds. We may even hope indeed to see some day an Orange grove such as is described in the "Orchard House." It must, however, be always borne in mind that root-heat or "geothermal culture" must be carefully provided wherever Orange trees are planted out in glass houses for the sake of their fruit, or no success can possibly attend the experiment.

It is not with fruit as with flowers; in growing the former, changes are made very slowly. In the case of these Tangierine Oranges it is we understand, 10 years or more since Mr Rivers ate some from trees growing in the garden of Mr. Bellenden Ker at Cheshunt. On that occasion he was so struck with their excellence that he forthwith attempted to make them a regular article of trade cultivation. Having in this been perfectly successful, the growth of other kinds of Oranges naturally followed, and it is now clear that no reason exists why they should not enter into our fruit culture as largely as Peaches and Nectarines, for which they are most especially adapted, because of the fragrance of their flowers, and the beauty of their foliage, as well as the universally recognized excellence of their delicious fruit.

That the Gardens of the Hesperides will soon be restored in England we entertain no doubt.—(*Gard. Chron.*)

**EUCCHARIS AMAZONICA.**—The wonderful specimen of this plant now growing at Syon, is in a 13-inch pot; the leaves are two feet seven inches long, and six and a half inches wide; there are 22 flower spikes, each from two feet six inches to three feet in length. The plant measures four feet six inches through. We learn, moreover, that Mr. Saunders of Clifton, has also a very striking specimen growing in a 13-inch pot, and just coming into flower, with nine strong spikes of bloom, well thrown up above the

foliage, some of which are 24 inches long by five inches wide. This, too, is something to be proud of, although but a pigmy compared with that at Syon.—(*Gard. Chron.*)

**THE BRUGMANSIA.**—This tender shrub is not employed for out-door summer decoration to that extent which it deserves. For a centre ornament for a large bed, or for a specimen plant in glass it is admirably adapted, and is very manageable, requiring only to be kept free from frost, and to have a slight pruning-in every season. Strong baskets are the best contrivances to grow the Brugmansia; they can readily be plunged in the ground with six inches of good rich compost put round them; into this the plant roots and grows and flowers profusely. At housing, turn them outside roots are cut off; this checks the plant, which is apt to grow with too great vigor when planted out. We have some good sized plants of it at this place, which have been subjected to this treatment year after year, and they are now objects of attraction. What can be more graceful than a plant five feet high, well feathered down to the ground with drooping trumpet-shaped flowers! In doors, it is much subject to the red spider; out doors, in this dripping climate, it escapes this pest. The yellow and red blooming kinds are best suited to out-door work.—(*Gard. Chron.*)

---

## Massachusetts Horticultural Society.

---

*Saturday, Dec. 5, 1863.* An adjourned meeting of the Society was held to-day—the President in the chair.

The Executive Committee recommended an appropriation of \$2800 for premiums and gratuities for 1864, viz.: Flower Committee, \$1100; Fruit Committee, \$1000; Vegetable Committee, \$400; Committee on Gardens, \$300.

On motion of B. Harrington, it was voted, that the Committee appointed to purchase the Montgomery Estate, be authorized to report the probable cost of erecting a building thereon suited to the purposes of the Society.

Jas. Patterson, Cambridge; Augustus Lowell, Boston; G. B. Wilbur, Watertown; and Abbott Allen, Cambridge, were elected members.

Adjourned two weeks, to December 19.

*Dec. 19.* An adjourned meeting was held to-day—the President in the chair.

The Chairman of the Fruit Committee presented his report, which, after reading, was unanimously accepted.

Hon. Joseph Breck announced the death of A. D. Williams, one of the oldest members of the Society, and, after some prefatory remarks, offered a series of Resolutions, expressing the feelings of the Society. The Resolutions were accepted.

Capt. Austin, Jos. Stickney, and C. O. Whitmore were appointed a Committee to settle with Mount Auburn Cemetery.

P. Barnes, Capt. Austin, and R. M. Copeland were appointed a Committee to nominate a Committee of Arrangements for next year.

Adjourned one week, to December 26.

Dec. 26. An adjourned meeting was held to-day—the President in the chair.

E. A. Story, Chairman of the Flower Committee, presented his Report, which was read and accepted.

D. T. Curtis, Chairman of the Vegetable Committee, presented his Report, which was read and accepted.

F. Parkman, Chairman of the Library Committee, made a Report, which was read and accepted.

The President, from the Committee appointed to publish a History of the Society, reported progress and asked for further time. Accepted.

The Publication Committee were authorized to publish the Reports of Committees and a list of members. Meeting dissolved.

---

## Obituary.

---

DEATH OF MR. DONALD BEATON.—Late English papers announce the death of Mr. Beaton, one of the editors of the *Cottage Gardener*, and long known as one of the best gardeners and an able writer on Floriculture and gardening generally. His age was 62. He was suddenly attacked with paralysis, while devoting himself to the culture of his plants, and rapidly sank under the disease. The *Cottage Gardener*, in announcing his decease, thus speaks of their associate:—

“There are none who knew Mr. Beaton personally, and few who knew him only by his writings, who will not regret to hear of this event. For upwards of thirty years he was in the van of English horticulture, and for many years leader of that branch of it which more immediately concerns the flower garden. To Mr. Beaton we are mainly indebted for the direction he has given to the modern style of English flower gardening, saving that part of it which is distinguished as the ‘polychrome style;’ and it is generally allowed, that through his articles as published periodically in this journal, his fine taste and skill in the harmonizing of colors have exercised an influence which has operated in all the best garden establishments in the country.”

---

## Horticultural Operations

FOR JANUARY.

---

### FRUIT DEPARTMENT.

December was a cool, though rather pleasant month; and at the close accompanied with snow and rain. The early part, however, enabled all to prepare for the winter, and little work need have been left undone.

**GRAPE VINES**, in early-forced houses, will now be swelling, and will need constant attention; very early grapes need less thinning than in later houses, but where there is thinning to be done it should be completed now. Continue to increase the temperature slightly, and keep a damp atmosphere in fine weather; avoid a high night temperature. In cloudy weather keep up the heat during the day. Top laterals when they are growing too freely, and see that the border is well protected from cold rains; increase the covering if the weather sets in severe. Vines in the greenhouse or grapery should now be pruned and cleansed if not already done. See that all insects are destroyed, particularly the mealy bug. By the middle of next month the vines will begin to break. Vines in pots may now be brought into the grapery or greenhouse where there is room.

**ORCHARD HOUSES** should be attended to, as we advised last month.

**STRAWBERRIES**, for forcing, may now be introduced into the house, giving them a place on a shelf, near the glass; water sparingly at first.

#### FLOWER DEPARTMENT.

With the increase of sun heat and longer days, plants will now begin to feel the influence of the solar rays, and will soon commence their growth of the year. The sunny autumn leaves them in fine condition for the winter, and a moderate temperature, with plenty of air, will keep them in fine condition. The houses should now look well. Camellias and azaleas will begin to bloom, to be succeeded by various plants. Commence now to lay out the work for the spring, and begin with the propagation in good season.

**PELARGONIUMS** will now require additional labor and attention. Repotting should be commenced and continue till the whole stock is shifted. Keep a little warmer and closer for a few days, and then cool again, with abundance of air. Tie out the shoots after repotting, and keep the plants near the glass, turning them round once a week. Water sparingly, and keep the house dry.

**AZALEAS** will begin to bloom unless kept in a very cool house. Water more liberally, and syringe freely such as begin to grow. Specimens intended for later blooming should be kept cool, and only moderately watered. Continue to tie out the shoots, and get the plants into shape.

**CAMELLIAS** will now be in their prime, and should have good attention. Syringe freely in warm sunny weather, and water rather more freely at the root. Plants going out of bloom may now be pruned, cutting away old useless wood, and heading back any long straggling shoots. A little attention now will tend to keep the plants in handsome shape and healthy growth. Repotting may be done now if the plants require it.

**CINERARIAS** should be potted for late flowering, and plants now showing bloom should be trained into shape. Fumigate for the green fly.

**CALADIUMS** should be potted now, giving water very sparingly till they begin to grow.

**BEGONIAS** may be divided and repotted.

**ACHIMENES AND GLOXINIAS** for early blooming, should now be potted, and placed in the warmest part of the house.

**JAPAN LILIES** may be repotted as soon as the earth is full of roots.

**AMARYLLIS**, now beginning to grow, should be placed on a warm shelf, near the glass, and have occasional waterings.

**HEATHS** should be kept cool, and carefully watered. Now is a good time to increase by cuttings.

**NEAPOLITAN VIOLETS** in pots, now brought into the house and placed on a sunny shelf, will soon be in full flower.

**MONTHLY CARNATIONS** may be repotted.

**VERBENAS**, Scarlet Geraniums, and other bedding plants, may now be propagated for a spring stock.

**SEEDS** of Pansies, Stocks, and other annuals, may be planted the last of the month.

**FERNS** may be repotted during the month; prepare a good compost of leaf mould, loam, and sand, rather coarse, and drain well.

**CALCEOLARIAS** should now have a shift into their blooming pots, and have a situation near the glass.

**ROSES** now growing and blooming freely should have occasional waterings with liquid manure.

**FUCHSIAS** should now be started into growth, pruning well back; as soon as the young shoots appear repot in good rich soil.

**CYCLAMENS** may be more liberally supplied with water as they commence blooming; keep in a light place near the glass.

**PETUNIAS**, struck from cuttings in October, should be potted off into small pots.

**ERYTHRINAS**, for early blooming, may now be started into growth.

**HOTHOUSE PLANTS** of all kinds, after a period of rest, will now begin to grow, and such as need it should be repotted.

**BOUVARDIAS** may now be propagated for summer bedding out.

**DEUTZIAS** and other shrubs potted in the autumn, may now be brought into the house to bloom.

**CHRYSANTHEMUMS** may be propagated at this season if very large specimens are wanted.

**ACACIAS**, and other free-flowering plants, should have a more abundant supply of water.

**CANNAS**, intended for planting out early, to make a good show, may be potted and started slowly into growth.

**POINSETTIAS** done blooming may be partially headed in, and placed away in a dry warm place under the stage.

**CALLAS** should be abundantly supplied with water.

**ORANGE TREES**, now coming into bloom, and setting their fruit, should be more liberally watered, and occasionally syringed.

**MARANTAS**, **DRACENAS**, and similar plants, may now be divided and potted in light sandy leaf mould.

**MISCELLANEOUS PLANTS** should now be looked over, cleansed, pruned, and neatly tied up.

## PEAR CULTURE IN MASSACHUSETTS.

WE have in our several volumes so often alluded to pear culture in the old Bay State, that it may appear somewhat hackneyed to refer to it again, yet the one great fact generally acceded, and fully established by the publication of the Catalogue of the American Pomological Society, that the growth of this fruit has been made a more special object by many cultivators throughout our State, and especially in the vicinity of Boston, than in other parts of the country, induces us to bring forward all the information to be obtained upon a subject of so much importance, not only as an aid to cultivators in other places, but as a record of the progress of pear culture in our immediate vicinity. That the subject is in any way exhausted, all who have undertaken the culture of the pear will emphatically deny; for though rapid advance has been made, and our markets have been supplied in far greater abundance than formerly with excellent pears, this increased product has mostly come from the gardens of skilful cultivators, who have given to this fruit that great attention which alone can render its growth successful and profitable. The mass of our people have yet to know even the excellence of the Bartlett, introduced upwards of sixty years ago, to say nothing of those well known for nearly half that period.

The pear in its present improved state is far removed from the normal character of the fruit. In many of our uncultivated fields and hedge rows may be found fine old healthy trees, which the vicissitudes of our climate for a hundred years have left unscathed, bearing annually bushels of perfect though austere or puckery fruit. Without any culture they give their yearly supply; but place any of our new kinds in the same condition and what would be the result? Undoubtedly, very good, but not probably known for the same varieties as they are found under careful treatment in cultivated gardens. That there is great difference in the

adaptation of kinds to particular soils is well known ; and while there are many—and we hope the time may come when more will be added to the list—which will grow well and bear well everywhere, others must be petted and coaxed by kind management to yield the rich fruits which they invariably do when such treatment is given. But so slow is the process of trial, by which all the merits or defects of the hundreds of varieties are ascertained, it must necessarily be a life-long study, and a few years add but little to our real knowledge of the true value of a particular sort. We need not, therefore, apprehend at present any danger of exhausting the subject of pear culture generally, but gladly avail ourselves of all information and every fact appertaining to the growth of such a noble fruit.

These remarks are prefatory to the introduction into our pages of a portion of the very excellent annual report of the Hon. J. S. Cabot, to the Massachusetts Horticultural Society, for 1863, more elaborate, we doubt not, than usual, in consequence of his now retiring from a position he has so honorably held for several years. A close observer and careful cultivator, his communications in our previous volumes have been among the most valuable we have published, and in connection with his annual reports, in whole or in part, which have appeared in our pages, contribute a fund of the most valuable information on pears and pear culture, around Boston, for the last twenty-five years. The report for 1863 is very full, and it would be a pleasure, as we have no doubt it would be a benefit to our readers, to give it entire, but this would require more room than we have to spare. That portion of it referring to grapes and grape growing, we intend to allude to again, but for the present we must be content with that upon the pear:—

The profit to be derived from the growing of pears, will, under favorable circumstances, and with the most judicious management, afford but a moderate remuneration for the capital employed and labor bestowed, and it is only by judicious management that this moderate return for labor and capital can be expected. It behooves, then, all who are commencing this enterprise, to avail themselves of every means tending to insure a propitious result, and to take advantage of the experience of their predecessors, whether manifested in success or failure. Any, who, induced by the



glowing accounts sometimes given of the great profits attending it, shall enter upon the pursuit without adopting the means necessary to succeed, will probably rue the failure of unreasonable expectations.

Besides the difficulty of making a proper selection of varieties, there is, in relation to pear culture, another embarrassment that sometimes meets the beginner at the threshold; that is, to decide what stocks are best suited to his purpose—the pear being cultivated as standards on their own roots and as dwarfs on quince stocks. The expediency of cultivating the pear as dwarfs on quince stocks, is at present less a matter of controversy than it once was, yet has that controversy not wholly ceased, as is evidenced by articles that occasionally appear in the horticultural periodicals in reference to it; and while the expediency of the practice is in most cases generally admitted, there are yet some by whom it is wholly condemned. At first it would seem that this was a subject upon which there could be no question, that the pear must be the most suitable stock for the pear; and that the use of the quince for the purpose, could only be justifiable under certain exceptional circumstances. Yet in practice this is found not to be the case. That, though some few kinds of pears will not succeed upon the quince, that the greater part do so; fortunately including among such as do succeed most of the most esteemed varieties, while there are some that seem completely to assimilate with that stock, and whose fruit when so grown is superior to that of the same variety when grown on the pear. The quince as a stock for the pear has long been in general use in Belgium and in France, and is being more and more extensively used for that purpose in this country. Where there is ample space the beginner, and even the experienced grower, will probably best solve the question, and most to their satisfaction, by adopting both modes of cultivation; in planting, set a portion of their trees as standards on the pear stocks, and a portion as dwarfs on quince, but when the space to be appropriated to this culture is limited in extent, particularly if much variety in kinds is thought desirable, the exclusive use of dwarfs upon quince stocks will, it is believed, afford altogether the most satisfactory results. Upon quince stocks the trees never attain a large size, and if properly treated can be kept in a very compact form; they thus can be set much nearer together, than if upon their own roots, and thus tend to protect each other from the injurious effects of high winds. So planted, a given space of ground will, it is believed, produce as great a weight of fruit as if set with trees on their own roots; and, coming sooner into bearing, the pecuniary results of this mode of cultivation will, it is thought, be fully as satisfactory, if not more so. Other advantages attending the use of quince as a stock for the pear are, that the trees being small and compact they can be managed much more easily, and with less expense in training and pruning the trees, and in thinning and gathering the fruit; while, the trees being low, the fruit is less exposed to the danger of being blown off and injured. There are, it is thought, really but two objections to its adoption, one is that the quince is subject to the attacks of the borer, and this may be in a great part if not wholly obviated by, in planting, setting the tree, that which should always be done, so deep that the junction of the

graft and the stock should be, after the earth is levelled, about two inches below the surface. The other objection, that the quince is a much less long lived tree than the pear, is not so capable perhaps as the other of a complete refutation, yet, as experience has proved that it is sufficiently long lived for all practical purposes, it is not considered that this objection if valid is entitled to much of any consideration, or should be allowed to have much weight in deciding the question. Admitting that the pear in its natural condition is a much longer lived tree than the quince, yet it will be contended that the pear as cultivated has ceased to be in this natural condition, but that by long cultivation, constant reproduction by seedlings, or some other cause, the character of the tree has become materially changed; that, instead of a slow, it has become a tree of rapid growth, that its wood is less close and compact in its texture, that it comes earlier into fruit, and its natural life is of much shorter duration. While in its normal condition the pear may be a much longer lived tree than the quince, yet, in its cultivated state, it may be questioned if it has very much the advantage in this particular. At least it is not difficult to find instances of pears upon the quince that have lasted for near half a century, and it is a fact of personal experience that a Louise Bonne de Jersey, upon the quince, has continued for more than twenty-five years to produce fruit, showing now no signs of a want of vigor, or any indications that it may not yet continue, for many years to come, to do so, while pear trees on their own roots contiguous to it, and of not very much greater age, give unmistakable evidence of old age and decay. Instances, it is true, are occasionally stated of a want of success in raising pears upon the quince, and the facts stated are not to be doubted or questioned; but these instances of failure, as it is believed, arise not from any inherent difficulty or defect in the thing itself, but from some unfortunate fortuitous combination of circumstances, as an unsuitable soil, bad exposure, or improper treatment; and, it is thought, that the expediency of this mode of culture for the pear is amply sustained by the weight of evidence in its favor, the results of the experience of those that have adopted it, and may be safely recommended.

In cultivating pears as dwarfs, the training and pruning the tree is by no means an unimportant part of the matter, it should commence with the young plant at an early age, and be afterwards regularly pursued until the attainment of its object. The form usually adopted for the tree, unless trained to a wall, is that known as the Pyramidal, but that might be more properly called the Conical. The training should commence when the plant is but one year old from the bud; the leading shoot should then be shortened to a length of about eighteen inches, in order to force it to throw out side shoots near the bottom; these and the leading shoots should again afterwards be yearly shortened, so that when the tree attains its full size, it may appear as a regular cone, gradually decreasing in size from the bottom to the top, becoming when filled with its fruit, a beautiful object. A neglect of the proper training or forming the tree, may perhaps sometimes account for a failure in this mode of cultivation with those who

object to it, this want of success. If the young plant is neglected and left to assume the form it pleases, it may take that of a branching spreading head, with a long naked stem, affording a powerful leverage to be operated upon by high winds striking the bushy top to the uprooting or bending down the tree, or some other equally unfavorable form. This is not felt to be the proper place to attempt to give instruction with respect to the rearing or training of trees further than by this brief outline; by the uninformed, the necessary information can readily be obtained, by reference to treatises on the subject by various authors, or to the experience of their neighbors—among the first named of these means of supplying information, to a little work, by Mr. Rivers of Sawbridgeworth, entitled the “Miniature Fruit Garden”—as containing useful directions, and many valuable suggestions in relation to this subject.

A mode of training dwarf pear trees, so far as is known unique in itself and peculiar to its inventor, has been adopted by one of the most extensive and most skilful cultivators of them in this vicinity, who, as often as any other grower, has succeeded in bearing away from his competitors the first prizes at our annual exhibitions; an associate, and long an honored and trusted officer of this Society, in a situation of much responsibility; that, from the success that has attended it, should, as an act of justice to him, and for the benefit of its members, be brought particularly to the notice of the Society. The method referred to being that invented and practised by Captain William R. Austin of Dorchester. Captain Austin trains his trees, as he calls it himself, in a wine-glass form; they have a naked stem about two feet in length, that then divides into four or five main limbs, also trained uprightly; from these main limbs, as fast as they appear, all side growth is at once removed, that by this means are converted into fruit spurs, and the fruit being borne on these spurs directly on the main limb, such being upright, easily support the weight, and the necessity of tying up or supporting the limbs to prevent being broken or weighed down by the fruit as when borne on the side shoots, is avoided. Captain Austin is the inventor of this method of training standard dwarf pears, at least no one else is known who pursues it; it seems to be in principle the same as that known as the Cordon Method, being that adopted and applied by the Rev. T. Collings Brehaut, at the gardens of Richmond House, Guernsey, to peach trees, on walls, and described as follows:—“The trees have each three leaders laid in at an angle of forty-five degrees, the spurs and successive growth on these spurs are slowly pinched in during summer; as soon as six leaves are developed on any shoot, these are pinched down to three; succeeding growth pinched in to two and one leaf respectively, the whole resembling a thick cord of leaves, shoots and fruit, whence the name cordon.” This mode is reported to be so successful, that, with Mr. Brehaut on the trees on the back wall, the peaches average three to each square foot. As Capt. Austin adopted his method of training his pear trees without any knowledge of that of Mr. Brehaut, indeed, as is presumed, long prior thereto, he is as justly as any one entitled to the credit of the discovery, and it would be but paying a graceful tribute to his

skill to identify him therewith, and thereby perpetuate a remembrance of the fact, by naming it the Austin Method. When Captain Austin first announced his method, and exhibited the trees that had been subjected to the treatment, doubts were expressed as to its value, and misgivings were indulged as to its permanent results; it has now however stood the test of more than fifteen years' experience, and whatever doubts may have once existed must have long since vanished in the presence of so brilliant success as has constantly attended its practice.

The pruning and forming of standard trees on their own roots, does not always receive the attention that the importance of it demands. Such trees are often neglected, until attention to them becomes absolutely necessary, and then the operations required are frequently conducted without any regard to established principles, or ultimate results, the consequence being ill-formed and unsightly trees. There are some pear trees that of themselves naturally take a regular symmetrical form, as the Urbaniste and Seckel; but there are others so straggling and diffuse in their growth, like the Rostiezer and Winter Nelis, that they can only be made to take a tolerable shape, by a free use of the knife, and close cutting back or shortening of the limbs. With standards, as with dwarfs, the pruning and shaping should commence with the young plant and receive regular and continued attention; in this way the removal of large limbs never becomes necessary, an operation that rarely can be performed on a pear tree without serious, if not permanent injury. The pear tree is, it may be said, impatient of the knife, and it may be laid down as a rule that in pruning it no instrument should be used larger or more powerful than a pruning knife; a rule easily to be obeyed provided the operation begins with the early years of the young plant, but when the young tree has been neglected until it has acquired a thick head, body not properly balanced, with limbs crossing each other in all directions, the use of the saw has to be called into free requisition in the attempt to remedy the consequences of early neglect.

Grafting of pear trees is a process of easy performance and safe application, from which the tree soon recovers when it has been skilfully performed; it is one to which all must be subjected, except in some rare instances where the seedling plant is found to produce valuable fruits. It had better be performed on the young tree, when the stock is not more than an inch or two in diameter, but can be delayed until the limbs of the tree become sufficiently large, though to do so is generally to the injury of its symmetry. Sometimes the grafting of more than one variety upon the same tree is attempted, but this is a vicious practice, and should be carefully avoided. The different varieties of the pear differ so essentially in their habits, growth, and vigor, some being upright, some diffuse, some strong, and others feeble, that to graft more than one variety on the same stock is almost to insure that the strong will stifle the weak, or if not, that at all events a most unsightly tree will be the result.

Although grafting is an operation easy and safe in its application, yet there is a limit to its practice in repeating it more than twice upon the

same tree. A tree once grafted may be regrafted with a different variety with perhaps a reasonable expectation of success; but if this second grafting is not satisfactory in its results the operation cannot, it is believed, be performed a third time without being, in the end, very unsatisfactory in its consequences, and it would be, in most cases, a matter of personal preference to dig up a tree that has been twice grafted, supplying its place with another, to attempt grafting for the third time. The graft and the stock both, perhaps, exercise mutually some influence the one upon the other, and it would probably be desirable that both should be of the same general character; this however it would be always difficult and often impossible to ascertain, and consequently, must be, as it generally is, disregarded, the strong being grafted on the weak and the weak on the strong haphazard. So far as a slight personal observation justifies the forming an opinion, it is believed that, so far as the character of the tree is concerned, a much greater influence is exercised upon the stock by the graft, than upon the graft by the stock; that a graft of a strong growing, vigorous variety, placed upon a feeble stock, will very probably make in the end a vigorous tree, while a scion of a feeble growing variety, grafted on a vigorous stock, will be very likely to dwarf and make stunted the stock. In some instances a want of congeniality between the graft and stock, and consequently evil consequences thereof that have come under notice, has been strikingly manifested; indeed, in the cases alluded to, tending to show a want of congeniality between the graft and any stock. The Cross Pear, naturally of a feeble growth and habit, repeatedly grafted and budded upon the limbs of strong growing thrifty trees, has invariably so dwarfed and made unthrifty the trees upon which it was grafted, after a year or two of growth, that they became of no value. And in a still more striking manner the Collins Pear, grafted on the limbs of a healthy long established tree, after growing for a year or two, not only ceased to thrive, but actually killed, at first the limbs on which it was grafted, and eventually the whole tree. If this was an isolated instance, the supposition would be that the defect was in the stock, and that the failure of the stock caused the perishing of the grafts, not that the grafts killed the stock; but as the same result has happened in repeated instances on different trees, this supposition is rendered improbable, and facts go to prove, in the case of the Collins Pear, such a want of congeniality, between its grafts and the stocks on which it was tried, as to kill the stocks. Fortunately as the Collins is a fine pear, it is said, that grafted on young stocks near the ground, to grow vigorously, and that the operation is attended with no ill effects. In this statement, it is intended to merely state facts of actual occurrence without any attempt to theorize respecting them.

There is one other subject connected with pear culture that it may not be thought out of place here to refer to as briefly as possible, and that relates to the renovation or attempts at renovation of old trees. This is some times recommended, and instances of success in so doing given, various processes being advised as tending to produce the wished result, as scraping the trunk and limbs to remove the moss and rough bark, the

digging of a trench around the tree to be filled up with a composition of bones, ashes, and peat, in given proportions, or other methods. This may be all very well, and some good may be the result, but while it is not intended to in the least call in question individual instances of success that may be given, yet it is nevertheless believed that generally all attempts in the direction stated will prove futile, and that those who make the attempt will have little but their labor for their pains. Youth or vigor once lost by age cannot be regained, whether the subjects of the attempt are animals or vegetables. So too, the grafting of aged trees of worthless varieties with better kinds, in their limbs, is sometimes advised, and when performed may result in giving for a year or two a crop of good fruit; but if more than a temporary success from the process is anticipated, disappointment will probably be its result. So far as has been noticed, grafts inserted in the limbs of aged trees grow and thrive for a few years, but then begin to fail, suckers are thrown out from the limbs, and, unless the tree dies, the grafts perish, and the original worthless variety regains the ascendancy.

No doubt it may be true, that when pear trees have lost their vigor, or even become stunted and feeble from improper management, from growing in thick sward on grass ground, or from a want of nourishment, and even, too, when the cause of the evil is the improper condition of the soil, that the application of proper remedies may correct it, that the digging up the grass and loosening the soil to admit the influence of air and heat, applying manure, draining the ground, or other proper measures, may restore health and vigor, and should be adopted. But where the evil is the result of old age or disease, remedies are believed to be of but little use, and it is thought that it will generally be found more satisfactory in results, and more economical in practice, to grub up these aged or sick trees and supply their place with young and healthy ones, than to attempt to restore those that, do what may be done, will still prove but cumberers of the ground.

Before concluding, the present opportunity is improved to state, what perhaps should have been before said in another connection, that it is thought that growers will find it much more profitable to cultivate those varieties of pears whose fruit ripens in September and October, than those ripening later. Experience proves that the fruit, in these two months, can be sold then much more readily and at better prices than later in the season; then the demand falls off very sensibly, and it is difficult to sell any but a few of superior quality by the dozen, though it is true, for such, a large price may be obtained.

These remarks must now be brought to a close, they are already more extended than perhaps will be thought justifiable; if so, it is hoped that an excuse for such trespass will be found in this, that the present is the only opportunity in the year for the Committee to bring to the attention of the Society, such considerations as may to them seem important or worthy of notice.

## ROMAN ARCHITECTURE.

COMPILED.

“Rome borrowing arts from Greece whom she subdued.”

AFTER a series of struggles Greece was conquered by the arms, or rather by the intrigues of Rome, and became a province of that empire. A prætor was sent from Italy to govern her; and the Greeks, with superior talent and ingenuity, flocked for employment and reward to their newly acquired capital. From the lowest condition of meanness, the Roman State had risen to vast power and wealth, unexampled in the annals of the world. With this increase of power and population, there gradually arose in Rome a demand for buildings on a scale such as the world had never beheld, for public and private purposes, as well as for the diversion of its inhabitants. Stupendous ducts, and cloaca, still unimpaired, though now disused, running in every direction under the ground on which the city stands to an immense distance, were built in the early era of her petty kings. It is difficult to believe that, so shortly after their insignificant origin, they should have been able to execute these vast works. But what Rome, and in process of time, Rome alone demanded, by degrees she acquired the means to obtain. She became the focus of an accumulation of wealth, compared with which, that possessed by any former State was absolute indigence. She collected the various resources of all nations within the circle of her own precincts, and from these she could again direct their productive powers to any single given point. Whatever edifices were required for utility or grandeur in the heart of the capital, or in the districts composed of States once independent, such they constructed. Aqueducts, bridges, forums, basilicas, temples, baths, theatres, and hippodromes were constructed on a scale which these tributaries never could have contemplated while existing as separate nationalities.

In Rome and its immediate vicinity were constructions for every useful purpose and every object of magnificence:—aqueducts of prodigious length, which, from the adjacent mountains, carried in every direction streams of the clearest

water across the vast plain into the bosom of the city ; sewers of indestructible solidity, to convey away all sorts of impurity ; roads, capable of lasting forever, which from the capital diverged on every side to the extreme confines of the peninsula ; and on these roads, bridges massy and durable joined the opposite banks of the widest rivers ; forums or public porticos, for assemblages of the people, numbering forty-five in the time of Augustus ; baths erected by the emperors, each a palace in splendor and almost a city in size, still astonish the world by their ruins ; basilicas for business and the administration of justice, vast and superb beyond description ; and even shambles so sumptuous that they might be mistaken for an amphitheatre. But it would be vain to attempt to enumerate, in the short space of a few pages, all the gorgeous palaces, the costly mausoleums, the temples without number, the triumphal arches, which were spread over the whole city. Not less remarkable were the buildings erected in all the provinces.

Whether the Greeks or the Romans were the inventors of the arch, the buildings of Rome were distinguished from those of Greece by the introduction of this feature, more than by any superiority of size or splendor. As necessity is the mother of invention, it is probable that the discovery of the arch was caused by the want of quarries of sufficient dimensions for cutting blocks of stone and marble large enough for their magnificent purposes. The Romans, being obliged to use brick to a considerable extent for building purposes on the muddy banks of the Tiber naturally resorted to this invention, which was a real necessity.

Hence we find the arch employed on a vast scale in the great cloaca, at a period when, if existing in Greece, it was in obscure constructions ; but we observe it likewise in ancient Etruria, whence the Romans appear to have derived all their earliest arts of elegance and industry, in monuments anterior to the construction of the cloaca and the foundation of Rome. The style of the edifices constructed at Rome, in its first era, and under its kings was, as well as that of their attire, chiefly borrowed from the neighboring Etrurians, and resembled in form as in simplicity and solidity, the Etruscan remains around



Cortona, Tarquinium and other Tuscan cities. When afterwards the Romans attempted to add the ornamental to the useful, it was done by adorning these primitive buildings with the ruins of Grecian architecture.

The Romans possessing more limited resources of stone and marble were obliged to resort to the arch, by which contrivance a less quantity of materials may be made to cover a much greater space. Skill in mechanics is a faculty wholly distinct from taste in the fine arts; and where the latter exist not, or lie dormant, the other may still advance with rapid strides. Hence the greater exigencies of the Romans in respect to architecture, the vaster buildings they had to raise and to cover, soon made them seek all the superior means, and develop all the superior powers of the arch. In their aqueducts they multiplied this feature in a seemingly interminable series; in their baths they gave it a prodigious continued elongation and span. Here, over a cylindrical wall, they turned concentric arches, into a round cupola: there, at the end of a square or circular vacant space, they covered semicircles by semidomes. Sometimes they enclosed smaller in larger arches, or giving to different objects a different tendency, they made them cross and form angles with others differently directed; the cupola itself was occasionally made polygonal. They gloried indeed in the arch, so that it became a characteristic feature of Roman structures.

If the Romans had been possessed of a delicate appreciation of the beauties of art, and had they been gifted with inventive or imaginative genius, they would have devised for their arch some new species of ornamental addition, appearing to belong to its nature. But such powers they did not possess. Their minds were fertile in useful inventions, but sterile in their ideas of beauty and ornament. They were obliged to borrow all their ideas and inventions from the Greeks; and they had not even the taste that discriminates between the inventions of others. They dwelt not in their study of ornament on the essential conditions of beauty; they knew not the principle on which it must be founded, and they required not in decoration as in objects of utility, that consistency which is needful for the end to be attained. With the Romans, the

art of creating beauty was called into action by ostentation and luxury, they were guided in their imitation of foreign models more by fashion than by taste, and they wanted only the semblance of Grecian forms, not the substance of Grecian principles. They were satisfied with fragments and patches, however inconsistently applied and united.

Under Augustus, who prided himself upon having found Rome of brick and left it of marble, the aberrations from consistency in architecture, were observed by Vitruvius, who himself a Greek, seemed to have imbibed many Roman ideas. "The Greeks," he says, "ever mindful not to represent in the copy what could not exist in the original, would, on no account, in the slanting cornices of their pediments have placed the dentiles under the modillions; since such a proceeding would have been in direct opposition to the original principle of the wooden roof; but the Romans never suffered themselves to be shackled by rules of propriety so minute and so strict. They place both dentiles and modillions just as, and wherever their whim happens to prompt them."

Of the original construction, interesting as associated with the origin and national achievements of the Greeks; pleasing to the beholder, as accounting for every partial form, making beauty arise directly from utility and maintain with it an indissoluble connection, not a vestige was left uncorrupted. Architecture—from being, in the time of its purity, like a young virgin, all health, simplicity and truth, her modest beauties derived from her natural and essential forms—in its degeneracy was over laden with meretricious ornaments, fulsome from their glare and oppressive with their weight and incumbrance. The bad taste of Rome became so general, as to extend to the very heart of Greece itself; and the same defects are observable in the arch of Titus, on the banks of the Tiber, and in the arch of Adrian on the banks of the Ilissus. Yet it cannot be denied, that the Roman architecture, in the curves and convexities of the arch, afforded means of adding much of variety and beauty to the straight lines, flat surfaces and angular terminations, and created a pleasing impression, which its awkward combination of Grecian forms could not destroy, and which it must preserve, whether

it shut off or remained untrammelled with inconsistent additions.

It is a remarkable fact, that the Romans, who were naturally and by education a practical people, with few ideas except those of utility, lost all sight of this principle in ornamental architecture; while the Greeks, in their prime, though less practical and utilitarian, were always guided by the principle of utility in their ornamental works. [In this respect the Americans seem to resemble the Romans.] Under the influence of Rome, and in the general decline of art, not only the composition, but the execution of architectural ornaments lost all their former excellence. Plain mouldings no longer contrasted with each other, but tastelessly multiplied, became at once heavy and yet tame, and without effect; imitative ornaments were ill wrought and confused. While yet edifices so vast and magnificent as that of which we see the remains, under the name of the Temple of Peace, continued to be erected, sculpture had already fallen to so low an ebb, that its gigantic marble brackets ornamented with victories, offer a workmanship not superior to the worst of Gothic eras. Under Constantine its powers seemed so entirely palsied that, according to some writers, the arch of that emperor could only be decorated by stripping that of Trojan of bas-reliefs, wrought in honor of another emperor, and recording other conquests.

Greece wanted the arch to enable them to carry out all their plans of utility and convenience, and glass to supply the light of heaven, without at the same time admitting the rain and wind. Rome enjoyed the advantage of the arch, but though not ignorant of the use of glass, from a deficiency of that material sufficient for their wants, many chambers at Rome, destined for public meeting and private habitation, seem never to have had any other light than that of lamps. In the baths of Titus, the Laocoon was found in a room totally shut out from daylight. In these apartments beauty was sought in a less degree from the chaste effect of relief, than from the glitter of costly materials, and the gaudiness of vivid and contrasted colors. This taste, though alike reprobated by Vitruvius and Pliny, was carried to such a pitch that the

richest marbles still had additional spots of different hues, stained or inserted in them, to add to their brilliancy.

While apartments of a more magnificent description thus shone with porphyry, and serpentine, and verde, and every species of agate and of jasper, the walls of ordinary rooms were painted in encaustic colors, less expensive, but not less vivid; and the fanciful combinations of vegetable and animal life, already exhibited in sculpture, became in painting, from the greater facility of execution, still more extravagant. All the decorations of rooms seem, in the later ages of the empire, to have been in that style which the Italians called *grotesque*, from having seen its first specimens in the grottos and excavations which restored ancient buildings to light, and which have since with less propriety been called *arabesque*, since the Arabs, prevented by their religion from representing animated nature, never knew them at all.

Rome, while yet pagan, possessed many structures, either round or polygonic,—some destined for temples, some for tombs, and some for various other purposes. Of the first class seem to have been those circular edifices, with columns on the outside, one in the city itself, and the other at Tivoli, called Temples of Vesta; also the Rotunda, now called the Pantheon, and the Decagon, called the Temple of Minerva. Of the second description were the mausoleums of Augustus and Adrian.

The architecture of the Romans, in its deterioration, followed so regular a course, that the style which most immediately preceded the conversion of its rulers to Christianity is also the worst. The period in Ancient Greece between the production of the finest works of art and the commencement of their destruction was very short. After the conquest of Greece by the Romans a few only of the principal works, such as the Olympian Jupiter, were left on their appropriate pedestals, because the great weight of the mass prevented their removal. Thousands of others, somewhat less bulky, were carried to Rome, and must have suffered greatly on their first journey, since we find so many with ancient restorations. Thus far, however, the very love of art might be said to have occasioned its losses; but other dangers than those of indiscreet fondness

arose while paganism still flourished. The tyrant Maximian had begun to melt down statues, groups, quadrigas, and whatever else belonged not positively to the altar and the temple, in order to convert its brass into gold; but this partial destruction of pagan works of art only, and of such whose materials had any intrinsic value, was inconsiderable compared with that of every object which paganism considered sacred, which took place at the hands of the Christians, on the promulgation of the edict by which Theodosius ordered pagan rites to cease, pagan temples to be pulled down, and pagan deities to be hurled from their pedestals. By that edict marble and bronze, painting and statuary, were all involved in the same common doom, and destroyed for the mere sake of destruction; destroyed because those forms, in which their authors had sought to embody the choicest gifts of heaven, were, by men ignorant as they were fanatical, considered as animated by the darkest spirits of hell; because these images of gods were considered actual demons, deluding the world by their engaging appearance.

The more, therefore, a sculptured image had, from its excellence, before attracted worshippers, the more it now excited wrath, and the sooner it fell a sacrifice to pious fury. An indifferent statue might escape with the loss of its most prominent limbs and features; but of a masterpiece of art no trace was left; and whatever had not in the first hurry of devastation become buried, and thus, to a certain degree, insured from further injury under the ruins of its own receptacle; whatever in the time of St. Gregory still remained visible above ground, was by the order of that holy man, cast into the Tiber, to be forever sunk in its slimy bed. Thus were the productions of Roman architecture and sculpture destroyed by the Romans after they were converted to Christianity. Nor did the primitive Christians make amends for the demolition of pagan monuments, by the production of Christian works. Even the wish to do so would, in the total decline of the arts, have met with only very inadequate means for its accomplishment. The mental darkness which from this time, for several centuries overshadowed the earth, was as apparent in the works of architecture as in those of literature. But as

learning revived, a revolution took place in building, producing those various styles which are now universally known as Gothic, as distinguished from the classical styles, and far surpassing the latter in certain sublime and picturesque effects.

---

### THE MAGNOLIA.

BY H. H. HUNNWELL, ESQ., WELLESLEY.

FOR many years past, on the appearance of each number of your Magazine, I have been unable to resist reading and admiring the exceedingly happy and appropriate motto prefixed to it, "Je voudrais échauffer tout l'univers de mon goût pour les jardins;" a sentiment which every lover of Horticulture must acknowledge and appreciate; and it is under this influence that I am now prompted to offer your readers a few remarks on the cultivation of the Magnolia, though it is a tree without the advantage of recent introduction, and I am well aware I can say nothing more than to repeat what has been so frequently urged by you, on many occasions, in favor of the great claims of this beautiful class of trees to the attention of every one who wishes to ornament his grounds and render them attractive. With young planters, however, continually coming forward, and perhaps I may add with older ones, in whom the taste for country life may have become suddenly developed by the acquisition of a fortune in these war times, information must always be acceptable, and if we would "warm up the enthusiasm of the whole world," and produce such results as we hear of in England, we can only do so at the expense even of frequent repetition. Of course it is not to be expected that, with our limited and divided means, anything of such magnitude as we see in England can be accomplished in this country; but, on the other hand, it is equally true we do not always avail ourselves of the resources at our own doors, to the extent their great merits entitle them to. And then, whilst we criticise our English friends for their interested construction of International Law, could we not, with profit to ourselves, imitate them in the example they

offer us of a more liberal application of our means to the embellishment of our country estates and to the encouragement of horticultural pursuits, thereby improving the public taste, which, it must be acknowledged, is much inclined to sanction extravagance in large expenditures for show and entertainments affording a few hours' gratification, whilst it is too apt to consider as money buried in the earth and thrown away, the trifling sum expended in planting a tree, which may become an object of beauty for a century and cause a man's memory to be cherished and revered by his descendants and kindred.

By the publication just made of the Book of the Royal Horticultural Society of London, which has been produced in the most exquisite manner and embellished with numerous photographs and illustrations on wood, and will be found especially interesting to those connected with our own horticultural societies, it will be seen that the late Prince Albert accepted the office of President of that Society, not as a mere complimentary sinecure, but with the full and avowed intention of personally performing its duties, which he did most faithfully, enabling the Society through his great influence and exertions, to attain the highest state of success and prosperity. To give an idea of the extent of their operations I may add, that it appears up to 1857, they had expended the sum of £250,000 stg., and since then, in connection with the Commissioners of the Great International Exhibition, a further sum of £100,000, in building a conservatory and a highly decorated Italian arcade, and in laying out a garden of 20 acres at Kensington Gore. Of the former sum, £20,000 have been applied in prizes for the encouragement of horticulture; £13,000 for the mere cost of procuring seeds and plants, of which over one-and-a-half millions have been distributed; and, as is well known, every part of the world has been explored at an enormous expense, by the eminent agents of the Society, producing results which have affected the appearance of all England, so that a day's ride cannot now be taken where the landscape is not beautified by some of the introductions of the Horticultural Society.

Although there may be many persons who are ignorant of

the different kinds of trees, and many more who cannot distinguish the different varieties of the same tree, yet, it is a fact, there is a peculiar charm in a fine collection of judiciously planted trees which no one can be insensible to, even if unable to fully comprehend the reason. All trees are objects of beauty, especially when standing alone and growing vigorously in a good rich soil, with plenty of space to throw out their branches without injury from man or beast; yet it cannot be denied that some possess decided advantages over others, and are more appropriate and effective in certain locations. It will be generally admitted I suppose, that of all our ornamental trees the Magnolia is one of the most striking we have, attracting the attention of the most indifferent with its magnificent foliage and flowers, and producing a tropical effect possessed by no other hardy tree that I am acquainted with; and yet it is very seldom we see it in this section of the country. It is probably in some measure owing to the impression that the tree is not quite hardy, which is altogether a mistake, as several of the varieties will grow in the most exposed places; and all, with the exception of the Grandiflora, can be made to thrive in sheltered locations. The Macrophylla, which has the largest leaf and flower, is of the latter class, and yet requires no other protection than that afforded by other trees, if transplanted when quite small. But who that has a spark of enthusiasm in his character, or the least pretension of a zealous horticulturist, would not consider himself amply repaid for any little extra care and attention bestowed in growing a tree with leaves three feet long, and beautiful white fragrant flowers 6 or 8 inches in diameter, and which no one can pass by without an expression of wonder and admiration? Then there is the Acuminata, which will grow in any situation no matter how much exposed, with foliage and blossoms not so large, but still of great size when the tree is young, and planted in a suitable soil, attaining the height of fifty or sixty feet and making one of the finest lawn trees we possess. The Cordata, also, makes a remarkably fine lawn tree, growing to a large size and resembling the acuminata somewhat, but the flowers are not so showy, being smaller, of a greenish yellow. Several winters



ago I moved one that was fifteen feet high more than ten miles, with a frozen ball of earth, without losing even a twig, and it is now one of the most beautiful trees on my place. The *Auriculata* and *Tripetela* do not attain the same size as the others, but are rapid growers, and thrive best when protected by other trees in moist sheltered valleys, where there is a good depth of leaf mould and decayed vegetable matter, and where their splendid foliage will not suffer from high winds. The borders in which *Rhododendrons* are planted are well adapted for them, and they harmonize admirably with that delightful shrub. The latter part of the season they have also large conical fruit-vessels, containing the seeds, which turn a rose color in the autumn and are hardly less ornamental than the blossoms. Besides these, I have the *Maxima* and *Triumphans*, also the *Thompsoniana* and *Glauca*. The latter is a large sized shrub, and is more commonly seen in this vicinity, and is remarkable for the very great fragrance of its blossoms.

Independent of these numerous native varieties we have a long list of Chinese, which, although of an entirely different character, are none the less desirable and deserving of general cultivation, especially by those who reside in the country during the winter or go there quite early in the season, as they blossom near Boston the latter part of April or first ten days of May. They only attain a medium size, and are remarkable for their blossoms, which appear before the foliage in the most wonderful profusion, numbering, though quite large, several thousand on a small tree, and presenting the most gorgeous appearance imaginable, particularly when planted in masses with an evergreen back ground. There are several kinds, among which the *Soulangeana*, with large white and purple flowers, is perfectly hardy and probably the most desirable for general planting in New England. In most seasons it blossoms a second time in September, but then only to a small extent. I have the *Norbertiana*, *Conspicua*, and *Purpurea* doing finely, though in a somewhat sheltered situation, but I have not thus far had very satisfactory success with the *gracilis* or *obovata*, which are more or less injured every winter. The *conspicua*, as is well known, flourishes to

perfection in Philadelphia, where they have numerous fine large specimens, and the sight of one of them, when in full blossom, will well repay a visit to that favored city, to say nothing of its many other attractions. Leroy of Angers has lately sent out a new variety called *Magnolia Lenné*, said to be also hardy, but the present winter is my first experience with it.

---

### TREE PROTECTORS.

BY JAMES WEED, MUSCATINE, IOWA.

WE continue our record of comparative temperatures, commencing on the 18th of December, the first zero weather of the season.

Our experiments this winter include the temperatures of three structures. The one which afforded the data for our table last year, eighteen feet long, twelve wide and twelve high, constructed of a double covering of boards with an intervening space of six inches filled with sawdust, has again answered our expectations.

Another, the same width and height, eighty feet long, made by nailing inch square strips horizontally six inches apart on each side of rafters eight inches wide, constituting movable frames, the intervening space of eight inches being closely packed with leaves, with the intention of thatching on both sides with straw. The season, however, only allowed of placing the leaves, which unfortunately contained numerous lumps of snow. These having since melted away on the occurrence of a warm rain, have left many loosely packed spaces, unfavorable to the degree of tightness desirable. The low temperature indicated in this enclosure on the 1st and 2d of January, was probably owing, in part, to a near vacancy in the leaves, admitting a current of air directly upon the thermometer.

The third structure, six feet wide, six high and sixteen feet long, consists of a single covering of rough boards one inch thick and twelve wide, nailed to the rafters after the manner of lapped siding reversed, beginning at the top, thus forming

the shoulder of the joints upwards, which it was proposed to render air-tight by luting with coal tar, the joints in the gables to be battened with strips bedded in the same material. The weather suddenly changed cold before the joints were closed and simultaneously with the fall of a foot of snow, which has since protected all the joints except those in the gables. This structure encloses several quince and one low peach tree; near the base of which a cistern was dug, five feet in diameter and eight feet deep, with an open neck two feet wide, constituting a subterranean air-chamber, no water having been admitted into it.

The modifying influence of this air-chamber is regarded as important, and we have in view other experiments in connection with it, which, if the weather soon becomes sufficiently mild to enable us to complete the enclosure, we shall report in the spring.

## TEMPERATURE.

		Outside.			Inside.			REMARKS.
		Morning.	Noon.	Evening.	Double boards and sawdust.	Frames filled with leaves.	Single board and cistern.	
1863.	Dec. 18,	8°	10°	-5°	..	..	..	
	19,	-12	2	-6	18°	..	..	
	20,	8	..	20	20	26°	..	
	22,	14	..	..	24	24	32°	
	23,	17	..	..	23	23	31	
	24,	24	..	..	23	23	31	
	29,	..	..	12	..	..	..	
	30,	-2	..	0	28	18	30	Snow.
	31,	-2	-4	-21	22	0	..	
1864,	Jan. 1,	-23	-18	-18	12	-10	26	Clear.
	2,	-22	-10	-6	12	-12	18	Clear.
	3,	-4	4	0	14	4	20	Clear.
	4,	-7	-4	-6	14	4	20	Cloudy.
	5,	-12	-6	-9	14	2	20	Clear.
	6,	-14	-4	-12	14	-2	20	Clear.
	7,	-22	-2	-13	12	-4	20	Clear.
	8,	-14	-2	-2	12	-2	20	Hazy.
	9,	-8	8	7	12	3	22	Clear.
	10,	-2	10	12	14	4	24	Clear.

The fruit-buds of the peach were generally killed by the cold of the 19th Dec., and it is greatly to be feared that the

extreme and protracted low temperature of the past two weeks will be manifest in its disastrous effects on those of some varieties of the cherry and plum, and also on many trees and shrubs.

We are highly pleased to present so favorable a report of Mr. Weed's experiment with his Tree Protector, which has been so fully described in our last volume. The test of the late unprecedented cold weather throughout all the West, is conclusive as to its security against any injury to the trees, the inside temperature of the house covered with shutters and the cavities filled with sawdust having been only  $12^{\circ}$ , when the outside temperature indicated  $23^{\circ}$  below zero, and during the whole of the ever to be remembered ten days' cold, varying only two degrees. The other Protectors were probably effective also, as a cold of  $10^{\circ}$  below does not hurt the peach buds, provided it is not warm previously or succeeding such a temperature.

Mr. Weed has sent to Messrs. Hovey & Co. a neat model of his Tree Protector, which is well worthy of inspection by all who feel an interest in the subject. Where lumber is cheap, there is no doubt they could be erected at very small cost, and a crop of peaches annually secured. Amateur cultivators would do well to examine Mr. Weed's mode of accomplishing this.—ED.

---

### THE ADIRONDAC GRAPE.

BY J. W. BAILEY, PLATT-BURG, N. Y.

BEING in receipt of frequent inquiries in regard to the origin and other particulars of the Adirondac Grape, I submit the following account of it which may be of interest to the public at this time:—

About seven or eight years ago, J. G. Witherbee, Esq., of Port Henry, Essex County, N. Y., purchased a strip of ground, which he enclosed to enlarge his garden. It was in grass, and on it he found an old grape vine, which had been

neglected, and he supposed it to be a wild vine, and consequently dug it out and prepared the ground for garden crops. The next season he discovered a vine near the same place, and supposing it to be worthless, he intended to dig that out also; but it was neglected. The next winter it killed back, but in the spring started vigorously from near the ground, and appeared so well that Mr. W. decided to leave it, and since that time he has given it the same treatment as his Isabellas, *i. e.*, pruning, laying down and covering every winter. It commenced bearing fruit five years ago, ripening usually previous to the 10th of September, and before the Isabella had commenced coloring, or had attained its full size, and about two weeks before the Northern Muscadine. The fruit is larger in bunch and berry than the Isabella, of the same color, but perfectly round, the bunches very compact and shouldered; in flavor, sweet and delicious, and without any hardness or acidity in its pulp, and is very prolific. In September, 1860, Mr. Witherbee sent me a sample of the fruit, wishing for its name. I was astonished to find a grape in existence ripening so early and of such rare excellence. I wrote to Mr. W., in substance, that from my knowledge of the character of all the earliest native grapes, this could not be identified with any of them, and that I was inclined to believe it to be a foreign variety; and I remarked that I would like to examine the vine, and preferred to visit him for that purpose. I accordingly visited Port Henry two weeks after, by appointment, and on seeing the vine, I decided at once that it was a native, and perhaps a chance seedling of the Isabella. At that time I closed an arrangement with Mr. Witherbee for the entire control of the vine for propagation, and named it the "Adirondac," it having originated at the base of the Adirondac range of mountains.

I claim for the Adirondac superiority over all other varieties for open air culture, for the following reasons:

First—It ripens decidedly earlier than any other good grape.

Second—It is a grape of the highest excellence. If not superior to the Delaware in flavor, I believe it to be fully equal to it, with the important advantage of being more than double its size, and ripening three weeks before it.

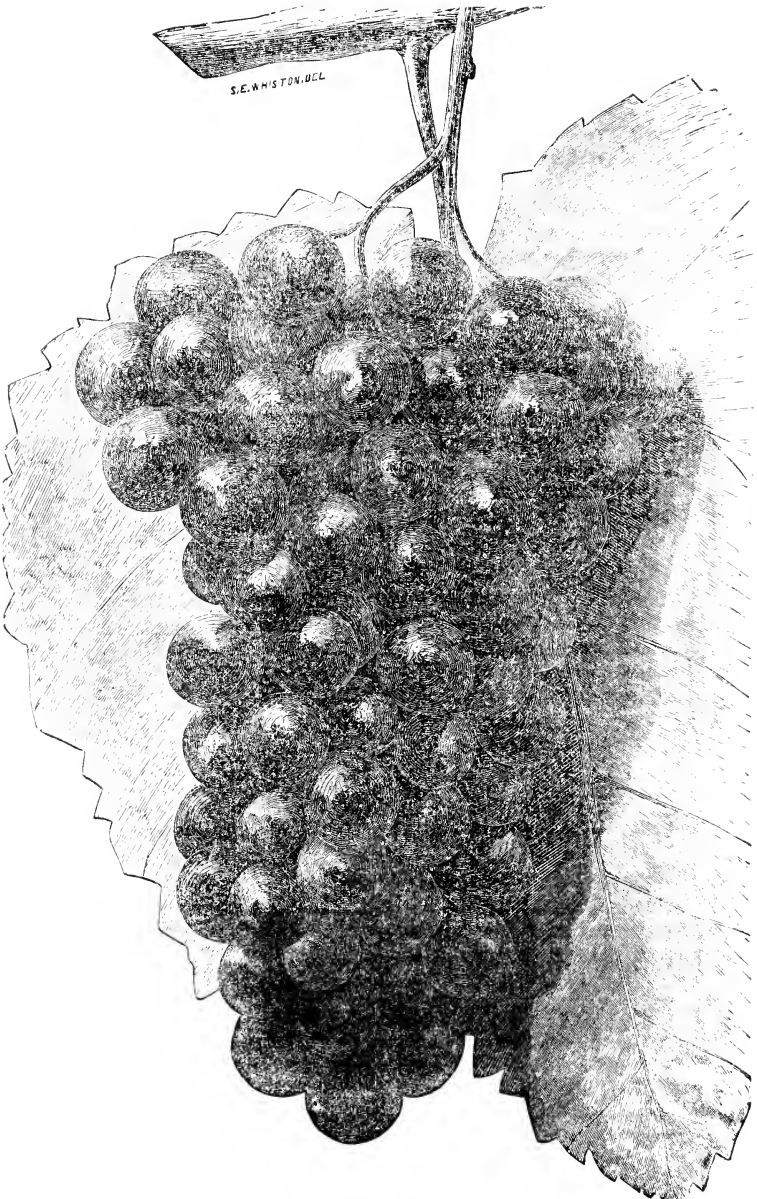
The rare combination of early ripening and excellence in this variety, constitute the desideratum long sought for, viz: A grape of the very best quality, that will ripen in all the Northern States and Canadas.

The foregoing was printed in my circular, dated January, 1862, and sent to my correspondents and others at that time. The claims made by me then have been most fully verified, so far as the fruit has been brought to the test of eminent pomologists and the public. I will take this occasion to correct a single error, in saying that the Adirondac ripened three weeks before the Delaware. It did so in fact that season, but my Delaware vines were young, and the fruit on them was unripe when the frost put an end to all ripening here on the 10th October; but by careful observation the two last seasons, I make the difference two weeks, as nearly as possible. It is also several days earlier than the Hartford Prolific.

Up to the present time, the Adirondac has fruited only at Port Henry and Plattsburg, but it is believed that it will be fruited the coming season in several different localities, which I feel confident will add largely to its reputation. The fruit produced the past two seasons has been shown at many of the most prominent Exhibitions in different States, and distributed freely among pomologists, and has won its way to public favor.

The vine is very vigorous, fully as much so as the Isabella, which it closely resembles in growth, wood and leaf. It has proved, thus far, free from all blight or mildew; the leaves remaining perfectly healthy until touched by frost.

The fruit—bunches large, compact; berries—large, round; color—dark purplish red with blue bloom, becoming quite black when fully ripe; seeds—medium, usually but two; flesh—greenish white, perfectly melting, without any hardness or acidity in the centre; flavor—remarkable for its excellence and delicacy, having a decidedly Black Hamburg flavor, causing many of the best judges (before seeing its growth) to doubt its native origin; skin—thin and tender. In regard to its bearing qualities, I will say that I know of no variety more prolific.



2. THE ADIRONDAC GRAPE.

Two years ago, when the American Pomological Society held its Session in Boston, we had the pleasure of tasting a single berry of the Adirondac Grape, and were struck with its superiority over the general character of our native varieties. But concluding that one berry could be no real test of its merits, we did not think it our duty to speak more particularly about it. The past autumn, however, while on a visit to New York, we had the opportunity of examining several clusters exhibited by Mr. Bailey, and of again tasting the grape. Quite to our surprise we found it even better than the impression we had of it before. It was, in fact, so unlike all our American varieties in the softness and delicacy of its pulp, that we could scarcely believe it one of them, and, but from our knowledge of its origin and history, should have considered its nativity doubtful. With such impressions we sent to Mr. Bailey for some account of it, believing that we could render no greater service than to extend a knowledge of a variety possessing so much excellence.

With Mr. Bailey's communication we present an engraving of the grape (FIG. 2) which will show the general character of the fruit.

After what Mr. Bailey has stated, and what has already appeared in our last volume in regard to it, we need not enlarge upon its merits. Without making any comparison between this and other well known sorts, each of which possess valuable qualities, it will be no more than is due to the Adirondac to say that it holds the highest rank among American varieties. A grape of its excellence, ripening with the Delaware, would be sufficient to entitle it to a place in every garden, but when we learn that it is two weeks, or even one week earlier than that variety, it becomes doubly valuable, and must, on the score of earliness alone, stand without a rival. If we add to its earliness, a fine large bunch, a good sized berry and a rich bloom, we have a combination of qualities difficult to surpass. Without the exquisite flavor of the Rebecca, or the honeyed-sweetness of Allen's Hybrid, it comes nearer the Black Hamburg than any native grape.—Ed.



## R O S E S .

FROM THE GARDENERS' CHRONICLE.

OF all our garden flowers, prëminently the first, as the rose is admitted to be, yet less has been written by our own cultivators upon its growth and general treatment than almost any other plant. Ordinarily it grows well and blooms abundantly, but the vigor of growth and the quality of its flowers do not seem to have been matters of great importance, contented as too many have been with its ordinary or neglected cultivation. Beauty there certainly is under any mode of treatment; but like other flowers, superior culture will doubly enhance its attractions and render it, as it certainly is, the Queen of Flowers.

If we look back twenty-five years we shall soon discover the vast improvement which has been made in the rose. What then were deemed beautiful varieties would now, with some few exceptions, be banished from our gardens; and whatever class we bring to mind has been enriched by new colors and superior forms, while the Hybrid Perpetuals are a new creation of the enthusiastic French cultivators, who have, so far, almost exclusively taken the rose under their care, and to whom we are indebted for the superb varieties that now ornament our gardens from June till October.

Not long since, in an article upon roses, we noted our intention of bringing it more prominently before our cultivators, and of advocating its more careful culture and superior treatment. But in the neglected state of its growth around us we must avail ourselves of other aid to forward the object, and we have from time to time given valuable information from the best Rosarians abroad, and we shall continue to gather all the information we can find which will accomplish a decided improvement in the cultivation of this flower.

England, with its cold damp climate, is very different from warm sunny France, yet the skill of her cultivators has overcome the vicissitudes of climate, and it is doubtful whether the rose growers of France can produce better specimens than are frequently exhibited in London. If the summers are cool and moist, the winters are mild, and, except in seasons of

unusual severity, the plants do not suffer or lose any of their vitality. Under our severer temperature even the hardiest roses are sometimes injured, and the less hardy often destroyed. But if our winters are cold our summers are warm, and the plants soon make up for what they have lost; yet we have the disappointment of a year or more, and, besides, our autumns are too short to see the hybrid perpetuals in the perfection they are seen in England and France where they often bloom till Christmas. With this single exception and our cold winters, our climate is more favorable than of England, and there is no reason why roses should not be raised everywhere. That they are not cultivated with better success is for similar reasons stated by the Rev. Mr. Radcliffe, a successful rose grower in England, who gives them in the following article, which is well worthy the attention of every lover of fine roses:

Why do not Roses more generally succeed in England? Various reasons may be given.

1. CLIMATE.—Ours is the most variable and consumptive climate in the word. England is the hyphen between a frying pan and a well—*i. e.*, between France and Ireland. One would have thought that the temperature would be at all times equable; but such is not the case. We are liable to quick transitions, and also to winter-summers and summer-winters! The roses being imported, with rare exception from the warm and more equable climate of France cannot but suffer from the change: more especially glass-raised, unhardened novelties.

2. SORTS.—People fail, because they do not get right sorts; or they do not get right sorts on stocks suitable to the rose itself, or they do not get right stocks, by which I mean stocks which, being suitable to the rose in some lands, are also suitable to their land. In this climate, robust, hardy, vigorous growers will alone last any length of time: even these will, on own roots, and on all stocks occasionally die, though they be well looked after, which is far from being generally the case.

3. STOCKS.—Briars, Manetti, Celine, are all good stocks. Of the Celine stock I know but little: such as I have upon it

grow and bloom well. Briars are best for moderate growers, and good also for strong growers in strong land. Manetti is good chiefly for strong growers, and indispensable for inferior lands. In very strong lands it would drive the rose into a pole rose, which might not be convenient. This stock, with suitable roses on it, is suitable to all lands. Its triumph, however, is seen in highly manured, shallow and worthless lands, where Briars would do but little. I have many Manetti roses planted in what was a duck pond, bottomed with chalk; also many in land close upon solid gravel. Between the chalk in one case, and the gravel in the other, I put a bed of black dung and half-inch bones, and plant the Manetti roses on the top of it, and then fill in, tread hard, and tie the plants to sticks; and nothing can succeed better. I have in the same ground Briars, homebudded, but they bear no relation whatever to purchased roses on the Manetti stock. In either of my lands, both different in their natures, you might as well put a hen against a horse as put a Briar rose against a Manetti rose. In my north-east garden this can be seen any day.

4. WINDS.—Roses cannot have too much air and too little wind. Those who are exposed as I am to the violent assaults of the W. and S. W. winds, which, by their violence and prevalence bend the heads of elms and other trees here towards the S. E. as if they were bowing to the Eastern Magi, know how injurious wind is in early spring and early summer. The sap then rises, but the lungs are destroyed; and the effect on the new wood is much the same as that of garrotting. The sap is pent back upon the wood, and it becomes bad. Of course good wood and good flowers cannot come out of bad wood. Whatever suddenly destroys the leaves, or impedes their action, whether wind, hail, or fungi, at the early part of the year before the wood is matured, will do great present and future damage. My home Rosery is as exposed to the W. and S. W. wind as Portland or Stonehenge. My house ought to be a windmill. Still I bear the demolitions of wind and hail, year after year,

“With that untaught innate philosophy,  
Which, be it wisdom, coldness, or deep pride,  
Is gall and wormwood to an enemy!”

5. DRAINAGE.—No matter what the stock is, or the rose upon it, free drainage is absolutely necessary. A rivulet, at the base of my home Rosery, stops the water back upon me. The Manetti roses bear it respectably. The Briar roses were annihilated in the well-known severe winter.

6. PLANTING, STAKING, AND TYING.—These are important things. Ground plants in highly protected situations may not require staking and tying, as they do here; but standards always, in all places, require it. As regards planting, the Briar roses should never be planted deeply—not more than 4 inches; Manetti roses must be planted sufficiently deep to cover the collar of the bud an inch or two: hence it follows that they should be budded low, or the radius of the roots will be too far from the action of the sun. A Briar rose deeply planted will have weak wood and bad flowers, then weak wood and no flowers, and then neither wood nor flowers.

7. APHIDES AND FUNGI.—If roses were kept constantly syringed from the time the trees put forth their spring leaves, little or no damage would be done by them. Clean water would cleanse the leaves and rid them of millions of helpless aphides and of the invisible spores of fungi. Orange fungus must be destroyed by hand at once. This can be only effectually done by taking off the leaf with the orange nucleus, which usually adheres to the lower side of the leaf, before it bursts and spreads its spores over both sides of the leaves. In spring you will discover it by a small discoloration of the upper side of the leaf; just beneath that is the orange nucleus. Sometimes it is on the stems. After heavy thunderstorms, I have observed that aphides and fungi greatly disappear.

These, then, are some of the main reasons why roses do not more generally succeed in England. There are other reasons, which need only be summed up, viz., improper pruning, pruning at an improper time, cutting the wood of H. P.'s before they have dropped their flowers, insufficient manure, lack of mulching and water in torrid summers, and insufficient root protection (straw is good for it) in severe winters.

FINALLY, a good grower of roses does not necessarily imply a first rate Rosarian; nor does the winning of prizes necessarily imply such a thing. The lands of some are so adapted

to roses that they have little to do but plant and cut off the flowers. Were they stuck in the eye of the wind on my dense chalky hill—chalk all the way to New Zealand, I believe they would be confounded. That man is a true Rosarian, who, surrounded by great natural difficulties, fights, and fights successfully against them; who studies the various likes and dislikes of roses, and treats them accordingly. “Necessity is the mother of invention,” and nothing but difficulties and experience can make a man a first-rate Rosarian. August, September, and October test a Rosarian better than June and July.

---

## General Notices.

**THE RUSSIAN VIOLET.**—To those who have to furnish a boudoir or drawing-room with scented flowers during the dull months of November and December, this kind of violet is invaluable. Managed in the way I describe, it flowers here more or less the whole year round. In May I prepare a piece of ground for it at the foot of a south wall; I take off all the strongest runners, and plant them in rows 15 inches apart, and about 10 inches asunder in the row; I prepare a compost consisting of equal parts sand, loam, and well rotted leaf mould, and in this I plant the runners. No more attention is required except shading them for a few days until they become rooted. Should the summer prove dry, they will be benefited by copious waterings, and if the weather should be boisterous and wet in October, an old spare light may be put over them, setting it on bricks at the corners. This will prevent the blooms from being damaged.—(*Gard. Chron.*)

**ORCHARD-HOUSE CULTURE.**—I beg to send for your inspection, three varieties of pears, gathered from trees grown in 11-inch pots; 16 pears were produced by the tree whose fruit is numbered 1; 28 were gathered from No. 2, and 32 from No. 3. Should you think them worthy of notice, I shall feel obliged by any remark upon them you may be pleased to make, and as I have some doubt about the names, your setting me right in that matter will be considered a favor. I have under my charge a lean to orchard house, 48 feet long, 12 feet wide; three feet high in front, and eight feet high at back. This has been built four years, and as I have every year been successful in having an abundance of good ripe fruit, I am partial to the orchard-house mode of fruit-growing, not only because by that system a greater amount of fruit can be obtained than by any other method, but because of its excellence and certainty. I am well acquainted both with in-door and out-door fruit-growing, my experience having spread over some 22 years; and I must say, that never have I tasted better flavored

fruits, under any circumstances, than those gathered from an orchard-house. We have two rows of trees running the whole length of the house, and most of the peach and nectarine trees were allowed to carry 3 and 3½ dozen fruit each, and some even 4 dozen. Our plum trees this season have been a perfect picture; Coe's Golden Drop bore 7½ dozen, which, for color and flavor, were all one could wish. Denyer's Victoria had 7 dozen. Columbia 6 dozen, Jefferson 7½ dozen, and Washington and others 7 and 8 dozen each. Cherries, figs, and pears have been equally good. Many have visited this house this season, and all have not only been pleased with what they saw, but several have made up their minds to have an orchard-house built for themselves.—(*Gard. Chron.*)

---

## Societies.

---

### BROOKLYN HORTICULTURAL.

At the Annual Election, recently held, the following gentlemen were elected officers of the Society, for 1864:—

President, J. W. Degrauw.

Vice Presidents, W. A. Anthony, D. P. Barnard, R. W. Ropes, Henry Baxter.

Treasurer, J. W. Degrauw.

Corresponding Secretary, A. S. Fuller.

Recording Secretary, G. H. Van Wagener.

Executive Committee, C. B. Nichols, G. Hamlin, Prof. Eaton.

---

### ILLINOIS STATE HORTICULTURAL.

The Eighth Annual Meeting of this Society was held in Alton on the 27th of December last. The meeting was the largest ever held, and the different sections of the West well represented. The Alton Horticultural Society provided a room in Mercantile Hall, President Long delivered his Annual Address, and the following officers were elected:—

President, Smiley Shepherd, Hennepin, Putnam County.

Vice President, (at large) O. B. Galusha, Lisbon, Kendall County; First District, Jonathan Perrain, Thornton Station, Cook Co.; 2d, Dr. C. N. Andrews, Rockford; 3d, A. R. Whitney, Franklin Grove, Lee Co.; 4th, J. H. Stewart, Quincy, Adams Co.; 5th, W. A. Pennell, Granville, Putnam Co.; 6th, J. O. Dent, Verona, Woodford Co.; 7th, M. L. Dunlap, Champaign, Champaign Co.; 8th, O. M. Coleman, Bloomington; 9th, C. C. Sturtevant, Beardstown, Cass Co.; 10th, Jona. Huggins, Woodburn, Maconpin Co.; 11th, Chas. Kinnicott, Sandoval, Marion Co.; 12th, Dr. E. S. Hall, Alton; 13th, F. J. Evans, South Pass, Union Co.

Corresponding Society, W. C. Flagg, Moro, Madison Co.

Recording Secretaries, Parker Earle, South Pass; C. W. Murtfeldt, Rockford.

In another number we shall refer to some of the discussions and decisions about fruits.

## Massachusetts Horticultural Society.

*Saturday, January 2, 1864.*—The annual stated meeting of the Society was held to-day—the President in the chair.

The President opened the meeting with the following address to the Society :—

GENTLEMEN OF THE MASSACHUSETTS HORTICULTURAL SOCIETY :—

Another year has passed away, and we are assembled on the new year to exchange the salutations of the season, and give renewed assurance of our devotion to the interests and objects of the Society.

It must be gratifying to all of us to know, that in the midst of the terrible struggle which has convulsed the country, and the trying times through which we are passing, occupying more or less the thoughts of every man who holds Freedom sacred and Union dear—the arts of peace have not been neglected, and that Horticulture, which marks a higher civilization, has received a large share of attention; that its steady and onward progress is the best evidence of the great importance of associations like ours, whose purpose it is to encourage a taste for, and diffuse information upon, every department of Rural Art. We all have a duty to perform; and it is ours, who are privileged to remain at home, while our brothers are fighting the battles of our country, to maintain unimpaired the art and science in which we are engaged.

The exhibitions of the Society, during the last year, though not so large and varied as in some previous years, have, when we consider the various causes, been as satisfactory as could have been anticipated. The season was unfavorable. Flowers were injured by the early drought of June, and the drenching rains of August; and the fruit crop, after a year of unusual abundance, was one of limited quantity, and rather inferior quality. Thus it was not possible, however so earnest the desire, to make our exhibitions so attractive and extensive. It is a source of congratulation, however, to learn that the contributors were more numerous and an unusual degree of interest manifested in the exhibitions.

The Annual Show was from actual necessity held in our own hall, and though by no means so large as when abundant room has been at our command, it much exceeded the most sanguine expectations of every member. All were astonished that in a season so unfavorable, the specimens should be so fine. The Chairman of the Fruit Committee, in his excellent Annual Report submitted at a late meeting, has admitted that in some particulars, especially in native grapes, the exhibition was the best ever made by the Society.

Believing that in the progress of Pomology, some alterations in our premiums would be attended with beneficial results, I offered some suggestions last year to attain the object. It is pleasing to know their adoption has proved highly satisfactory, and accomplished a good purpose. Further alterations, I understand, of a similar character, have been introduced into the schedule of premiums for this year, which the Committee believe will

result in a decided benefit to Pomological science. The Flower Committee have also rearranged their list, which, for a few years back, has been in a confused and unsatisfactory state. I doubt not their labors will meet with a corresponding improvement in the weekly exhibitions.

I am glad to learn that the Prospective Prizes for superior seedling fruits and flowers, which were struck from the list a few years ago, have been—or a portion of them—restored. This is an important and timely move in the right direction. I shall not detain you with the train of reflections which a consideration of this subject suggests, but would merely remark, that if there is anything which the members of the Society may look back upon with pride, it is the deep interest which has been everywhere awakened for the production of seedlings, and particularly in the immediate sphere of our association; and it is due in an eminent degree to the liberal premiums which were offered by the Society for that object.

The production of new varieties of fruits and flowers by seeds is just in its infancy, and is yearly becoming of more and more importance. Too long have we overlooked the treasures to be obtained from this source, and too long have we relied upon foreign cultivators for everything new. With a climate more favorable than most of Europe affords, only a few enthusiastic men have ventured upon the experiment of raising new seedlings; but the success which has attended these few efforts has induced others to follow, and encouragement by liberal premiums is only needed to enrich our collections with fruits and flowers excelled by no other clime. A mere mention of the additions which have been made since these premiums were first offered by the Society would exceed the limits of my remarks; a few were named last year, and the others your own information will readily supply.

During the past year a Committee was appointed to consider the propriety of awarding Certificates of Merit. The Committee made a favorable report, with estimates of the cost of procuring suitable certificates. Their report was accepted, and they were authorized to have the certificates executed, and ready for use the present year. There can be no doubt of the benefit resulting from the awarding of these certificates, which are to be independent of the ordinary premiums. They will be only given for the exhibition of new, rare and beautiful plants and flowers, new fruits and vegetables, for seedlings of unusual merit, and for superior skill displayed in cultivation. The Royal Horticultural and Royal Botanic Societies of London long ago adopted the practice of awarding such certificates, and in the case of seedlings it has prevented amateurs and lovers of flowers from purchasing many inferior things which have no other merit than what in the opinion of the producer they possessed. The stamp of merit by a Society like ours will at once give value to every new flower, fruit or vegetable which may be brought before it.

The Library is in excellent condition. The chairman justly estimates the importance of this department of the Society. While the high rates of exchange have prevented the purchase of larger works, all current periodicals and popular books have been added, so that the wants of the members



have been well supplied, and they have been enabled to keep up with the progress of the art abroad.

The sales of Mount Auburn, the past year, are believed by your Treasurer to be considerably larger than in 1862; and as no extra expenses are known to have been incurred, a handsome sum will be realized. A piece of bog land of no value for cemetery uses has been filled up and beautified, and a fountain erected, adding much to the value of the surrounding lots. The Society were only called upon to relinquish all their rights in this lot, and this was cheerfully done, in consideration of the advantages gained.

I am happy to state that the finances of the Society are in a flourishing condition. Four thousand dollars (\$4000) have been invested in Government stocks, and there remains in the Treasury a cash balance of \$1193 33. After paying the large expenses incident to the purchase of a valuable estate, this must appear highly gratifying. If we add to the amount invested and the cash balance, the expenses just alluded to, the accumulation of the year over and above ordinary expenses would exceed \$6000. I find on looking over the Treasurer's reports for five years (1859 to 1864) that during the whole period only \$3000 were invested, and of this sum, \$6000 was from the surplus over and above the mortgage received for the sale of the old hall. Thus has an accumulation begun which it is hoped will go on increasing until a fund shall be established which will enable us to transmit to our successors a splendid estate, unincumbered and free.

But, gentlemen, with all this prosperity must be mingled regrets at the loss of those who have so long been faithful co-workers and active members, friends and companions, whose loss we lament, and whose memory we cherish.

The death of Mr. David Haggerston occurred in November last. Of late years he has not been an active participator in the affairs of the Society; but for a long period, from its first organization, he was not only a frequent contributor wherever employed, but an active and efficient member, serving on various Committees and always punctual and faithful in the performance of his duties. Few professional men have done more for the Society, or presented better examples of skilful culture than Mr. Haggerston.

The departure of Mr. A. D. Williams in a good old age has just been announced, and resolutions expressive of the feelings of the Society were passed at a very late meeting. Though somewhat retired from the active pursuits of horticulture, he was one of the oldest members, and contributed largely to its exhibitions in former years, and from time to time up to a few weeks previous to his decease. He served on various Committees, and was, with Mr. Haggerston, one of the Council under the old constitution of the Society.

Thus are the old members passing away. May those who fill their places feel the deep responsibility which rests upon them to make good their loss; and may each and all do their share, as they did theirs, to keep the Society on the solid foundation they so earnestly labored to secure.

And now, gentlemen, let me pass to the congratulations of the season.

First, let me congratulate you upon the large accession of members, much more numerous than any year for a long period. Forty-nine new

members have been added, many of them life members, and six have died—making a gain of forty-three. I see by the address of your late President, that in 1859 the total of members, both life and subscription, was 541, and in 1862, 563—making a gain of only twenty-one members in four years. The gain last year, deducting withdrawals, was thirty.

I congratulate you upon having been the recipients of the fine work of art which adorns our room—a lifelike bust of the Hon. M. P. Wilder—the gift of C. O. Whitmore, Esq., a gentleman whose interest in our welfare and progress has never waned, and whose aspirations are that we may never cease our great work until a knowledge of horticulture becomes diffused throughout our entire country.

Fortunate indeed it is that this memorial of our friend and associate, and former President, has been placed before us to remind us of his long devotion to horticultural and pomological science, and especially to the highest interests of the Society. Though prostrated by sickness, and long deprived of his constant intercourse with us, his most ardent wishes are for our prosperity. It is the earnest hope of every member that he may soon be restored to health, and again be permitted to give us the aid of his valuable services, always so cheerfully rendered.

I congratulate you upon the munificent donation which has been made to our funds by H. H. Hunnewell, Esq., to encourage and promote the growth and introduction of ornamental trees and shrubs, and particularly the Rhododendron and Azalea. How timely has this been made, and how deeply are we indebted to his good taste in selecting the very plants which, of all others, most merit encouragement, but which have been most neglected? Let us hope that the means which he has so liberally placed in our hands will be so judiciously used as to effect the object of the donor, assured that the result must be the diffusion of a taste for some of the most magnificent plants that enrich our gardens and grounds.

And, lastly, allow me to congratulate you, upon the purchase of the Montgomery House estate for a new hall—a location one of the most advantageous the city affords. Whatever views may be entertained regarding the erection of a suitable building, there can be but one opinion as to the eligibility of the site over any other which was offered, or was likely to offer. Your Committee labored long and assiduously in the accomplishment of their work, believing that no such opportunity would again occur to secure for the Society just the place they thought the only one within the means of the Society to purchase. The unanimous ratification of their acts has shown how much you appreciate their labors.

It now remains for you to complete the work so well begun, and to open a new era in the history of the Society. Whether it will be for our best interests to erect a building at once, or put off the work until another time, is for you to decide. A matter of so much importance requires careful deliberation, and I have no doubt you will give it the attention it deserves. Nothing, however, it appears to me, but actual necessity, should induce us to postpone the erection of a building suitable to our wants, our standing and our means. Second to no other similar association in material wealth, and wielding an influence extending from the Atlantic to the Pacific, it is

important that the source of this power should be recognized. We owe it to ourselves, and more especially to those who came forward in our hour of need and gave us a helping hand. They had seen our early progress, and believed our resources were equal to our needs. But when with a zeal and earnestness we ventured upon the then hazardous task of erecting a hall which would require something more than we possessed, then were those found who remembered us, and endowed us with the means to make the attempt succeed; and it is due to their memory that we should as speedily as possible put ourselves in the position they helped to place us, in order to carry forward the purposes of its founders. Their object was to endow an institution, not to aid an obscure Society. Truly was it said in the eloquent address at the dedication of our old hall, that "its erection was the most fitting testimonial of our liberality, and its purpose afforded the best evidence of a refined and intelligent community." How much more then, at this day, with our enlarged means, will a new hall afford renewed evidence of the great progress which twenty years have accomplished? Trusting, therefore, that this subject will have your mature consideration, I commit it to your hands.

**GENTLEMEN :**

The New Year finds us a united, harmonious and prosperous Society. Never since its organization has a kindlier feeling prevailed, or so general a desire been manifested to help on the good work. Let us hope that, under the blessing of Providence, our country may soon be restored to peace, freedom become universal, and a love of horticulture a leading passion of our people.

On motion of Dr. E. Wight it was voted that the President be requested to furnish a copy of his Address for publication in the papers, and in the Transactions of the Society.

The Finance Committee presented their Annual Report for 1863, giving the following statement of the financial condition of the Society:—

**RECEIPTS FOR 1863.**

By cash in the Treasury, December 31, 1863,	-	-	\$2,561 41
" dividends and interest, - - -	-	-	5,251 14
" assessments collected, - - -	-	-	800 00
" receipts from Mount Auburn, - - -	-	-	4,284 72
" rents collected, - - -	-	-	1,500 00
" receipts of Annual Exhibition, - - -	-	-	432 25
" miscellaneous receipts, - - -	-	-	180 90
			<hr/>
			\$15,010 42

**PAYMENTS FOR 1863.**

To cash paid Premiums and Gratuities, - - -	-	-	\$2,218 00
" salaries, \$850, Mr. Farnum, \$100, - - -	-	-	950 00
" rent, - - - - -	-	-	1,550 00
" Annual Exhibition, expenses, - - -	-	-	742 21

To library, books, insurance, &c.,	-	-	-	-	\$294 15
“ printing and advertising,	-	-	-	-	330 47
“ Montgomery House Estate, on account of purchase, examining title, &c.,	-	-	-	-	2,350 59
“ improvement of Mount Auburn,	-	-	-	-	287 50
“ invested in government stocks,	-	-	-	-	4,051 82
“ medals,	-	-	-	-	212 25
“ miscellaneous bills,	-	-	-	-	829 90
“ cash in treasury, December 31, 1863,	-	-	-	-	1,193 53
					<hr/>
					\$15,010 42

## PROPERTY OF THE SOCIETY.

Montgomery House Estate,	-	-	-	-	\$102,350 50
Donations invested,	-	-	-	-	4,000 00
Legacy of B. V. French,	-	-	-	-	564 50
“ of Theodore Lyman,	-	-	-	-	10,000 00
H. H. Hunnewell's donation,	-	-	-	-	500 00
Society's investments,	-	-	-	-	14,551 82
H. D. Parker's note,	-	-	-	-	60,000 00
Furniture and library, &c.,	-	-	-	-	5,000 00
Cash on hand, December 31, 1863,	-	-	-	-	1,193 53
					<hr/>
					\$198,160 35
Indebtedness, Mortgage (\$100,000) Sundry Rents, Premiums, &c.,	-	-	-	-	\$103,762 50

The Committee, appointed to nominate a Committee of Arrangements for the next Annual Exhibition, reported the names of the following members, who were unanimously chosen:—

P. B. Hovey, Chairman; J. S. Cabot, J. F. C. Hyde, E. A. Story, D. T. Curtis, A. C. Bowditch, C. H. B. Breck, P. Parnes, S. H. Gibbens, J. C. Hovey, Abner Pierce, E. W. Buswell, and R. McCleary Copeland. Two hundred and fifty dollars were appropriated for the use of the Committee.

The Committee reported that the Exhibition would take place on Tuesday, September 22, and continue, day and evening, till Saturday the 26th.

On motion of C. O. Whitmore, a Committee of nine, of which the President should be Chairman, was appointed, to consider the expediency of erecting a building on the Montgomery House Estate, and report the probable cost of the same.

The President, Jos. Stickney, C. O. Whitmore, M. P. Wilder, J. S. Cabot, W. R. Austin, J. F. C. Hyde, H. H. Hunnewell, and L. Wetherell, were unanimously chosen.

On motion of Jos. Stickney the thanks of the Society were voted to the Hon. J. S. Cabot, for his long and valuable services, as Chairman of the Fruit Committee, and that a piece of plate, of the value of \$100, be presented to him, as a testimonial of their respect and esteem. Jos. Stickney, L. Wetherell, and J. F. C. Hyde were chosen a Committee to carry the same into effect.

# Horticultural Operations

FOR FEBRUARY.

## FRUIT DEPARTMENT.

AFTER a fortnight of continued cool weather, with scarcely a day of bright sunshine, the weather moderated, and the latter part of January has been nearly as mild as April. The ground is now free from all snow and ice. This change has been pleasant and favorable, after the long wintry weather, and forcing-houses, of all kinds, will now receive the benefit of bright sun and an abundance of air.

**GRAPE VINES**, in the earliest houses, will now, with greater sun-heat, make rapid progress, and will show signs of coloring by the close of the month. Keep up a slightly increased temperature, not too high, at night, and give more air, as the season advances. Damp the house well down in clear sunny weather, or when cold nights require a greater heat. Stop the laterals as they require it. Replenish the border with fresh manure, if the warmth is exhausted. Vines in greenhouses and graperies will begin to break during this month. As soon as this is perceived, syringe gently every day, or twice a day, till the buds expand; after that tie up the vines to the trellis. Begin with a moderate temperature, increasing it gradually, so as to prevent too rapid a growth at first, which is sure to weaken the vines. Give air in good weather, and maintain a genial moist atmosphere.

**STRAWBERRIES**, in pots, may be introduced into the grapery, or greenhouse, and, if placed on a warm shelf, near the glass, will produce a good crop. Such as are now swelling their fruit should have manure water.

**ORCHARD-HOUSES** will now require increased attention. As the sun heat increases, ventilation should be abundant, and the house remain open at all times, except when there is danger of severe weather.

**FIGS, PEACH TREES**, and other fruit trees, in pots, now introduced into the grapery, may be brought forward so as to ripen their fruit early.

**SCIONS** may now be cut, preserving them in the cellar, placing their lower ends in earth or sand.

**ROOT GRAFTING** may be done now, if the roots were laid in so as to be accessible. Place the roots, after grafting, in boxes, in a cool cellar.

**PRUNING** may be done this month, commencing with apples and pears.

## FLOWER DEPARTMENT.

The main work, at this season of the year, in all places of any extent, is the arrangement of the plants to produce a fine effect, taking away such as are going out of bloom, and filling their place with others just coming in; keeping all perfectly clean, and free from insects, the pots washed, and such as require it neatly tied up. Propagation of young stock should also be kept up, and plans laid to facilitate the spring work when that season

arrives. Hotbeds will be needed next month, and preparations should be made to have the manure and sashes in readiness for use.

**PELARGONIUMS** should now all be repotted, and arranged with plenty of space, in a good position, as near the glass as possible. Keep rather dry till they begin to grow freely, and give an abundance of air at all times, a night temperature of 45° to 50° being ample for this month. Tie out the shoots of choice specimens, and those intended for specimens next year. Fumigate often.

**CAMELLIAS** will now be in full bloom, and water must be given more liberally. Syringe freely in fine weather. Repotting may be done now.

**AZALEAS** will now be showing flower, and will need more liberal watering. As they go out of bloom, others may be brought forward to fill their places, and a succession of flowers kept up till June. The late blooming plants should be kept cool, and rather dry, to prevent them from starting. Take every opportunity to tie the plants into shape. Young stock, now repotted and placed in a warm house, will make fine specimens for blooming next year.

**CINERARIAS** should be very carefully watered. Give them plenty of room, and a place near the glass. Fumigate for the greenfly.

**CALCEOLARIAS** require similar treatment to the Cinerarias. Give the plants plenty of room. Shift now into their blooming pots.

**FERNS**, not already repotted, should be attended to this month.

**FUCHSIAS**, growing freely, will soon need a shift into larger pots. Give them a light airy place.

**ROSES**, now making a new growth, should be encouraged, by a shift into larger pots.

**ORANGE TREES** should be frequently syringed, and carefully watered.

**HEATHS**, in small pots, should be encouraged, by a shift into a slightly larger size. Keep cool, and water sparingly.

**BEDDING PLANTS**, of all kinds, should be propagated, and young stock potted off.

**ASTERS, PANSIES, STOCKS, ZINNIAS**, and other flower seeds, may now be planted in boxes, or pots, for early bloom.

**GLOXINIAS AND ACHIMENES** may be potted and placed in the warmest part of the house, or a hotbed, if convenient.

**CHRYSANTHEMUMS** may be propagated this month.

#### VEGETABLE DEPARTMENT.

Hotbeds should now be prepared for sowing all kinds of early vegetables. Let the manure be thoroughly turned over before the beds are made, and after the rank heat is exhausted they will be ready for use.

**CUCUMBER** seed should be planted in pots.

**LETTUCE** seed should be planted.

**CABBAGE AND CAULIFLOWER** may be sown.

**EGG PLANTS AND TOMATOES** should be planted.

Cover the beds well with straw mats, in very frosty weather, and protect the sides with a banking of leaves, hay, or seaweed.

## GRAPE CULTURE IN MASSACHUSETTS.

IN our last number, in our notice of the Annual Report of the Hon. J. S. Cabot, to the Massachusetts Horticultural Society, we stated that we should refer to it again, particularly that part of it alluding to grapes and grape culture, and we embrace this early opportunity to bring it before our readers, that they may be made familiar with the progress which this interesting and important department of fruit growing is making in the neighborhood of Boston, and to a greater or less extent throughout the State.

In a previous number (p. 8) we offered some remarks on the progress of grape culture, and the great advance made in the production of new and superior varieties. It was our intention at the close of the favorable season just past to give a resumé of the year's experience in grape growing, and note more particularly the merits of some of the varieties which have been recently introduced, as well as the relative value of the older kinds as compared with them; but the opportunity to obtain all the information required did not occur, and the brief remarks above alluded to were given in the place of a more detailed and extended article. We now offer the views of Mr. Cabot, which have been the result of careful observation upon the very large number of fine specimens presented for exhibition the past year.

Though so far north of what may be considered the grape growing region, Massachusetts cultivators may feel a pride in what they have done for the grape, and if we have not the climate or soil which will give us the rich and ripe Catawbas and Isabellas of Cincinnati and Kelly's Island, we can offer in their places the Diana, the Concord, Allen's Hybrid, the Winchester, the Framingham, and probably one or two of Rogers's Seedlings, certainly no mean substitutes—for the best Cincinnati grapes, and so far in advance of those kinds when raised in our climate, as to entirely change the character of this fruit. For, with few exceptions, in very

favorable seasons, the Catawba rarely matured, and the Isabella was an acid and pulpy berry. All this is changed; and we can now produce an abundance of superior grapes, even in unfavorable years.

But what has surprised us is the excellence of the specimens which have been produced by the cultivators of Massachusetts, particularly around Boston, as noticed in Mr. Cabot's report. We have been present at various exhibitions of grapes in New York and Philadelphia, and with the exception of the Grape Growers' Exhibition in the former city, which we did not attend, we have not noticed the same number and fine specimens as those exhibited before the Massachusetts Horticultural Society, and the Cambridge Horticultural Society a week later. The varieties embraced Concord, Diana, Isabella, Delaware, Catawba, Union Village, Hartford Prolific, Rebecca, Allen's Hybrid, Framingham, Crevelling, Winchester, and Iona, in quantities of six or more bunches each, from a great number of competitors; and many more kinds in small lots, less known and far less valuable, if we may not add comparatively worthless, varieties. It is evident from the excellence of the specimens that grape growing has been taken hold of in earnest, and that we have nothing in our climate but what can be overcome; and however favored other and more southern or western localities may be for some grapes, ours has nothing to prevent us from obtaining an abundance of others, of equal if not superior excellence.

The grape does not show its permanent characteristics at once: though less variable than the pear, yet two or three successive seasons are necessary to establish its various merits; and as these are affected and changed or modified by the character of the weather, it is impossible to ascertain the true estimate of a variety without careful observation, and the experience of two or three years. For this reason, a variety is elevated or lowered in the scale of merit, and a degree of uncertainty attached to it in one season that disappears the next, and another variety apparently established is rendered doubtful by the experience of an additional year. Thus by comparing the average of different years, we come at last to the true standard of merit.



Such will be the result of the accumulated information of individuals and societies. We shall soon know the exact standard of the older kinds, and the newer sorts must pass through the same ordeal before they will find their proper rank. It is this information which all cultivators seek for, and it is our object to supply it. Mr. Cabot's report will add something to our accumulated knowledge of grapes and grape growing:—

Of native or hardy grapes, exceedingly interesting displays were made by Messrs. Strong & Spooner, comprising in their collections several that were new or not before exhibited. Among them were the Aiken, that resembles the Isabella, but said to be earlier; the Arkansas and Hyde's Eliza, neither of which were considered of any special promise; Oporto, a frost grape, that is apt to lose its foliage, is very acid and foxy; Marion, of a dark black color, with showy compact bunches, does not mildew, after frost of tolerable quality; Lenoir, a small black grape that ripens early, but is acid, and not to be recommended; Grant's Anna, a white grape that will not probably ripen here; and Brandywine, a white grape of good size, handsome bunches, that, too, probably will not ripen in this vicinity.

From Mr. Oliver Bennet there were specimens of the Framingham Seedling, a new grape, raised by Mr. J. G. Morneberg of Saxonville; has a round berry, of good size, black color, with a fine bloom; said to be a very strong grower, not subject to mildew, or to drop its fruit, and to be early. Mr. E. A. Brackett presented specimens of his new seedling, coming from the Union Village, equalling its parent in size and beauty; as it has been described in previous Reports it is not felt necessary to repeat its description. As the land of Mr. Brackett is wet and springy, the wet season operated very unfavorably upon his vines, and seriously interfered with his success. Mr. Brackett exhibited, also, specimens of the Iona, one of the most promising of the new varieties, a seedling raised by Dr. Grant, from the Catawba, and not yet disseminated; in bunch and berry it has some resemblance to the Catawba, is of fine quality, and said to be as early as the Delaware.

At the Pomological Convention held in Boston, in 1862, there were shown some specimens of the Adirondac, a new grape, an accidental seedling, originating near Lake Champlain, in Essex County, N. Y., and the President of the Society presented a few berries of it to some members of the Committee the present season. Those that tasted them considered it a very fine grape; it is of good size, sweet, of a dark-amber color, and reported to be very early. Coming from about the 44° of north latitude, it would seem suited to our climate; if, when put into cultivation, such should prove to be the case, and that the fruit equals the specimens and proves to be as early as represented, it cannot fail to be considered a great, if not the greatest acquisition. Allen's Hybrid, raised for the first time, it is believed, in the open air, was exhibited perfectly ripe, on the 12th of September, by Messrs. Strong & Spooner. That it ripened perfectly in the open air, so early, was an event of some interest, because the only doubt that has existed with respect to the claims of this variety to be placed in the very first rank, if not at the head of the list of out-door grapes, has been in reference to its hardiness and fitness for out-door culture. Although further proof may be necessary to conclusively decide the question, yet the experience of the past year, as far as one year can, seems to solve this doubt. About the great excellence of the variety there has never been but one opinion; it is certainly a most delicious grape in sweetness and richness, though of a different flavor, rivalling the Grizzly Frontignan.

To go back to a period not more remote than that of the formation of this Society; at that time, the only out-door grapes of any value then possessed were the Isabella and Catawba, both fine grapes, but both so late in arriving at maturity that it was rare, and only under favorable circumstances, that either, and especially the last, became perfectly ripe in this vicinity. With a greater knowledge of the subject, and a better system of pruning and cultivation, these varieties are now more frequently produced in a perfect state than formerly; but at the time referred to it might properly be said, that, from being so late, the Isabella only rarely, and the Catawba never attained here to perfect ripeness. To

these two was soon added the Diana, that, being of good quality and ripening earlier, was an acquisition, After a time, the subject attracting attention, endeavors were made at an improvement in this fruit by raising new varieties from seed, that, constantly prosecuted, have, it must be allowed, been attended with great success. One of the first evidences of the success to be afterwards attained, was the production of the Concord, and subsequently of the Hartford Prolific. Neither of these varieties was in quality any improvement on the Isabella, on the contrary they were decidedly inferior to that variety, but the first being of large size and much beauty, and the last named very early in ripening, they were welcomed, as tending to show that an improvement might be expected if the means to obtain it were resolutely pursued. At a somewhat later period the Union Village was brought into notice by Mr. E. A. Brackett, and its introduction constituted another era in grape culture.

To attempt to relate step by step all the stages of the advance that has been made in the endeavors at improvement of hardy grapes, would require more time and labor than can be given to it; it is sufficient to say, that the endeavor has been so crowned with success, that instead of having, as was the case but a few years since, only such acid imperfectly ripened grapes that it was performing a penance, rather than procuring a satisfaction, to eat them, there is now the Delaware, Allen's Hybrid, the Iona, and Adirondac. Truly the improvement has been wonderful; the advance from the Concord and Hartford Prolific, to the Delaware and Allen's Hybrid, to say nothing of the Iona and Adirondac, as yet but imperfectly known, is one that once would hardly have been hoped for, certainly not expected.

Mr. W. C. Strong has long entertained and expressed the opinion, that hardy grapes for the supply of the market could be profitably cultivated, and has with his associate, Mr. Spooner, been attempting it on an extensive scale. Thus far, the experiment has been satisfactory. Mr. Strong has been kind enough to furnish the following account of his method of cultivation, that cannot be otherwise than highly appreciated, as giving the views and opinions of a gentleman of

much mental culture and great skill and experience in horticulture. Mr. Strong says, "You will recollect that I have differed from the majority of the Fruit Committee in years past, in regard to the practicability of growing grapes for the market in our State. I am inclined to comply with your request to state my method of training, since the request may be construed as a partial admission that my experiment is a success. At the outset I started in the belief that our winters are too severe for the vine. Not that the cane is often killed outright, but it is frequently and seriously injured, and almost invariably the vitality is so perceptibly affected by a full exposure to the cold, that protection must be regarded as an absolute rule, as a *sine qua non* for vineyard culture. Boards, mats, boughs, hay, leaves, and other such materials are used for winter covering. But these are more or less expensive, they require considerable labor, and harbor mice that are very apt to spoil the vine. Above all, these materials are not a perfect protection. Trailing the vine upon the ground in a line with the rows, and covering with soil, is the simplest, cheapest, and most perfect protection. It is beautiful to see how supple and full of life the canes are after such a winter's sleep. They start with, and maintain a vigor that not only increases the size, but also materially hastens the time of ripening the fruit.

"I allude to this subject of winter protection, in connection with the method of training, because I would make every method bend to the rule of bending the cane to the ground in the fall. The Thomery method may be admirable for sunny France, and has been admirably drawn out in a series of 'Thirty-nine Articles,' more or less, for America, but I very much doubt its practical value for New England, at least. As your limits require me to be brief, I cannot enter into particulars, but will only state what my experience teaches to be the best conditions.

"The best position is a steep side hill, sloping south. For short-jointed varieties, that do not have large and luxuriant foliage, the Delaware, for example, training to a trellis, is probably the cheapest and best method. The rows may be six feet apart, and the vines the same distance in the row.

The posts for the trellis may be fifteen feet apart, and six feet in height above ground. Wire is cheaper, neater, and more durable than lattice. Five wires will be found quite sufficient for a trellis of this height. The first wire running eighteen inches from the ground. In the spring, when the vines are uncovered, about April 1st, instead of tying the canes perpendicularly to the trellis, let it slant obliquely at an angle of  $45^{\circ}$ . Two advantages result from this, the tendency of the sap to the top of the vine is considerably checked, and also the vine is in an easy position to be bent to the ground again in the fall. The trellis should run east and west, in order that the morning and evening sun may shine through the rows, and yet the foliage may shade the ground when the sun is in the meridian. This method for short-jointed varieties with rather thin foliage. But there is danger that trellises of this height and distance, covered with the luxuriant foliage of some of our native varieties, will prevent a free circulation of air; dampness, mould, mildew, black rot, and barrenness, are the natural consequences. The evil may be remedied to an extent by increasing the distance of the trellis. Yet I am inclined to think that for such long-jointed kinds as the Concord, a more free circulation may be obtained, and a greater check to upward growth be given, by training each vine spirally to posts from six to eight feet high. The advantages of this method are very considerable, but too apparent to require mentioning. Three objections stand against it. First—it is considerably more expensive to procure and plant good sized durable posts for each vine; yet if the plan is decidedly better, the objection is answered. Second—The want of support for the laterals and the fruit, is an evil. It can be obviated to a considerable extent by bending the laterals, and supporting the fruit when found necessary with a tie to the cane; still this is never so simple and easy as on a trellis.

“In regard to the third objection, that when the vines become old and stiff it may prove difficult to uncoil and bend to the ground for covering, my experience will not allow me to speak positively. Of course, it will be a more difficult work than by the former method, and will require to be done

very carefully, and upon warm days when the wood is flexible. With care I do not doubt it may be done until the cane becomes of such an age and stiffness as to require renewal for its own good.

“Confining myself strictly to the subject given, ‘my method of training the vine’ which does not include even summer pinching or fall pruning, I believe I have said all which I have to say. In return, let me ask you the question which I have so often asked you before. If our fences, fields, and woods of Massachusetts are so spontaneously supplied with luxuriant native vines, in such excess of most other kinds of wild fruit, why, in the name of reason, why may we not expect by cultivation to obtain extensive plantations producing an abundance of good table fruit? How few wild peach, or plum, or cherry, or even pear trees, do we find in comparison with the grape? Yet, in contrast, how few cultivated vines in comparison with pears?”

---

#### POMOLOGICAL GOSSIP.

**NICKERSON PEAR.**—Sometime since, in a letter from Mr. S. L. Goodale, of Saco, Me., he mentioned a new pear, called the Nickerson, which he stated originated in that State, not unlike the Louise Bonne of Jersey, “and as good so far as yet produced there.” In the Report of the Maine State Board of Agriculture, just prepared by Mr. Goodale, the Secretary, he briefly describes it as follows:—“In form and general appearance it somewhat resembles the Louise Bonne of Jersey, and the specimens sent me were equal to that variety in quality. The original tree, though not old, and only about seven inches in diameter, bore three barrels in 1860, which sold at twelve and a half dollars per barrel. Young trees have vigorous growth and fine form. The evidence of sufficient hardiness and productiveness seems conclusive.”

Since this appeared, a meeting of the Board of Agriculture has been held, for the discussion of various topics of fruit

culture, and the originator of this variety, Mr. H. S. Nickerson, who was present, gave the following account of it:—

“The original tree came from seed planted by Ex-Governor Huntoon, when he resided in Readfield, and the tree was transplanted from thence to my place. It has had no care taken of it, and would have been cut down a dozen times before its value became known, had an axe been at hand. It has bore every year, but a larger quantity is produced every other year. The fruit was exhibited at the State Fairs in Portland and Augusta. The Committee at Augusta named it the ‘Nickerson Seedling.’ The original tree in 1860, only about seven inches in diameter, produced three barrels of pears, which sold for \$12.50 per barrel. It is very hardy: several hundred grafts have been set, and not one has died. Does not keep a great while after it is in eating. It was exhibited at the Exhibition of the Massachusetts Horticultural Society, six or seven years ago, and was called the Louise Bonne of Jersey, by them. A discussion concerning this pear was had in the Boston Journal, at that time, and its claim to originality established. The skin of the pear is hard; will not bruise when quite ripe, and is never knotty. Should be taken off about two weeks before it is ripe.”

Mr. Foster, of Gardiner, “had found it to unite perfectly with the quince stock. Had grown it for four years on the quince, but not fruited it. Fruit has not so bright a cheek as the Louise Bonne de Jersey, is about the same size, and is superior in flavor to that pear.”

We do not recollect the specimens which are said to have been exhibited before the Massachusetts Horticultural Society seven years ago, and we give the above account as we find it, that those who desire may try it and ascertain its merits.

**UNDERHILL SEEDLING GRAPE.**—This is the name of a new variety about to be introduced to cultivators, and described as follows: “This grape, now offered for the first time to the public, inherits to a greater extent all the essential qualities required in a good grape, than any native variety in the market. Its merits may be summed up as follows:—The vine is hardy enough for the rigor of a Canadian winter; it has an exceedingly robust habit of growth, and cuttings from it

strike with a facility equal to a currant. The berries and bunches are large, compactly formed, tenacious of the stalk, and properly distributed over the vine. The color is a deep lilac; skin thin; flesh very juicy, with an exceedingly sugary, rich vinous flavor; rendered more *piquante* by a just distinguishable muscat aroma; ripens three weeks earlier than the Isabella." Of its real merits we know nothing more than is here stated.

THE CONCORD GRAPE IN VIRGINIA.—Mr. O. Taylor of Loudon Co., Va., gives his experience of the Concord grape, in the Gardener's Monthly, as follows:—"As to the quality of the Concord here, it is not good on young vines, generally, but on older vines it improves so much, that the most of persons prefer it to the Catawba for the table; and when in its perfectly ripe state, is very superior to what it is when just colored; so it is not surprising that persons living in different parts of the country should differ as to its merits. With us it gets thoroughly ripe, and if there is any rain about the time it is perfectly ripe, the berries crack open, and if not soon gathered the birds are apt to eat them."

SEEDLING PEARS.—In a late magazine we alluded to the large number of seedling pears which have recently been introduced to notice. We now quote from Mr. Cabot's Report to the Massachusetts Horticultural Society, the following account of them by the Fruit Committee:—

"Dr. Shurtleff exhibited pears, of which one was named President; that was very large, obtuse, obovate, with a short stem, green color, with brown specks, its flesh, though a little coarse, was melting, juicy, of a sprightly flavor, and good; another called Norfolk County, large pyramidal, yellow, flesh yellow, juicy, melting, sprightly, and good; and a third named General Kearney, long, pyramidal, green, flesh white, melting, very juicy, but lacked flavor. Mr. A. J. Dean also exhibited a seedling pear, that was large, pyriform, with a long stem, yellow, flesh melting, juicy, sweet, and very good. Mr. Clapp, one marked No. 12, and another marked No. 15. No. 12 was a medium, oval or Bergamot-shaped pear, of a light-yellow color, sweet, musky, tender, but rather dry flesh. No. 15 was large, obtuse, obovate, with a large, long stem; it was



melting, juicy, sweet, a little musky, and not fine grained; and Mr. Richardson, Richardson's No. 1, and No. 2. No. 1 was pyriform, yellow, melting, juicy, subacid. No. 2 was large, pyriform, yellow, with a short, stout stem, sweet, not juicy.

Mr. Francis Dana further proved his remarkable success in originating new varieties of pears from seed, by exhibiting two new seedlings, one named George Augustus, and one unnamed. George Augustus was of good size, obovate form, with a long stout stem, rather rough, brown yellow skin, with some red, its flesh was fine, not very juicy, little subacid, and well flavored; the other was obovate, of good size, yellow, with red in the sun, not very juicy, of a pleasant subacid flavor.

Mr. Frederick Tudor, in November, exhibited a seedling pear, of a rounded obovate form, almost like an apple, with a short stem set in a very deep cavity, that was melting, juicy, and nearly first-rate quality; it was worthy of notice from its remarkable form, as well as for its good quality. Messrs. Walker & Co. also exhibited specimens of their new pear, Mount Vernon; they were quite large, larger than has been before noticed, they were of a peculiar spicy flavor. Some of these pears made a favorable impression, but the Committee felt that the time had not arrived to form a definite opinion respecting them."

FRUITS AND FRUIT CULTURE IN WESTERN NEW YORK.—The Fruit Growers' Society of Western New York held its annual meeting at Rochester, on the 27th of January. There was the usual attendance of members, and some very good collections of fruit exhibited, among which were well-kept Diana, Isabella, and Catawba grapes, the first named in most admirable preservation, showing its fine-keeping qualities. The meeting was opened with an address from the President, S. H. Ainsworth of West Bloomfield. It was devoted almost entirely to grapes and grape culture. The Society then proceeded to the discussion of the subjects before it, some account of which will be found in our next number.

BEST FOURTEEN VARIETIES OF THE PEAR.—After the discussion of the best 14 varieties of the pear, by the Western New

York Fruit Growers, a vote was taken upon the question, and the result was as follows, 21 ballots being cast:—

Bartlett, . . . . . 21	Belle Lucrative, . . . 16
Duchesse, . . . . . 18	Beurre Giffard, . . . 14
Louise Bonne of Jersey, 17	Beurre d'Anjou, . . . 14
Sheldon, . . . . . 17	Rostiezer, . . . . . 12
Lawrence, . . . . . 17	Flemish Beauty, . . . 12
Doyenne d'Ete, . . . 17	Winter Nelis, . . . . 12
Seckel, . . . . . 16	Beurre Bose, . . . . . 11

This list corresponds very nearly with the views of eastern cultivators, who consider the Bartlett, Louise Bonne, Sheldon, Lawrence, and Seckel as among the six best pears. We are surprised not to find the Urbaniste enumerated among a selection of fourteen sorts, or even mentioned in the discussion which preceded the vote, which we shall copy in our notice of the meeting.

**BEURRE GIFFARD PEAR.**—When this pear, which we think has been much overrated, was under discussion in Rochester last month, Mr. C. Downing stated that it rotted easily unless taken at the very moment of maturity; “he had to watch them as a cat watches a mouse, to hit the right moment.” This is a capital illustration of the character of this variety. For an amateur collection one tree is very desirable, but as a market fruit it is comparatively worthless.

**DE TONGRES OR DURANDEAU PEAR.**—This variety was discussed at the same meeting as the Beurre Giffard. All agreed that the tree was not vigorous; and Mr. C. Downing said, in many localities it dropped its leaves too soon. Mr. W. B. Smith said, that it was too acid for him. The same objections are made to this new pear by our own cultivators. Last year it would not compare with the Swan's Orange, which has been considered by some as too acid; the De Tongres is the most acid of the two. It has also failed in many collections, the trees proving tender, though in some places splendid looking specimens have been produced.

## THE FRAMINGHAM GRAPE.

BY THE EDITOR.

So closely does one new seedling grape follow upon another that attention is drawn to the latest, and those of an earlier date are often overlooked or neglected. Thus the Hartford Prolific and Delaware, introduced to notice 10 or 12 years ago, were so immediately followed by the Concord and Rebecca, that the attention of cultivators was diverted from the former and given more particularly to the latter; and their real merits, such as they possess, are just beginning to be well appreciated. Even the Diana, almost the first of the improved seedlings, is now, after 20 years, becoming a more popular variety, since judicious culture has brought out and established its excellence. So it is with every new fruit or flower; there is a charm in novelty, and when this charm has worn off we go over and review the past, and often recover from neglect some of the most valuable varieties. How eager were our cultivators to plant a To Kalon, a Dracut Amber, a Lenoir, or some other new grape now worthless, when such fine sorts as Diana, Union Village, and Delaware were considered comparatively old and inferior varieties.

Just now we have a quantity of new and improved varieties, which are brought to the notice of cultivators as possessing superior qualities, and worthy of general introduction. These are the Adirondac, Iona, Israella, Winchester, Cuyahoga, Allen's Hybrid, Lydia, Rogers's Nos., &c., and more recently the Underhill Seedling, and the one we are now about to notice, the Framingham. Among this great number, the amateur who has but little space, finds it difficult to make a choice; yet a choice must be made, and almost wholly upon the representation of those by whom they are introduced; for, with few exceptions, they have only fruited with the originators. Upon those therefore who bring forward new grapes the mass of cultivators depend for a correct and reliable account of their merits; that the choice, whether it may fall upon one or another, will at least ensure them of a variety that will be worthy of cultivation. It has been our object to

supply this information, so necessary to such a result, and we are glad to be able to state that in few if any instances have those who have placed any confidence in our opinion been misled. We may name the Diana, Hartford Prolific, and Concord as popular kinds, which were first made known and described in our magazine, and are now among the most valuable grapes.

Some eight or ten years ago, at an exhibition of fruits by the Middlesex Agricultural Society, at Concord, Mass., there was quite a show of grapes, that attracted much attention. The Concord was then exhibited for the first or second time, and had acquired so good a reputation even then in the place where it originated, that other grapes had less attraction. Among the kinds shown, however, was a seedling from Mr. Morneberg of Saxonville, Mass.; but the specimens were so large, showy, and beautiful that it was the general belief they were nothing but Isabellas grown in some warm spot, where they ripened at that early day, about the middle of September. We particularly noticed them, and came to the same decision ourselves. We had seen so many instances of such errors, that we passed them over as another to be added to the list. The Concord was a new grape because it was unlike the Isabella in bunch, berry, and bloom. Hence all recognized the distinction, while in the other case there was no perceptible one but maturity. We lost sight of the grape after this.

Two or three years ago we learned that Mr. O. Bennett, an amateur cultivator of Framingham, was cultivating a new and superior grape, which originated in the adjoining town of Saxonville; and, upon enquiry, we traced the variety to the very grape we saw at Concord, and the recollection of its appearance induced us to consult with Mr. Bennett in relation to it. He informed us the grape was a seedling raised by Mr. Morneberg of the latter place, which he had taken, to raise a stock in behalf of the originator; this enquiry satisfied us as to the identity of the grapes. Last year we prevailed upon Mr. Bennett to exhibit some of the specimens, believing it a variety of much merit, if its quality was equal to its appearance. This he did, at the Annual Exhibition of the Massachusetts Horticultural Society, on the 20th of Sep-

tember last. The specimens were over ripe, but in quality were pronounced excellent by all who tasted the berries.

Upon further enquiry of Mr. Bennett, we learn that the Framingham is a seedling of the Isabella, as its appearance would indicate, and which it so much resembles in size of bunch, berry, color, flavor, &c. ; its distinctive merit and great value being its earliness, ripening from three to four weeks before the Isabella, or in the first and second week of September. Last year it was the earliest grape in Mr. Bennett's collection, ripening a week before the Delaware, though both were growing side by side on the same trellis. The vine is a strong and vigorous grower, with a thick foliage, which defies the mildew, and for productiveness will rank with the Concord.

So far as we are able to judge, from Mr. Bennett's specimens, we consider this variety a decided addition to our hardy grapes, and one which will supply the place of the Isabella with those who think so highly of that old but too uncertain grape in our New England climate.

---

### FORCING PRINCIPALLY BY SUN-HEAT.

BY JAMES WEED, MUSCATINE, IOWA.

IN conversation with a gentleman from the east, on the subject of protecting trees, he remarked that his father, a citizen of Worcester, Mass., had repeatedly ripened peaches in the winter—cost him \$10 apiece—beautiful, fine specimens to look it, but in quality not as good as an apple;—ten thousand dollars for a greenhouse was an item. His father had concluded he could not grow peaches.

To produce the choice fruits with certainty and cheaply, has always been regarded an object worthy of the best minds in horticulture, and engaged the highest genius and skill of practical gardeners.

Geologists inform us that the earth is a molten mass of matter, pervaded by the most intense heat, except near the surface, which has, in time, become a hardened crust by the

natural process of cooling. The rate of increase of temperature descending from the surface, indicates that its solidity only extends a distance of a few miles interior; and that the constant radiation of heat from the earth is mainly supplied by its internal fires.

When our North Pole, in friendly attitude, inclines in summer to receive the sun's rays, they operate in conjunction with this original and never-failing source of bottom-heat, and so increase the temperature of the earth's surface and and its superincumbent atmosphere, that the whole vegetable world is forced into vital action, again to rest when it presents the "cold shoulder," and blows its icy breath over our cherished gardens and fields, until we measure frost in the soil, of formidable thickness. But the Ice King has his limits, and below the frost it is warm, then warmer, as we descend.

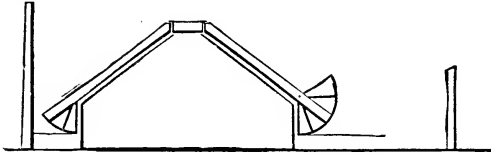
Advantage has been sought to be obtained in forcing, by sinking pits below ground, and by placing lean-to houses against bank walls, not so much to avail of subterranean heat, as to exclude frosts; and the question arises whether this subterranean heat may not be appropriated to positive results, and applied economically to the purposes of winter forcing of fruits and vegetables.

The following illustrations are designed to show the application of substantial and efficient shutters to forcing-pits, or other glazed structures:—

The house may be supposed to be fourteen feet wide, eight high, with rafters eight feet long. The shutters, ten feet high and eight or ten inches thick, consist of the necessary joists and a double covering of half-inch boards, and should inclose in their construction a perfectly shut air-chamber, and close tightly over the glazed structure, as represented in the first cut (FIG. 3).

The house should extend east and west, and the north shutter, when opened to a perpendicular position, is fastened to substantial posts, and thus forms a back wall eleven feet high, the rocker rails one foot from the ground, which should be mulched with a suitable covering, one to two feet thick. The south shutter is, when open, also attached to posts, and turned over sufficiently to admit the full action of the sun's rays upon the house, as shown in the second cut (FIG. 4).

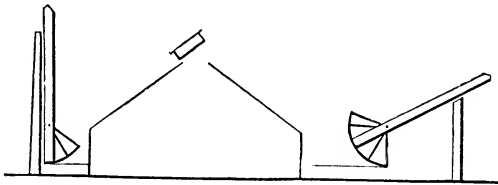
The base of the shutters below the centre of the circle is weighted with sand or other suitable material, until they are balanced on the centres, when they may be opened or closed with the greatest ease and facility. The ends are closed with similar shutters.



3. SECTION OF FORCING PIT WITH SHUTTERS CLOSED.

The objects sought to be obtained by this mode are, so to enclose and protect the house that the temperature may be suffered to decline naturally during the night without endangering the plants, to economise fuel, simplify the management, and to lessen the cost of heating apparatus.

If cisterns or subterranean air-chambers are used in connection with this kind of enclosure, they will increase the volume of air enclosed without otherwise increasing the dimensions of the house, and when the temperature of the



4. SECTION OF FORCING PIT WITH SHUTTERS OPEN.

air in the house approaches  $40^{\circ}$  its density will exceed that of the air below, and will circulate and become warmed by passing through the lower chamber, the temperature of which can hardly be reduced below  $40^{\circ}$ , thus affording security against frost.

Writers on the subject of forcing all agree that the injuries resulting to plants from high night temperature, which is unavoidable in severe climates, subject to extreme vicissitudes and sudden changes, are among the most serious and difficult to obviate. We are advised to "leave on a little air all

night," with so many cautions and counter instructions, which, when put together, amount to *just as little as possible in the very coldest weather*, when the greatest fire-heat is required, and consequently the *most ventilation needed*.

To apply this house to the purpose of forcing the peach economically, put up the frame and shutters, and plant the trees in the border at the base of suitable trellises, and after training the first season, close the shutters over them until the next spring; continue the training and allow a few specimens of fruit; in the fall enclose again for the winter, and the third summer a moderate crop may be realized. Thus we secure a perfect condition in the trees, and raise "peaches without glass." As soon as the trellises are filled, and the trees in condition for a full crop and for forcing, cover the frame with hot-bed sash, and when desirable to start the trees, open the shutters daily to the sun and close up securely at night. A common stove and pipe, or simple flues, will be necessary in cold, cloudy weather, and in extremely cold nights; but there are many warm days in winter when the sun would afford all the heat wanted.

The following directions from the Gardeners' Chronicle, for the management of peach trees in pots, indicate that the peach requires much less heat in forcing than the grape:—

"The trees started in December should be commenced with a temperature of about 40° by night and 45° by day. After the first fortnight the temperature should rise to 45° by night and 50° by day, with an increase of about 10° with sun heat. At the end of another fortnight the temperature should rise to about 50° by night and 55° by day. The night temperature should not exceed this until after the fruit is set. This is the rock on which so many beginners suffer shipwreck. They forget that the peach must be flowered under a comparatively low degree of temperature; they are frightened to give air, especially if the weather be cold and frosty; they keep a close warm atmosphere, and the results are, the petals all drop off without any fruit setting. Whilst peach trees are in blossom, air must be admitted abundantly by day, and a little also at night; precautions must of course be taken in severe weather to place some material over the



openings to break the cold draughts of air. So long as the temperature is kept above  $35^{\circ}$  the blossoms are safe, but only keep a close atmosphere and a high temperature and there is a certain end to the crop. This is a point which cannot be too much insisted on, as everything as regards the crop depends on it. By admitting plenty of air, and keeping a night temperature of about from  $45^{\circ}$  to  $50^{\circ}$ , if the wood was, previous to forcing, well ripened, a much greater quantity of fruit will set than is ever needed to remain for a crop. When the fruit is all set, and about the size of large peas, the temperature should be raised to from about  $55^{\circ}$  to  $60^{\circ}$  by night and  $65^{\circ}$  by day, with an increase by sun-heat of  $10^{\circ}$ . Air should be freely admitted. The night temperature should not exceed  $60^{\circ}$  until the 'stoning' is over, for this is a very critical period in peach forcing. After this the temperature should be raised to  $65^{\circ}$  by night and  $70^{\circ}$  by day. Peach trees will stand a high temperature after this. When the fruit is approaching maturity, which, when the trees are started in December, and the foregoing treatment attended to, will be about the beginning of June, it should have all the exposure to light and air possible. Trees thus treated will be in the best possible condition for forcing the next season. The above mode of treatment will apply to the trees started at any subsequent period; and to have a succession of fruit, a fresh batch should be started every three or four weeks."

If trees are started the last of January instead of December in this climate, the average temperature from sun-heat will increase after the first month, in something like the proportion required.

When, under the system of pot-culture in orchard houses, in this country, it is recommended to remove the trees to the open grounds, we remove the sash from the house, and use the shutters if occasion requires.

The advantages of planting directly in the border, are aimed to be contrasted with pot-culture, in the following quotation from the above authority in 1862. :—

"GLASS HOUSES FOR FRUITS.—I am sure that all gardeners must bear testimony to the great stimulus which 'T. R.'

has given this particular branch of horticulture, and to the indomitable perseverance with which he has continued to fight for a number of years for his 'Orchard-houses,' and for his peaches and nectarines 'in pots.' 'A look into their roots,' he says, 'is like a look into the book of Nature, most valuable to a reflective mind.' I accept the cultivation of fruit trees in pots exactly in this sense. But as a matter of £. s. d. and of supply, I must leave my potted pets to keep company with my geraniums and orange trees, where as objects of beauty they shall have my attention still. That fruits of all kinds can be grown in pots there can be no doubt; but where a constant and substantial supply is required for table or for market, of the finest quality and in the greatest quantity, then there is no question that you must decidedly plant out. If my opinion is worth anything I recommend glass houses of the lightest possible construction, and trees planted out for supply. In this way there will be no disappointment, and if you wish to grow in pots let it be understood that it is for the pleasure which such a fancy conveys, not for profit."

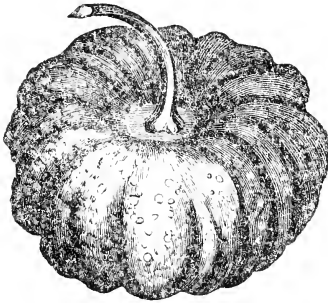
---

#### THE YOKOHAMA SQUASH.

It will be recollected that Mr. Thomas Hogg of New York visited Japan two years ago on a botanical tour, and since his arrival there he has sent home a variety of seeds to his brother; among them were seeds of a squash. These were planted by Mr. James Hogg, and very carefully cultivated away from all other varieties. The vines made a strong and vigorous growth, running rapidly, and rooting at the joints. They blossomed abundantly, and ripened a large crop of squashes, which proved to be entirely unlike anything we possessed, and so strongly marked as to leave no doubt of its being a new variety. Its appearance is represented in the annexed engraving (FIG. 5) and Mr. Hogg sums up its general characteristics as follows:—

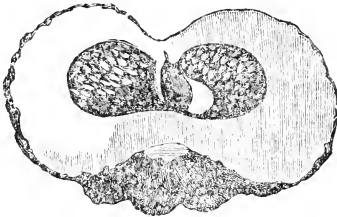
Size, medium, about eight inches in diameter, and four inches deep, weighing from six to eight pounds; Stem, very

long, woody, and angled like that of the pumpkin; Surface, strongly ribbed; Skin, warty, and of a dark green color,



5. THE YOKOHAMA SQUASH.

which often turns more or less to a dull orange; Cavity for the seeds, small, and placed near the blossom end (FIG. 6); Seeds, very small, about the size of the Summer Crookneck squash; Flesh, very fine grained, sweet, sufficiently dry, and well flavored. Keeps well.



6. THE INSIDE OF THE YOKOHAMA SQUASH.

Such is the general description of this new variety. Those who have tried it pronounce it of superior quality. Its fine growth, early maturity and productiveness, give it a claim to our attention, and it seems likely to become a favorite and profitable variety.

Mr. Jas. Hogg states that the Yokohama keeps until February, and he has little doubt it will keep till March. It becomes quite dry by keeping, nearly as much so as the Hub-

bard. It is excellent for cooking when not larger than an ordinary Bush squash, thus affording a continual supply from July to March.

Mr. Hogg calls it the Yokohama, the place where his brother resides, and from whence he forwarded the seeds.

---

## R O S E S .

FROM THE GARDENERS' CHRONICLE.

WE present our readers with another excellent communication by the eminent rose grower, the Rev. Mr. Radclyffe, upon the cultivation of this beautiful flower. He is not only a practical rosarian, and an enthusiastic lover of the flower, but a thorough and successful cultivator, and frequent and successful exhibitor, carrying off many of the highest prizes. His experience is extensive and his judgment reliable, and those who follow his good advice cannot fail of success, bearing always in mind the difference of climate, by which we are prevented from planting some of the kinds he names, in the open ground, except in summer, as our winters are too severe for many of the Bourbons, Noisettes, and Teas.—ED.

The rose cause in England is as yet but in its infancy; still it spreads. The furor is national. The Rev. S. R. Hole, to whom we owe so much for bringing the rose more prominently before the public, has lighted a candle that I believe will never be extinguished. I propose now to answer a few questions that are sometimes put to me.

1. "Would you advise me to have roses on their own roots?"

I can hardly answer such a question as this without knowing other circumstances. I would advise no one to depend entirely upon roses on their own roots. To succeed well they require great care, till the roots are firm and strong. Rose-wood roots, when matured, are very hardy. Tea roses for out-of-door purposes, when nursed for a year or two, do well on their own roots. *Elise Sauvage*, *Devoniensis*, *Silene*,

Souvenir d'un Ami, Gloire de Dijon, are quite hardy on their own roots. As regards other autumnals, except Malmaison—the finest and best of all light-colored autumnals—I do not think that roses on their own roots bloom so abundantly, so continuously, or so late, as on alien stocks. There is, however, this advantage in having roses on their own roots, viz., that if the wood of a previous year is bad, or if it is killed by the winter, you may cut it down to the stump; and if it is injured there, it will still break from the roots. My advice is, have some roses on their own roots, and also other stocks. Here, no stock is so early, so bloom-producing, so continuous in producing blooms, or so late a producer, as the Manetti stock. As an old Harrow cricketer I call it the “tip and run” stock. The following autumnals here are (besides being on other stock) on their own roots, and do well:—Malmaison, Gloire de Vitry, Jules Margottin, Geant des Batailles, General Jacqueminot, M. Laffay, Caroline de Sansal, Pauline Lansezeur, Cardinal Patrizzi, Proserpine, Paul Joseph, La Reine, Madame Campbell, Auguste Mie, and Baronne Prevost. The five Teas and those are all that I have on their own roots.

2. “What roses won't die, or at any rate will die least?”

This has been partly answered. Confirmed rose roots will last longest; but, if these questions relate to families, then I answer that the summer roses are the hardiest of all roses. About seven years ago I procured some of Mr. Cranston, on two-feet briars. They are nearly all alive, and they are better trees than when they came here. Half of them are in my home garden, and were removed this time last year; the other half (the same kinds) are in my N. E. garden, and have just been removed for the first time (Nov. 25). I was surprised at their splendid roots—so much better do briars root with summer roses on them than with autumnals; moreover their heads are splendid, and their wood is uninjured by summer demolitions, from which other kinds have suffered more or less. They do equally well on Manetti. From their freedom of growth, and sucking so freely at their heads, the stocks and roots are kept more healthy. Roses, however, as I have said before, will, on their own roots, and on all

stocks, occasionally die. The most scientific gardener himself has not an immunity from decay and death. How unreasonable then is it to expect that roses should never decay and die! Even if they were budded on "Lignum vitæ," they would be subject to death and to

"Time's tyrannic sway."

The great wonder to me is, considering what the weather has been for the last four years, that roses, on own roots and on all stocks, have not been exterminated. The demolition in England and in France this summer has been very great. I watered all mine four times copiously during the torrid weather before the rain came, and I saved all but a very few. They gave an excellent bloom, and they are in excellent condition for next year. Owing to the mischief done to the foliage there is, however, amongst them more dead wood (this year's wood) than I ever saw before. Still there is plenty of matured wood, old and young.

I would here ask those who have lost many roses this summer, two questions—first, Did you after the continuous rains of winter fork the ground deeply in the spring with Parkes's fork to make the ground healthy? Secondly, after the torrid weather set in, did you water the roses copiously? If you did not do these two things, they are the main reasons why you have lost your roses, and why I have saved mine. I dare say you divided the blame between Providence and the nurserymen! I hope nurserymen do not listen.

3. "Is it best to move roses?"

This depends on circumstances. My rule is to let well alone. If a rose looks ill, or continues to do badly, I remove it. Roses may be removed annually, or biennially, into fresh ground, if it is done carefully. All depends on the *modus operandi*. The remover should dig all round the plant in a 10-inch radius, and cut off all the roots before he lifts with the spade under the plants. I have seen some dig the spade down under the plant and force it up. Of course some of the best roots are broken off close to the stock. By the above plan I have just moved 200 briar roses without the least damage to the roots. After the plant is up, cut out all brood suckers, and shorten the roots to a 6 or 8-inch radius,

preserving the fringy roots as much as you can. If it is not desired to remove the plant, to stop blind wood, the roots may be pruned with good effect. Trees given to blind wood should be thinned out, but allowed to carry a liberal quantity of wood.

4. "My roses are covered with sedge; what would you do?"

Many of mine are much in the same state. I have ordered two bushels of quicklime, which I shall slake and mix with soot; and, having made it into a wash, I shall apply it with a brush. This compost is excellent for apple trees. Add a little salt, and it is good for American blight. This moss or sedge is owing to excessive moisture, and also to injury done to the foliage; and, as it grows into the rind of the tree it impedes its healthy functions. It is equivalent to scurf in the skin. Clean rind and clean foliage are essential to the health of the stock, and of the rose on it. A hardy rose often dies because the stock, or its roots die.

5. "What are the best tallies?"

I use none myself. They are apt to be lost, or the name becomes defaced. I plant my roses chiefly in straight lines, and always write their names in a book. The chief object of tallies is to enable the rosarian to know how to prune them, as the habits of roses, even in the same family, are often dissimilar, some requiring merely thinning out and a more liberal quantity of wood than others.

6. "What is the best time to prune?"

Taking the average of seven years as regards summer roses and autumnals (excepting Teas and Chinas, which should be pruned later), the 15th of March would be the best time. The two exceptions require but little pruning.

On these and many other points, the excellent books of Mr. Rivers, Mr. W. Paul, and Mr. Cranston, give sound advice—indeed, one or other, or all, should be in the library of all rosarians.

I believe that I have now answered, as well as I can, questions frequently proposed to me. The questions may seem trifling, but they are by no means immaterial.

## FLORICULTURAL NOTICES.

NEW PLANTS OF 1863.—Although we have from time to time noticed most of the new plants of last year, we present the following from the *Gardeners' Chronicle*, as giving a brief summary of the principal introductions of especial interest to cultivators:—

To begin with the hardy series, we may observe that amongst shrubby plants there have been some grand additions made to those of climbing habit, in the Japanese *Clematis Fortunei*, with large double sweet scented white flowers; *C. florida Standishii*, from the same country, with large single purple flowers; and *C. Jackmanii*, an English hybrid, with flowers of the richest velvety violet purple—all of them decidedly front-rank plants. *Deutzia erenata flore pleno*, whose flowers are double and tinged with rose, and *Weigelia rosea alba*, with pure white flowers, both Japanese, are useful and ornamental dwarf shrubs, whose peculiarities are expressed in their names; they will doubtless make good forcing plants. There has further been made known a very handsome variegated evergreen called *Taxus hibernica fastigiata*, which has golden yellow leaves with green midribs, and is one of the most ornamental of the upright yews.

Of hardy herbaceous perennials, the past year has made us acquainted with the following as garden plants: *Lychnis senno*, which has red-stained leaves and stems, and very large deep crimson flowers; *Tricyrtis hirta*, with elegant ovate amplexical leaves, from whose axils emerge the singular white purple spotted handsome flowers; *Primula cortusoides amœna*, which has flowers of the richest crimson, twice as large as in the common form; *Sedum Sieboldii medio variegatus*, which adds to the well known beauty of its prototype the additional feature of ornament presented by its centrally-blotched foliage—all these being Japanese. *Silene Elizabethæ*, an Italian species, forms a beautiful dwarf tuft, with large rich magenta-colored flowers. To these must be added the Chilian *Ourisia Pearcei*, a *Linariad*, with broad crenated leaves, and beautiful *Pentstemon*-like crimson flowers, which quite eclipses the *Ourisia coccinea* introduced last year; and *Anemone japonica*



Honorine Jobert, a dwarf-habited free-flowering autumnal plant, with large white blossoms. Annuals have not yielded much novelty, at least in the shape of distinct species; but one, *Helipterum Sandfordii*, a golden Everlasting, seems to possess an ornamental character, and is likely to become popular.

Passing to plants of half-hardy character, we may especially mention *Lycioplesium pubiflorum*, a shrubby Chilian Solanad, with rather pretty reddish-purple flowers, having somewhat the aspect of those of *Lycium*, but with ventricose flower-tubes, and probably hardy as a wall plant; and *Valdivia Gayana*, a pretty saxifragaceous perennial, quite different in aspect from anything in cultivation, and producing abundant rose-colored flowers. This last will perhaps be found a useful half-hardy subject for greenhouse decoration in spring.

Amongst greenhouse plants perhaps the most distinct and ornamental amongst those of herbaceous habit, is the Peruvian *Bomarea multiflora*, a climbing species, with drooping umbels of orange-red and yellow flowers. *Erica exquisita* decidedly takes the first place amongst shrubby plants, being probably one of the finest heaths ever raised, a seedling, it is said, between *obbata* and some form of *tricolor*, and remarkable for its thick-tubed salmony-red flowers, with dark constricted throat and blush-white limb. Other plants deserving of prominent mention, are the very curious bipinnate Marattia-like Cycad, named *Bowenia spectabilis*; a very free-flowering variety of *Browallia Jamesoni*, called *multiflora*, with changeable orange yellow, and deep orange-colored flowers; *Eranthemum tuberculatum*, a dwarf neat-leaved New Caledonian bush, bearing a profusion of white flowers; a rhododendron, called *Prince of Wales*, raised between *javanicum* and *retusum*, and associating narrow-tubed orange-red blossoms with broadish elliptic foliage; a blue and white statice called *Frostii*, bred between *Holfordii* and *imbricata*, and of ornamental character; and a Japanese *Saxifraga*, having the leaves handsomely variegated with white and pink, and called in gardens, pending its flowering, *S. japonica tricolor*.

Stove plants have been extensively recruited, but we confine our present observations to *Meyenia Vogeliana* and *Stau-*

*ranthera grandifolia*, amongst the ornamental-flowered series; the first being an erect-habited shrubby Acanthad, with large purple flowers, orange in the throat; and the second a lovely herbaceous *Cyrtandrad*, with panicles of short wide-tubed lilac flowers, stained with deep orange at the base. Of the handsome-leaved series, *Miconia pulverulenta*, though not equal to either *Sphærogyne latifolia* or *Cyanophyllum magnificum*, has a beauty of its own, its broad rugose silvery-ribbed leaves being very effective as borne on young fresh-grown plants. *Pandanus elegantissimus* again, is a plant always presenting a graceful aspect, and it does not appear as if it would attain the cumbrous size of some other species of the Screw Pine family. Lastly, we may mention *Gymnostachyum Verschaffeltii*, a low-growing perennial, with the habit of *Eranthemum leuconeurum*, and cultivated in English gardens under the name of *Eranthemum rubronervium*, which is remarkable for the elegant pinkish-red veining of its broad flat oval leaves.

Amongst the novelties of what are commonly called Florists' Flowers—a term which has not now the definite limits it had in bygone times—there have been some acquisitions, a few of which may be briefly mentioned. Of Indian azaleas, the most novel have been Louise von Baden, a bold-flowered and remarkably pure, smooth-looking white; and Beauty of Dorking, also a white and very smooth, but stained with green and flecked with carmine. Of Camellias we have had Filipo Parlatore, a smooth blush-white with rosy-carmine stripes; Jubilee rosea, a flat but showy imbricated sport of Jubilee, with rosy-pink flowers; Napoleon III., a cupped flower of veined pink, paler at the edge; and Carlotta Papudoff, a white-blotched carmine-rose—all desirable flowers. Among bedding *Calceolarias*, Bijou, a rich velvety brown-red, proves to be an acquisition. *Chrysanthemums* have received meritorious accessions in such flowers as Princess of Wales, ivory-white with delicate peach-colored margin; Prince Alfred, rosy-purple; Lady Slade, pale rosy-lilac; General Bainbrigge, amber-colored; Venus, pearly-lilac—all large-flowered incurved sorts; Mrs. Edward Miles, clear pale-yellow; and Lord Clyde, deep crimson, both of the ranunculus form, and of medium size;

and Lizzie Holmes, a very perfect yellow Pompon, with reddish-tinted margin. Cinerarias have nearly run their length as named flowers; the only ones, out of many shown, which may claim a record here were John Spencer, a deep crimson, and Snowflake, a pure white, with blue disk, both selfs, and likely to be useful for decoration.

Dahlias were largely shown, but they want novelty. In this view perhaps Enchantress stood as high as any, having good properties, and being of a pale apricot tipped with rosy carmine; a very showy flower, deeper in color, but not equal to this in quality, was Brunette. Anna Keynes, a blush white tipped with lilac; White Perfection, a pure ivory white; Fairy Queen, a creamy-blush flushed with rose; Willie Austen and Nonsuch, both amber colored; and Magpie, rosy purple tipped with white, were also amongst the most noticeable; and Erebus is deserving of mention on account of its intensely dark maroon color. The carmine-crimson *Dianthus multiflorus hybridus*, one of the best of bedding plants, and nearly always in flower, has been recruited by varieties of exactly similar habit—*striatiflorus*, with pale pink flowers flecked with crimson; and Marie Pare with the flowers pure white. Gladioli have not shown any remarkable progress this season, but Charles Davis and Mrs. Dix, the first a light rosy scarlet, and the latter white with purple stripe, may be mentioned as pleasing novelties. Among hollyhocks one named R. B Ullet, a large crimson, occupies a front rank; so also does Neatness, deep crimson; The Queen, blush-white with darker base; Mrs. M. Binning, dark rose; Alexander Shearer, rich deep red; and Acme, peach color. Pansies, of which a good many have been raised, we pass over, with the remark, that among the fancy sorts Her Majesty, Prince of Wales, Princess of Wales, King of Italy, Hibernia, and Thomas Moore, are amongst the most novel and desirable.

Pelargoniums have not taken the position they did in 1862, but nevertheless some good things have been added. Diadem stands highest in our estimation, a rosy purple with dark top petals, and of exquisite form; Artist, a variety similar in character, but more rosy and less purple; as well as Achilles, a crimson clouded with maroon, are both fine flowers; while

Prince of Wales and Princess of Wales, both high-colored crimsons with maroon markings, differing a little in the disposition of the colors; and Maid of Honor, with a pale purplish-lilac tone, come among the desirable flowers of the year. Many varieties of the Scarlet pelargonium class have been produced, but from the very profusion of sorts one becomes rather fastidious in the selection of novelties. Adonis, however, a scarlet with white eye, is good; Dr. Lindley is one of the finest of all for form, a light red-scarlet; Beauty, a white with salmon eye, is well described by its name, both form and marking being beautiful; Princess of Wales is a good salmon-colored sort, deeper in the centre, and a very free bloomer: Lord of the Isles is a fine bold rosy-scarlet; Roi d'Italie is a dwarfish dark-zoned, finely-formed, salmon-tinted scarlet; and Waltham Pet, for its small foliage, dwarf habit, and finely-formed orange-scarlet white-eyed flowers, deserves to be a favorite. The variegated Mrs. Benyon is a free dwarf vigorous novelty, in the style of Mrs. Pollock as to its foliage, but flowering very abundantly, the flowers scarlet. Stella variegated, a sport from the well-known and deservedly prized nosegay of that name, is an acquisition, having the same character as the original in all but the foliage, which has a creamy margin. Of single-flowered petunias, Royalty and Duchess of Northumberland, both magenta and white-striped sorts, are to be recommended for their fine form. Amongst picotees, Lucy, a light-edged rose, and Exhibition, a heavy-edged red, are useful; and pinks have been recruited by a very fine one named in memory of a true florist, the late Rev. G. Jeans. The new race of Pyrethrums continues to be recruited by novelties gradually advancing towards perfection in form. Some of the best of these are Princess Alexandra, white; Lysias, crimson; Roseum album, rose with white centres; Fair Rosamond, pale peach; and Delicatum, lilac. Of roses, so much has been said, that we content ourselves with the remark, that Mrs. William Paul has proved one of the best; and that Lord Herbert and Lord Clyde, both English seedlings, have taken a high position. To out-door tropæolums has been added King of Tom Thumbs, a variety raised from Brilliant, which it resembles in its dark foliage and scar-

let flowers, both rather diminished, but in its habit is quite different, being close and tufted. Very little advance has been made in verbenas; Mauve Queen has mauve-colored flowers of fair quality; Comte Bernard Lechi has white flowers striped with purple; and Othello is a good mulberry-purple bedder. A large single yellow wallflower called Yellow Perfection, very sweet and fine, has been obtained by careful seeding and selection through several generations.

With this fragrant flower we close our brief sketch of some of the more important and desirable of the novelties of 1863.

729. *BOWENIA SPECTABILIS* Hook. AUSTRALIAN BOWENIA.  
(Cycadææ.) Australia.

A cycadeous plant; growing three feet high. Bot. Mag., 1863, pl. 5398.

A remarkable plant, differing from all other cycads in the nature of its leaves, which have some analogy to that of the ferns. It was discovered by A. Cunningham, forty years ago, but nothing was known of it till introduced into the Royal Gardens at Kew in 1863. (*Bot. Mag.*, Sept.)

730. *SILENE ELIZABETHÆ* Walp. ELIZABETHAN CATCH-FLY.  
(Carophyllææ.) Italy.

A half hardy perennial; growing six inches high; with very purple flowers; appearing in summer; increased by seeds and cuttings; grown in good rich soil. Bot. Mag., 1853, pl. 5400.

A very handsome and rare hardy (?) perennial, received from the Botanic Garden of Hamburg. It is a native of Italy. It forms a dwarf tufted plant, about six inches high, and throws up stems with terminal panicles of numerous large flowers, of a bright rose color, which have a charming effect. At Kew it blossomed in the open border in July. (*Bot. Mag.*, Sept.)

731. *HOMOIANTHUS VISCOSUS* De Cand. VISCID HOMOIAN-  
THUS. (Compositææ.) Chili.

A greenhouse plant; growing a foot high; with blue flowers; appearing in summer; increased by cuttings and seeds. Bot. Mag., 1863, pl. 5401.

From its size and habit (not unlike that of our favorite species of *Tagetes*) and the color of the flowers, it is quite likely to become a good bedding-out plant for summer flower borders. In June the flowers begin to appear in perfection. Coming from Chili it will undoubtedly succeed with the same treat-

ment as the salvia, and, as the flowers are large and bright blue, it will prove a desirable acquisition. (*Bot. Mag.*, Sept.)

732. SPHÆRALCEA ACERIFOLIA *Torrey and Gray*. MAPLE-LEAVED SPHÆRALCEA. (Malvaceæ.) Northwest America.

A hardy or half hardy plant; growing two feet high; with pale rose or pink flowers; appearing in June; increased by seeds. *Bot. Mag.*, 1853, pl. 5404.

A fine malvaceous plant discovered by Nuttall on the banks of the Walla Wallah, and since found in British Columbia, and seeds sent to Kew which grew, and the plants flowered in the Royal Gardens in June, 1863. The plant has a maple-like foliage and erect spikes of moderately large flowers, rather thickly set, like the hollyhock, of a clear deep rose color. As it comes from so far north it may probably prove hardy. (*Bot. Mag.*, Oct.)

733. ERANTHEMUM TUBERCULATUM *Hook fil.* TUBERCULATED ERANTHEMUM. (Acanthaceæ.)

A greenhouse shrub; growing two feet high; with white flowers; appearing in summer; increased by seeds and cuttings. *Bot. Mag.*, 1863, pl. 5405.

A very handsome and free flowering shrub, of upright and bushy growth, all the smaller shoots covered with pure white flowers which almost cover the foliage from their number. The flowers have a long and slender tube but are an inch or more across on the limb. As it flowers freely in summer, we have no doubt it will form a beautiful addition to our collections, requiring simply protection in winter. (*Bot. Mag.*, Oct.)

734. HIBISCUS HUEGELII, VAR. QUINQUEVULNERA. BARON HUEGEL'S HIBISCUS, QUINQUEVULNEROUS VAR. (Malvaceæ.) Australia.

A greenhouse plant; growing two feet high; with deep rose colored flowers; appearing in summer; increased by cuttings; grown in good rich soil. *Bot. Mag.*, 1863, pl. 5406.

A beautiful hibiscus from Australia, which Dr. Hooker considers only a variety of *H. Huegelii*, or *H. Wrayæ*. It has a neat and pretty divided foliage, and the flowers, which are of a deep rose, have a rich dark maroon purple spot at the base of each petal. It a handsome and desirable variety. (*Bot. Mag.*, Oct.)

735. HELENIUM ATROPURPUREUM VAR. GRANDICEPHALUM.  
LARGE CENTRED HELENIUM. (Asteraceæ.) Texas.

A half hardy perennial; with orange and purplish flowers; appearing in summer; increased by seeds and division of the root. *Ill. Hort.*, 1863, pl. 375.

A showy and handsome variety of the *H. atropurpureum*, raised from seeds by M. Portula, and introduced by M. Verschaffelt of Gand. It is quite hardy in Belgium, but will probably require the protection of a frame in our climate. Its large showy flowers are produced in clusters on terminal shoots. (*Ill. Hort.*, Sept.)

736. CAMELLIA DUCHESSE DE NASSAU. Garden Hybrid.

Illustration Horticole, 1863, pl. 376.

A very handsome variety obtained by M. Verschaffelt and dedicated to the Duchesse of Nassau. It belongs to the class now called PERFECTIONS by the Belgians. The flowers are large and well formed, imbricated to the centre, with large outer petals of a delicate very pale rose, and the inner petals more numerous, and those in the centre slightly shaded with white. The habit is good, the foliage ample, and the flowers free and abundant. (*Ill. Hort.*, Sept.)

737. BRAHEA DULCIS *Knuth*. SWEET-FRUITED BRAHEA.  
(Phœniciaceæ.) Mazatlan.

Illustration Horticole, 1863, pl. 379.

This is a new and fine palm, from the mountains of Mazatlan, found at an elevation of 3000 to 4000 feet. It is consequently well adapted to the ordinary greenhouse, or for garden decoration in summer, attaining the height of five or six feet, with a beautiful deeply-cut foliage. As most of the palms require a high temperature in winter, this will be an acceptable addition to our collections. (*Ill. Hort.*, Oct.)

738. PÆONIA MOUTAN. NEW VARIETIES.

1. MAD. STUART LOW.      2. PRESIDENT LAMBINON.

Illustration Horticole, 1863, pl. 377.

These are two new and splendid tree pæonies, originated by M. Jacob Makoy & Co. of Liege, who have given great attention to the improvement of this noble flower. Madame Stuart Low is a bright cherry color, shading off to nearly

white at the border, with irregular petals, which are lobed and cut at the ends. President Lambinon is of a beautiful crimson lilac, marked with white at the borders, with regular petals, with entire and undulated edges. The color is distinct and unique, and it is a most beautiful variety. The flowers of both are of the largest size, about ten inches in diameter. (*Ill. Hort.*, Oct.)

739. *HECHTIA GHIESBREGHTII* *Nob.* GHIESBREGHT'S *HECHTIA*.  
(*Dasyliariacæ.*) Mexico.

A greenhouse plant; growing two feet high; with crimson and green leaves. *Ill. Hort.*, 1863, pl. 378.

A distinct and splendid plant belonging to the *Agave* tribe, with broad toothed fleshy leaves, silvery beneath, and brownish purple and green above. A more novel and striking plant has not been recently introduced. It was found in Mexico, by M. Ghiesbreght, and two living plants sent to M. Verschaffelt in 1862. It is as easily cultivated as the common *Agave americana*, and for decorating the greenhouse in winter, or the lawn or flower garden in summer, is a magnificent acquisition. (*Ill. Hort.*, Oct.)

## General Notices.

**RHODODENDRON SOILS.**—Some cultivators inquire for the best soil for rhododendrons, and the following answers, by several cultivators, are given; they show conclusively, as we have already stated, that peaty soils are not absolutely necessary.

For the benefit of E. S., permit me to state, from practical experience in an extensive tract of forest land, that I find wherever rhododendrons are planted in virgin soil, whether it be clay or loam, black or brown, they invariably luxuriate. To me it seems evident that rhododendrons do not so much require a peat soil, as abounding in vegetable mould, properly so called. If E. S. has not such a soil, he should add to his ordinary garden loam, before planting, as much leaf or other vegetable mould as he can get. After that, I should not hesitate to plant rhododendrons, knowing as I do that time would soon prove that they will not only grow but luxuriate under such circumstances. There can be no question that the rhododendron grows best in peat, but it does also remarkably well in loam. I could point to thousands of magnificent plants growing in peat loam, and in some



instances almost on bare rocks. Where the ground is naturally poor, I would recommend the addition of manure and leaf mould, which will very much assist the plants in their growth. I may add, however, that this neighborhood, and South Wales in general, owing to its moist atmosphere, is well suited to the growth of this beautiful tribe of shrubs; and I may refer hereafter to some of the more extraordinary specimens to be found at Penllagare, the seat of J. D. Llewellyn, Esq., F. H. R. S., and elsewhere in this neighborhood. W. BARRON.—I can affirm that peat soil is not indispensable for these shrubs. I know more than one place in Sienex and Wilts, where they grow luxuriantly, coming up by hundreds of seedlings, in the woods, many miles from any peat. Any light loam with a little sand and leaf mould will grow them well. But there are other circumstances necessary to have rhododendrons in any tolerable perfection, viz.: 1. A loose sandy soil, rather damp, and not too dry in summer. 2. It is absolutely impossible to grow them on a chalk or limestone subsoil, even in an artificially-made bed; as soon as the roots penetrate down to the chalk the plants turn yellow and their health is ruined. It is surprising how small an amount of lime will kill them. Even water from a well on the chalk is injurious. 3. Sea breezes are destructive to them; it is useless to try them in a maritime district—I suspect Bristol too near the salt water. Messrs. Maule's nurseries are no doubt well sheltered from the sea air. Why not grow the arbutus in such places instead? Azaleas and rhododendrons grow well here on loam on a clayey subsoil. As a proof of the way they grow I have measured some rhododendrons this morning, and found them to be 40 feet and upwards in circumference, quite pictures of robust health. If E. S. or his gardener will pay us a visit in June when they are in flower, I will feel a pleasure in showing how well our rhododendrons grow in loam.—(*Gard. Chron.*)

ORCHARD HOUSE.—I have been much interested in the discussions which have from time to time appeared in your publication, respecting orchard houses, but I have not seen that any one has compared the quality of fruit which has been obtained from trees in pots, with that obtained in a similar sized house from trees planted in beds in the ordinary manner. I have endeavored with a small portion of a south wall, during the past eleven or twelve years, to grow fruit without protection; you may judge how I have succeeded when I tell you that my three trees have not during the whole time produced 12 dozen fruit. The trees are in good condition, bloom in abundance every year, but the spring frosts have invariably killed nearly all the fruit. In the spring of 1861, I erected a small orchard house, about 30 feet long by 10 wide, in which I placed 24 trees in pots; these in that year produced about five dozen good fruit. In 1862 the trees were repotted into 13-inch pots, the former being only 10 inches; in consequence of late potting I only obtained about seven dozen fine fruit in that year. The fruit produced in 1863 was as follows, viz.: 5 dozen pears, 12 dozen peaches, 11 dozen nectarines, 1 dozen 2 apricots, 9 dozen 7 plums; cherries on two trees an abundant crop. The fruit has all been fine, and of the best flavor.—(*Gard. Chron.*)

**RAISED BEDS FOR VERBENAS, &c.**—Amongst the flower beds, those which most attracted attention were raised by rustic larch stakes driven into the ground, so as to leave about 15 inches above the surface, the inside being filled with prepared compost, and planted with a mixture of fuchsias, humeas, geraniums, verbenas, heliotropes, &c., many of which, such as fancy geraniums, were in bloom when planted out, the whole being so arranged as to give, if I may so say, a regular irregularity or good bouquet-like aspect.—(*Gard. Chron.*)

**CULTURE OF THE HYACINTH IN MOSS AND SAND.**—Of the very many interesting ways of growing the hyacinth, the following is exceedingly elegant and worthy of special attention:—Fill with silver sand a China bowl, glass dish, vase, or anything of an ornamental character, capable of containing moisture, bring the sand to a point in the centre, and place three or more hyacinths at equal distances, filling up the space between them with crocuses, snow drops, tulips, or jonquils, or a mixture of all. Cover the whole with sand, or push them into it, as may be most convenient, allowing the top of the bulb alone to be seen; then immerse the vessel in a bucket of water for ten minutes, to settle the sand, and fix the bulbs in their position; put them in a dark cool place for three weeks, afterwards keep them on a table near to the window, where they can have plenty of light and air; at no period should the sand be allowed to get dry, which will be prevented by the vessel, once a week at least, being immersed in water five minutes, in the manner previously directed. Hyacinths, &c., when grown in suspended wire baskets, planted in moss, and treated as recommended for those grown in sand, are strikingly ornamental.—(*Ibid.*)

## Societies.

### FRUIT GROWERS OF WESTERN NEW YORK.

The annual meeting of this Society was held at Rochester, N. Y., Jan. 27, when the following officers were elected for 1864:—

President—P. Barry, Rochester.

Vice Presidents—Hugh T. Brooks, Joseph Harris, W. B. Smith.

Secretary—James Vick, Rochester.

Treasurer—W. P. Townsend, Lockport.

Executive Committee—J. J. Thomas, C. W. Seelye, E. Moody, E. A. Bronson, H. N. Langworthy.

The proceedings will be given in our next.

### PITTSBURGH HORTICULTURAL.

At a recent meeting the following officers for 1864 were elected—

President—George R. White.

Vice Presidents—Hon. James P. Sterrett, B. L. Fahnestock, W. S. Bissell.

Corresponding Secretary—Hon. Robert McKnight.  
 Recording Secretary—D. Bacon.  
 Treasurer—Geo. G. Negley.

---

## Obituary.

---

**DEATH OF MR. CHARLES MCINTOSH.**—We regret to have to record the death of Mr. McIntosh, which took place at his residence, Newcome Villa, Murrayfield, near Edinburgh, on the morning of the 9th of January, in his 70th year. Mr. McIntosh had been under medical treatment for some months, and never completely recovered from a surgical operation it was necessary to undergo.

Mr. McIntosh was born in Perthshire in 1794. For many years he was gardener to Sir Thomas Baring, at Stratton Park. Subsequently, his intelligence and energy recommended him to the notice of Prince Leopold, and he was gardener at Claremont for many years. On the accession of Prince Leopold to the Belgian throne, he went to Belgium, and remodelled the Royal Gardens at Lacken. In 1838 he returned to Scotland to take the management of the Duke of Buccleugh's gardens at Dalkeith; and it was he who planned the magnificent grounds and conservatories which form such an attraction to the palace. After a period of nearly 20 years spent as head gardener to the Duke, Mr. McIntosh resigned his appointment, to become landscape gardener and garden architect on his own account, since which time he has been engaged in beautifying the villa residences of many citizens, and the gardens and parks of many of the gentry and nobility of the country, his advice being sought not only in Scotland but in England. Prior to his departure from Dalkeith, Mr. McIntosh was presented by 600 subscribers with a testimonial, consisting of a tea service and purse, the value of which was £325, in token of the eminent services he had rendered to horticultural science.

It was while he was gardener for the Duke of Buccleugh, in 1844, that we had the pleasure of meeting Mr. McIntosh at Dalkeith, and passing a day with him in looking through the grounds. The kindness and hospitality with which we were received are among the pleasant memories of the past. Our visit was one of the most agreeable during our entire tour. Mr. McIntosh was thoroughly acquainted with our country; an admirer of our institutions and government; familiar with our horticultural progress, and read with great interest our gardening journals. He was delighted to learn that horticulture was attracting so much attention, and appreciated the excellence of our new fruits. After a thorough inspection of all the improvements which have been made upon the place, including the formation of a new garden and numerous splendid ranges of glass, we passed an hour or two at his residence, in discussing horticultural and pomological matters in Great Britain and America. On our leaving Dalkeith, Mr. McIntosh

presented us with a splendid pine apple, as a specimen of the crop just maturing.

Mr. McIntosh was a voluminous writer, and his publications upon the several branches of the profession are numerous. The principal ones, and those by which he will be best and most favorably known, are the *Practical Gardener*, *The Greenhouse*, and the *Orchard and Fruit Garden*, and latterly the *Book of the Garden*, in two large volumes, a complete record of modern gardening. He was a frequent contributor to Loudon's Magazine and other gardening periodicals, and corresponding member of various societies, including the Massachusetts Horticultural Society.

The Gardener's Chronicle, from which we gather the above, truly remarks, that "He will be remembered not only as a gardener who during a long life has occupied a prominent position in the horticultural world, and who has in the course of it acquired a varied and extensive fund of information in all departments of horticulture, but also as one who had contributed to the scientific advancement of the profession; and further, as the genial, kindly, unselfish, and warm-hearted friend of a wide circle of professional associates and acquaintances."

---

DEATH OF FRANCIS BOOTT, M. D.—This eminent American botanist died at his residence in London, on Christmas day, the 25th December last, at the age of 72. Mr. Boott was a son of Kirk Boott, and was born in Boston, September 26, 1792, and graduated at Harvard University; at an early age he went to England, where he married and has since resided; making several voyages home in 1820 and 1821, and during these visits collecting Massachusetts plants, of which he had an excellent herbarium, and which were little known then in England. On his final return to England in 1821, he determined to follow the medical profession, and placed himself under the direction of the late Dr. J. Armstrong. Subsequently, and in later years, he carried on a very successful practice in London. But inheriting a competency at a comparatively early age, he devoted himself to literature and botany.

Eminent as a physician, it was, however, in connection with the Linnæan Society that Dr. Boott was best known in London and our own country. He was secretary, and subsequently treasurer of the society, and its present unexampled prosperity is acknowledged to be owing to his moderation and good judgment in harmonizing the opinions of opposing parties.

Dr. Boott was remarkable for great force of character, boundless sympathy for whatever is good and beautiful, and an enthusiastic admiration for all honest cultivators of literature and science. His principal contributions to botanical science were two folio volumes, published at his own expense, intended to contain 600 plates and descriptions of the carices. Of these, however, only 411 appeared, and he was engaged upon the work a few weeks before his death. It is considered one of the most munificent contributions ever made to scientific botany.—(*Gard. Chron.*)

# Horticultural Operations

FOR MARCH.

## FRUIT DEPARTMENT.

WITH the exception of one week, the month of February was mild and favorable, with few cloudy, rainy, or snowy days; in fact there has been less than three inches of snow at any time during the winter. The 17th was the coldest of the winter, with a very high and keen northwest wind, almost a gale; a severe day and night for forcing houses of all kinds.

**GRAPE VINES** will have their fruit nearly or quite ripe and ready for cutting; after this the house should be kept at an even temperature with plenty of air, and as little moisture as will answer to keep the vines in good condition until the fruit is all gathered. Vines in ordinary graperies and greenhouses will now be making young shoots, and will need considerable attention, as the first few weeks is the period when they need care. Gradually increase the temperature, and keep up a genial atmosphere by sprinkling the floors or walks often, and syringing before the flowers expand; dispense with it when in bloom; give air freely in good weather; tie in the laterals as they advance in growth, and nip off all useless shoots not wanted for next year's wood. Cold houses will not require attention till next month.

**STRAWBERRIES** in pots may be brought into the house for a succession of fruit; those already in bearing should have occasional supplies of liquid manure; keep on a warm shelf near the glass.

**ORCHARD HOUSES** will require abundant ventilation this month. Let them remain open night and day in good weather.

**FRUIT TREES** in pots brought into the grapery or greenhouse, will give a succession of fruit throughout the summer.

**SCIONS OF FRUIT** may now be cut and placed away in the cellar, packed in moss or sand or loam.

**PRUNING** may be commenced this month.

**GRAFTING** may be commenced the latter part of the month, beginning with the cherries.

## FLOWER DEPARTMENT.

As the season is now so far advanced that sun heat is sufficient for day temperature, only moderate fires will be required at night. Everything will now begin to push with much vigor, and constant attention will be required to repot and forward specimens and young stock for next year. Look after insects, and use sulphur freely for the red spider, which at this season becomes more troublesome. Maintain a humid atmosphere, and give air freely in all good weather.

**PELARGONIUMS** will begin to push more freely, and will require more attention both in airing and watering. Give air freely and water thoroughly when the plants require it. Tie out the shoots of specimens from time to time, as they extend in growth, and bring the plants into handsome conical shape.

**AZALEAS** will now be in full bloom, unless kept in a very cool house, below the ordinary temperature of the greenhouse. Water freely as they begin to open their buds, and syringe often before they flower. Young stock may be shifted now, and forwarded in a slightly increased temperature. Tie out the shoots of such plants as are intended to make specimens.

**CINERARIAS** will now begin to bloom; late flowering plants may be repotted and brought forward on a cool shelf near the glass. Fumigate often for the green fly, which are very troublesome to these plants.

**CAMELLIAS** will now show signs of making a new growth; as soon as this appears increase the temperature slightly, and syringe morning and evening in fine weather. Shade in the middle of the day from the hot sun.

**FUCHSIAS** should now be encouraged. Give specimens plenty of pot room, and a moist-growing atmosphere, and pinch in young shoots as often as they require it, to make bushy plants.

**GLOXINIAS** AND **ACHIMENES** should now be started for a succession, and forward plants shifted into larger size.

**CHRYSANTHEMUMS** should be propagated this month.

**VERBENAS**, **SALVIAS**, and other bedding plants should be propagated, and early-struck plants potted off.

**FERNS** may be divided and repotted if not already done.

**BEGONIAS** may be repotted, using coarse turfy loam and leaf mould.

**CALADIUMS** may be started into growth, placing them in the warmest part of the house.

**WINTER-FLOWERING PLANTS**, for next year's stock, may be propagated.

**FLOWER SEEDS** of various kinds may be planted in pots or boxes, either in the house or in hot beds.

**AMARYLLISES** should be placed on a warm shelf, and watered as soon as they begin to grow.

**LANTANAS** should be repotted.

**CYCLAMENS** should have a bright airy place when coming into bloom.

**MONTHLY CARNATIONS**, for next year's stock, should now be propagated.

**ERYTHRINAS**, for early flowering, may now be potted and brought forward in the house.

**JAPAN LILIES**, growing vigorously, may now be repotted.

#### VEGETABLE DEPARTMENT.

**HOT-BEDS**, made last month, will soon have their heat partially exhausted, and will require a good lining of fresh manure to maintain a good temperature. Continue to plant all kinds of Vegetables for a succession.

**EGG PLANTS** AND **TOMATOES** should be transplanted from the seed frames into pots.

**CUCUMBERS**, raised in pots, may now be turned out into hills; one hill in the centre of each light.

**CABBAGE**, **CAULIFLOWER**, and other seeds may be planted.

**LETTUCE**, **CELERY**, and other seeds wanted for an early crop, may be forwarded in hot beds.

Cover the beds well on cold nights with mats, or loose hay or straw, and prepare manure or leaves for new beds to succeed such as may have their heat quite exhausted.

## ONE HUNDRED FINE PEARS.

NOTWITHSTANDING all that has been written upon the cultivation of the pear, in books devoted to the subject, in the various periodical works on horticulture, in the recorded transactions of various State and County Societies throughout the country, and in the proceedings of the various sessions of the American Pomological Society, there is yet a decided want of valuable information regarding the best varieties for cultivation in larger or smaller collections of this fine fruit. Many years ago the late A. J. Downing started the question as to the three best pears. Later, several societies published lists of the best six varieties and the best twelve varieties, and the American Pomological Society in addition to its long catalogue of kinds adapted to general cultivation, requested the numerous State societies and local committees to give lists of the best six or twelve kinds for family use, as well as the best 100 sorts for orchard culture.

The information obtained from all these sources has been valuable, and probably as reliable, as far as it goes, as could have been secured in any other way, and has undoubtedly saved much disappointment to those who would ordinarily make an indiscriminate selection from the four or five hundred sorts enumerated in some of the extensive nursery collections, made with a view not only to obtain all the best, but also those of doubtful quality, that their merits might be proved, and the really worthy selected from the mass of unknown kinds. It has not been supposed that many cultivators would add but a portion of this great number to their gardens, even if all were really excellent; because, admitting an equality of goodness, few collections would admit of space for such a large number of trees. The object aimed at has been to ascertain the very best, or the best for especial purposes; and this has perhaps, been well accomplished. Yet, after all,

when we reflect upon the variety of pears now so well known, it seems an absurd notion to attempt to single out six or twelve varieties which can by any fair means be considered the best.

Without therefore questioning the utility of knowing which are the best three or six or twelve varieties of the pear, it may be well to inquire whether all the large number of varieties at present known, exclusive of the well proved and now justly rejected sorts, have been so thoroughly tested that we can safely pronounce upon their merits? We think we may safely say only a limited number, and from that number have been taken the few sorts, on account of their combination of excellences, not quality alone. They are such as have been proved after a series of years, as being best adapted for a particular object, for reliability of a crop and good results from the sale of the fruit. So far we understand them, and they serve a good purpose.

But there are many cultivators who care less about abundance and profit than variety and superiority. A bushel of some pears would be worth less to them than a dozen of others; and those who ask "what six pears would you select could you have only six trees," would be answered quite differently by those who have space for a larger number, than by those whose grounds are limited to so small a lot. The six most profitable pears for market culture might be pretty safely enumerated, or the six largest pears, without regard to quality. But the six best, gives a very large margin; and, as we find, some of our best cultivators range from 6 to 20 varieties in a list of six. In fact, it has been said by some judicious cultivators, that there is but one pear upon which all would agree, and that was the Bartlett; perhaps the Seckel would be the next, but after these two the range is broader, the information more limited, and the task of naming four more becomes more and more difficult. There are full six months when the pear is in perfection, and six varieties would give but one a month; yet we know there are some of the choicest kinds which are in eating less than two weeks, which shows how ill supplied a collection would be with such a limited number.



The question has often been asked of us privately, "what pears would you recommend for an ordinary garden, where profit was not the main object, but simply an abundance of the very choicest varieties for the table?" and we embrace this opportunity to answer it here, that our opinion, passing for what it is worth, may be applicable to a large class of cultivators, who, knowing what are already considered the best six or the best twelve, cannot bring their collections within such a limit, many of the kinds they have seen and tasted and approved of not being mentioned in any of these lists, some of them scarcely known only in the localities where pear growing has been carried to high perfection, and where the newest varieties are constantly added, supplying a variety of forms, sizes, and flavors, which give to the pear, above most other fruits, its high claim to our greatest attention.

We recently noted the remarks of a gentleman who had a fine collection of one hundred and thirty-five varieties of the pear, and was seeking to obtain a still greater number. Judge Hoadley of Cincinnati, an eminent cultivator, who has a collection of over one hundred varieties, in a recent letter, was pleased to commend the article alluded to, (Vol. XXIX, p. 405,) as exactly expressing his views upon the subject, and he embraced the opportunity to state that although his collection was already large, he would esteem it a great favor to have us give him a list of *fifty* additional varieties, equally as good as those he already possessed. We might name other pear growers who have expressed the same opinion, but these sufficiently show that the attempt to limit the number to six or twelve, except when the object is to produce fruit for the market, leaves out a great many varieties, whose general qualities may not commend them for ordinary cultivation under all conditions of treatment, but whose particular excellences are of the highest order.

It is well to know that there are six or twelve varieties of pears that have been very generally approved by successful cultivators. But, if we look over the list carefully, we shall find that most of them are very old pears; more or less known, some of them, for nearly half a century, and yet just now recommended as reliable, after so long a trial. If

we are to follow this rule of waiting the appreciation of societies or the approval of the majority of pear growers, how long will it be before many of our rare and superior sorts will find a place upon these selected lists? Not certainly for many years; and during this long period will our cultivators be content to dispense with the new and superior varieties, because they have not passed the ordeal of pomological societies, or the approval of those who produce fruits for the market, and ever keep in view the item of profit? We think not; on the contrary, the intelligent and enthusiastic pear-grower will not lose the luxury of a delicious variety because it has not been unanimously accepted, but will continue to enrich his garden with every superior fruit, according to the space at command, and the intrinsic merit of every variety.

For instance, the *Beurre Bose* does not find a place in the best six, or even the best twelve, because there are objections to the tree, its habit, tenderness, productiveness, &c. Yet no one would be without it. The *Dix* is another variety rejected often because it is so slow in coming into bearing, and sometimes cracking; yet what good collection could dispense with such a noble sort. The same might be said of many other varieties. The *Doyenne du Comice*, *Sheldon*, *Hovey* (*Dana's*), and many other new pears introduced within the last dozen years, are only known in choice collections; yet to reject them because they are not named in a select list of a dozen sorts, would be to lose some of the best pears ever eaten.

Such being our estimation of the pear, obtained after a thorough trial of nearly one thousand kinds, and for the various purposes of the table, for exhibition, and for the market, so far as our experience goes, we should require a tolerably large number in a collection for ourselves, perhaps larger than a majority of cultivators, and we have prepared the following list for a moderate-size garden, beginning with the earliest varieties and continuing through the season to the very latest. These, for convenience, we have arranged in months as they come to maturity:—

#### AUGUST.

*Doyenne d'Ete*; ripe from the last of July to Aug. 10; should be gathered early and ripened in the house. The best very early pear.

Supreme de Quimper; Aug. 10 to 20; should be gathered a few days before eating; a slow-growing tree.

Manning's Elizabeth; Aug. 10 to 25; should be gathered only a few days before eating; a very handsome pear, grows well on quince.

Bloodgood; Aug. 10 to 25; should be gathered a few days before maturity; tree a slow grower.

Brandywine; Aug. 10 to 25; should be gathered early and ripened in the house; a very superior pear.

Osband's Summer; Aug. 10 to 25; should be ripened in the house; handsome and very good.

Dearborn's Seedling; Aug. 15 to Sept. 1; should be gathered a few days before maturity.

Boston; Aug. 20 to Sept. 5; must all be gathered by the 20th, at least 10 days before maturity; remarkably fine.

Rosticzer; Aug. 20 to Sept. 1; gathered only a few days before eating; a small but high-flavored pear.

Beurre Giffard; Aug. 15 to 25; slender tree; decays soon.

Tyson; Aug. 20 to Sept. 5; should be gathered early and ripened in the house; delicious.

Muskingum; Aug 25 to Sept. 10; should be gathered a few days before eating; a large and good pear.

#### SEPTEMBER.

Hanners; Sept. 1 to 15; gathered early and ripened in the house; a very fine pear.

Cushing; Sept. 1 to 15; gathered and ripened in the house.

Omer Pasha; Sept. 1 to 15; should be gathered early.

Excelsior (Dana's); Sept. 5 to 20; a new and very high-flavored pear.

Clapp's Favorite; Sept. 10 to 20; keeps only a short time.

Adams; Sept. 5 to 25; a large, handsome, and fine pear.

Doyenne Boussoek; Sept. 5 to 25; very large and fine.

Moore's; Sept. 5 to Oct. 20; gathered early, it ripens in succession for more than a month.

Knight's R. I. Seedling; Sept. 5 to 20; should be gathered very early; a large and fine pear.

Rousselet de Meester; Sept. 5 to 20; does not keep long, but a remarkably fine pear; good on the quince.

Dunmore; Sept. 10 to 25; should be gathered early; to those who like an acid pear it is a valuable variety.

Belle Luerative; Sept. 10 to 25; a sweet and delicious pear.

Henkel; Sept. 10 to 25; a large and very fine pear.

Buffum; Sept. 10 to 25; gathered early and well ripened the Buffum is a very juicy and excellent pear.

Bartlett; Sept. 15 to Oct. 1; should not be allowed to be too ripe before gathering.

Andrews; Sept. 10 to 25; a very superior pear.

Beurre Montgeron; Sept. 10 to Oct.; ripens in long succession.

Merriam; Sept. 20 to Oct. 5; unless gathered before the 22d loses much of its excellence.

Cabot; Sept. 10 to 25; gathered a few days before eating; a very fine pear.

Beurre Hardy, known as B. Sterekmans; Sept. 15 to 25; a superb pear but does not keep long.

Edmonds; Sept. 15 to Oct. 1; a new and delicious pear.

Paradise of Autumn; Sept. 15 to Oct.; should be gathered early, or it loses much of its excellence.

Pratt; Sept. 15 to Oct.; very handsome, and keeps well.

St. Ghislain; Sept. 10 to Oct.; ripens in succession.

Washington; Sept. 10 to Oct.; keeps well; a small but fine pear.

Beurre Beaumont; Sept. 10 to Oct.; excellent.

Collins; Sept. 10 to Oct.; tree not very vigorous.

Flemish Beauty; Sept. 15 to Oct.; should be gathered early, and does not keep long.

#### OCTOBER.

Swan's Orange; Oct. 1 to Nov.; should be gathered as early as Sept. 25, and ripened in the house; a large, productive, and superb pear.

Sheldon; Oct. 1 to 25; should not be allowed to hang too long on the tree, as it loses its fine aroma.

Louise Bonne of Jersey; Oct. 1 to 20; too well known to require any remark; though valuable it has a slight astringency.

Beurre Superfin; Oct. 10 to 20; should be gathered in good season, or it will not keep long; too acid for some tastes, but a fine pear.

D'Albret; Oct. 1 to 15; a very superior pear; but the tree wants vigor.

- Gen. Lamoriciere, known also as Belle Julie; Oct. 1 to 15; a very nice, high-flavored and fine pear.
- Seckel; Oct. 5 to 25; too well known to need comment.
- Hull; Oct. 5 to 25; gathered early this is one of the best pears; extremely productive.
- St. Michael Archange; Oct. 5 to 25; a large, showy, and excellent pear; tree a splendid grower.
- Abbott; Oct. 10 to Nov.; Gathered early and well ripened it is one of the most beautiful pears, and of nearly first quality.
- Heathcot; Oct. 10 to 25; few pears equal this, which is in every respect equal to the White Doyenne; tree a slow grower, and moderate bearer.
- De Tongres; Oct. 10 to 25; large, showy, and fine; tree rather tender and delicate in habit.
- Beurre Bose; Oct. 10 to Nov.; keeps well; tree rather tender, of slow growth, and only moderately productive.
- Beurre Kennes; Oct. 10 to 25; a russetty pear, handsome, and of excellent quality.
- Bergen; Oct. 10 to 25; a new pear, of large size, handsome and good.
- Duchess of Orleans; Oct. 10 to 25; handsome and fine; tree a straggling grower.
- Des Nonnes; Oct. 10 to 25; a very high flavored pear, too musky for some.
- Oswego Beurre; Oct. 10 to Nov.; a high-flavored and excellent pear; requires thinning to get fine specimens.
- Fulton; Oct. 15 to Nov.; an old and fine pear, but the tree grows slowly and produces sparingly; though introduced 30 years ago it is not a common pear.
- Kingsessing; Oct. 15 to Nov. 10; a fine growing tree, an excellent pear and keeps well.
- Urbaniste; Oct. 15 to Nov. 10; one of the very best pears; always good.
- Marie Louise; Oct. 15 to Nov. 15; one of the very finest pears; should be well thinned, as the small specimens are often tasteless and poor.

## NOVEMBER.

- Beurre Diel; Nov. 15 to Dec. 15; one of the most noble pears, but requires high cultivation.

- Duchess d'Angouleme; Nov. 15 to Dec. 10; large, showy, and excellent, and keeps well.
- Doyenne du Comice; Nov. 15 to Dec. 10; probably one of the best of pears; high flavored, very sugary and delicious.
- Augustus Dana; Nov. 15 to Dec. 15; a new, superior and highly flavored pear, resembling Winter Nelis.
- Admirable; November 10 to Dec.; another of Mr. Dana's pears; very fine.
- Beurre Clairgeau; Nov. 15 to Dec. 10; not of the highest quality, but large, showy, and excellent.
- Baron de Mello; Nov. 1 to Dec.; a valuable pear; russetty; of the Brown Beurre flavor.
- Beurre d'Anjou; Nov. 15 to Dec. 15; a very fine pear, keeping late into December.
- Nouveau Poiteau; Nov. 1 to Nov. 15; large and showy, but does not color up, remaining green when ripe.
- Howell; Nov. 5 to Dec. 15; a very large, showy, handsome, and excellent variety.
- Bezi de la Motte; Nov. 15 to Dec.; one of the old pears, but much better than many of the new ones of the season.

## DECEMBER.

- Hovey (Dana's); Dec. 15 to Jan. 10; superior to any pear, surpassing the Seckel in its rich honied flavor; growth and habit of the tree superb; very productive.
- Winter Nelis; Dec. 20 to Jan. 20; well known for its excellence.
- Dix; Dec. 10 to Jan.; few pears surpass the Dix, but it requires good culture, and the tree is slow in bearing.
- Lawrence; Dec. 15 to Jan. 15; a well known, productive, and delicious pear.
- McLaughlin; Dec. 10 to Jan.; a russetty pear of excellent quality, and deserves general cultivation.
- Beurre Bachelier; Dec. 10 to Jan.; very large and very good, but not high flavored.
- Fondante du Comice; Dec. 10 to Jan.; not equal to the Doyenne du Comice, but keeps well; juicy and excellent.
- America; Dec. 1 to Jan. 20; large, showy, and excellent.
- Grand Soliel; Dec. 10 to Jan.; a russetty pear, in appearance resembling the Sheldon, not very melting but juicy and rich.

## JANUARY.

- Glout Moreceau; Jan. 1 to March; one of the most valuable winter pears; requires good culture.
- Beurre Langelier; Jan. 1 to Feb.; a very handsome and fine pear, not so rich as G. Moreceau, but juicy, refreshing, and excellent.
- Columbia; Jan. 1 to Feb.; very large, and though not very high flavored or melting, a juicy and good pear; fruit apt to blow off.
- Beurre d'Arenberg; Jan. 1 to March; has been called the "Prince of Pears;" requires good culture and a rich light soil.
- Sieulle; Jan. 1 to Feb.; sometimes cracks, but with good cultivation is a superior pear.
- Belle Epine Dumas; Jan. 1 to Feb.; very handsome and excellent; a great bearer and requires to be thinned.
- Doyenne d'Alencon; Jan. 15 to March; somewhat resembling in quality the Easter Beurre.
- Passe Colmar; Jan. 7 to Feb.; one of the best pears, but the tree requires high cultivation to obtain fine specimens.
- Le Curé; Jan. 1 to March; not of the highest quality, but large, showy, and often excellent.
- Easter Beurre; Jan. 25 to April; the best of all the late pears, but often fails in ordinary culture; in a rich light soil the specimens are very fine.

This may appear to some a long list, but where there is room we should rather increase than diminish it. If, however, the space is limited, and not more than ten or twenty of thirty trees can be planted, a selection may be made which will give a succession of the finest pears for six months. Some cultivators would, perhaps, with abundant space, prefer duplicates of half the number to the whole; but this would leave out many fine pears, and lessen the variety of flavors which, after all, render this fruit so much superior to all others; it would also limit the constant succession, as some of the sorts are in perfection but a few days, and soon give place to others. It is the perishable quality of some of the finest pears that prevents them from becoming popular sorts.

These data of maturity have been made up from a record, carefully kept, of the time that the several sorts have been ready for the market, embracing about the earliest and latest period. It may vary according to the season, but it may be safely set down as the average for the neighborhood of Boston. Farther south, they would ripen from one to four weeks earlier.

If this list shall accomplish the object of supplying the information which has often been asked, we shall feel that the labor of its preparation has been well repaid.

---

### EARLY ENGLISH HOME ARCHITECTURE.

COMPILED FROM SEVERAL SOURCES, CHIEFLY FROM REPTON.

AT the dissolution of the monasteries by Henry VIII., a new style of architecture was adopted in England, and most of the old mansions now remaining in that country were either built or remodelled about the end of that reign, or in that of Queen Elizabeth. Hence it acquired the name of Elizabeth's Gothic; and although in the latter part of the reign, and in the anarchical times that followed, the original purity of its character had been corrupted, by introducing fragments of Grecian architecture in its ornaments, yet the general character of these houses is purely Gothic. It may be truly said of these, that the bold projections, the broad masses, the rich fenestration, and the irregular outline of their roofs, turrets, and tall chimneys, produce a play of light and shadow wonderfully picturesque, and amply compensate, in a painter's eye, for their occasional inaccuracies as specimens of regular architecture.

Among the conveniences observable in Gothic colleges, may be mentioned the uninterrupted communication between the different apartments. This was formerly provided for by cloisters, that each member of the society might at all times, and in all weather, walk under cover from his respective apartment to the hall, the chapel, the library, or to the apartment of any other member. Such cloisters also yielded a dry and airy



walk, when the uncertainty of the English climate would otherwise have prevented that sort of moderate exercise necessary to the sedentary occupations of the learned.

Mr. Repton gave it as his opinion, that there are only two general characters of buildings: the one may be called *perpendicular*, and the other *horizontal*. Under the first, he classed all buildings erected in England before, and during the early part of Queen Elizabeth's reign, whether deemed Saxon, Norman, Saracenic, or Gothic, of the thirteenth and fourteenth centuries. Even that peculiar kind called Queen Elizabeth's Gothic, in which turrets prevailed, though battlements were discarded, and Grecian columns occasionally introduced, belongs to the same category. Under the *horizontal* character he included all edifices built since the introduction of a more regular architecture, whether it copies the remains of Grecian or Roman models. The perpendicular lines generally mark the Gothic character of building, the *horizontal* mark the Grecian style.

He further remarks, that the characters of *Grecian* and *Gothic* architecture are better distinguished by an attention to their general effects, than to the minute parts peculiar to each. It is in architecture as in painting, beauty depends on light and shade, and these are caused by openings or projections in the surface. If these tend to produce horizontal lines, the building must be deemed Grecian, however whimsically the doors and windows may be constructed. If, on the contrary, the shadows give a prevalence of perpendicular lines, the general character of the building is Gothic. This is evident from the large houses built in Queen Elizabeth's reign, where Grecian columns are introduced, we, nevertheless, always consider them Gothic buildings.

In Grecian architecture, we expect large cornices; windows ranged perfectly on the same line, and that line often more strongly marked by an horizontal fascia. There are few breaks of any great depth; and if there be a portico, the shadow made by the columns is very trifling, compared with that broad horizontal shadow proceeding from the soffit; and the only ornament its roof will admit, is either a flat pediment, departing very little from the horizontal tendency, or a dome, still rising from a horizontal base.

One feature that distinguishes the early English style of building is certainly variety; and this was the consequence of that continual straining after novelty that distinguishes a semi-civilized people. "In most countries, (says Kett,) novelty, in every form of extravagance, broad humor and caricature, affords the greatest delight to the populace. This preference is congenial with their love of coarse pleasures, and distinguishes the multitude from the more polite classes of every nation. The inferior orders of society are, therefore, disqualified from deciding upon the merits of the fine arts; and the department of taste is usually confined to persons enlightened by education and conversant with the world, whose views of nature, art, and mankind, are enlarged and elevated by an extensive range of observation."

On this principle we may account for the many incongruous mixtures not only in the early English houses but in the American houses of a still later date, the most of which were designed in accordance with the taste of men of no education or intellectual culture, who rose suddenly from poverty to wealth, by the exercise of trade. In the earliest English mansions, which were but a sort of castles, and were designed for the extensive hospitalities of the English nobility, we cannot fail to observe a certain grandeur, which we should vainly attempt to imitate in a modern house; and the great variety observed in their mode of construction was, in most cases, produced by the continued additions made to the original edifice, for successive generations.

So prevalent was the taste for Gothic structures, in Sir Humphrey Repton's time, that he remarked in the neighborhood of great cities we see buildings of every description, from the villa to the pigsty, with little pointed arches, or battlements, to look like Gothic, and a Gothic dairy had become as common an appendage to a place, as were formerly the hermitage, the grotto, or the Chinese pavilion. In old Gothic cottages, however, we never see the sharp-pointed arch, but often the flat arch, and there are no more picturesque forms than these buildings of that date, with their lofty perforated chimneys, that contribute greatly to the beauty of their outline.

The materials used in the construction of houses have been so changed during the present century, that the modern attempts to imitate the early styles, while using different materials, often produces incongruity. In the adaptation of ancient forms to modern uses and inventions, we are often under the necessity of deviating from the rules of the true Gothic. Under such circumstances, it is perhaps better to apply old expedients to new uses, than to invent a new and absurd style of Gothic or Grecian architecture. The principal error in the imitation of Gothic arises from their not considering the difference of the materials with which they work. If in the mullions of a window, or the ribs of a ceiling, they copy, in wood or plaster, ornaments originally of stone, they must preserve the same massive proportions that were necessary in that material, or they must paint it like wood, and not like stone. But if the architects of former times had known the use we now make of cast iron, we should have seen many beautiful effects of lightness in their works. But whenever cast iron is used in the construction, it ought to be identified as a support, it should appear to be metal, and not wood or stone; otherwise it would appear unequal to its office.

The earliest form of houses, (except of laborers' cottages, which in England were never till the last century considered worthy of any consideration,) prior to the reign of Elizabeth, consisted of apartments built round a large square court. There were formerly either castles or abbeys, and often received all their light from the inner courts; but when afterwards converted into habitations, windows were opened on the outside of the building. The views from a window were of little consequence at a time when glass was hardly transparent; and, in many of the ancient castles, the small lozenge panes were glazed with colored glass, or painted with armorial bearings, which admitted light without any prospect. The imitation of these lozenge panes in modern houses is perfectly absurd.

There was another form of houses of later date, that seem to have had one side of the quadrangle opened; and thus the line of communication being cut off, this sort of house

becomes less commodious in proportion to the length of its projecting sides. A form of the date of George I., has commonly been called an H or half H. This kind of house is distinguished by the centre being one great hall, which breaks the connection of apartments above stairs.

The modern style of living differs so entirely from that of former times, that there are few houses of ancient date that would be habitable, without great alterations and additions. Such, indeed, is the constant fluctuation in the customs and habits of mankind; and so great the change in the luxuries, the comforts, and even the wants of a more refined people, that, in these times, it would be impossible to live in the baronial castle, the secularized abbey, or even in the more modern mansions, built in Elizabeth's reign, preserving all the apartments to their original uses.

The principal rooms required in a house of that era, were as mentioned below:—

First, the *Hall*, for the entertainment of friends and vassals. This was a large lofty room, having the floor at one end raised above the common level, as at present in the halls of colleges; this was to mark some distinction in the different rank of the guests. In modern houses the hall is no longer required. Instead of it, the eating or dining room is used, though it is no longer the fashion to dine in public, hence this room is not so large in its proportions as the hall.

The second large room in the Elizabethan houses was a *Gallery*, for the reception of company in the morning, for dancing in the evening, and for family exercises within doors. Very few books were then in use; and instead of reading newspapers and pamphlets, as at the present day, the people held conversations in those long galleries, which had large recesses, or *bays*, hence called bay, or bow-windows, into which some of the company would occasionally withdraw for more private conversation. There is no room in modern English mansions corresponding to this.

The third apartment, and one which was deemed absolutely indispensable in former times, when men were more particular in certain religious observances than at present, was the *Chapel*. This was the room in which the magnificence of the proprietors was particularly displayed.

The other apartments were one or more *small parlors*, for the use of the ladies and their female attendants, in which they carried on their various works of embroidery and other needle work. Instead of the present dressing rooms and sitting rooms, which are added to each modern bed-room, there was generally a small closet to each, with, perhaps, an oriel window for private morning devotions.

“When we look back a few centuries,” to follow the language of Repton, “and compare the habits of former times with those of the present, we shall be apt to wonder at the presumption of any person who shall propose to build a house that may suit the next generation. Who, in the reign of Queen Elizabeth, would have planned a library, a music-room, a billiard-room, or a conservatory? Yet these are now deemed essential to comfort and magnificence; perhaps, in future ages, new rooms, for new purposes, will be deemed equally necessary.”

Architecture has been classed under two very general heads, distinguished as Gothic and Grecian. The Grecian style is said to have been first introduced into England by Inigo Jones, in the reign of James I. Until the reign of Elizabeth, the large buildings of the country had either been castles for security, or colleges and religious retreats.

Many of these were converted into private mansions for the nobility, and some of them into palaces; and the changes made in their original form to adapt them to such residences, produced that mixed style called the Elizabethan, or House Gothic.

Under the Grecian character were included all buildings in England, for which models were furnished from Greece, from Italy, from Syria, and from other countries, unmixed with the Gothic style. For in all these countries, some intermixture of style and dates, in what is called the Grecian character, may be distinguished. Simplicity is not less necessary in the Gothic than in the Grecian style, yet it creates great difficulty in its application to both, if no mixture of dates is to be allowed in the respective styles of each. Thus the English antiquary will discover, and, perhaps, be offended at the mixture of Saxon, Norman, and the several

dates of subsequent buildings, called Gothic; but the man of taste will discover beauty in the combination of different forms in one great pile, or he must turn with disgust from every cathedral and abbey in the kingdom.

---

### HORTICULTURAL GOSSIP.

BY REV. A. D. GRIDLEY, CLINTON, N. Y.

YOUR amateur readers will thank you for the editorial, last December, on "Variety in our Gardens and Pleasure Grounds." And if your subscribers also, whose tastes run somewhat in the ornamental line, would but send in for your pages their notes of experience and observation, we should all be the gainers.

Doubtless, the chief ornament of every pleasure-ground is the ground itself. Not the ground as of a meadow, ploughed field, or rough, weedy pasture, but cultivated, *dressed* ground. The harrow, the rake, and the roller should have cleaned and smoothed it; fine grasses should clothe it in green velvet; choice trees and shrubs and flowers should give it life and fragrance. Whoever has this, has the essential of all attractive gardening. Yet few will be content to stop here. They will wish to clothe this ground with some further indications of human art. Vines need props to support them, and this will lead to the introduction of ornamental frames and trellises. Spreading shade trees seem to call for tasteful seats beneath them. No flower garden or lawn is complete without an arbor, from which to view the surrounding scene. Streams of water running through pleasure grounds need to be often crossed; and, for this purpose, while a few planks will answer the demands of necessity, a cultivated eye will be satisfied only with neatly-wrought bridges of rustic work, or of painted wood or iron.

Gardens, without running water, lack an essential element of variety. One does not need a lake, or pond, or large stream; if he has only a living current, large or small, of pure water, he has one of the best things that ever fell to a

planter's lot. A horticultural friend of ours, whose ground is unblest with a stream, declares he shall go to his grave sighing for water. Whenever he rides abroad, he notes, with a touch of envy, every clear trout brook that he crosses, and estimates its relative value to him if only it could be bought. For this one, about three feet wide, he would give fifty dollars; for that, four or five feet wide, one hundred dollars, and so on, if it could be carried up hill to his domain and made to sing through his garden. It will be borne in mind that a stream of water is not only beautiful in itself, but affords the gardener an opportunity to cultivate many plants along its margin, which would otherwise be excluded from his grounds.

A brook should not ordinarily be brought into a highly-dressed lawn, but into some side scene, where there is some air of natural rusticity. Let this native wildness be heightened by bringing in boulders and mossy logs and stumps. Set out forest trees and shrubs and vines and plants from the woods, until the place is completely embowered, and looks like a little forest. Make the sides and bottom of the stream jagged with stones, and set out all sorts of water-loving plants along its border. Perhaps a cascade or miniature waterfall can be constructed. One of the most agreeable incidents in a recent journey of the writer was to a friend's cottage, near which was a rustic scene, like that above hinted at. Of the children's water-wheel, and their fairies' grotto, and their hut, we cannot now speak more particularly.

One of the most refined uses of water is for fountains with jets of spray. These properly belong to the highly-dressed ground near the house. When the water is abundant, and the entire fixtures are well made and of a pure classical design, the effect is every way pleasing. What more musical than the silvery splash of water in its marble basin! When the supply of water is small, instead of attempting a jet, a better way is to have simply a dripping fountain. "A basin of any material," says a high authority, "from the coarsest common stone to white marble, with a block of the same in the centre, supporting a graceful vase, in which the water boils up and falls gently over the rim into the basin, will give more pleasure both to the eye and the ear than any other ap-

plication of the same amount of water." And again: "A small, clear stream may be made to break from an apparently natural fissure in a mass of rock-work, and flow down its side into a pebbly basin below; a graceful nymph may pour water from her urn; or many other beautiful uses may be made of even a small quantity of water, always provided it be of crystal purity. But by all means avoid making the likeness of bird, beast, or fish, throwing water from its mouth: in spite of its frequent use in celebrated fountains, this is too much like one of the most disgusting ills that flesh is subject to, to be anything but revolting to good taste."

The subject of fountains naturally suggests the kindred topic of vases, statues, and sun-dials, as ornaments of the pleasure-ground. There is an obvious fitness and propriety in their use. Beautiful in themselves, they also give an air of refinement and finish to a place which nothing else can impart. If a handsome house stands upon a rough, untidy piece of ground, there is an apparent incongruity between the two; there is a painfully abrupt transition from the finished architecture to the rude, uncultivated land. But surround the wall at its base with a smooth, grassy terrace; set a few vines here and there upon it to twine about the porch and windows, and what a transformation! There is now a link, a felt harmony between the house and grounds. Carry the work a few steps further. Extend the lawn on all sides to the boundaries of the premises, and plant graceful trees upon it; set here and there on the terrace a classic vase, yonder a sun-dial, and, further on, among the trees, a statue, or fountain;—have we not ascended a step higher?

Nor does this require the outlay of great expense. For those who cannot afford to purchase these ornaments in marble, there is a tolerable substitute in cast iron and terra-cotta. The first, if well painted, will last almost as long as marble itself. The manufacturers of ornamental iron work in our leading cities, have shown much good sense in preparing for market copies of some of the finest vases and statues of antiquity. And it speaks well for the public taste that has called for such articles. Whoever will visit one of these establishments will find much to interest him. Here are



many symbolical and other figures, of which the classical student will say, "Thereby hangs a tale;"—a tale sometimes extending into remote history. Here are copies of Egyptian, Grecian, Tuscan, and Roman sculptures. To the common eye, many of these will appear attractive only from their symmetry and grace, but to the eye of the scholar they will have an additional meaning. They will recall the pages of Homer, Euripides, Virgil, and Horace; they will conjure up the memory of heroic actions, of ancient scenes and incidents full of romantic interest. It is no light thing that the public are thus enabled to procure, at moderate cost, specimens of the ancient sculptures which have a world-wide renown. Copies of them set near the doorway, or scattered sparingly upon the lawn, will not only answer as embellishments, but will excite the curiosity of children, and awaken inquiry into their history and significance. They will inspire in the young a love of the beautiful, and will form their taste according to the best models.

---

### TREE PROTECTORS.

BY JAMES WEED, MUSCATINE, IOWA.

We have just passed another scathing ordeal. The record stands thus:—

#### TEMPERATURE.

	Outside.			Inside.			REMARKS.
	Morning.	Noon.	Evening.	Double boards and sawdust	Frames filled with leaves.	Single board and cistern.	
1864. Feb. 15,	..	..	4°	..	..	..	Very mild.
16,	-11°	-4°	-4	10°	-4°	10°	High wind.
17,	-13	-4	-4	8	-6	6	Strong w'd.
18,	-2	8	1	8	2	12	Windy.
19,	4	40	31	10	4	14	Mild.
20,	28	..	..	24	28	32	Cloudy.

This trial confirms our confidence in the efficacy of shutters for the purpose they are designed to answer.

This cold period, from its commencement throughout, was attended with a high, piercing wind, and the shutters filled with sawdust were found, on examination, to be empty about one foot down from the top, and also from the middle partition, which runs horizontally, leaving the joints open between the boards on both sides; consequently admitting considerable circulation of air through the inclosure, which was prevented in the side shutters by the snow, in the former cold period; but the doors closing the ends, constructed in the same manner, had the joints open as far as the sawdust had settled down, during the severe trial early in January.

The single-board structure, the snow being all off, and the joints being more or less open, was unnecessarily ventilated.

The leaf frames showed more efficiency than we expected, considering their imperfect construction and the effect of the late dry weather in shrinking their contents, thus rendering their imperfect packing still more loose. It will be noticed that the temperature in this house rose from 6° below zero on the morning of the 17th, to 2° above on the morning of the 18th, the outside temperature being still 2° below, not having been above zero the day previous. Showing plainly the effects of radiation from the earth, even when its surface is frozen.

The buds of the plum, Early Richmond, and Morello cherries, were all perfect and uninjured, after the severe and protracted cold of January; but the former, and about one-half of the latter, are now killed. Was it the *cold* that killed them? We think so,—the sap being up.

---

#### POMOLOGICAL GOSSIP.

THE ADIRONDAC GRAPE.—The following extracts from a letter from Mr. Chorlton, of New Brighton, Staten Island, in reference to this grape, will be read with much interest. They are in reply to Mr. Bailey, the introducer of the variety:

“I have to thank you for a copy of the Country Gentleman, containing your excellent reply to criticisms on the Adirondac

grape, and exposure of Dr. Grant. You are no doubt aware that I was one of the committee who gave the decision in favor of the Adirondac, at the 'Agricultural Exhibition.' That decision was honestly given, and you have to thank the quality of your grape for it. There was not a dissentient voice excepting one in that committee; and no one that I heard, either of the committee or otherwise, excepting one gentleman, but agreed with us. Now much as I respect the abilities of these two gentlemen, they are no more infallible than were the judges who acted along with myself. . . . The class in which the Adirondac was placed first was for quality, which includes many points of excellence, and collectively in that position your grape surpassed all its competitors. I consider the Adirondac is the commencement of a class which will ultimately become equal in quality to Black Hamburgh, and of similar flavor and texture. I have seen it at two exhibitions last season, and am sure that we are now in a fair way to arrive at what I have recited many times, and have also stated in my *Grape Growers' Guide*, we shall yet have a quality in the native equal to the exotic. The gentlemen referred to, thought nothing equal to the Delaware, and would discard everything in favor of their pet. The Delaware is a good grape, and I have spoken in its favor as much as any one, but there is no reason why we should blind our own perceptions by prejudice. Delaware will lead to a class resembling Frontignans in flavor, while in Adirondac we have an approach to the full-flavored and not musky taste of Hamburgh. There is no hard pulp in your grape, and this defect now being overcome, there is a certainty of final perfection if followed up in a right manner by generations of seedlings."

In a subsequent letter, dated February 5, in answer to some inquiries by Mr. Bailey, Mr. Chorlton makes the following remarks:—"You ask respecting fertilizing with Frontignan. I would answer do not, because we have already too much of the musky flavor, the which when reduced in future improvements is likely to become subdued into that rich aroma and bouquet now existing in the Muscats and Frontignans. The Adirondac has scarcely any, I may say none, of

the native foxiness, and if you persevere with further generations of seedlings direct from it, you are always sure to entirely obliterate the smell and taste, and secure a class of grapes possessing the fine fleshy and abundant saccharine quality of Black Hamburg. We must not be satisfied with one flavor; we have different ones in the exotic, and the very best point in Adirondac is the near approach to the Hamburg or Chasselas. We have plenty of foxy sorts, and shall continue to have more, but there is no danger of obtaining a superfluity entirely free from this peculiarity. You may depend upon it the public will appreciate such a class, as above mentioned, quite as much as is now the case in the extremes of Hamburg and Muscat."

THE CONCORD GRAPE IN ILLINOIS.—The severe and unusual weather of the first week of the year throughout the whole west, will long be remembered. It has injured or destroyed the entire peach crop, and grape vines have suffered everywhere. Dr. H. Schröder of Bloomington, states that his "Catawbas are killed to the ground; Isabellas, and the blessed Delaware gave out their breath together, with many other varieties. Concord, the grape for the million, you may plant safely! It is tested thoroughly, and heads my list. Once more, plant Concord." The most hardy of all is the Concord. Cuyahoga stood well. Hartford Prolific, hardy. The Dr. has 10,000 vines, which he says he neglected to cover, and all are much injured except Concord, which will alone yield a full crop. Those who have contended for the great hardiness of the Delaware will now be convinced that it is not a safe variety to leave unprotected.

THE BUFFALO STRAWBERRY.—This is another new seedling introduced last year. It is stated to have been originated by Rev. N. S. Smith, in Buffalo, N. Y., in 1857, and is described as embracing "all the essential qualities of the most popular varieties." Having been tested five years it is announced by the introducers, "that the Buffalo contains in itself and distinctly and perfectly develops every essential quality that can be found in all the best varieties; in fact it is not deficient in anything essential to a superior and universally popular strawberry. Its great productiveness, size, flavor, and firm-

ness, with many other remarkable qualities, make it the best strawberry ever introduced, and the world is challenged to produce its equal."

GRAPES IN MAINE.—At a discussional meeting of the Maine Board of Agriculture, an inquiry was made as to the best grapes for Maine.

Dr. Weston said the Delaware, although small, both in the size of the bunch and berry, had proved successful in Bangor. The Hartford Prolific would grow anywhere and ripen its fruit if judiciously cared for. The Rebecca is not so hardy as the others, but is a good berry; the ends of the shoots are apt to winter kill. The Diana has also ripened, but he could not recommend it for general cultivation; should be trained against the wall of house on the sunny side.

Mr. Goodale remarked that the Delaware, Hartford Prolific, and Northern Muscadine, were the three best grapes for out-door culture in Maine. They should be protected in winter, for they will bear so much better for it the year following. Did not think so much of the Diana as formerly, as it is subject to the dry rot. The great secret in grape growing is to procure good healthy well-ripened wood, and take off three-fourths of the bunches of the fruit as soon as they are fully formed. Mr. Dill regarded the Hartford Prolific as the best he has ever grown.

---

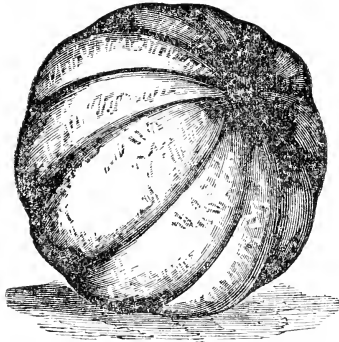
#### THE WHITE JAPAN MELON.

JAPAN supplies us with some good fruits and vegetables as well as flowers. We have just given an account of the Yokohama squash, and now present our readers with a brief notice of the White Japan Melon, introduced last year (FIG. 7).

Desirous of trying this new melon we planted it in our grounds the past season, and found it to be a most excellent variety, well worthy of a place among our very best and most popular sorts. It grows as freely as any of the melons, ripens early, and produces most abundantly.

Its chief characteristics are a white skin, very thin, not netted; a yellow flesh, whitish on the outside; very thick,

juicy, sweet, and rich-flavored; size, small to medium, somewhat like the nutmeg.



7. THE WHITE JAPAN MELON.

The seed was brought from Japan, some years ago, and the variety was first introduced to notice by W. S. Carpenter of New York. In its pure state it must be considered one of the most desirable sorts for cultivation. Whether a mixture with our well-known kinds will impair or improve its quality, remains to be seen. Perhaps a judicious mixture might give us some superior varieties. The field is open to enthusiastic lovers of this delicious fruit.

---

#### FLORICULTURAL NOTICES.

740. *PHYRNIUM VANDEN HECKEI* A. Versch. & Nob. VANDEN HECKE'S PHYRNIUM. (Cannaceæ.) Brazil.

A hothouse plant; growing two feet high; with variegated foliage; increased by division of the roots; grown in leaf mould, peat and sand. Illustration Horticole, 1863, pl. 380.

A remarkably beautiful plant of the habit of the Marantas, with green leaves, barred with very dark green, and blotched with white on the upper surface, bronzy red beneath; these are borne on long petioles like the calla, and have a noble and picturesque effect. This plant is another of the acquisitions due to the researches and zeal of M. Baraquin, who found it in Brazil. It was sent to Ghent in 1862, and exhib-

ited at the Spring Exhibition, gaining the first prize among new and remarkable plants. Under good cultivation its leaves attain a large size, and the variegation and spotting of the leaves much more brilliant than the artist can depict. Its treatment is the same as the Marantas. (*Ill. Hort.*, Nov.)

741. TACSONIA VAN VOLXEMII *Van Volxem.* VAN VOLXEM'S TACSONIA. (Passifloræ.) New Grenada.

A greenhouse climber; growing ten feet high; with scarlet flowers; appearing in spring; increased by cuttings; grown in light, rich soil. Illustration *Horticole*, 1863, pl. 361.

A remarkable and distinct species from the high regions of New Grenada, and cultivated in the gardens of that country. It was in a garden at Bogota that it was found by M. Van Volxem, an amateur, who introduced it to Europe in 1858. The flowers are very large, solitary, pendent, and hanging very gracefully by the peduncle, which is from six to eight inches long. The flowers are six inches in diameter, of a deep rich crimson, with a small white spot at the base of each petal. According to Van Volxem it is found in a cool region where the thermometer falls to 25°, which demonstrates that it will flourish in the cool greenhouse or conservatory. It grows rapidly, and a plant covered with its brilliant flowers produces a superb display. (*Ill. Hort.*, Nov.)

742. CAMELLIA FANNY SANCHIOLI. Garden Hybrid.

Illustration *Horticole*, 1863, pl. 382.

Perfection among the perfections, this charming camellia is originally from Italy. The flowers are of the largest size, pure white, with an occasional tint of light rose, shading to sulphur in the centre. The petals are large, rounded, bilobed at the summit, imbricated with perfect regularity. Its habit is elegant, its foliage ample and deep green, and the flowers open freely. (*Ill. Hort.*, Nov.)

743. DIERVILLA (WEIGELIA) MULTIFLORA *Von Siebold.* MANY-FLOWERED DIERVILLA. (Loniceraceæ.) Japan.

A hardy (?) shrub; growing two feet high; with red flowers; appearing in summer; increased by layers; grown in good garden soil. Illustration *Horticole*, 1863, pl. 383.

A beautiful shrub, with the habit of the Weigelia, but with more delicate foliage, every shoot terminated with drooping clusters of deep crimson tubular flowers, with exerted red fila-

ments and white anthers, and a long projecting style, which heighten the effect by the beautiful contrast of colors. It is from Japan, and will probably be as hardy as the *Weigelia* to which it is allied, if in fact it does not belong to this fine group. Introduced by Von Siebold. (*Ill. Hort.*, Dec.)

744. *GLOXINIA MACULATA* VAR. *INSIGNIS*. ELEGANT SPOTTED-STEMMED *GLOXINIA*. (Gesneriaceæ.)

A greenhouse plant; growing six inches high; with bluish lilac flowers; appearing in summer; increased by cuttings; grown in loam, leaf mould and sand. Illustration *Horticole*, 1863, pl. 384.

This is a new variety of the old *G. maculata*, having a scarlet stem, spotted and striped with darker color; the leaves are green, shaded with brown, and reflect a metallic lustre; beneath, they are of a beautiful red. The flower stems are terminated with six or more flowers, of a bluish lilac, with a deep crimson purple throat. The whole plant is covered with short hairs, and this variety forms a pretty addition to this fine class of summer flowers. (*Ill. Hort.*, Dec.)

745. *RHODODENDRON BARON OSY*. Garden Hybrid.

Illustration *Horticole*, 1863, pl. 386.

A very delicate and elegant variety, with large flowers in large heads of a clear white, tinted with soft rose, and deeply spotted with crimson and brown. The habit is bushy, the foliage fine, and the variety one of the most desirable to possess. Raised by M. Verschaffelt, and quite hardy in Belgium. (*Ill. Hort.*, Dec.)

746. *STAURANTHERA GRANDIFLORA* *Benth.* LARGE-LEAVED *STAURANTHERA*. (Cyrtaudaceæ.) Moulmein.

A greenhouse plant; growing a foot high; with lilac flowers; appearing in August; increased by cuttings; grown in light soil. *Bot. Mag.*, 1863, pl. 5409.

A charming plant, found in Moulmein, at an elevation of two thousand feet. It forms a branching plant, having succulent green terete stems and branches. Leaves, remarkably large, often ten inches long; flower stems much branched, producing numerous blossoms, an inch in diameter, of a lilac or pale purple, with a deep yellow spot on the lower side. It will probably grow well and produce its flowers, turned out in the open border, and prove a good bedding plant in our climate. (*Bot. Mag.*, Nov.)



747. *WEBBIA PINIFOLIA De Cand.* PINE-LEAVED WEBBIA.  
(Compositæ.) Cape Town.

A half hardy plant; growing a foot high; with purple flowers; appearing in summer; increased by seeds; grown in loam, leaf-mould and sand. *Bot. Mag.*, 1853, pl. 5412.

A rich colored and showy plant, with numerous heads of corymbiferous flowers, which quite compensate for the unattractive appearance of the foliage. Seeds sent to Kew produced plants which blossomed freely in August last. These were kept in the cool greenhouse, but Dr. Hooker thinks it will bear the open air in summer, and may be used as a bedding-out plant. The plant forms a much branched and dense head of rich blood-purple level-topped flowers. (*Bot. Mag.*, Nov.)

748. *FUGOSIA CUNEIFORMIS Benth.* CUNEATE-LEAVED FUGOSIA.  
(Malvaceæ.) West Australia.

A greenhouse shrub; growing two feet high; with white flowers; appearing in summer; increased by cuttings; grown in light peaty soil. *Bot. Mag.*, 1853, pl. 5413.

Nearly allied to *Hibiscus*, of a branching shrubby habit, with thick, fleshy, narrow, cuneate foliage, and large pure white flowers, crimson spotted at the base. Seeds were sent from Australia, and the plants flowered in August last. (*Bot. Mag.*, Nov.)

749. *DIPTERACANTHUS AFFINIS Nees.* SPLENDID DIPTERACANTHUS. (Acanthaceæ.) Brazil.

A stove plant; growing one foot high; with scarlet flowers; appearing in summer; increased by cuttings; grown in light rich soil. *Bot. Mag.*, 1853, pl. 5414.

Among the most beautiful of Acanthaceous plants, exhibiting a remarkable contrast between the fine deep blue of *D. spectabilis* and the present species. It is a native of Brazil, and flowers during the summer. It will probably succeed well turned out into the open border, where its bright scarlet flowers would be remarkably showy. (*Bot. Mag.*, Dec.)

750. *LIGULARIA HODGSONI Hook.* MR. HODGSON'S *LIGULARIA*. (Compositæ.) Japan.

A half hardy (or hardy) perennial; with yellow flowers; appearing in summer; increased by division of the roots; grown in good garden soil. *Bot. Mag.*, 1853, pl. 5415.

A very distinct and perfectly new specimen of *Ligularia*, from Yezo, the most northern part of Japan, and there is every reason to believe that it will bear the open air in Great

Britain. The leaves are large, and the plant throws up a thick stem, three feet high, terminated with a dense spike of very large light yellow flowers, which appear in July. (*Bot. Mag.*, Dec.)

---

## General Notices.

---

**GRAPE SETTING.**—Mr. Nicholson appears to attribute his success in this matter to the daily syringing of his vines from the period of starting until the stoning of his fruit. Now there can be no question that gardeners in general are opposed to syringing vines while they are in flower. In my young days the plan pursued was as follows:—From the first day a grape-house was shut up washing was commenced and continued daily until the vines came into flower; then for two weeks or so the engine ceased working, and during that time the temperature was raised up to 70° to 85°. The fumes were then deluged with water, causing steam to arise, which heightened the temperature to say 95°, producing what was termed “a first class artificial shower.” Unfortunately, however, during these 14 or 16 days, red spider not unfrequently established itself on the vines, very much to the damage of the crop. Twenty-four years ago, therefore, it occurred to me, that if out-door fruit set best in a mild temperature with refreshing showers when the trees were in blossom, why should not grapes also set under similar conditions; and ever since I have continued to syringe my vines, whether in flower or not, and in four divisions of vineries I have never lost a crop, neither have I ever been troubled with red spider. Muscats, I find, in fact, to set best under the treatment just mentioned, at a temperature of not less than from 80 to 85, but the washing must by no means be continued after the fruit approaches stoning, lest it should interfere with the bloom upon the berries.—(*Gard. Chron.*)

---

**RAISING MINUTE SEEDS.**—The following plan of raising minute seeds is given in a Dutch work on Gardening. The pots are filled with mould firmly pressed in, and made perfectly level at the top, leaving the edge projecting above the soil for about half an inch. The seed is then scattered over the mould, and gently pressed with some flat round surface, as the bottom of a flower pot. A piece of filtering paper is then cut of the size of the pressed surface, and pierced with holes, so as to make it pervious to air, and the paper is kept moist from time to time, with a fine rose. The surface of the soil in consequence is not disturbed and the seeds buried, while the paper can easily be lifted from time to time to see what progress they have made, and may be turned on one side altogether as soon as the seedlings are well rooted. Plants with larger seeds, as for example stocks, it is said, may be sometimes advantageously raised in this manner.—(*Gard. Chron.*)

ORCHARD-HOUSE TREES.—Observing in your paper an inquiry by Mr. Watson, whether “J. P.” shakes the earth free from the roots of his fruit trees in pots, or merely gives them a larger size pot, and not seeing any reply to Mr. Watson’s inquiries, and having had ten years’ practice in the management and cultivation of orchard-house trees in pots, I tender my experience in reference thereto. In 1854 I commenced the cultivation of fruit trees in pots, more especially that of peaches and nectarines, and my labor has been crowned with success. I have scarcely during the whole period repotted a tree of those with which I first started, unless I have observed the drainage defective; in that case I have shaken the stagnant soil from the roots, and returned the tree to the original or a pot of the same size. I allow the pots to stand on a bed of soil, into which the roots are allowed to descend; the pots are not moved till the fruit is ripe. During the time the fruit is swelling, the trees receive liquid manure occasionally, and after the wood is pretty well ripened they are placed out of doors until the approach of winter; the old soil is then gently stirred on the surface and a little fresh applied. I have exhibited peach and nectarine trees in pots at Brighton for several seasons, and have always been a successful competitor. Many of my trees are in as fine health as can be desired, and none are in a bad condition. About the time I commenced the cultivation of fruit trees in pots, a gentleman in this neighborhood, D. Lyon, Esq., had an orchard house erected and filled with trees in pots. At Mr. Lyon’s request, I repotted them for him either in 1854 or 1855, and from then until now, not one has been repotted; but the person in charge finding the drainage choked, repotted four or five of them a few weeks back, and the whole house is, without exception, the very *beau ideal* of what an orchard house, filled with potted trees, should be. There is not a shoot or spur that is not covered with blossoms. Therefore, Mr. Watson, provided his trees are in sufficiently-large pots, may safely allow them to remain in the same pots, and not trouble himself about shaking out or repotting.—(*Gard. Chron.*)

---

WOOLLEN REFUSE.—In reply to Mr. Rymer’s request, I can say, that from my own experience of this material as a manure, I am led to consider it valuable for nursery and market garden requirements; when the soil is of a heavy nature, a liberal application of it will soon effect a wonderful change in its texture and temperature; on the other hand, however, where the staple is light, I think that the refuse ought to be used sparingly, and principally as a top dressing, as it decomposes more rapidly on the surface than under the soil. My kitchen garden is one-half light hazel loam, and the other half stiff clay. The last-named portion I found principally covered with fruit trees and bushes, and amongst the first things I did after coming here, was to thoroughly drain that part of the garden and to give it liberal applications of woollen waste; this I have continued to do at intervals of two or three years, and the soil is now as light and friable as a mole hill, and my trees and bushes grow and bear freely. For vegetables I would not recommend it to be used alone; its slow decomposition prevents

it from doing much good the first year of its application. But I find that when mixed with farm-yard dung to the extent of one half, it is certainly one of the best manures, for some purposes, I have ever used. I have grown my celery in a compost of this kind, mixed with a little salt, when it is in a state of slight fermentation. I also grow my potatoes in the same mixture, with the exception of the salt, and I can say that for size and quality I have rarely seen finer; I have had my tubers of Haigh's Seedling or Lapstone Kidney weighed, and found them from  $\frac{3}{4}$  to  $1\frac{1}{2}$  lb. in weight, with a skin as smooth as that of the finest apple; the foliage of one of my vines when I have used it freely in the border is so striking as to elicit surprise even from a casual observer.—(*Gard. Chron.*)

**GERMINATION OF RODANTHE SEEDS.**—Mr. Thompson, the introducer of the beautiful rodanthes, (*atro sanguinea*, *maculata* and *maculata alba*.) states that it is important to know that seeds of these require to be *freely* watered, in order to induce them to germinate quickly. The pot in which they are sown may even be plunged under water for a few seconds with advantage; and the soil being thus saturated, will often require no farther watering until the seeds are above ground. If, he adds, the seeds are thus treated and placed in a temperature of  $65^{\circ}$  to  $70^{\circ}$ , they will speedily give proof of their vitality, but if insufficiently watered, they will remain dormant for several weeks. The hint may be useful now that the seed-sowing season is coming on.—(*Gard. Chron.*)

## Gossip of the Month.

**MR. WEED'S TREE PROTECTORS.**—Mr. Weed, among other things, writes us as follows:—If any of your amateurs should feel disposed to a trial of the mode, I would advise planting east and west, in four rows, for a structure fourteen feet wide, after the plan of the house illustrated in the article I sent you.

The shutters may be more economically made of half-inch boards, by procuring inch lumber, say six inches wide, and taking it to mills, and having it ripped into half-inch. Clear flooring boards, in this market, are worth \$27 per M., and the charge for ripping is \$3 per M., making the covering \$15 per M.

I shall put on the covering horizontally, after the manner of ordinary siding.

**THE CONCORD AND ADIRONDAC GRAPES.**—In a recent number of the *Country Gentleman*, Mr. J. W. Bailey, proprietor of the Adirondac grape, makes an unpleasant *exposé* of the action of Dr. Grant of New York, relative to this grape. It is unpleasant to refer to such acts, but our duty forbids us from passing over it in silence, and as the Concord Grape was

introduced through our agency, we give the remarks of a contemporary journal upon the whole subject:—

“The Concord grape stood sadly in the way of these speculators: hence their bitter hostility. It was a larger, handsomer grape than the Delaware, bunches two or three times the size, productiveness great, vines as hardy as iron, and the flavor of the fruit excellent. The Delaware was far, far behind it in everything except flavor. The Concord ‘took’ with the people—the sales of the Delaware diminished, hence the price had to be reduced, until, seeing the irrepressible drift of public opinion, the grape-mongers in question began, faintly at first, after going into the cultivation of the Concord, to mutter its praises and sell all they could!

In connection with this subject, we notice in the Country Gentleman, of the 17th inst., a communication from Mr. John W. Bailey of Plattsburg, N. Y., the originator or discoverer of the Adirondac grape, now exciting public attention, in which he exposes, to a most humiliating degree, the conduct of C. W. Grant, a well-known grape-monger of that State, in his efforts to disparage the Adirondac and elevate seedlings of his own. The plan, according to the exposure of Mr. Bailey, was to advertise the Adirondac for sale at a low price, without possessing any, and when ordered, instead of filling the order, sending a damaging letter about this grape, and recommending some of his own seedlings! These letters are printed by Mr. Bailey, and tell their own story. A portion of Mr. B.’s concluding paragraph is appended:

‘I submit these facts to them with the single remark, that I have allowed Dr. Grant to tell his own story, and if he appears to disadvantage he has himself to blame. My friends urge me to prosecute him legally for the damage he has evidently done me, but I am reluctant to do so, for I think he has prosecuted himself so far as the Adirondac grape is concerned. \* \* As to the conduct of Dr. Grant in the matter, I desire that the public may judge, and I deem it my duty to them to expose his pretensions to offer the Adirondac for sale without having any to sell, and when applied to by purchasers, in availing himself of the opportunity to disparage it, and seeking to detract from its reputation.’

Comment, by us, is quite unnecessary.”—(*Germanstown Telegraph.*)

---

## Societies.

### AMERICAN POMOLOGICAL.

A letter from the President of the Society, Hon. Marshall P. Wilder, desires us to give notice that he has appointed the 13th of September next, for the commencement of the Tenth Session of the American Pomological Society, at Rochester, N. Y. From the very favorable winter experienced in the Atlantic States, there is every prospect of a fruitful year, and an interesting display of superior fruits.

## HAMPDEN COUNTY HORTICULTURAL.

At the Third Annual Meeting of this Society, held at Springfield, Mass., on the 10th of January, the following officers were elected for the year:—

President—J. B. Stebbens, Springfield.

Vice Presidents—Dr. T. L. Chapman, Longmeadow; Geo. E. Howard, and Wm. L. Smith, Springfield.

Secretary—J. E. Taylor, Springfield.

Treasurer—Gurdon Bell, Springfield.

## NEW YORK STATE AGRICULTURAL.

The Annual Meeting of this Society was held at Albany, on Wednesday Feb. 10, when the following officers were elected for 1864:—

President—James O. Sheldon, Ontario.

Vice Presidents—1, Simon R. Bourne, New York; 2, Samuel Thorne, Duchess; 3, Herman Wendall, Albany; 4, T. L. Harrison, St. Lawrence; 5, Solon D. Hungerford, Jefferson; 6, Ralph Newell, Delaware; 7, H. T. E. Foster, Seneca; 8, Wm. A. Bird, Erie.

Corresponding Secretary—B. P. Johnson.

Recording Secretary—Erastus Corning, Jr.

Treasurer—Luther H. Tucker.

## FRUIT GROWERS OF WESTERN NEW YORK.

The following are the proceedings of the Annual Meeting, held in Rochester in January:—

*Hardiness of the Peach on Plum Stocks.*

H. N. Langworthy thought this a subject of much importance, and while he had not sufficient experience to judge, he thought experiments should be made to determine the question, as a crop every year instead of every other year, would be extremely desirable. W. P. Townsend of Lockport, had tried the experiment on a limited scale, and had found such trees to bear with more certainty. G. Ellwanger regarded the hardening of the wood on the plum stock as the only influence exerted rendering the trees slightly hardier, but little or no effect was exerted on the crop in any way. Dr. Spence of Yates Co. had found such trees to bear finely, better than on peach stock, but the trees soon died, and he thought they could not be depended on as durable trees. G. Ellwanger said that the peach was largely propagated in England on the plum, and the trees were successful, and continued growing for a long time, but for extensive planting he would not recommend them. W. P. Townsend's trees were 22 years old, in good condition. W. B. Smith of Syracuse, had successfully used the Wild or Canada plum as a stock, to escape the attacks of the peach grub—he had not observed any other distinct effect. Chas. Downing said the trees grew less on plum, and are of course hardier in the wood. H. E. Hooker had found more

nursery trees on plum to fail from gum and other causes, than had been saved by the exclusion of the grub. S. H. Ainsworth found the trees liable to break off at the place of union, and his experience was unfavorable, and he had been severely censured as a nurseryman for selling trees which afterward send up plum suckers—he had not found hardness to be at all increased by the diminished growth, but on the other hand, they were made more tender by the enfeebling process. The only advantage was the better growth of the peach tree on strong clay soils. He had mostly used the Egg plum as a stock. W. B. Smith thought these failures owing to the kind of plum used—the Wild plum he thought would obviate the objection. Some varieties of the peach had not however done well thus treated.

On the whole, the expression was decidedly unfavorable to this mode of propagating and growing the peach.

#### *Keeping Winter Pears.*

H. E. Hooker had found them to keep best put up in rather large and cold packages—in barrels or half barrels. He thinks they are best ripened in a cool cellar, instead of being brought into a warm room to complete the process, as has been recommended. Keeping them in a cool atmosphere retards the ripening, but this period cannot be greatly retarded without injuring the quality. Some cellars are too dry, and the pears shrivel; others are too damp, and they decay or become mouldy—the proper medium is of great importance. G. Ellwanger agreed in main with these views, and he found it of great importance to hang as long on the tree as they could with safety. He prefers half barrels for packing and sending to market. They are kept in a cool barn cellar,—cooler than any house cellar. He had two barrels of very fine Winter Nellis the day before Christmas, kept in this manner.

#### *Best new sorts of the Pear.*

Charles Downing named the following promising sorts: Doyenne de Cornice, Durandau, Jones's Seedling, Dana's Hovey, Lycurgus, and Wilmington, but he had not sufficient experience yet to speak of them with confidence; they must be tried longer. G. Ellwanger thought the Edmonds (a large, early autumn sort) one of the best, and the Belle Williams as very promising. H. E. Hooker strongly recommended the Durandau or De Tongres, but had not found it a strong grower. W. B. Smith said although it was very handsome and an abundant bearer, and suited many palates, it was too acid for him, and the tree was not vigorous. C. Downing said, with him it was an excellent pear, and strong grower, but that in many localities it drops its leaves too soon.

#### *Best 14 Varieties of the Pear for Family Use.*

Several sorts were discussed. C. Downing said, the Beurre Giffard rotted easily unless taken at the very moment of maturity—he had to watch them as a cat watches a mouse, to hit the right moment. The Doyenne d'Ete, Rostiezer, and Tyson, were also named as of first quality—the first for early summer and the two last for late summer.

W. B. Smith would place the Osband Summer and Beurre Giffard as best intermediate between those, to which C. Downing added Dearborn's Seedling, as one of the most valuable of all summer sorts. Several members spoke very highly of the Beurre Giffard, as one of the best of its season, being about a week or two before Osband's Summer, which was also commended as a "very good" pear, but not equal in quality to some others. G. Ellwanger thought the Osband had hardly character enough—had hardly enough flavor. Dr. Beadle of Canada West, had found the Osband Summer excellent in quality—much better than the Dearborn. From different statements made, the latter appeared a variable sort, its quality being much influenced by culture, season, locality, &c. C. Downing predicted that the Rostiezer would yet prove one of the best market pears of its season, when people come to know it. The Tyson was highly recommended. W. B. Smith said, he had visited the original tree, and found it to measure six feet nine inches in circumference, and was healthy and vigorous—he regarded this sort as a very hardy tree. S. H. Ainsworth said, the fruit had sold at \$9 per barrel. The Kirtland had been found by several members to rot at the core frequently before it becomes soft, and could not, therefore, be highly recommended. G. Ellwanger named the Belle Lucrative as the best after the Bartlett. It had been found quite variable in quality, but when at its best was scarcely equalled in quality. C. Downing had found heavily-loaded trees to have comparatively poor fruit; but when well thinned out and well grown the fruit was unexcelled. Dr. Beadle had never found a poor Belle Lucrative, but he always thinned the crop. W. B. Smith thought it too delicate, and requiring too close watching as to time in ripening, to be a market sort. The Flemish Beauty, strongly commended by many, was objected to by others on account of cracking in some localities—being liable to drop its leaves—and as not holding its fruit. The Sheldon elicited general commendation, the only drawback being the tardy bearing of the young trees. The Anjou was generally approved as a late autumn sort, and the Lawrence for early winter. W. B. Smith commended the Des Nonnes for its excellent character and great productiveness. C. Downing said, the Pratt pear was sometimes very good, and sometimes very poor—which was concurred in by G. Ellwanger. The Beurre Superfin was strongly recommended by C. Downing, G. Ellwanger, and others, but regarded as too acid by H. E. Hooker. The Winter Nelis was named as one of the best of all winter varieties. Its extremely crooked growth had led several members to work it, standard height, on the best and hardiest strong and straight growers. The Vicar of Winkfield was not generally regarded as of great value, on account of its variable nature, and very moderate quality, but it had been greatly improved by allowing it to remain as long as possible on the tree.

The evening session was occupied in remarks on the culture of dwarf pears, as planted largely in orchards for profit in marketing. Many cases were stated where four or five hundred dollars per acre annually had been obtained, mostly from rather young orchards. A few members thought



this much larger than the average amount, and that these were extreme cases; while others, who had had much experience with dwarfs, regarded the statement too low for the best management. It was urged that field culture was the only desirable mode for dwarf pears, because all the work could be done with horses at little cost, and with a greater probability, therefore, that it would be well attended to.

*Which are the Best Varieties of Grapes for Western New York?*

Mr. Frost, Rochester—The Hartford Prolific, the best early grape—next the Delaware and Concord.

Mr. Moody, Lockport—In preparing a list of grapes we should have two objects in view—for table and for wine. If grapes for wine are cultivated, there will be no danger of an overstock. For this purpose the Diana is the best in cultivation—it makes wine without sugar. The Delaware is a splendid grape, but it is to be tested yet whether it will make a good wine—the samples of wine he had tasted had been poor.

Judge Larowe, Hammondsport—would say, the Hartford Prolific, Delaware, and Concord—thinks the Hartford Prolific will not make a good wine grape. The man who goes through his vineyard with his knife in his pocket, never will raise good grapes—both summer and winter. The man who pays the best attention to his vines, will realize twice as much from the vines as another who lets *nature* have her own way. The Delaware has one peculiarity which no other variety has—all the buds upon the lower branches are perfectly ripened; it is as hardy as a hickory tree. The Diana is more tender—about as hardy as the Isabella; needs protection, as does that variety. The Catawba when it can be ripened, and it ripens when the Isabella does,—(he means what he says)—the Isabella colors before it ripens; in this respect it differs from the Catawba. In this vicinity it does not ripen over once in ten years. The Catawba, when it ripens, is about all that is required in a grape. Grapes will be made into wine, and anything which needs sugar to make it, is not wine. The Isabella, when well ripened, will make wine—a sour wine, but a good wine. The Catawba makes better wine than the Isabella. The Delaware grape will, without doubt, make a good wine, although it is so tender in the skin, it is difficult to market. The consumption of fruit in this county is only in its infancy—the consumption of grapes more than doubles every year. The village of Bath, which could not use half a ton of grapes five years ago, the past year used five tons. One year ago he sold from an acre five tons of grapes—the past year four tons, not quite so much, but he had applied no manure. He thinks four tons can be raised on each acre on an average. The price, when let out by the job, of doing all the work, including pruning and picking, is \$40 per year. With him it does not cost as much as this. They plant eight by eight feet.

H. N. Langworthy would name H. Prolific, Concord, Delaware, Diana, Isabella, Rebecca.

Dr. Sylvester thought that the consumption of fruit is destined to be very largely increased.

H. N. Langworthy thought the Diana would ripen well, and exhibited some which had been grown upon a western exposure, which were very well grown.

*Planting and Pruning the Grape.*

J. J. Thomas thought we ought to allow more room than American cultivators generally do.

W. A. Underhill of Croton, commenced with trellises six feet high, and afterwards increased them to nine feet, and in consequence increased the product nearly twice. Both he and his brother, Dr. Underhill, thought the vines became more valuable as they became older. Some, 23 years old, were more valuable than those of 12 and 15 years.

H. H. Olmstead has a vineyard of 10 acres of Delaware grapes, planted at a distance of 12 feet, so as to render easy access with teams to put in manure and gather the fruit.

Judge Larowe would plant grapes eight feet each way. Thought the experience of the old world would aid us in forming just conclusions in regard to pruning the grapes. The proper way is to fill the trellis with new wood and fruit, and cut out all the old wood. Each vine should be pruned according to the habits of the variety. Would not cut back much the cane intended for next year's fruit bearing. Those bearing this year should be cut off just beyond the fruit. In this way you have less shade—practiced nearly upon the renewal system. Would never prune or work in a vineyard when in the blooming season, as it interferes with the setting of the fruit. The nearer you get your grapes to the surface of the ground the richer your grapes will be in saccharine matter.

H. H. Olmstead had found loss from too close pruning in the summer—rubs off the shoots he does not need for fruit or for next year's bearing, but would not prune much after the fruit set.

Dr. Sylvester thought we had made our vines sickly by over manuring. Where the ground is rich enough to raise good corn, it is plenty rich enough for grapes.

*Best Winter Apples.*

Upon the results of the past very favorable season, the following vote on the best six varieties of apples for winter market, was had:

Rhode Island Greening, . . . . .	13	Northern Spy, . . . . .	6
Roxbury Russet, . . . . .	13	Golden Russet, . . . . .	7
Tompkins County King, . . . . .	13	Baldwin, . . . . .	14

---

## Massachusetts Horticultural Society.

---

*Saturday, Feb. 6th.* An Adjourned Meeting of the Society was held to-day—The President in the Chair.

Capt. Austin, the Treasurer, from the Committee appointed to settle with Mount Auburn, reported as follows:—

Sales of lots for 1863,	. . . . .	\$28,989 75
Deduct Superintendence,	. . . . .	1,400 00
		<hr/>
		27,589 75
Society's proportion of one quarter,	. . . . .	6,897 44

which had been paid into the hands of the Treasurer.

The President, Chairman of the Committee to whom was referred the subject of the expediency of erecting a new building on the Montgomery House Estate, made a report, accompanied with plans and estimates, by G. J. F. Bryant, architect, and recommending that a building be erected in accordance with the same, and at a cost of \$102,500. The following Resolution was annexed:—

Resolved, That the present Committee be constituted a Building Committee, and that they be, and are hereby, authorized and directed to proceed with the erection of a building on the Montgomery House Estate, recently purchased by the Society, according to the plans, specifications, and estimates prepared by Gridley J. F. Bryant, Esq., approved by the Committee, and now submitted to the Society, and that they have full power to enter into and make all contracts and agreements, in the name of the Society, necessary for the erection and completion of said building.

On motion of N. Mathews, Esq., the report was unanimously accepted, without the resolutions. After some discussion of the plan, by Messrs. Mathews, Bryant, Andrews, Wetherell, Cabot, Whitmore, Hyde, and the President, Mr. Mathews submitted the following as a substitute for the Resolves of the Committee:—

That the whole matter of erecting a building be referred to the Committee, with full power to make such alterations in the plans and specifications as may suggest themselves, under the superintendence of Mr. Bryant, and at a cost not exceeding \$105,000. It was unanimously adopted.

The President announced that Wm. Gray, Jr., had authorized him to offer to the Society \$50, to be awarded in two special premiums, one for Foreign Grapes, and one for Strawberries; also \$50, to be awarded in 1865, for Peaches and Grapes in Pots.

The President announced, that in order to induce greater competition, he would present \$25 for the same objects as Mr. Gray, viz., a second prize for Grapes of \$10, and a second prize for Strawberries of \$15.

The President also announced, that he was authorized by C. O. Whitmore, to offer \$40, in two special premiums for Pears.

The following members were elected:—H. F. French, John N. Stephenson, and Moses Hunt, Boston, and C. N. Laughton, Roxbury.

Adjourned, one month, to March 5th.

*March 5th.* An Adjourned Meeting of the Society was held to-day—the President in the chair.

The Building Committee made a report, stating that contracts had been made for the erection of a building on the Montgomery House Estate, the entire amount of which was less than the sum voted by the Society, amounting to \$104,630, and for this sum the building would be constructed of Concord granite, on both the Montgomery place and Bromfield street sides, as well as the Tremont street front. The report was accepted.

Capt. Austin, the Treasurer, read a personal statement in reference to his services as Treasurer of the Society, and the agreement entered into by the Finance Committee relative to his pay, which had not been communicated to the Society. He asked the Society to ratify the doings of the Committee, and offered a resolution relative to the amount to be paid the Treasurer in future. The resolution was unanimously accepted.

H. H. Hunnewell, Esq., presented the Society with a copy of the "Book of the Horticultural Society's Garden;" George B. Emerson, Esq., with two colored engravings of eatable and poisonous mushrooms; and George W. Pratt with a model of the Uvedale's St. Germain pear. The thanks of the Society were voted for these acceptable donations.

L. Clapp, Jr., and A. Beal, Dorchester; G. H. Maier, Newton; John Parker, Boston, were elected members.

Adjourned, one month, to April 2d.

---

## Horticultural Operations

FOR APRIL.

---

### FRUIT DEPARTMENT.

March has been a rather mild and favorable month, with but very little snow or rain, or any severe cold, and the frost is now nearly or quite out of the ground. The month has been unusually favorable for graperies, on account of the great number of fine days with clear sunshine; and vines should now look in fine condition. The fruit garden will now require much attention; as soon as the ground becomes dry and in fine condition transplanting, if there is any to be done, should be commenced. Pruning and grafting should be attended to, and everything done in time to forward the work of this busy season.

**GRAPE VINES** in the grapery will now be in full flower, and will require to be kept a little warmer until the fruit is set. Damp down the walks, and close the house rather early to retain the day heat; as the laterals extend tie them in carefully, and lay in nicely any bearing wood for next year; disbud all superfluous shoots and top the laterals. The border will now be better if it is slightly forked and raked to warm and aerate the surface. Cold houses will now require attention; uncover and tie up the vines loosely along the front wall, and syringe daily; giving air early in the morning and closing up early in the afternoon. Fork and rake the border. As soon as the eyes are well and evenly started tie up the canes to the trellis. Vines in the open air may be pruned, if not yet done; a little bleeding will do no harm; as soon as the weather is settled tie up the shoots neatly and regularly to the trellis.

**ORCHARD HOUSES** will now require care; in a few days after it is closed up the peaches and nectarines will begin to bloom. Give air freely which will insure the setting of the fruit.

**STRAWBERRIES** in pots, which have been forced, if planted out in a good soil, will produce a fine crop in September next. Water liberally those now in fruit, giving liquid manure occasionally. Strawberry beds should be uncovered, raked and cleaned.

**GRAFTING** should now be done; the earlier the greater growth, though it may be successfully performed till May.

**FIGS** brought into the house will soon produce a nice crop.

**PRUNE** all kinds of trees this month; it is about the best season for the operation.

#### FLOWER DEPARTMENT.

After the fine weather of March the plants should be the picture of health and vigor. No cloudy days and cold nights have occurred to require heavy forcing, by which so many plants are greatly injured; but the sun has given color and vigor to the foliage, and kept the growth compact and strong. The houses should be rearranged, as many things go out of bloom, and it should present a gay display of blossoms. Cold frames will protect many plants done flowering until it is time to remove to the open air.

**PELARGONIUMS** will now show signs of flowering, and will require careful attention to have superior specimens. Tie out the shoots in a neat manner, and give every plant an abundance of room; no plant should touch another; turn them round once a week, and water more liberally as the season advances. Young plants, intended for specimens next year, may be encouraged by a shift into larger pots.

**AZALEAS** kept in a cool house should now be placed in a light and favorable situation, and have frequent syringing to invigorate the plants; water more liberally but carefully at the root; as the plants come into full bloom shade in the middle of the day. Young stock may be repotted, and the young growth stopped to make bushy specimens.

**CAMELIAS** will now be making their growth; syringe every day, and water more liberally; shade from the hot sun.

**FUCHSIAS** intended for large specimens require a slightly-moist atmosphere, with a little shade; repot as the plants require it; top straggling shoots, and tie the leading shoot to a neat stake.

**CINERARIAS AND CALCEOLARIAS** should have a cool airy situation near the glass; shift now for the last time into flowering pots. Fumigate for the green fly.

**CHRYSANTHEMUMS** may now be propagated, if not already done.

**BEGONIAS** should have a shift into larger pots.

**CALADIUMS** started last month may now be shifted into larger pots.

**FERNS** may still be divided and repotted.

**VERBENAS, SALVIAS,** and other bedding plants should now be hardened off in a cold frame.

**GLOXINIAS AND ACHIMENES,** started late, may now be potted off, and those previously potted have a shift into larger size.

**EPACRIS AND HEATHS,** done blooming, may be removed to a cold frame.

**NEW HOLLAND PLANTS,** of most kinds, may now have a shift into larger pots.

**TUBEROSES** should be started in small pots in the hot-bed. Plant two weeks later for a succession.

**ROSES** in small pots may now have a shift into larger size.

**SCARLET GERANIUMS** may be shifted into larger pots.

**COBÆA SCANDENS**, and other beautiful summer climbers, may now be raised from seeds and transplanted into small pots.

**CYCLAMENS** will require more water as the season advances.

**PETUNIAS** for early blooming may be shifted into larger pots.

#### FLOWER GARDEN AND SHRUBBERY.

With the month of April commence the labors of the Flower Garden and Shrubbery. As soon as the ground is free from frost and rather dry, attention should be directed to the walks and lawn; the walks should be at first roughly raked and the lawn well rolled, afterwards the walks should be gone over again, made perfectly smooth and level, cutting the edges and putting everything in complete order. The shrubbery should be well raked, and the broad spaces lightly spaded. The flower garden should receive early attention, the borders should be lightly dug, the edgings trimmed, and the walks rolled. Seeds of hardy annuals should be planted, and all shrubs, roses, &c., neatly pruned.

**HYACINTHS AND TULIPS** should have all their winter covering removed and the surface soil lightly stirred with a small stick or hand fork.

**LILIES** of all kinds should be uncovered, and the beds raked neatly before the shoots appear over ground.

**ROSES** should be well manured and the ground spaded. Now is the time to prune, cutting away all the old wood and heading well in, except the Hybrid Chinas and rapid-growing sorts, which should have part of the wood cut out and the rest only shortened in a few inches.

**HARDY ANNUALS** should be planted early, as they bloom much better. Rocket Larkspur, Candytuft, Mignonette, Eschscholtzia, and many others, should be sown in patches or rows where they are to grow, as they do not transplant readily. Make the ground light, and merely cover the seed.

**PEONIES** should be transplanted now; if the roots are large and old, divide them with a sharp knife.

**HERBACEOUS PLANTS** should be transplanted this month; old roots should be divided as they do not bloom so well as young ones.

**DAHLIAS** may be planted out the last of the month.

**GLADIOLUS** for early blooming may be set out the last of the month.

**CARNATIONS AND PICOTEES** should be removed from pots or frames to a well-prepared bed.

**STOCKS, Asters, Zinnias, Balsams,** and other tender Annuals, should be planted in the greenhouse, hot-bed or frames.

**PREPARE GROUND** for Rhododendrons, Azaleas, and other American plants, as we have given directions in our previous volumes.

**DAISIES**, wintered in frames, may now be removed to the flower border, where they will bloom all the spring.

**BEDDING PLANTS** of all kinds should be hardened off, ready to put out early in May.

## HORTICULTURE IN THE WEST.

THE progress making in horticulture in the West is surprising, and we of the East, with our old-established societies, our taste, and our wealth, can barely keep up with the country which, not many years ago, was almost a wilderness. We have now before us the Transactions of the Missouri State Horticultural Society for 1863, a pamphlet of one hundred and fifty pages, giving not only the discussions of the Society at the Fifth Annual Meeting, held in St. Louis, on the 12th of January last, but quite a number of interesting and valuable essays, read before the meeting by the respective authors. Mr. George Husmann's was on the Adornment of our Homes; Mr. Saunders's on Flowers; Dr. Long's on Live Fences; R. L. Elliot's on the Influence of Woman on Horticultural Pursuits; Mr. Bryant's on Deciduous and Ornamental Trees; Mr. Huggins's on Timber Trees, and others of equal importance. Then we have the Report of a Special Committee on Grapes and Vineyards, of many pages, giving a full and complete account of the principal vineyards, the kinds of grapes cultivated, their adaptability to the climate, their cultivation, the modes of pruning, the manufacture of wine, and the varieties considered best by the committee for vineyard culture—all exceedingly interesting, of great value to the region embraced, and of general utility to cultivators throughout the country.

We propose devoting a few pages to a notice of this document, deeming it of sufficient importance to merit such attention, and believing some of the facts elicited will be useful to our readers.

APPLES.—The first business was the discussion of fruits, and Mr. N. J. Colman moved to select the best three varieties of apple for summer, fall, and early and late winter, for market and family. After some discussion upon the mode in which the subject be taken up, Mr. Colman proposed the Early Harvest, Red June, and Red Astrachan.

The Red Astrachan was considered the best for market; and on motion it was voted that the above three kinds be adopted as the best early summer apples. It was then proposed to consider the best five summer apples, and after much discussion the following were adopted: Early Harvest, Sweet June, American Summer Pearmain, Early Strawberry, and Summer Queen.

It was then decided to consider the best five fall apples for market; quite a number were proposed, and after discussion the following were adopted:—

Rambo, Maiden's Blush, Hubbardston Nonsuch, Fameuse, and Ramsdell Sweet.

The best five winter apples for market were voted to be the following:—Smith's Cider, Fall Queen, Pryor's Red, Nonsuch (Red Canada), Moore's Sweet.

The best five winter apples for family use were decided to be these:—Bellflower, Peek's Pleasant, R. I. Greening, Jonathan, Lady Apple, and American Golden Pippin. The Lady Apple was highly praised. The fruit is small, but it bears prodigiously every other year. Mr. Husmann had five barrels from one tree. Dr. Long said it was one of the most profitable market apples.

The meeting then discussed the best five late-keeping apples, and adopted the following:—Rawle's Janet, Newtown Pippin, Michael Henry Pippin, Willow Twig, Winesap, Gilpin, Ben Davis, Ladies' Sweet.

PEARS.—These were next discussed, and the meeting adopted the following:—Beurre Giffard, Rostiezer, Tyson, Bartlett, Doyenné Boussock, Howell, Beurre d'Anjou, Flemish Beauty, Seckel, White Doyenné, Beurre Bose, (as a standard,) Glout Moreeau, Winter Nelis, Lawrence, Le Curé, Doyenné d'Ete, Louise Bonne of Jersey, and Easter Beurre.

GRAPES—A portion of the time of the meetings was devoted to the reading of the several essays, and the reports of Committees, and that upon vineyards being of the greatest interest, we make some extracts therefrom.

A committee was chosen early last season, whose duty it was to visit and examine the vineyards, and report to the Society at its annual meeting. They consisted of W. C. Flagg,



L. D. Morse, C. W. Spaulding, N. J. Colman, and George Husmann.

In accordance with this appointment the committee proceeded to examine such vineyards as their accessibility, the brevity of the grape season, and other engagements would permit, and the following extracts are from their report:—

#### IMPORTANCE OF AMERICAN GRAPE CULTURE.

In the appointment of a Special Committee on vineyards we are glad to see a recognition of the special importance of grape culture in the United States generally, and particularly in Missouri. Considering the great prophylactic value of the grape; the demand from all quarters for more healthful drinks than the poisoned whiskey, adulterated foreign wines, and unnerving coffee, which have heretofore made up a large part of our national beverages; and, looking at the economic advantage of a profitable culture of the rocky and steep hill-sides along our great rivers, we see at once a variety of reasons for urging upon the public attention and endeavoring to increase and expand the already lively interest in vine culture.

#### DIFFICULTIES OF THE AMERICAN GRAPE CULTURE.

But at the same time it must be remembered that, in at least this part of America, the grape must be grown under great and various disadvantages; the variableness of our climate is one. Whilst the warmth of our summers extends from the northern limit of possible grape growing far into the regions of the north, the severity of our winters make the winter care of the vine a matter of painful thought even in this latitude. The humidity of the atmosphere of the Mississippi Valley is another formidable check upon the success of grape growing with old varieties after old methods; and the insect productiveness and vegetable disease, to which the combined warmth and humidity of our summers contribute, put formidable obstacles in the path of our first attempts at grape growing here. All these we regard as inherent difficulties, to be met and overcome by new treatment, and new varieties adapted to our soils and climate, and which should ever be kept in view by the beginner. It is a very difficult thing growing

grapes in the Mississippi Valley, from their culture in the Orient, in Italy, or California, where volcanic soils and dry atmospheres supply very different conditions.

In this connection, the vine grower may, perhaps, gather facts from the man of science, more particularly as this fruit has, more than any other, been the subject of scientific research in its climatic relations. Humboldt's *Cosmos*, Blodget's *Climatology of the United States*, and Boussingault's *Rural Economy*, all contain facts that may prove valuable. By the proceedings of the Academy of Science of St. Louis, we see that Dr. Englemann has been investigating the vexed question of grape disease; and, in a late number of the *Horticulturist*, Professor Silliman, the younger, sets forth some interesting views concerning the mildew. The opinions of all these savans should be well weighed and applied to existing facts.

But, although it would be agreeable to dwell upon this topic, our business was to examine and report facts from such vineyards as we could visit in Missouri and the adjacent parts of Illinois, and to this we now address ourselves.

#### VINEYARDS.

The first vineyard examined was that of E. R. Mason, consisting of about seven acres; four and a half acres being planted with Catawba, one with Norton's Virginia, one with Concord, and a half with various sorts—about forty in all. Commenced planting in 1860. Mr. Mason thinks highly of Hartford Prolific, Concord, and Norton's Virginia, for profit, and Delaware for amateur purposes. The first and second years the vines were trained to stakes, and now, the third year, to a trellis, made by setting oak posts, nine and a half feet in length, to a depth of two and a half feet in the ground, and nailing on three bars and a wire. The plants stand eight feet by eight; but, in the case of strong-growing varieties, he believes eight by ten would be better. The system of pruning is a simplification of that of Thomery. The present practice is to prune in the spring; but his foreman inclines to the belief that fall pruning and loosening the vines from the trellis during winter would be better. He pinches in the laterals, leaving one joint and two leaves beyond the last fruit.

The crop of Concord grapes, which, at the time of our visit, were just ripening, was a fine sight. The vines, only three years of age, were well loaded with beautiful clusters of large dark fruit, and soil and training evinced care and attention. The report of the Hartford Prolific was almost equally favorable; but, it being past its season, we did not have an opportunity of examining its fruit. The Committee spent a very interesting and agreeable afternoon in the grounds of Mr. Mason, and were much pleased with his early success in making thus fruitful and beautiful, what but a few years since was a wilderness of oaks and undergrowth.

The second vineyard was that of Mr. Malinckrodt. Concord in good repute. By enclosing bunches in cotton bags of loose texture, they are kept on the vines till October. Hartford Prolific rotted badly. Rebecca succeeds tolerably. Union Village bearing large, thick-clustered berries of beautiful fruit.

The third vineyard visited was that of Mr. George Booth of Alton, Ill., situated two hundred feet above the river.

Mr. Booth's vineyard comprises eight hundred vines set on half an acre of ground, prepared by ploughing to the depth of ten inches; then digging holes to the depth of two feet, and putting into each hole one-fifth of a wheelbarrow load of well rotted stable manure. The soil is the calcareous loam of the loess or bluff formation, with a permeable sub-soil, and seems excellently adapted to the growing of all fruits. The plants used were yearling raised, (from cuttings,) planted 5x5 in 1854, nearly all of the Catawba variety, which, in the Alton region, is still the favorite variety. They were manured heavily the first two years with stable manure, and the cultivator and hoe were used often enough to keep them clean of weeds. The mode of training has been the renewal system, using a single stake the first two years, and since that time two. The product of 1862 was 4,700 pounds of grapes, which were marketed at ten cents per pound. The estimated product for the present year was 4,000 pounds. The rot has given Mr. Booth very little trouble. Leaf blight has affected the fruit a little the present year. Some wine of the vintage of 1857 was pronounced by the committee to be of uncommon

excellence, and to give promise of excellent results should Mr. Booth turn his attention to the wine growing. His present success, however, in getting a gross return of \$800 to \$940 per acre may be sufficiently satisfactory.

Dr. Hull's vineyard comprises nearly 2000 vines, mostly Catawbas, which do finely in his grounds.

The vineyard of John S. Seymour shows what system and good management will do.

The vineyard contains one hundred vines. The soil a light loam, on which the timber growth was white oak, hickory and maple; was prepared by ploughing about eight inches deep. The plants were layers of Concord, Diana, Catawba and Isabella varieties, planted in 1858, at a distance of 10x10 feet. The most of them were cultivated with strawberries the first two years, without injury, Mr. Seymour thinks. Were trained on a trellis with two arms and upright canes; are pruned in February, or any time after the leaves fall. In summer, laterals are pinched off at the third leaf from the last bunch. The Concords produced the first bearing year ten pounds to the vine—the thirty vines producing more than double the amount of the seventy Isabellas and Dianas. The Dianas produced about four pounds to the vine, Catawbas about the same, whilst the Isabellas were almost worthless from leaf blight. The second year the Concords produced about seventeen, Dianas fourteen, and Catawbas ten pounds per vine. The third, which is the present year, the Concords produced ten pounds—would have done as well as last year but for the rot, the Catawbas nearly as much, and the Dianas having overborne last year produced but little. Diana and Catawba have both been troubled with leaf blight the present year, but the Diana is less affected than it was last year. Mr. Seymour would not hereafter plant Catawba or Isabella; would plant Diana for family use; it hangs well and keeps till Christmas. Would plant Crevelling, Hartford Prolific and Concord for market, and Norton's Virginia for wine.

Two vineyards of Mr. Geo. Husmann were visited. He is one of the most zealous cultivators, and has published an "Essay on the Culture of the Grape in the Great West." Mr. Husmann says the Concord, though a strong grower, must be

short pruned. He shortens in like a peach tree, leaving two to five eyes on a branch, and greatly increasing the productive capacities of the vine. Many notes are made by the Committee on the varieties Mr. Husmann cultivates, but we have not space to copy them. The Concord is his favorite, 400 vines produced, in 3 years, layers and 2000 pounds grapes worth \$1,483.

Mr. Poeschel's vineyard contains five acres, all trenched to the depth of two feet, at an expense of \$80 per acre, planted mostly with Norton's Virginia and Catawba.

Here, say the Committee, we first saw the wire trellis oak posts. Seven feet long are put down in every other space, and three No. 11 wires are stretched along—the first at twenty-four inches high, the second at eighteen higher, and the upper at eighteen higher, or five feet from the ground. Mr. Poeschel reckons this the cheapest trellis, and prefers it, because the tendrils winding themselves about the wire save a good deal of tying up.

Mr. Poeschel approves of Mr. Husmann's view concerning the pruning of the Concord. A vine of this variety, pruned with long canes, produced only four or five bunches of fruit the present year, whilst another, pruned on the plan recommended by Mr. Husmann, yielded fourteen or fifteen pounds of grapes. Mr. Husmann thinks Norton's Virginia and Herbemont may need same system.

Two hundred Concord vines, from cuttings put in the ground two years and four months before, yielded the present year \$180 worth of fruit.

Many other vineyards, some twenty or thirty in all, were examined, but the greater number of these were planted with Catawba. The Committee conclude their Report with some notice of grape culture, which may be valuable to those who are planting young vineyards.

#### PREPARATION OF GROUND.

We saw vineyards variously prepared: by ordinary ploughing; by deep ploughing, followed by the subsoiling process; by ditch trenching; by thorough trenching; by terracing, without stone fronts, and by stone terracing. We saw good

crops of grapes on each preparation of ground, though not on every sort of soil. We are inclined to give the preference to the ploughing and subsoiling process for moderate slopes, and the dirt terraces of Dr. Hull for steep declivities; though this latter process is not fully tested. For grounds not adapted by a permeable subsoil for grape culture, trenching appears to be the only guaranty of success, except in the case of the Concord and varieties of equal hardiness. Hence, considering the great expense of trenching, it may be better, as a matter of profit, to plant only the Concord, Hartford Prolific, Norton's Virginia, and other healthy varieties.

#### PLANTS.

Cuttings and yearling roots appear to be the plants generally used, and their apparent success has not been very different. Mr. Husmann, we believe, prefers rooted plants decidedly. Others appear to be quite successful with cuttings, and regard it an advantage to root the cutting where the future vine is to stand.

#### CULTIVATION.

We have seen a good many varieties of cultivation and non-cultivation. The instruments used are the karst and hoe by the hand workers; and the plough and cultivator by those who prefer horse power to the severe and slow processes of European vinedressing.

Too much importance, we believe, cannot be attached to thorough surface culture in this climate and soil, especially for the grape. The general nature of our soil is such that, when beaten down by our semi-tropical summer rains, a hard crust is formed on the surface, which greatly obstructs the nicer processes of vegetable nutriment and growth: and the best conditions can only be secured by breaking up this crust after every rain. The admirably thorough culture seen at Hermann cannot be too strongly commended to all planters of vineyards in this portion of the Mississippi valley; and upon this one point—the thorough and continuous pulverization of the surface during the growing season—we would

concentrate our exhortation. The weeds may take their chance if the stirring is complete.

#### MODES OF TRAINING.

We saw vines trained upon a single stake, two stakes, three stakes, latticed trellis, and wire trellis. The latter appears to be the most preferred method by vinegrowers of the longest experience at Hermann. Mr. Poeschel, as has been stated, says the vines tie themselves to the wires with their own tendrils, and need less labor than with other training. Dr. Hull prefers two stakes to a trellis, on account of the greater ease in going about the vines and through the vineyard. The three stake system of Jacob Rommel appears to comprise, to some extent, the advantages of the stake and of the trellis system (especially of that described as used by Mr. Knox, of Pittsburg, Koch, of Golconda, and Schroeder, of Bloomington.) Whether this last method of Mr. Knox, and others, will prove superior the committee are not able to judge from personal observation, but would refer to the able Report of Dr. Warder, given in the Appendix, for its appearance on the grounds of Mr. Knox.

#### PRUNING.

It is not known that any important fact on this subject was observed by the committee, unless it be the mode of pruning recommended by Mr. Husmann for the Concord and other vigorous varieties.

#### PRODUCT.

The year 1863 has been, we believe, one of the most favorable for all fruits in this region, and not less for the grape in particular. The product everywhere has been unusually large and excellent, the wine of the last vintage of a superior quality. This should be said in qualification of the reports made by several growers, which are such as would render grape growing a very remunerative occupation, could equal yields be expected in every year to come. The returns from the Concord vines of Mr. Husmann, Mr. Poeschel, and others, are enormous; and the yield of the Catawba at Alton and Hannibal is very satisfactory. No satisfactory estimate, how-

ever, can be made of the results of grape growing until we have had more experience with new varieties that seem to be almost entirely replacing the old standards.

#### WINES.

For the information of many who are planting for the purpose of making wines on a larger or smaller scale, we give a brief synopsis of the decisions of the Committee on the quality of those wines made from grapes which can be grown and ripened in the Middle and Eastern States. The character of the Catawba and Norton's Virginia is known, but they are neither of them successfully raised north and east of Pennsylvania.

Concord—Vintage of 1863. Reported as follows:—

No. 1—Theodore Englemann, Mascoutah, Ills.

No. 2—C. Eisenmayer, “ “

No. 3—William Poeschel, Hermann, Mo.

No. 4—Michael Poeschel, “ “

No. 4, by Michael Poeschel, was unanimously selected by the Committee, as best. No. 1, by Theodore Englemann, as second. No. 3, by William Poeschel, as third. No. 2, although a fair wine, was injured, in the opinion of the Committee, by the must having been fermented on the husks of the grape, a treatment which should be particularly avoided with this grape.

The samples exhibited compared favorably with the best Catawba, and the exhibition of three such fine samples establish the Concord as a *wine* grape for the west, beyond controversy.

Delaware—Vintage of 1863. Reported as follows:—

Only one sample was exhibited, by Jacob Rommell, Hermann, Mo. An excellent wine, of delicate bouquet and great body, considered by the Committee the best wine exhibited in this class.

These were all of the class of white or light red wines.

Clinton. Reported as follows:—

No. 4—By Jacob Rommell, Hermann, Mo.; an excellent dark red wine, of good body and excellent flavor. Considered the best red wine on the table.



Nos. 1, 2 and 3—By Mr. McClure, very inferior; evidently made from unripened grapes.

Such is the condition of grape culture in Missouri and the new state of Illinois. It shows how important the subject of grape growing is, and the great interest it is destined to become to the cultivators of the country. There is no doubt we shall, ere long, supply light wines of a quality equal to those of the best French and German vineyards.

#### POMOLOGICAL GOSSIP.

GOOSEBERRY CULTURE IN GREAT BRITAIN.—Few of our American cultivators are aware of the great interest taken in the growth of the gooseberry in England. Here it is almost an unknown fruit, and few collections contain any of the foreign varieties, which, unfortunately are liable to mildew. But it is a very fine fruit in English gardens, and one which, if it could be raised here in the same perfection, might take the place of many of the small fruits.

The Annual Gooseberry Growers' Register, a record of the gooseberry shows of 1863, forms a volume of more than 200 pages, giving the results of 155 gooseberry shows held during last year, and recording the respective weights of the berries exhibited, the names of the varieties, and the names of the winners. There is a fraternity of gooseberry growers in England, and this volume is the bond of union. Besides the exhibitions, all the new seedlings of the year are named and described, with the weight of each.

A few of the heaviest new sorts are as follows:—

Reds—Bratherton's Foreman, 29 dwts. 12 grs.; Pilkinton's Farmer, 24 dwts. 4 grs.; Leicester's Smoker, 22 dwts. 22 grs. Yellows—Walton's Garibaldi, 22 dwts. 19 grs.; Eardley's Hannah, 22 dwts. 5 grs.; Wilkinson's Oyster Girl, 22 dwts. 2 grs. Green—Bratherton's Birchen Lane, 24 dwts. 17 grs.; Prophet's Diadem, 23 dwts. 8 grs.; Becket's Bravo, 22 dwts. 19 grs. Whites—Walton's Annie, 24 dwts. 12 grs.; Soars's Miss Soars, 17 dwts. 5 grs.; Shingler's Edna, 16 dwts. 2 grs.

A table at the end of the Register gives at one view the number of prizes won by each variety and the weight of the heaviest berry. From this it appears that among Reds the favorite is that called London, which has taken 253 prizes, and has attained the weight of 34 dwts. 1 gr. Of Yellows, the highest placed is Leveller, which has won 229 prizes, and been grown as heavy as 28 dwts. 18 grs. Greens, like the Yellows, weigh less than the other classes. The heaviest is Shiner, which weighed 29 dwts.; but Stockwell, which in weight only reached 28 dwts. 13 grs. has now many more prizes, as many as 168 falling to it. In Whites, Antagonist has won 267 prizes, and attained 34 dwts. 21 grs. in weight.

If the same interest manifested by the English gooseberry growers, in the culture of this fruit, was felt by our own cultivators, it would be but a few years before our gardens would contain improved varieties of Houghton's Seedling, adapted to our climate, with berries undoubtedly much larger if not double or treble the size. As we have eaten the fruit in English collections, it is well worthy of extended culture, and we hope it may receive more attention from our amateur cultivators of choice fruits.

NEW FOREIGN GRAPES.—The recent production of new varieties of the foreign grape of so much excellence is somewhat remarkable after years of cultivation of the same old kinds, with but few additions; all at once there seems to have been brought forward a multitude of seedlings, most of them possessing very superior quality, and destined apparently to take the place of the old favorites. Much attention seems to have been directed to the growth of new seedlings by the English cultivators, and though some of them may be simply additions, without any distinctive qualities, others appear to combine the various excellences which are necessary to make them popular. In addition to the kinds we have heretofore noticed, several have been exhibited and favorably reported upon, though only one or two have yet been named; one of the most prominent appears to be the following:—

DUCHESS OF BUCCLEUGH GRAPE.—A new variety, raised by Mr. Thomson, gardener to the Duke of Buccleugh. Mr.

Anderson, of Oxford Castle, gives the following account of it in the Gardeners' Chronicle:—"Being in Dalkeith a few days ago, and having an hour to spare, I called at the palace gardens there. I was fortunate in finding Mr. Thomson at home, and still more so in seeing the new variety of grape in an early stage of its growth. I was shown into a lean-to house, where there are numbers of plants of it fruiting in pots. There are also some Black Hamburgs in the same house, but they are entirely eclipsed by the Duchess. On entering the house I was astonished at the profusion of bunches showing upon quite young vines. The rods are about eight feet long, good stout canes, though not extra strong, having been grown under the shade of vines last year; consequently they are not so well ripened as they would have been under more favorable circumstances. Nevertheless many of the shoots are producing large bunches at the third and on the fifth leaf, proving to a certainty its free-bearing character as an early grape. I had the curiosity to measure some of the bunches, which (though not yet in flower) were 14 inches in length, excluding the stalk. It may therefore be judged what they will be when fully grown; and this, be it recollected, from pot vines started on the first of January. I had also the pleasure of seeing it in another house, a stage later, planted out. The flower of this new grape resembles that of the Chasselas Musqué, which is one of the parents, but the seedling is free from the cracking propensities of that sort. It was exhibited last year at Kelso, where it carried off the first prize for the best-flavored grape. Among the many grapes of recent introduction I am convinced that the Duchess will occupy a place in the foremost rank."

**THE CHAVOUSH GRAPE.**—This is a comparatively new variety, which we have accidentally omitted to notice. It has been exhibited before the Fruit Committee of the Royal Horticultural Society, and is described as having a "large bunch, nine and a half inches long, tapering, very well set, with one large shoulder. The berries are large, long-oval, and the skin is of a bright amber color, thin, and adhering close to the flesh, which is rather firm, juicy, rich, and highly flavored.

The bunch is very showy, and will prove a valuable addition to our first-class collections of large-bunched white grapes. It was unanimously voted a first-class certificate." It was introduced in 1857, when a cutting was given to Mr. Constantine, gardener to C. Mills, Esq.; it had been sent from Bithynia, Asia Minor, and was represented to be the best grape that the Sultan had at his table. Mr. C. states that it is a strong-growing variety, an abundant bearer, a very fine setter, and bears freely under pot culture. It grows freely in the same house with Black Hamburgs, but requires a week or two longer to thoroughly ripen, but does not require any additional heat, and hangs well without shrivelling. Mr. Spencer, of Bowood, thinks it will supersede the Golden Hamburg.

MAD. TREYVE PEAR.—A new variety, offered for sale by Parisian nurserymen, which appears by the representation to be a very large pear, and is described as being ripe at the end of August and beginning of September. The fruit is in fact extra-sized, broadly and bluntly turbinate, pale green in color, and dashed with flesh color; the texture is said to be fine, melting, and juicy, with a sugary aromatic flavor. The tree is vigorous and very fertile.

WINCHESTER AND REBECCA GRAPES.—“I want to learn more about the Winchester grape; as to its earliness and its quality as compared with Rebecca and Delaware. By the way, the Rebecca does finely here. It fruits better even than Delaware, and is fully equal in quality, and is a better keeper.” Thus writes our correspondent A. D. G., of Clinton, N. Y., and we are glad to answer his questions as well as present so good a recommendation of what we have always considered our finest grape—the Rebecca—as much superior, in our opinion, to the Delaware, as the latter to any common grape. We have never doubted where it was treated right it would answer the expectations of all. It grows more rapidly than Delaware, is handsome, and possesses an aroma superior to the best Frontignans or Muscats. The Winchester is not of the same class, but approaches the Union Village and other black grapes. It is very large, quite black, with fine bloom, and its merits over the Union Village, of which it is a seed-

ling, are its earliness, being about a week earlier than that variety. It is free from pulp, and its quality is well endorsed by the Hon. J. S. Cabot, late Chairman of the Fruit Committee of the Massachusetts Horticultural Society, who has often spoken of it, in his annual reports. It has not, we believe, yet fruited only in the collection of the originator.

**POPE HAMBURGH GRAPE.**—This variety of Hamburgh, which is little known among our cultivators, is highly spoken of by the English grape growers. It is said to be a kind well worthy of culture from its being the earliest and sweetest of the numerous varieties of this really useful and most generally grown vine. It is the only kind of Hamburgh grown by Mr. Robertson of Swinnerton, near Stowe, in Staffordshire, and we have seldom seen finer crops than he obtains. The bunches are large and handsome, and black as jet, and the berries although not so large as what is called Wilmot's Victoria are better flavored. The Pope grape is the best forcing one we have ever tried, being a fine grower and an abundant bearer, and becoming well flavored even when ripened in February and March. It is the best of its class to plant in small houses for producing early crops.

**DOOLITTLE'S BLACK-CAP RASPBERRY.**—Among smaller fruits this variety holds a high place. Last year Mr. S. Hood of Springfield (Ohio) gathered from half an acre 1450 quarts, for which he received \$182.85, and he says the prospect for the coming season is one-third more. The price per quart was only 12½ cents. Reducing the quarts to bushels, the quantity would be 80 bushels to the acre. The Black Cap is an excellent fruit, but compared with the Franconia raspberry will not give much more than half the product in dollars and cents per acre.

---

## THE TRITOMA.

FROM THE GARDENERS' CHRONICLE.

THE Tritoma is undeniably one of the showiest and most ornamental autumnal flowering plants, and deservedly claims a prominent place in every flower garden. Though intro-

duced many years ago, its merits appear to have been overlooked, and it was not until a few plants in the Royal Gardens at Kew, some four or five years ago, flowered in great perfection, that its real beauty was rendered prominent. Since then it has attracted general notice, and its introduction into other gardens, where it has still further displayed its blossoms, has rendered it one of the most popular, as it is one of the most showy, of ornamental plants.

Though not hardy in our climate, (and scarcely so in England,) it is still hardy enough to bear rough treatment, and it may be as easily kept in a cold frame, a dry cellar, or under the stage of a cold greenhouse during the winter, as the dahlia. Its roots are strong and somewhat tuberous, and if kept rather dry, and out of the reach of severe frosts, they remain in fine condition for planting out in spring, and bloom abundantly in August and September.

But showy as the *Tritoma* is, under ordinary treatment, its great beauty is only displayed when the roots acquire a good size, and are planted out without division. They then make fine specimens, and throw up successively, and for a long time, their brilliant spikes of orange and yellow flowers, often a dozen or more from each root; rising from the deep-green and gracefully recurved foliage, their stately stems, loaded with bloom, are the most conspicuous objects of the garden.

We have already in a previous volume spoken of the *Tritoma*, and we now append a more detailed account of it, as it appears under good treatment in English collections. It will be seen that, like other plants, it varies from seed; and, though all the seedlings may possess great attractiveness, the most distinct and beautiful so far, are those known as *T. Uvaria glaucescens* and *T. grandis*, the last probably the same as that known in our collections as *T. grandiflora*. We commend both of them to the attention of all lovers of really showy, attractive, and highly-ornamental plants:—

There is scarcely a plant in cultivation—perhaps none—which as an object of out-door embellishment equals the *Tritoma*, or as some would now call it the *Kniphofia*, with its

glow of brilliant coloring, lightening up as it were our outdoor gardens at a season when they show more or less evident symptoms of dulness and exhaustion. Not even the chrysanthemum itself, with all its variety of form and coloring, and with all its beauty too, can boast of so much thorough effectiveness out of doors during the late autumn and winter months as the late Tritomas; and we must go to our brilliant-berried shrubs to find something of a parallel. There is a peculiar grandeur about a fine well-flowered mass of the Tritoma; and in the south of England at least our national botanic garden at Kew has done much to render it popular. But, like other plants, Tritomas vary in their quality, the variety no doubt being attributable to their seedling origin. And they not only vary in the coloring and quality of their flowers, but also in respect of their habit, some of them blooming early, and some late in the autumn.

In a letter now before us from a gentleman who has employed the Tritoma very extensively for decorative purposes, the notion entertained by some persons that these plants reproduce themselves true from seed is altogether exploded. I have at least proved, he writes, that the best variety of *T. Uvaria* does not do so, and that from a packet of seed many varieties may be obtained, few, if any, being at all equal to the original. This best variety of *T. Uvaria* is the one which has become so well known in consequence of having been brought into notice at Kew. It differs from all others in its much more glaucous leaves, and from the other earlier sorts in its brighter and richer colored flowers. For the sake of distinction it is now known in gardens under the name of *T. Uvaria glaucescens*. It is no doubt one of the two finest forms of this noble autumn flower which are at present to be met with in our gardens, but it is an early bloomer, and is in its best condition in the months of August and September. Our informant describes a row of it nearly 50 yards in length, with upwards of 850 spikes of flowers developed at one time, as a floral picture of the most gorgeous character, not easily to be forgotten.

The value as a decorative plant, of the variety to which we have just referred, is on all hands admitted, but it appears

that there is in gardens another very distinct variety of equal beauty, and having the very useful quality of blooming late in autumn, and in favorable seasons continuing in a fresh and very effective state quite through the winter. Such a plant deserves prominent notice as a real acquisition for our flower gardens. This is grown sometimes as *T. Rooperi*; but from the examination of a boxful of flowers sent to us about New Year's Day, by Mr. Parker, of Tooting, who is cultivating it extensively, we are inclined to question its relationship to *T. Rooperi*, which, at least in the typical form, is an early summer flowerer, and appears besides to have some structural differences.

The provisional name of *Tritoma grandis*, which it seems well to deserve, has in consequence been adopted in gardens for this late-blooming plant, of which we shall now proceed to record such particulars as have become known to us. The leaves have the broad base and recurving habit of those of the true *T. Rooperi*; indeed it is probable that this similarity of aspect in the foliage may have led to the use of that name. The plants come into bloom towards the end of September or in October, and a succession of flower-spikes is produced all through the winter, if the weather continues at all mild—in such seasons as the past, for instance, continuing in full beauty quite into the new year, and in those of milder character, lasting on till February. The stems grow to a height of six or sometimes seven feet, more than half of their length being clothed with flowers, and smaller lateral blossom-spikes are also sometimes produced from the main stems. We are informed that the flower-spikes themselves last in flower twice as long as do those of the other kinds, and that the plant is a much stronger grower. When fully developed the flowers are quite equal in color and effect to those of *T. Uvaria glaucescens*. The winter-blooming habit of this *Tritoma grandis* sufficiently distinguishes it from the variety just mentioned; its foliage distinguishes it from the other recognized varieties of *T. Uvaria*, such as *serotina*; while certain points relating to the bracts and the flowers separate it from *T. Rooperi*, so far as there is any evidence of what that plant is: besides which, the latter blooms in the month of May.



But what are all these reputed species of *Tritoma*—*Uvaria*, *Burchellii*, *Rooperi*, &c.—so very imperfectly distinguished and so difficult to distinguish by botanists, and yet so different in a horticultural point of view? The inference which may be drawn from our present knowledge of the variability of *T. Uvaria* when originated from seeds, is that they are wild varieties of one and the same species, somewhat modified by the conditions under which they have been grown, or perhaps cross-bred varieties of aboriginal origin. We hope during this season to notice more exactly the characteristics presented by *T. Rooperi*, which may throw some light upon the subject.

Reverting to the more strictly horticultural question, we may say, that the two plants we have alluded to under the names they bear in gardens, *T. Uvaria glaucescens* and *T. grandis*, are both of them really grand subjects for garden decoration, and that by planting the two alternately a fine display of their brilliant flowers may generally be had for five months at least in succession. They are telling objects as isolated specimens dotted about the pleasure ground, but still more so, if possible, when used as a back row for a ribbon or other flower border. We may add, moreover, that there is no finer plant than this *T. grandis*, for the decoration of a cool greenhouse or conservatory in the autumn and early winter months, for which purpose the plants may either be grown in pots or lifted from the borders when they are commencing to flower, which latter may be done without appreciable detriment to them if they are afterwards kept shaded for a few days.

---

## THE INDIAN AZALEA.

FROM THE GARDENERS' CHRONICLE.

In a previous volume we have recorded our own experience in the culture of this superb greenhouse plant, and those who are desirous of availing themselves of it, are referred to that article. The azalea is a decided favorite of ours, and we have not only cultivated all the best varieties and the most recent introductions, but have produced some very fine seed-

lings, which rank high among the imported novelties. But in the growth of so fine a plant it is well to know how other successful cultivators manage their plants, and though we have from time to time given their views, we have seen nothing which so completely covers the whole ground as a series of articles by Mr. Wm. Barnes, a skilful nurseryman, near London, and we do not know how we can better promote a taste for the azalea—the finest decorative greenhouse or exhibition plant—than in giving them a place in our pages.

American cultivators have hardly begun to appreciate the richness of the azalea. Admirably adapted to the cool greenhouse or even parlor, it can be made to bloom successively from January to July, a full space of six months, and when we consider the ease of its culture, the magnificence of a fine specimen, or the long period that it remains in bloom, it is everyway worthy of the greatest attention, and will richly reward the real lover of fine plants for all the labor and time bestowed upon its culture.

Mr. Barnes commences his article with a very detailed and full account of the production and introduction of new varieties, so called, but which he believes, and has proved in some cases, to be simply sports fixed by grafting. The continental growers, with their skill in the manipulation of plants, immediately propagate any branch or shoot which shows a new color, and the result is a multiplicity of names, without any really distinctive character; as the plants soon sport back into their old color. At another time we may copy Mr. Barnes's remarks, as they are not only interesting, as recording the progress of the growth of this favorite flower, but might aid the amateur in making a selection of kinds. The season is at hand, when azaleas intended for specimens should be taken in hand, and we now give that portion of his article which will materially aid in the growth and treatment of the plants, leaving to another number the opportunity to refer to his hints on varieties, and his advice as to the most desirable kinds for large and small collections:—

Let me now give a few hints upon the general management and cultivation of this showy flower, commencing with small plants as they are sent from a nursery. In the first

place it is necessary to be very particular to selecting plants that are worked upon clean healthy stocks from 6 to 12 inches high; even if 18 inches high it will be so much the better. I am convinced that a long clean stock is more conducive to their well-doing than a short one, and the great beauty of a specimen azalea is to weep down over the rim of the pot. If the stem is not sufficiently high to allow of this, the bottom of the plant soon becomes too thick, and the shoots so confused that the blossoms have no chance of properly developing themselves. It may be said by some that they have always had plenty of bloom upon their plants without paying all this attention to the stocks. But I would ask them, did they ever compare the quality of the blooms produced by plants that have been properly trained and the wood neatly thinned, with those that have been allowed to grow thick and confused? I think there will not be two opinions upon the matter.

I will suppose then, that we are commencing with nice young clean-stemmed healthy plants. In the first place put one stake to each plant, selecting the longest and most central shoot to be taken up as a leader, and never allowing the stake to be higher than the top of this shoot. Then commence at the base, and tie the shoots down with very fine string, or with thread if the wood is not too stubborn, for the smaller the material the neater the plant will look; tie the thread loosely round the shoot to draw it down to the stake, so that it may assume a weeping character. In this way the shoots are to be so disposed as to form a regular well-shaped pyramidal plant; the lower tier of branches round the bottom being first drawn down with the thread or string to the position required, and then the second tier, these latter not requiring to be drawn down so much as the first. All however must be brought into their proper places, so as to make the plant appear regularly and neatly furnished on every side. The shoots may be held where they are required by reversing the string around the stake. When the plants are first taken in hand for tying out, the tops of all the longest shoots are to be removed, in order to bring the plants into a symmetrical form. The leader should never be allowed to grow more than four inches in length before it is topped;

this will make the plants throw out their side shoots more freely, and thus they will become well furnished. It is as soon as the shoots have grown three or four inches in length, that the strongest and best is to be selected and tied up to form the leader, and the others tied down in the manner described.

The plants are now, we will suppose, growing in six-inch pots, made shapeable, just out of bloom, and commencing their season of growth. Under these circumstances they should be put into moderate heat to make their growth. If bottom-heat is available for them, so much the better, provided it is not too strong; that supplied by any half-spent fermenting material will suit them best. If there are more shoots to be disposed of, treat them precisely the same as the two first tiers, that is to say draw them down to the place where they will be most useful in furnishing the plant. The foundation will now have been laid for a well-balanced plant, and by keeping this in view while they are growing, there will be no difficulty in building up handsome well-shaped and well furnished plants; indeed, with such a foundation, there is but little attention required as they advance in growth, to keep them in good order. After the shoots have once been tied down and made pendent by keeping on the string for 12 months, they will all become set to this shape, and will never rise again, even though the ties may then be removed. Plunge them half the depth of the pots, and keep them close or nearly so for a few days until they begin to break into growth freely; then admit air rather plentifully during the day. Syringe them liberally in the afternoon, and shut them up while the sun has power to raise the temperature to 75° or 80°. Thus treated, they will make rapid growth, for no plant I am acquainted with enjoys a close moist atmosphere more than the azalea. As the season advances, and the sun becomes bright and powerful, a very thin light shading must be used for three or four hours in the hottest part of the day, but it must not remain over them too late in the afternoon, and on no pretence is it to be used at all unless the sun is very powerful. Too much shading will only induce weak, long-jointed growth. In the course of four or five weeks they will require to be examined at the

root, and if they have done well and their pots are quite full of roots, they must be repotted. They must never, however, be shifted into larger pots until they have quite filled with young roots those in which they are already. If the roots are in the proper state, give them a liberal shift, that is to say, put them into pots two sizes larger, from a 22 to a 16. The soil, to be prepared in quantity according to the number of plants to be potted, should be prepared as follows:—Take of light fibrous peat and heavy rich peat—the latter such as may be obtained from Petersfield in Hampshire, or Wanstead in Essex—equal parts; add to this a fourth part of good sharp sand, and well mix the whole together.

I would here remark that there are various opinions about preparing good peat for potting. Some prefer to use the peat rough, with the coarse fibres and roots, precisely as it is dug. This, however, is unwise, as these roots and fibres will sometimes become partly decomposed, and breed a poisonous fungus, which, spreading through the ball of earth, will ultimately kill the plant. Unfortunately I have had to suffer from this real and only cause of death, by losing some of my best and choicest specimens. The next objection I have to the use of rough peat is, that the ball of earth cannot be made sufficiently solid at the time the plant is shifted for the latter to prosper for any length of time. I would therefore recommend the peat to be broken up by being beaten with heavy sticks, and sifted through a moderately coarse sieve, rubbing out every particle of soil, and rejecting every root or strong fibre. When this is done, and the sand is added and well mixed with it, the compost will be ready to commence potting. Having the pots prepared according to the size required, by well draining them with potsherds, say two inches deep, put over this drainage some of the lumpy portions of the peat unsifted, but broken into pieces about the size of a small hen's egg, all coarse fibres and roots being picked out. Place about an inch of this over the potsherds, and mix with it a liberal quantity of sand, which is not to be thrown in and allowed to remain in a layer upon the rough peat, but is to be mixed with it, so that the roots may work freely into it after the plants have recovered from their removal. I mention this because I am aware that very little

omissions sometimes serve to frustrate the best endeavors; and I have seen it happen, even when orders have been distinctly given to mix the sand with the rough peat, that the direction has been unnoticed, or perhaps thought of too little importance to be attended to. I have had plants come into my hands, in which, in potting, a handful of sand has been thrown upon the top of the peat, forming a layer, and when such plants have come to be again shifted, it could plainly be seen that the sand had done injury instead of good, the roots not having penetrated it, and the rough peat being rendered next to useless.

These matters being attended to, the plant is to be taken out of its pot and examined. If the ball of earth and roots is in good order, shift into the larger pot; but if it should be discovered that the ball is dry, by no means shift until it has been thoroughly soaked, for which purpose a tub of water should be provided, and the plant stood into it, so that the water may cover the ball entirely, in which position it is to remain two or three hours, or until the water has penetrated the whole ball. When this is the case, take it out and allow it to drain well before it is potted, for to pot while the water was still dripping from it, would only tend to make the new soil wet and sour. In potting always be provided with two or three rammers of different sizes, and as the fresh soil is added, ram it well down with that rammer that best fits the space between the new pot and the old ball of earth. This is the most important particular in all the various stages of potting. The greatest possible attention should be paid to make the new soil as solid as the old ball of earth, for if this is not attended to at this time, the cultivator may rest assured that his endeavors will not be rewarded with much success. I feel confident that in the case of half the plants that are lost or get into a sickly state of health, the evil could be traced to one of these two causes; either the plant has been potted with its ball dry, or the new soil has not been made as solid as the old ball so that both may absorb moisture alike. It is well known that water will not percolate through hard solid ground when it can find its way into any that is soft and porous; and this of course would be the condition of the

newly-potted plants if the fresh soil was not rammed down as solid as the old ball; but if this firm condition is secured, the water will filter through the whole mass of earth in a regular way. The potting is to be finished off by covering the old ball about half an inch, ramming down both old and new soil, then shaking a little fresh soil on the top to prevent the ball from cracking or shrinking, this being pressed down with the hand, and the surface made neat and level, and finally sprinkled with a little dry sand on the top to keep the surface open and healthy.

Any long shoots that may have grown should be pinched back, to cause the growth of young shoots to fill out the plants; and where the shoots are plentiful, if any of them are too vigorous they should be tied down with string so as to check them. This being done, the plants may be returned to their former warm quarters, where besides daily syringing them so as to keep up a moist atmosphere, and preserving a genial temperature, with proper attention to watering, there will be but little more to be done, with the exception of keeping all the strong shoots which have a tendency to lengthen pinched back as early as it can be done, this being continued until July,—not later however, if the plants are required to bloom the following spring. After they are topped for the last time they must be kept in heat until they have pushed forth fresh shoots, and formed the bloom buds upon the point of each. As soon as this is ascertained to be the case, commence in a gradual way to give more air and exposure; and as the season advances, the plants may either be exposed entirely to the weather by placing them out of doors, or they may be kept in the pits with plenty of air day and night; they will thus become hardened, and the wood well-matured before winter.

---

### MACHÆRANTHA TANACETIFOLIA.

BY THE EDITOR.

WE have in our previous volumes alluded to the value as well as the beauty of many of our well-known annuals for the summer decoration of the flower garden, and cannot omit

to put in their claims to a prominent place, notwithstanding the passion for bedding plants—all well in their proper proportion—but which should not monopolize all the ground. We have already figured some of the former of recent introduction, and now add another belonging to the aster tribe, but now made a new genus under the name of *Machærantha tanacetifolia* (FIG. 8).

It is a hardy annual, flowering abundantly all the autumn if the seeds are sown in April or May. Messrs. Vilmorin, the French seedsmen, describe it as “a very pretty little annual plant, recently introduced into our gardens, though discovered many years ago. It grows to the height of 10 or 12 inches, with numerous divergent and erect branches, and a deeply and finely cut foliage, of an ashy-green color. Its flowers, which are very profuse, appear in clusters, are large, from one to one and a half inches in diameter, with a small yellow disc, with the florets of a lilac violet. They appear in succession all summer.”



8. MACHÆRANTHA TANACETIFOLIA.

Our engraving represents the habit and general character of the plant; its finely-cut foliage appears in pretty contrast with the large and entire leaves of other asteraceous plants. The seeds sown now will produce plants which will bloom freely all the autumn, and if another sowing is made in August the plants will bloom early in spring, thus keeping up a succession throughout the summer. We can commend it as a neat and pretty plant for the flower garden.



## REVIEWS.

TEN ACRES ENOUGH; a Practical Experience showing how a very small Farm may be made to keep a very large Family, with extensive and profitable Experience in the Cultivation of the Smaller Fruits. 1 vol. 12mo. pp. 255. New York, 1864.

It is the great error of our farmers that they undertake the cultivation of too much land. It is abundant and cheap, and hence they are eager to possess many acres, believing that if one acre is profitable any greater number may be made so; the principle is true, but in practice it does not often prove so. Often, indeed, it is the reverse; and as the farm increases in extent the average profit per acre is diminished. There are many exceptions to this, but unfortunately it is the rule.

To show the fallacy of the increasing desire for extended farms, is the object of the work above quoted.

"Ten acres enough," will appear a modest claim for an intelligent man who wishes to farm either for pleasure or profit. It is but little more than many village gardens. Yet when properly managed affords more satisfaction and yields far more profit than ten times the number. And the writer proceeds to show how a little land, well tilled, is far better than a great quantity half cultivated. The author in his preface alludes as follows to the passion for extensive farms:—

"The mistaken ambition of owning twice as much land as one can thoroughly manure, or properly cultivate, is the great agricultural sin of this country. Those who counsel it, by beginning wrong, too frequently continue wrong. Owning many acres is the sole idea. High cultivation of a small tract is one of which they have little knowledge. Too many in their several classes think they know enough. Hence in their eyes the owner of a plot so humble as mine, must know so little as to be unable to teach them anything new."

The writer, for the name of the author is not given, then proceeds to give his experience, beginning with city life—

meeting with losses in the reverses of 1857, and finally purchasing a farm in New Jersey. His removal to it, and his subsequent cultivation of it. What he raised and how he raised it. What he sold and how much profit,—including the growth of fruits, particularly the smaller kinds, and closing with general observations on gentlemen farmers—unsuccessful men—where to locate, east or west; and a final laudation of New Jersey in particular; leaving the conclusion that the object of the work is to sell a large farm, (uncultivated of course,) adjoining his ten-acre lot.

The work is intelligently and pleasantly written, and contains much information of a general nature on the subjects of which he treats, but when the author launches out into fruit culture as a business, he evidently knows but little about it, and his experience as to the best varieties is limited enough. The old stories of \$400, \$500, and \$800 per acre profit, for certain fruits and vegetables, are repeated, and in conclusion the great fact is stated that while the New Jersey market gardens produce annually \$20 per acre, those of New York and Pennsylvania produce only \$5, and while the fruit gardens of the former State produce \$28, the latter only produce \$5 or \$10!

We have no space for extracts. The book as a whole is a pleasant contribution to our agricultural literature, and a capital laudation of New Jersey lands.

---

THE GRAPE CULTURIST; a Treatise on the Cultivation of the Native Grape. By A. S. Fuller, Practical Horticulturist, Brooklyn, N. Y. 1 vol. 12mo. pp. 262. New York, 1864.

The increasing number of new native grapes of high excellence, has caused a more extended culture of this fruit, and a greater desire for information upon their growth and treatment. Much has been written in our own and other horticultural magazines on the culture of hardy grapes, and two or three volumes have been published upon the subject. Yet their appears to be a demand for further information, and Mr. Fuller has come forward with his work to supply it.

He does not, as he states in his preface, intend "to promulgate new theories or principles, but to elucidate the practice of those already known. Nothing is offered for the purpose of instructing those who are already familiar with the subject, but only for those who do not know, and are seeking knowledge."

The work comprises twenty chapters, dedicated to Growing from Seed—Propagation under glass and in the open air—Layering the Vine—Grafting—Hybridizing—Transplanting—Soil, and Situation—Planting—Grape Trellises—Pruning—Garden Culture—Insects and Diseases—Description of Varieties—Review of Systems of Training, &c.

These contain the results of Mr. Fuller's experience and that of other experienced cultivators, and are given in a plain and familiar way, easily understood by the merest novice in grape culture. Though a simple understanding of the treatise will not always insure success, it will at least serve as a guide to the right course to pursue, which can only be thorough when theory and practice are combined. All the modes of propagation, planting, training, &c., are illustrated with engravings. The chapter on varieties contains brief descriptions of upwards of 30 new and, some of them, approved grapes, besides brief notices of a large number, some of which have been highly spoken of, but of whose merits little is yet known, and several being decidedly inferior or worthless. Mr. Fuller agrees with us that the Rogers's Hybrids, so called, are only "pure native varieties of the *Labrusca* species."

As a whole, Mr. Fuller's book is an acceptable addition to our stock of information upon the management of the hardy grape, and will convey much valuable information to all who are interested in the culture of this fruit.

## General Notices.

**A NEW GRAFTING WAX.**—Several of our friends who have tried the following composition as a grafting wax have been much pleased with it. We see it also recommended in some of the horticultural journals, to wit:

one pound of rosin, five ounces 95 per cent. alcohol, one ounce beef tallow, one table-spoonful spirits of turpentine.

Melt the rosin over a slow fire, add the beef tallow, and stir with a perfectly dry stick or piece of vine. When somewhat cooled add the turpentine, and last the alcohol in small quantities, stirring the mass constantly. Should the alcohol cause it to lump, warm again until it melts. Keep in a bottle. Lay it on in a very thin coat with a brush. In a room of moderate temperature, the wax should be of the consistency of molasses. Should it prove thicker, thin it down with alcohol. It is always ready for use, is never affected by cold, and heals up wounds hermetically.—(*Ger-mantown Telegraph.*)

---

**POINSETTIA PULCHERRIMA.**—A more charming and beautiful plant than this is during the winter months, when grown in perfection, it is difficult to imagine. Mr. Mink, gardener at the Cedars, Tottenham Green, sent a cut specimen of it to the Royal Horticultural Society's gardens, at South Kensington, a fortnight ago, which was placed in water in a Wardian case, and is still comparatively fresh. Its gorgeous whorl of vivid scarlet leaves measures 49 inches in diameter, and the plant from which it was cut bore three other flower heads of similar beauty. Mr. Mink states that he has 15 plants in one stove growing in eight and nine-inch pots, and having from four to six flower heads on each plant, and that many are of the size just named. Their beauty has been the admiration of all who have seen them.

As the details of his method of treatment may be useful to your readers I venture to furnish you with them. The plants are partially dried off preparatory to their being set down in pots. As soon as the young shoots are fairly started they are taken out of the pots, the ball reduced, and the plants repotted in the same sized pots. They are then placed in a cold pit, and kept close a short time, after which air is admitted freely, day and night, until the beginning of September, when they are again placed in the stove, and about the middle of November their flowers appear, encircled by a magnificent whorl of scarlet leaves, which remain in perfection for a space of six weeks, and of semi-perfection for two or three weeks longer.

The Poinsettia is a plant now being grown very largely for the London market, and if properly hardened off it is peculiarly fitted as an ornamental plant for drawing-room decoration. If placed in a plant case, free from dust, its period of flowering will be lengthened, and its beauty long preserved.—(*Gard. Chron.*)

---

**EXTENDING VINE BORDERS UNDER GRAVEL WALKS.**—With reference to the communication of an old subscriber, I feel confident that the recommendation of his gardener to extend the border under the gravel walk, in order to give the roots more room, is very judicious. I expect very shortly myself to be under the necessity of having recourse to the same expedient, and my reason for coming to the conclusion is this:—A few years ago I had occasion to transplant a Jefferson plum tree growing in the middle of

the orchard-house near the foot path. No artificial walk had been made, and therefore it was composed merely of the natural soil which is moderately light. On taking up the tree I found that it had thrown out a multiplicity of beautiful fibrous roots quite across the walk, and coming within three inches of the surface. If I rightly remember, you have, at times, expressed an opinion that no possible harm can result to the roots of fruit trees from pressure on the surface, provided the soil is of not too stiff a character. On examining the roots of the tree referred to, it was evident that under the foot path they were completely in their element; and there cannot, I think, be a doubt as to the accuracy of the view which you have taken on this subject.—(*Gard. Chron.*)

---

**PEGGING DOWN ROSES.**—Mr. C. J. Perry strongly recommends pegging down roses for the flower garden, and states the advantages to be, 1. That a much greater quantity of good blooms is produced. 2. The blooming period is considerably prolonged. 3. Many kinds which are otherwise too much crowded with buds to open freely, will thus produce single blooms of great size. 4. The plants are less subject to injury from winds. The mode of procedure which is described in the *Florist*, is to take vigorous plants budded low on the Manetti, or better on their own roots; to cut away all the small shoots and a few inches of the ends of the strong ones; and to bend these pruned shoots carefully down to the ground and fasten with pegs strong enough to last for the season. The result is a crop of fine blooms—such blooms indeed as enabled Mr. Perry to carry off two leading prizes at Birmingham, last July. But, besides the flowers, many shoots will be produced from the base, too strong for summer flowering, but most of them such as to produce noble flowers in the autumn. These are the shoots for pegging down the following season. The old ones are cut away in the course of the winter, and the plants with their ample supply of strong shoots, four to eight feet high, are described as then resembling raspberry bushes. These shoots are bundled together and tied to a stake, to prevent their being injured by wind, and at the latter end of March are pegged down. Mr. Perry observes, that when this method of pegging down and dwarfing strong growing roses becomes generally known, many of the valuable robust show varieties will occupy the prominent position in our flower gardens to which their merits entitle them.—(*Gard. Chron.*)

---

**DRACÆNA TERMINALIS.**—Having grown quantities of this ornamental-leaved plant, for decorative purposes, I have been often amused with such exclamations as “Oh! what beautiful plants, how do you obtain them?” To this question I reply, that I can propagate them by the thousand. Nevertheless I am certain that, in many instances, the proper cultivation of this plant is not sufficiently known, or at least that it does not receive that amount of attention which it so richly merits. It is a strong-growing shrub from the East Indies, and should be kept in a warm house, where it can have bottom heat during the season of growth. Its propagation is easy, and may be effected in various ways. When a few plants only are

required, the young shoots or suckers will afford a sufficiency of cuttings, which may be taken off with a sharp knife, as soon as they become a little solid at the base, and inserted singly in small pots. Bottom heat should be given them, until the roots are formed. If numbers of them are required as early as possible, and an old plant or two is at command, the operator may with certainty proceed in the following manner. Having allowed the plants to get dry, but not so much so as to cause the leaves to flag, cut up the whole stem, and fleshy roots, into pieces one to two inches in length. Then provide some well-drained pans, and a compost consisting of equal parts loam, peat, and silver sand, poured through a quarter-inch meshed riddle, place over the drainage a layer of fibrous peat or moss, then two inches of the compost, and on this place the cuttings an inch apart. Cover the compost to the level of the vines, slightly cover with sand, and plunge the pans in bottom heat; if covered with glass, to partially exclude the air, so much the better. Take care they do not suffer from excess of water. If kept in a moist atmosphere, and slightly shaded, they will require little or no water until such time as they show signs of growth. They will soon make shoots a few inches in length, and when they have developed two pairs of leaves may be potted off singly into small pots, using the soil in a rougher state than that recommended for the cuttings. Plunge the pots in bottom heat in a nice moist shady atmosphere, and keep up a temperature of 70° at night, with a rise of 10° to 15° during sunshine. They will make rapid growth, and may be put into larger pots as required. Before removing the plants to the conservatory, care must be taken to have them gradually hardened, as any sudden transition would at once disfigure them. After being well hardened, this and others of the same family, will endure even rather rough treatment. I have no doubt that it may be bedded out in sheltered situations in the south of England, during the summer months, with excellent effect.—(*Gard. Chron.*)

**STANDARD EPIPHYLLUMS.**—Now that plants have come largely into requisition for the decoration of the dining table, I know of none that can be recommended as more suitable for the purpose during the winter months than the *Epiphyllums truncatum* and *E. Russellianum* with their varieties. These plants can be had in flower from November until March. In November, 1862, I grafted many varieties on stems of *Pereskia aculeata*, from 12 to 24 inches high; and in the following November, 1863, many of them began to flower, and continued blooming until March, 1864.

The following are the sorts I am growing:—

*E. Russellianum*.

*E. R. Snowii*.

*E. R. nebrun*; tube pink, petals deep red, large and fine.

*E. R. Superbum*; tube pinkish violet, petals deep purple, large and fine.

*E. truncatum*.

*E. t. Bridgesii*; tube violet, petals deep violet, purple face.

*E. t. Cruentum*; tube purplish crimson; petals deep red, large and fine.

*E. t. magnificum*; tube rosy violet, petals deep red, large and fine.

*E. t. spectabile*; tube white, petals white, deeply margined with violet, large and fine.

*E. t. Salmoneanum*.

*E. t. Morellianum*.

*E. t. Ruckerianum*.

The six sorts which I have briefly described are beautiful varieties; and there are many others of which I have not seen sufficient to judge whether they are distinct from those named. I find that the varieties of *E. truncatum* flower first, while those of *E. Russellianum* are later, [they flower in the spring with us.—ED.] and by exciting a few of the former in autumn, and retarding a few of the latter, I am confident they can be had in flower, for a much longer period than I have named above.

My plants were repotted from 60 to 48 size, or 4½ inch pots, in the spring of 1863, and the heads of many of them were by the autumn 12 inches in diameter. When in flower they formed beautiful objects. I have just repotted some of the largest in 6½ inch pots, and I anticipate that by the autumn there will be many of them, not easily surpassed as flowering plants, either for the decoration of the dinner-table or for the conservatory, in which latter, mixed with camellias, forced hyacinths and other bulbs, azaleas, rhododendrons, &c., they form a beautiful contrast.

The pots should be well drained. The soil should be very fibrous sandy loam, having a small quantity of potsherds broken small mixed with it, sufficient to keep it porous. The house most suitable to their growth is an intermediate one, such as would be suitable to many of the orchids that require cool treatment, or the warmest end of the conservatory. The temperature in winter should range from 40° to 50° by night, and from 50° to 60° by day. They should be kept rather dry during the winter, but not allowed to shrivel, the quantity of water being increased as the season advances, giving a higher temperature and plenty of air, particularly in hot weather, sufficient water being thrown about the house to keep up a humid atmosphere. They should not have too much shade. When they are required for the table, some neat creeper should be twined round the stem to hide it.—(*Gard. Chron.*)

---

## Societies.

---

### FRUIT GROWERS' OF EASTERN PENNSYLVANIA.

The Annual Meeting of this Society was held in Norristown, Pa., on the 18th of February, agreeably to previous notice.

Some 40 members reported at roll call, and many more came in during the meeting. Mr. Rufus A. Grider of Bethlehem, the President, made the opening address, which possessed so much interest, particularly in grape culture, that we make no abstract of it, in the hope of finding a place for it entire, on some future occasion.

Previous to the appointment of the business committee, Mr. W. Saunders called the attention of the Society to the great want, in most associations of the kind, of a proper direction to their investigations. The effort should be to deduce some general principle from all the various experiences detailed. Some ploughed and some harrowed; but few could tell what object they proposed to gain by these operations. Thus it seemed to the public, that the experiences brought out by these meetings, were contradictory, when in reality, we did not know the separate objects of each. One man manured his orchard, and it did well—another did so, and it ruined it. Probably in the one case, the trees were starved, and the manure helped them; in the other case, they were growing well enough before, and the manure overdone it. This, he said, was merely to illustrate how important it was to have a method and principle to work on, so as to know to what object cultivation was directed.

The meeting then proposed to discuss the question,

*What is Cultivation?*

Mr. A. W. Harrison said cultivation resolved itself into two divisions. 1st. Mechanical. 2d. Nutritive. The first had, for its object, the improvement of the texture of the soil, by underdraining and pulverization; the second, by adding to the soil the elements taken away or required for the perfection of the growing crops. Thought all soils improved by underdraining: even sandy soils are rendered by it moister in summer, by the condensation of the moist air drawn through the soil to the underdrains. The object of pulverization was to present new surfaces continually to the action of the air. Air and moisture must act together before the oxidation necessary to prepare plant food can go on. The soil must be so pulverized that the particles must just touch. If too wide apart, moisture cannot act with the oxygen. If we examine a pile of round iron balls, we find rust only where the balls touch. The great object of cultivation, in its mechanical sense, was to pulverize the ground into as many small surfaces as possible, and then to provide for a continued current of fresh air and moisture through it.

Mr. Satterthwait said some soils could be injured by pulverizing too much. The particles would grind so very fine, that neither air nor moisture could go through.

Judge Knox agreed with Mr. Satterthwait. Soils that, in common language, "bake," do so through a tendency to this over fine pulverization.

Mr. W. Saunders, also, inclined to this view. Yet thought no one could go wrong if he knew his object. If we want air and moisture in the soil, and if it is too heavy for it, pulverize; but if the other extreme, pulverization, which when wet makes mud, obstructs air and moisture—stop the practice. With a clear object one could not go wrong. One might say, manure was good for soils; but if we wanted leaf growth and succulency, as in the cabbage, we wanted one kind and quality; but if we wanted sound wood and fruit, as in the orchard, manure is quite another question.

In answer to a question, Mr. Saunders added, that his rule for covering



seeds, was to regulate it by the seed. A seed  $\frac{1}{4}$  inch in diameter, to receive a  $\frac{1}{4}$  inch of covering;  $\frac{1}{8}$  inch,  $\frac{1}{8}$  of soil, and so of all others.

Mr. Samuel Miller mentioned a singular instance of a grape vine, that had extended its roots deeply in a stiff clay subsoil, which was saturated with water in winter time, and in which little air could penetrate; that was one of the best vines he knew.

Mr. Satterthwait was sure there was as much money lost by some persons in cultivating too much—uselessly—as by others who did too little of it.

Cultivation dealt in compromises. There was no doubt, as a rule, it was bad to injure the roots—cultivation always, more or less, injures roots; yet corn never cultivated, left with its roots to run uncut in stiff hard soil, would not do as well as corn which had its roots a little disturbed by the cultivator.

Mr. Gustavus Heines thought it would be difficult to lay down rules that would apply to all. Objects were so very numerous; and soils so varied.

Dr. Opfelt explained the principles of root pruning, when judiciously performed, it had great advantages. If one long root were cut at the point, a dozen or more roots branched out in various directions, and by just so many were added sources of food to the tree.

Mr. S. Miller had seen much evil from much cutting of surface roots. In his orchard, the largest trees were where the trees were never cultivated, and simply top-dressed. The finest crops of raspberries with him, were invariably, where the roots were unmolested; additions being simply made on the surface.

Mr. Satterthwait had found immense benefit from these surface mulchings.

Mr. Heines would never, under any circumstances, stir about the roots of his vines. Mulches heavily on the surface, and has the most decided success.

Mr. Josiah Hoopes opposed dry mulch, which had for its object, the mere shading of soil. It was more favorable to mice and insects, than to vegetation. The greatest advocates of mulching for these objects, had to abandon their practice. We understood him to say, that Mr. Charles Downing was one of the converted mulchers.

Dr. Houghton thought the experience of members favored not cultivating orchards, but for his part, he had never seen a healthy orchard that was long in grass.

Dr. Busch had an orchard of 100 trees, that had been 20 years in grass sod. It was first in sod, then broke up and planted with corn, then with two crops of potatoes, then one of wheat, after which, the apple trees were planted the same fall. It has been in grass since, with an annual top-dressing of vegetable manure, made of sawdust, salt, and lime, and his orchard is considered one of the healthiest in the State. He exhibited some samples of Smith cider apples from his trees, which the members thought the best of that variety they had ever seen.

Mr. W. Saunders said that the objection made to grass, was, that it took out too much moisture from the soil; but judging from Dr. Busch's

specimens, it was a fair question to ask, whether it was in all cases necessary that all the moisture in the soil was required by the trees.

Mr. David Miller had found dry mulch favor mice. He would branch his trees very low, and never cultivate under or near them.

Mr. Saunders said there was much, of what is called, prejudice against trees in grass; but he had generally found even prejudices had some sound foundation for their first start, and were worth examining. Prejudice, as well as other things, should be reduced to a science.

Mr. J. E. Mitchell referred to an instance of a wide-prevailing prejudice, that it was moister and cooler under a cultivated, than under a grass surface. Mr. Meehan, Mr. Joyce, and himself, had made experiments, and found the reverse to be the fact. [These experiments are detailed in an article contributed by Mr. Meehan to Harris's Rural Annual, for 1864.—*Ed. G. M.*]

The discussion next turned on

*The management of Cold Graperies.*

Dr. Houghton, as a question of profit, had found his experience unfavorable.

Mr. J. E. Mitchell, on a question of management, had an outside and an inside border, and pruned on the old spur system. His vinery was in its third bearing year, and was very successful. Ventilation, he thought, should be in the peak, not in the back. He referred to lean-to vinery.

Mr. Josiah Hoopes said more labor and expense were usually spent on graperies, than there was occasion for. His grapes were raised abundantly and superbly, in what the *Gardener's Monthly* had not very complimentary, though perhaps truly, called a "tumble-down concern"—and he thought there was little more than one day's labor in the whole year together spent upon them.

Dr. Thomas's experience, given in the last year's Report of the Society, was referred to by members, as showing satisfactorily how much could be done with very little labor and expense. Dr. Thomas believes that the time spent by many gentlemen, in smoking their after breakfast cigar, would manage a large vinery well for the whole year.

Mr. S. Miller thought inside borders worthless, the roots always go outside. At any rate, he only watered his inside border about once in three months, and was not sure they required it then.

In reference to varieties, Mr. Harrison said he had seen a Bowood Muscat, five-years planted, produce 60 lbs.

Dr. Houghton had found much benefit from watering his grape borders with warm water. In one of the largest commercial graperies he had seen there was an apparatus especially for heating the water to be used, and he thought so well of it, that he intended to introduce it to his own. Would use the water at 90° if he could get it.

Mr. Saunders entered at length into his method of grape growing, and was attentively listened to. The chief points, were his attention to keeping the air always moister than the external atmosphere, and his efforts to have

the roof as flat as possible, consistent with other objects not to be lost sight of.

Mr. John Rutter objected to this. The higher the pitch, he thought, the better.

Mr. Saunders replied it was difficult to equalize the temperature in a steep-pitch house. The heat being greater at the top, the upper buds burst earliest, and gaining the start the lower would burst weakly, or not at all.

Mr. Satterthwait had noticed vines to break badly below, when trained to steep rafters.

Many members joined in the discussion at this point, and the conclusion seemed to be that the exact angle that should be recommended for grape houses, was yet an open question. A vote was taken on the

*Best 20 Varieties for Cold Vinery.*

And the following was the result:—

8 Black Hamburg,	2 Grizzly Fontignac,
4 Bowood Muscat,	2 Black Prince,
2 White Fontignac,	1 Lady Downe's Seedling,
1 White Syrian.	

---

## Massachusetts Horticultural Society.

*Saturday, April 2, 1864.* The stated quarterly meeting of the Society was held to-day—the President in the chair.

Mr. Parkman, from the committee appointed for that purpose, presented a proof of the Certificates of Merit, ordered to be procured. The cost of the plates of the three Certificates was \$90, and on motion of Mr. Wetherell, \$90 were appropriated for the payment of the same.

Mr. Parkman moved that 50 copies of the several Certificates be struck off for the use of the Society, and that the plates be placed under the care of the Treasurer. The motion was adopted, and \$13 appropriated for printing the same.

Capt. Austin offered an amendment to the 19th section of the By-Laws, relating to the pay of the Treasurer, which was read twice and laid over for action at the next quarterly meeting.

On motion of the President, it was voted, that all the available funds of the Society be placed at the disposal of the President and Finance Committee, for the erection and completion of the New Building on the Montgomery House estate, and that the Treasurer be authorized to make all payments approved by the Building Committee.

On motion of Mr. Wetherell, it was voted, that the Library Committee be authorized to procure a photographic album suitable for the use of the Society, at a cost not exceeding \$50, and that members be invited to send their "cartes des visites," to be placed therein.

On motion of B. Harrington, it was voted, that the thanks of the Society be tendered to Mr. D. T. Curtis, for his long and faithful services as Chairman of the Vegetable Committee, and that a suitable testimonial of the value of \$50 be presented to him. B. Harrington, F. Burr, and A. Pierce were chosen a Committee to attend to that duty.

L. Wetherell, E. W. Buswell, and J. F. C. Hyde were chosen a Committee to consider the expediency of some alteration in the By-Laws admitting Ladies to membership.

The following members were elected:—Stephen A. Hall, Geo. A. Hall, William Durant, H. F. Durant, Charles L. Flint, Henry Ross, George F. Woodman, Henry W. Daniell, Henry P. Kidder, Charles W. Scudder, George D. B. Blanchard, E. H. Greenwood, Nehemiah Washburn, Boston; Sarah W. Story, Brighton; Patrick Dacy, Dorchester; George Wingate Chase, John Pearce, Samuel L. Wheeler, Jonathan A. Lane, William Ellery James.

Adjourned one month to May 7th.

---

## Horticultural Operations

FOR MAY.

---

### FRUIT DEPARTMENT.

THE month of April has been cool and wet, though fortunately free from any injurious frosts, and the season appears now highly favorable for the cultivator. So much cool and damp weather has retarded planting, but at the same time trees have not yet started, and such work can be continued for some time yet. In the hardy fruit garden pruning should be pushed on vigorously, and grapes should be trained to the trellis before the buds are so much started as to endanger their loss by breaking.

GRAPE VINES in the graperly will now be just going out of flower, or setting their fruit, and will require more attention. Disbud all useless growth, and keep the laterals topped in good time. Commence thinning the last of the month, but be careful not to thin too much, as is too often the case, and fine bunches are quite ruined. Damp down the house often in hot weather, so as to obtain a moist atmosphere. Vines in cold houses will be coming into flower soon, and the temperature should be little higher by giving less air and closing early in the afternoon. See that hardy vines are neatly trained to the trellis, and all eyes not wanted for new wood rubbed off.

STRAWBERRIES will require attention if fine large fruit is wanted. Go over the beds and dig up with a trowel or hand fork all small plants and such as are too much crowded; then top dress with good leaf mould or old manure, not likely to be full of weeds; then clean and rake the beds. New plantations may now be made. Dig or trench and manure well. It is the best season for this, as the vines will bear the best crop next year. Old beds, if raked well with a coarse rake, to pull out weak plants,

and then top dressed, will produce good crops. Old plants that have been forced, if turned out into the open ground, will produce a late crop.

**ORCHARD-HOUSES** will require much attention. If our directions have been attended to the trees will now be well set with fruit. Air abundantly in good weather, closing up early. Look after the green fly and red spider, and if either appear destroy them as we have recommended. Water more liberally as the season advances. Now is the time to obtain and pot new trees.

**GRAFTING** may be continued all the month.

**RASPBERRIES** should be neatly tied up to strong stakes, heading off the shoots at the height of four feet. Secure blackberries in the same way.

**SUMMER PRUNING** should be commenced as soon as the new shoots are four or five inches long; pinch in all laterals to two or three eyes. If this work is commenced early and continued, the trees may be kept in fine shape without scarcely ever using the pruning knife.

#### FLOWER DEPARTMENT.

This is the busy month with the ambitious cultivator. Everything is to be done almost at once; at least there is so much work that there is no time to be lost. The houses should now make a fine show with pelargoniums, calceolarias, azaleas, &c. Remove all soft-wooded plants to cold frames, so as to give space and air to those in bloom or in fine-growing order. Repot and prepare all winter-blooming plants, which are apt to be forgotten in the hurry of the season.

**AZALEAS**, kept cool, will now be coming into full bloom; shade in the middle of the day. Young stock or young specimens coming on for next year, may now have a shift into the next size, using good fibrous peat and sand. Stop and thin out the young shoots as they advance in growth. Large specimens will require more water.

**PELARGONIUMS** will now begin to bloom; give air freely, and shade an hour or two from the noonday sun; water more freely, regulate the shoots and tie them into good shape, if not already done. Young stock may have a shift into larger pots.

**CAMELIAS** should be syringed freely every evening. Keep them slightly shaded during their growth and water rather more freely.

**HEATHS AND EPACRIS** may be turned out of the pots into a well-prepared bed, where they will do much better than kept over summer in pots. Water occasionally till the plants get hold of the soil.

**CHRYSANTHEMUMS** should now be propagated and the early stock shifted into larger pots. Keep in a cold frame.

**WINTER-FLOWERING CLIMBERS** should now be headed in and the branches thinned out before they begin to grow.

**STEPHANOTUS, ALLAMANDA**, and similar stove plants should now be repotted and encouraged in their growth.

**CACTUSES** should now have a sunny situation and a more abundant supply of water.

**FUCHSIAS** intended for handsome specimens, should now be encouraged by a shift into larger pots, and a good situation in an airy house.

**JAPAN LILIES** should have a shift into their flowering pots.

**MAURANDYAS** and other free-growing climbing plants, for turning out doors, should have a shift into larger pots.

**AMARYLLISES** now growing freely should have more water; if they require it, repot after they have done blooming.

**ORANGE TREES** now making their growth, may be shifted into larger pots, using a good rich sound compost.

#### FLOWER GARDEN AND SHRUBBERY.

The favorable April weather has given an emerald hue to the lawn and ere long it will require to be cut; give a thorough rolling in order to obtain a fine even surface. Mow as soon as the growth requires it. Re-rake, clean, and roll the walks, and rake or dig all beds or spaces around trees or shrubs. See that the shrubbery is cleared of superfluous wood, and all shrubs pruned with a view to a succession of fresh shoots. The flower garden should be put into complete order, and all vacant spaces sown with choice annuals, unless wanted for bedding plants.

**TULIPS** will be in flower the last of the month. Stir and clean the surface and keep out all weeds.

**ROSES** yet unpruned should be headed in, and it will aid in keeping up a succession for a week or two.

**GLADIOLUSES** should be planted this month, reserving a portion till the end of the month, which will give a succession of flowers up to October.

**CARNATIONS AND PICOTEES** should be put out into beds.

**DAHLIAS** may be planted out the last of the month, or as soon as danger of severe frosts is over. Prepare the ground by deep digging.

**ANNUALS** of all kinds may yet be planted.

**PHLOXES** should be taken up and divided if the roots are large and old.

**BEDDING PLANTS** of all kinds may generally be planted out by the 20th of the month.

**CANNAS** should be divided and potted, ready for planting out in June.

**ERYTHRINAS** may be planted out as soon as the weather is favorable.

**NEAPOLITAN VIOLETS** should be divided and planted out in well-prepared ground, in order to have good plants for next winter.

**POLYANTHUS AND AURICULA** seeds may now be planted.

**ROSES** of the Tea, Bourbon, and Noisette classes may now be planted out in prepared beds.

**BOUARDIAS** may be turned out into the open border.

**PÆONIES** should be neatly staked as the shoots get up, which will keep their fine blooms out of the dirt.

**HOLLYHOCKS** may be planted out in beds, or the open border.

**PREPARE GROUND** for Rhododendrons and Azaleas, which may be removed safely all the month of June.

**BOX EDGINGS** may now be reset; planting deep and firm to obtain a nice growth.

**HEDGES** may be clipped by the last of the month.

## SEED SOWING.

REPEATED are the complaints in regard to the germination of various kinds of seeds; and great are the disappointments which arise from this failure. In many instances, without the least doubt, it is owing to the use of old or worthless seed; not but what all seedsmen intend to supply good seed, but that necessarily all do not have that knowledge of the business which will enable them to secure such, or the ready means of trying and proving such as are in the least doubtful. The seed trade is one of great importance; for the failure of some crops involves a very large loss; hence it should be the first object of all who purchase seeds to buy of responsible dealers, who can have but one object—the success of their business—which can only be obtained by furnishing fresh and reliable seeds. Unfortunately there are too many who purchase seeds as they buy any merchandise, forgetting that while a sample of sugar or a piece of cloth will enable the purchaser to estimate nearly its value, seeds on the contrary do not show their characteristics until the crop is ready to gather. Then, if not what they purported to be, how great the disappointment and how serious the loss? The difference in the cost of seed enough to plant an acre is trifling, but the loss by an inferior crop may be often counted by hundreds of dollars.

But supposing the seeds to be all genuine and true to name,—that these can always be had; there is still some uncertainty about their vegetation. The season is too cold, or too wet, or too dry, or too something—all is wrong, for they fail to grow—and the unlucky seedsmen, who supplied them, is anything but an honest man.

It does not occur to the planter that it may be owing to mismanagement, to want of proper care, proper preparation of the soil, or unskilful planting; that they were sown too early, before the ground was warm, or too late, when dry

weather overtook them; too deep, or too shallow. But without reflection the seeds are pronounced worthless.

We have once or twice intended to prepare an article upon the general subject of seed sowing, and are now reminded of our intentions after reading some excellent remarks in a late number of the *Gardeners' Chronicle*—and though rather late in the season, we deem it too valuable to pass over and perhaps be forgotten when such information will be needed. Our own remarks would be but a repetition of the good advice contained in the following article, applicable to our own climate as well as that of Great Britain, and we copy without further comment, merely advising its attentive perusal by every cultivator, and especially by all those who annually undergo so much disappointment in their experiments with seed sowing:—

At this season of the year, some of our readers may find it useful to be reminded of certain considerations which bear upon the operation of Seed Sowing, which they have now to put in practice.

A seed planted in the earth germinates under the combined influences of heat and moisture, and the process is all the more active when these agencies are accompanied by the exclusion of light. The practical means employed to secure the latter condition, namely a covering of earth, is indeed also favorable to the action of the two former, by closing in and sheltering the seed from the vicissitudes of temperature to which it would otherwise be exposed, and by serving to retain in the soil immediately surrounding it a more uniform condition of moisture than could readily be secured if it were exposed. When seeds are sown therefore, the conditions under which they are placed should secure for them darkness, and moisture, and warmth.

The seeds of different plants require different degrees of warmth in the soil, in order to enable them to carry on the germinating process, and hence no very general rule on this point can be laid down for the guidance of the uninitiated. Some seeds, those of the Chickweed and other common weeds for example, will germinate when the soil is but little



above the freezing point, but practically the influence of the sun and of warm rains is necessary to bring the earth into a state fit to receive the germs of all our cultivated crops. Some of them, indeed, the onion for example, will do with a smaller amount than others of this acquired warmth, and such as these are always the better, in certain soils at least, for being sown early, in order that their roots may become well established before hot parching summer weather sets in. Some again, such as the umbellifers, take a much longer time than others for effecting the germinating process; and for the same reason, namely, that they may have the advantage of getting well established and forwarded during the moist genial weather of spring and early summer, these also are the better for being sown as early as circumstances will permit. The great heats and droughts of summer, without abundant feeding is resorted to—more abundant than is often possible—tend to check the vegetative development of our crops in the same degree as they tend to forward the production and development of blossoms. Hence it is that as a rule the main vegetable crops in which succulent leafy development is desired—and this is desired in the early stages of all crops, as well as also in the mature stages of some—should be sown as early in the season as circumstances and the peculiar character of particular seasons and situations will permit. Succession cropping is another matter, and has to be regulated by the supply needed. It is indeed often little better than a struggle between horticultural skill on the one hand, and the adverse conditions of an unfavorable period for the respective operations on the other; and therefore may be excluded from the present argument.

We have already mentioned the covering of earth as one of the conditions to be considered as practically necessary to the healthy germination of seeds. The covering must indeed be greatly varied to suit the various kinds of seeds, those of minute size needing the merest sprinkling of the finest soil to be placed over them, and others admitting, in a ratio exactly proportionate to their bulk, of a covering of one-eighth, one fourth, or half of an inch, or even of one, two or three inches, or more as the case may be. There is however one

condition especially obvious, if we confine our attention for a moment to in-door seed sowing, or the sowing of the small seeds of choice plants, which is doubtless often overlooked, but which has a decided influence on the result that is expected to follow: this influence being moreover, from the very nature of things, in an inverse ratio to the bulk of the seed. We allude to the watering of the soil. An experienced cultivator will, however, understand that other conditions and considerations here intervene: for instance, the soil must be of a proper mechanical texture to allow the moisture to drain away freely; there must (in the case of all ordinary terrestrial plants) be no approach to a water-logged condition, and heavy soils being more liable to this defect than light ones, will require less abundant applications of water than others; but allowing for all this, as well as for the varied requirements of individual species, there remains the fact that constant moisture—in plenty, but not in excess—is from first to last necessary to germination. We know how rapidly seeds will germinate after a warm shower, especially if they have been a short time in the soil, so as to have gradually absorbed therefrom just that quota of moisture which is necessary to have brought the germ which lies hidden within them, into a state to be influenced by a further supply. We also know how sluggish a seed will lie in its bed if the earth happens to continue to be in a parched dusty condition after sowing. Now this, in principle, illustrates the whole question, but what may we often see in practice? Why, scared by the bugbear of “rotting the seed,” an unskilful cultivator will be found sowing the seed of some choice plant, and then suffering it to lie parched in the unmoistened soil; or, with some like phantom before him, he will be found careful above all things to provide that the soil should be allowed to “dry” between each application of water. This is no doubt an error of practice; and the smaller the seed the more forcibly it tells upon it. In the former of the two supposed cases, the moisture which is necessary for the germinating process—a truly chemical process, which we need not here stay to explain—not being present, germination is, to say the least, retarded; and in the second case, that of an alternating con-

dition of moisture and drought, the germ is first excited, and then checked or shrivelled, and the chances are that such of the seeds as are so acted on will be killed outright; indeed, but for the surplus to be attributed to the accidental inequalities of development attendant on what is in itself another error—thick sowing, the whole crop in cases like this would often be lost.

But this avoidance of watering has a further adverse influence in the case of small seeds especially, which is not at first sight so apparent. It leaves the particles of soil so open, that as far as regards all shallow coverings at least, the light can penetrate through them even down to the very seeds themselves. We have already mentioned that one of the conditions favorable to germination, is darkness; and it will be evident that the act of watering the surface of the soil after sowing must produce this condition by closing the soil around and upon the seed. Hence we regard the advice sometimes found in books of garden instruction, that the operation of sowing should be finished off by watering the surface with a pot having a finely-pierced rose to its spout, as being perfectly sound in theory and beneficial in practice. It might, indeed, be thought that there would be some advantage in leaving the soil after sowing, for a day or two without water, on the ground that the moisture in the unexposed portion of the soil would suffice for the requirements of the seed in the first process of germination, and this indeed may often be so; but in the case of very fine seeds our own experience is that a surface of earth thus left exposed is apt to become so thoroughly dry that it does not absorb water readily when the latter is applied, and the consequence of this is that in the case of such seeds as those alluded to, necessarily thinly covered, the earthy particles settle down, and the seeds being lighter than they, float on the water, and on its subsiding are deposited *on* instead of *beneath* the surface of earth. Such seeds are consequently left fully exposed to light, and are by no means placed under the most favorable conditions to promote germination.

Such considerations as these, indeed, apply mainly to choice seeds sown in pots and on carefully prepared seed

beds, and to the finer seeds sown out-doors, whether in the flower or kitchen garden. They also apply strongly to seeds sown in heat, under conditions which favor the drying of the surface of the soil. And they apply still more forcibly in the case of all these, if it so happens that sunny weather occurs just after sowing; for this sunshine, by causing rapid evaporation, brings about more rapidly the parched condition to which we have referred. There are of course other means besides watering which may be adopted to secure a uniformly moist condition of the soil in which seeds are sown; and these are especially valuable when the seeds are of a kind in which germination is sluggish, and where consequently if the applications of water were frequent and repeated, they would tend to consolidate the soil, or reduce it to a soddened condition. The most important of such auxiliary means, is that of shading during hot sunshine. This, by preventing, to a certain extent, the drying of the surface, may indeed be regarded as a negative instead of positive means of keeping it moistened; but after all, there will remain the necessity for the first watering, and for such subsequent supplies, fewer or more numerous as circumstances may demand, as will keep both soil and seeds damped until germination has taken place.

The more bulky crops of the kitchen garden, from the depth at which their seeds are deposited, are, at the usual seed-time, when spring-showers are plentiful, in little risk of being exposed to light until growth has set in, and from the same cause they are much less likely than those we have been considering, to be in danger of suffering from actual lack of moisture; but as every gardener well knows, attention to this moistening process becomes absolutely necessary in the case of those succession crops of kitchen garden produce, which have to be sown during periods of drought in summer.

## POMOLOGICAL GOSSIP.

**THE VICTORIA NECTARINE.**—We have, in our previous volumes, noticed this new variety, raised by Mr. Rivers from the Stanwick. It is beautifully figured in the Illustration Horticole, the fruit greatly resembling the Stanwick, both in size, beauty, and color, but has the merit of ripening earlier, and does not crack; defects which do not apply to the Stanwick in our warmer climate. The Victoria is undoubtedly a valuable variety of this showy and beautiful fruit.

**THE FRUIT CROP OF 1864.**—Present appearances indicate a fruitful year. Peaches have been one mass of bloom, and the pears are now literally one sheet of flowers. The weather has been good, and there is every prospect of as great a crop as in 1862. Many new kinds of pears are showing bloom, and, as the trees have now acquired age, the specimens will undoubtedly be much larger and better and show the true character of the variety. We anticipate one of the most attractive displays of the pear that has yet been witnessed, and the next meeting of the Pomological Society at Rochester will be an interesting one to all pomologists.

**HALE'S EARLY PEACH.**—This variety is highly praised by those who have cultivated it. At the late meeting of the Ohio Pomological Society, M. B. Bateham stated that he saw it growing in the same row, and under precisely the same circumstances, as the Early York and Early Tillotson. From what he saw and tasted of the fruit he could say that its merits exceeded the highest expectations, as to earliness, size, looks, and quality of fruit, and the habit of the tree; and he was not at all surprised to learn that people are loud in its praise wherever it has come into bearing. The Chicago peach growers say it is so much earlier than any other good market variety that they are in want of another kind equal to it, to fill up the interval of a week or so between the time when Hale's is finished and the next comes in. It ripens about ten days before the Early York, the fruit is handsomer, full as good, and tree much healthier. Various cultivators bore the same testimony.

PETIT'S IMPERIAL is the name of a magnificent looking variety, which we saw on exhibition at the Annual Show of the Pennsylvania Horticultural Society, last September. They were almost as large as melons; larger than any Late Crawfords we ever saw, and we have seen them twelve inches in circumference. Of its quality and productiveness we have no knowledge, but it is certainly a superb looking peach.

---

### HARDINESS OF THE ADIRONDAC GRAPE VINE.

BY COL. D. S. DEWEY, HARTFORD, CONN.

I beg leave to volunteer a brief report, through the medium of your valuable Magazine, with respect to the hardiness of the Adirondac. I was so favorably impressed with the "*quality*" of the fruit when I first made its acquaintance in Boston, in the fall of '62, that I engaged a vine (one-year old) of Mr. Bailey, which was duly sent to me, in good condition, in the spring of '63. Its growth was satisfactory; and the two small canes which were produced during the season were allowed to remain, during the winter, entirely unprotected; but were bent down nearly to the ground, by a dry spray, for the purpose of shaping it for propagation. The result has been that three lower eyes on one cane, and two on the other, have retained their full power of development, and have been carefully layered, and appear to be growing thriftily.

Two other vines of Adirondac—each two years old and cut back to two or three eyes—were obtained last fall. One was planted out at the time, and the other was heeled in, and planted this spring. The tops of both were unprotected, and they are now pushing vigorously.

One three-years old vine, of the same variety, was placed in my vineyard, last fall, for the purpose of fruiting it this season, by the side of Hartford Prolific, Concord, Delaware, and others, with regard to comparative earliness and productiveness. This, also, was left without protection, and is now growing finely; every bud having started well.

So far then as this experiment of one season goes, I have been led to the conclusion that the Adirondac grape vine is as hardy as any of the other kinds to which I have alluded; and more so than the Rebecca and Manhattan, grown in the same vineyard, under similar circumstances.

By the way, I fully agree with you in opinion as to the merits of the Rebecca, when it is grown in perfection, as I think it may be by any one who will give it a little extra attention in planting, position, and protection of the roots. The very best grape vine of any variety, with which I am acquainted in this vicinity, is a well-grown and well-trained Rebecca on the grounds of a gentleman of this city.

---

#### ARBORICULTURAL NOTICES.

NEW FORSYTHIA (F. Fortuni).—A new and very fine specimen of this handsome hardy shrub has been introduced into English gardens by Mr. Fortune, who found it growing at Peking, in the north of China, and undoubtedly even hardier than *F. viridissima*. Mr. Fortune states, that when he visited the Chinese capital, in the autumn of 1861, he fully expected to find many new plants of a hardy nature suited to the English climate, as Peking is several hundred miles north of those parts of China he had previously explored. He was, however, disappointed; there were plenty of fine plants, but they were all brought from the south. As he looked eagerly into every hole and corner in quest of something new, the good natured Chinamen were evidently puzzled. "Had he not come for flowers?" they inquired; "then why not take them?" He could hardly make them believe that nearly all they had were common in Europe.

"My explorations," he says, "however, were not altogether fruitless. A new Forsythia was discovered which now proves to be a great acquisition to our spring flowering shrubs. As it was in the autumn when I first met with it, I had no opportunity of seeing its flowers, and therefore could only form an opinion of it from its foliage. I had no difficulty in

recognizing the genus to which my plant belonged, and as its leaves differed in form and appearance from the old species, there was little doubt that it would prove new to science and our gardens. The leaves of *F. viridissima*, as every one knows, are oblong, or oblong-lanceolate, in form, while those of the Peking plant are broadly ovate. Some of them, if my memory does not fail me, are slightly lobed, and they are of a dark green color—much darker than the old species; they have more substance, and are very glossy on the surface. The flowers, as we now see by the plants which have bloomed at Bagshot, are also larger in size and of a brighter yellow than *F. viridissima*. There are also many other botanical distinctions between them. Altogether the new plant is the most ornamental of the two, and I have no doubt it will prove a very important acquisition to our collections. It will be perfectly hardy, in our climate, and when once planted will take care of itself.

*FORSYTHIA SUSPENS*A has flowered beautifully in our collection this year, and is really a fine thing; its flowers are similar to *F. viridissima*, but the habit of the plant is much more slender, and may almost be classed among the climbing shrubs; it makes shoots 6 to 8 feet long, which unless tied up recline upon the ground, and are wreathed with their golden blossoms the entire length. It is a valuable acquisition.

**NEW JAPAN MAPLES.**—We have seen, in some of the foreign catalogues, the names of some new maples from Japan, which have been described as hardy, distinct, and fine. At the late grand exposition of the SOCIÉTÉ ROYALE DE FLORE, held at Brussels on the 24th of April, many new and rare trees and shrubs, and evergreens, were exhibited, several of which will be undoubtedly hardy in our climate.

M. Von Siebold of Leyden exhibited 22 species and varieties of maples, mostly new, as follows:—*Acer dissectum* fol. pinnatifidus viridibus and fol. pinnatifidus rubra; *A. japonica* petiolis viridibus and petiolis roseis; *A. Meiketa*; *A. palmatum sanguineum* fol. incisus, rubrum, carneum, reticulatum, and roseum sanguineum; *A. digitatum* fol. integris rube-scentibus; *A. septemlobium pubescens*, roseo versicolor, bi-



color, argenteo-maculatum and sponte crescens fol. viridibus; *A. pictum* verum, and carneum; *A. atropurpurea*. What a rich collection? and what variety will they add to our ornamental plantations. We hope they will be speedily introduced.

M. A. Verschaffelt also exhibited several beautiful Japanese maples—*A. japonicum jucundum*, with palmate leaves, of a very lively pale green color; *A. j. sanguineum*, with bronzy red palmate leaves; *A. j. princeps*, with finely dissected leaves, colored bronze and pink; and *A. j. Fredericki Gulielmi*, with dissected leaves, wholly of a bronzy red.

NEW VARIETIES OF *PYRUS JAPONICA*.—We have already noticed the production of new varieties of this showy and splendid shrub, old and well known but still one of the best. The Belgian nurserymen, appreciating its beauty, have produced many seedlings, and among them some that are very distinct, brief notices of which we have already given. This year quite a number have flowered in our collection, and we embrace this opportunity, while yet in bloom, to briefly notice them. The varieties are as follows:—

1. *P. macrocarpa*. Flowers large, deep crimson scarlet, very dark.

2. *P. Moerloosii*. Flowers medium size, blush white, edged and shaded with rose, very distinct.

3. *P. Mallardii*. Flowers medium size, rose, distinctly edged or margined with white, like some of the azaleas.

4. *P. Sulphureus*. Flowers medium size, much cupped, creamy yellow, changing to a delicate blush, very distinct.

5. *P. fructo odoratus*. Flowers medium size, blush white, somewhat like the old *alba*.

6. *P. rubra aurantiaca*. Flowers medium size, reddish orange.

7. *P. coccinea*. Flowers medium size, bright crimson scarlet.

8. *P. cardinalis*. Flowers medium size, rich dark crimson.

These, with the old scarlet and white and rose-colored, make eleven varieties of this very beautiful and showy spring flowering shrub.

PROBABLE NEW HARDY TREES.—A late number of the Gardeners' Chronicle contains some account of the last rather severe winter in England, and its effect on various new trees and shrubs for the first time exposed to intense cold. This single trial was highly favorable to many of the Japan evergreens and shrubs, and leaves little doubt that some of them at least will be hardy in our climate.

Although the winter was less severe than that of 1827 and '38, when the thermometer fell to 4° below, and in some places lower, yet it has been on more than one occasion extremely cold and trying to those things which are not perfectly hardy. On the 5th and 6th of January the temperature fell to 8°, and the mean temperature of the week was 12° below the average. Again, on the 11th February it fell to 11°, without snow, and this was at Chiswick, it being colder north of London.

At the Bagshot Nursery, where are collected so many of the Japanese novelties, growing in a bleak and unsheltered situation, nearly all passed through the winter without the slightest sign of being affected by the cold. An imported plant of *Sciadopitys* was amongst them, and not a leaf appeared to be injured. The different varieties of *Osmanthus illicifolius*, plants looking like Holly bushes, together with the variegated forms of *Euonymus radicans* and *Eleagnus japonicus* appear to be as hardy as the common English Furze. *Lonicera aureo reticulata* and *Lilium auratum* may be added to the list. *Retinospora pisifera* and *obtusa*, both quite hardy. Even the green-leaved *Aucuba* was not injured in the least.

Although this does not establish their perfect hardiness in our New England climate, it does so for all our country south of New York, and we have but little doubt the hardiest of them even in the latitude of Boston. The pretty little *Retinospora ericoides* is quite hardy, and the addition of two such plants as *R. pisifera* and *obtusa* would be a grand gain in the smaller and more delicate evergreens suited to the decoration of small gardens, of which the number is now very limited. We look for many fine things among the Japan novelties.

RHODODENDRON MAXIMUM AND ITS VARIETIES.—Are there numerous varieties of the *R. maximum*, with different colored flowers as with *R. catawbiense*? *R. maximum* went through last winter with me finely, and last summer it made a strong growth, and is now covered with flower buds for next year; and all this on the very spot where *R. catawbiense* dwindled away year after year. Yet, let me note, that the seedling which you sent us for the College Grounds (and it was a *catawbiense* I believe) has done pretty well and flowered once rather feebly. I hope you will tell us all about these plants, and among other things, whether they can be well grown in soil that is not naturally moist. Yours, A. D. G.

The varieties of the *Rhododendron maximum* are not numerous. European cultivators seem to have given their attention mostly to the improvement of *catawbiense*, probably from its earlier bloom, larger flower heads and deeper color, the object having been to secure deep colors rather than light ones; on this account the Indian *arboreum* has been extensively used for fertilization. There are, however, a few varieties of *maximum* named in the Catalogues, but we have never seen them; there is a white native variety found in some localities, and a gentleman interested in this fine tribe sent us a few seeds. We have been surprised that the English and Continental cultivators have not given more attention to the improvement of *R. maximum*, certainly a superb species, though not quite so showy as the *catawbiense*, but for its delicate tints and late blooming, keeping up a succession of bloom for nearly two months. As regards the growth and hardiness of the two native kinds and their seedlings, we have been unable to discover any difference. *R. catawbiense* and its seedlings flourish as well as *maximum*, are quite as hardy, and bloom at a younger age. There may be a difference when soil and locality are not right, but our plants under the same treatment in the same soil show none. When however there is one part too much of the Indian breed in them, from which the first improvements were made, then they suffer in the foliage, and after a few cold winters dwindle away and finally disappear. The only sure way to secure

perfectly hardy kinds, which our coldest and most variable winters will not affect, is to plant only American seedlings, or such as have been propagated from seedlings whose hardiness is established. Nothing has so much retarded the introduction of the rhododendron in our gardens as the importation of semi-hardy sorts, which do very well until we have a severe winter, when they soon disappear, and forthwith they are denounced as needing protection, and difficult to cultivate. We invite all who wish to see what the rhododendron will do without any care, when planted in the right soil, to visit our collection of some thousands of plants, many of them twenty years old, which will be in full bloom all this month.

NEW AUCUBA JAPONICA.—The old-fashioned, large, yellow-spotted leaved aucuba is well known in our collections, though only ornamental from its foliage, and requiring greenhouse protection in winter. The original species is not variegated, but has beautiful shining green leaves, which when young are of the brightest color. The latter was introduced by Mr. Fortune, from Japan, and is considered one of the greatest acquisitions to hardy shrubs. This new aucuba is fortunately a male plant, while all the plants in Europe have been propagated from the female spotted variety, hence they have produced no fruit, as they do in Japan where the flowers are fertilized. The introduction of the male will, therefore, enable all who have the spotted kind to secure an abundance of fruit, by which it will be rendered highly ornamental, from the profusion of its very large red berries which cover the plant and which form a rich contrast with the deep green foliage. As an ornamental plant for cool greenhouses, orchard-houses, or conservatories, or for the decoration of the lawn in summer, it will be a rich addition to our gardens.

---

### THE CHINESE AZALEA.

FROM THE GARDENERS' CHRONICLE.

WE continue our extracts from Mr. Barnes's excellent papers on the azalea. In our last number the general treat-

ment of the plants was detailed; we now give his management of the plants when attacked by the black thrips, a very troublesome and injurious pest, often spoiling a plant for a whole season, if not destroyed in season. We have often had to deal with them on our own plants, and though we have tried many remedies, that of smoking is efficient when done as thorough as Mr. Barnes advises. All lovers of clean foliaged specimens will welcome this contribution of Mr. Barnes. Ed.

The principal enemy to the azalea, through the growing season, is the black thrips. This pest, if allowed to attack the plants without interference, will assuredly do most serious injury. I have tried many things to destroy the thrips and with various success. One was the Gishurst compound, used in the proportion of two ounces to a gallon of water. This was made up in large quantities and taken to the houses and pits in tubs, in which the plants were immersed and kept covered for a minute or two, and then taken out and washed with clean water by means of the syringe. On examining the plants, to see what the effect had been upon the thrips, I was delighted to find, as I thought, that they were all destroyed, for many dead ones were found adhering to the plants. I however then tried some further experiments, by taking a few leaves off the plants and placing them in the Gishurst mixture. As soon as the insects came into contact with this, they tried to escape, starting off at full speed, and running a short distance, and then turning round several times as quickly as possible, they made a few struggles and died. I began to think the Compound was a great boon, for having always a large quantity of azaleas about me, it was a matter of some importance to have discovered a sure remedy against such destructive vermin. I took the precaution, moreover, to place the leaves under a powerful microscope when I took them out of the mixture, and then found that all the perfect insects were killed, but that the eggs deposited close to the ribs of the leaf did not appear to be much affected. However, nothing daunted, I determined to persevere, and set about giving the plants another dipping in about

three weeks from the first, when to my surprise I found them completely covered with living black thrips in a perfectly developed condition. It was thus clear that although the solution had destroyed the perfect insects, it had not taken the least effect on their eggs; and as it took three men to do the thing properly—one to take the plants to the dipping tub, one to dip them, and another to syringe with clean water: as moreover after a few days the plants became as bad as ever, I found that the labor would be incessant, and was compelled though reluctantly to abandon the Gishurst, and fall back upon my old plan of thorough fumigation with tobacco paper or rag. This I have found and still find, the only effectual remedy to keep the insect pests in check; and I feel assured that by its use, if I were not to have a fresh supply brought to me upon the plants of new varieties that are constantly being received, I should not have such a thing as the thrips upon my premises.

I have heard many opinions upon the practice of fumigating. Some advocate smoking the plants on three successive nights. This plan I do not approve, having practised it and found its defects. I do not assert that it did not kill all the insects that were alive at the time that it was done, but what about the eggs that had been deposited, and had not yet come to life? Why, in three or four days these eggs had hatched and become perfect insects, and the plants were covered again; in three or four days more those of this crop had deposited their eggs; and if the plants were but let alone for ten days or a fortnight, it would be easy to discover on them a very promising healthy family, including three or four generations of progeny.

The most certain and effectual remedy I could ever find was to fumigate well three or four times—commencing upon any given night, then leaving them for three or four days before giving another strong dose, and then again leaving them for a similar interval before having recourse to the third smoking. I have rarely found any left after the third dose, but should a few stragglers remain, another or fourth smoking three or four days later will, I feel convinced, thoroughly clear the plants. I remember many years ago being

terribly annoyed with thrips upon my azaleas, and from them they got on to the ixoras, gardenias, camellias and grape vines, making terrible havoc among them all, and causing every plant attacked to look brown and unsightly—so much so indeed, that things began to get rather serious. At that time I tried many appliances to destroy or keep them in check, such as strong soap suds, hot water, tobacco water, and sulphur dusted upon the under side of the leaves. These things having all failed, I felt determined to take some more decisive steps, and the first was to give them a thorough fumigation. I had them all removed into my seed room, which was close, so that there was no escape for the smoke except up the chimney, which I stopped with damp mats. I set the plants upon shelves, and empty pots, so that they should be as close to the ceiling as possible, and that the smoke might have every facility to draw up regularly through each plant. Then, to be certain what effect the smoke had had upon them, I placed sheets of white paper over the top of the pots, and set about smoking until the room was completely filled—taking care not to allow the fire to break through the top of the fumigating pot, for this generally injures the plants in their foliage. As soon as the place was full of smoke I took out the fumigating pot and shut the room up close. The next morning the plants were well shaken, and the white paper being taken off, was found almost covered with dead thrips. I was of course very much pleased to find them dead, and carefully collected them from all the papers, and threw them into a furnace, thinking I should never be troubled with such pests again. The plants were fumigated on the two following nights, the papers being again placed over their pots; on the second morning I found but very few, and after the third and final smoking there was not one to be seen. The plants were taken out of the room, well syringed, and returned to their original quarters to finish their growth, with a firm conviction on my part that I should not be troubled with any more of the vermin. But to my surprise I discovered in a few days that the plants were again covered with them. How could this be? The plants appeared thoroughly cleared when smoked before. However,

I had them brought back to the seed-room, and thoroughly smoked, the paper laid as on the former occasion, and I found the next morning large quantities of dead insects. I then left them for three days before giving them a second dose, and allowed a like period to elapse before the third and final smoking; this thoroughly cleared them, and I was never troubled with them after that time in sufficient quantity to do any serious injury. This is an important matter, for these insects sometimes make their appearance when least suspected, being brought in with new or fresh plants in the shape of insects or eggs, and from them spreading through a whole collection. Upon a close observation of the plants after a thorough fumigation it will be found that all the perfect full-grown insects are destroyed, and by repeating this, say four times, with three or four nights intervening between each, I firmly believe that an examination after the final fumigation would fully substantiate my assertion as to the efficacy of this plan.

Before leaving the subject of fumigation I wish to offer a few further suggestions. When smoking is necessary it should be done in the evening, as the smoke will continue in the house much longer than it would during the day. As soon in the afternoon as the sun has lost some of its power, take off the lights if the plants are in pits, or if in the growing house give plenty of air to thoroughly dry the foliage, and withhold the syringe that night. I have seen that fumigating plants of almost any description when they are damp will cause much injury to the foliage, and sometimes cause the leaves to fall off in large quantities, which much disfigures as well as damages them; whilst by having the foliage quite dry, such a disaster need not be feared. I find good tobacco paper or tobacco rag the best article to fumigate with, but care is required in the keeping of either article. As soon as it is received it should be opened and laid out to prevent it from becoming mouldy. I find that both paper and rag if allowed to get mouldy lose their power, and will have but little effect upon the insects; therefore any which may have been allowed at some time to become mouldy, might as well be destroyed, as it will surely lead to disappointment when used for fumigating.



## DOUBLE PORTULACAS.

BY THE EDITOR.

THE *Portulaca*, though one of the most common, is still one of the most showy and beautiful annuals, admirably adapted to our climate, growing freely and flowering abundantly under conditions of soil and treatment where many other flowers would scarcely make any display; the old orange and scarlet, when planted out in large patches, vie in brilliancy and decorative effect with the showiest verbenas.



9. DOUBLE PORTULACA.

For a long time there were but two or three shades of red and orange, but with the skill of cultivators they have been crossed and fertilized till we have nearly a dozen different sorts, some scarlet, some crimson, some yellow, orange, white, &c., with a mixture of the two colors. These have hardly become well known before we have another improvement, obtained by the German florists, in double flowers, as double as the rose, which our engraving (FIG. 9) represents.

These double varieties are in fact charming objects, and may well claim a prominent place among the novel things of recent introduction. The flowers are perfectly double, about the size of a twenty-five cent piece, and a bed of them in full bloom presents a gay appearance, not unlike that of the beautiful ranunculuses, or the little Burgundy rose, so that the Germans call them "Portulaca roses."

The Portulacas love a warm and rather light soil, and a dryish situation, to flower well. They need not be planted early, unless in a frame or hot-bed, as the seed will not grow freely till the ground is warm. About the middle of June the plants begin to appear in the open ground, and grow with great rapidity, soon covering a large bed, and making a dazzling display, with their many-hued flowers, from July to frost.

The double varieties, like all other double flowers, cannot be relied upon with certainty to produce all double flowers, but the larger part of them will be double, and the single sorts may be pulled up and thrown away or transplanted, unless it is desired to retain them in the same bed with the double kinds. These, and the double zinnias, are grand acquisitions of the German cultivators.

---

#### FLORICULTURAL NOTICES.

DOUBLE EPIGÆA.—A correspondent of the Gardeners' Monthly, writing from Halifax, says he has discovered a double variety of this exquisite little plant; he also has both the pink and white growing in his garden. We should be content to have the common pink variety in abundance, but until the plants are more easily possessed and more easily raised, they will be very rare in collections. Nothing can be more beautiful, and we trust our enthusiastic amateurs will yet tell us how to successfully cultivate this gem of alpine plants.

THE NEW VERBENAS.—Some of these are very fine, and others only mediocre. Lord Craven is a rich scarlet maroon, large and showy; the Banner, quite novel, distinctly varie-

gated, lilac and blue; White Lady, good, but faulty in form of flower, though perhaps a fine bedder. These are all we have seen in good condition that are distinct; others yet to bloom may be useful additions. The verbena, however, has been so much improved it is difficult to bring forward in a single year twenty or thirty new and distinct sorts.

755. SOLANUM ANTHROPOPHAGORUM *Seem.* CANNIBAL'S SOLANUM OR BORO DINA. (Solanaceæ.) Feejee Islands.

Some time ago a tomato was introduced which was called the Feejee Tomato. Whether it came from that island we are unable to state, but if so it is quite different from one introduced from thence into England and now under notice. The present species has ovate entire leaves something like the Egg Plant, and small fruit. It has little value, unless for the purpose of hybridizing with the common tomato. (*Bot. Mag.*, Jan.)

756. FORRESTIA HISPIDA *Less. et A. Rich.* HAIRY-SHEATHED FORRESTIA. (Commelynaceæ.) India.

A stove plant; growing three feet high; with green and purple foliage and purplish flowers; increased by division; grown in light peaty soil. *Bot. Mag.*, 1864, pl. 5425.

“A really handsome” plant, a native of India, growing two to three feet high, with somewhat of the general habit of the Marantas, the leaves being large; green above and purplish beneath, and from the lower sheaths a stem is thrown up covered with dense clusters of capitate sessile flowers of a purplish color. (*Bot. Mag.*, Feb.)

757. IPOMEA FILICAULIS *Vahl.* SLENDER-STALKED IPOMEA. (Convolvulaceæ.) India.

A tender annual; growing ten feet high; with lemon-colored flowers; appearing in summer; increased by seeds; grown in good garden soil. *Bot. Mag.*, 1864, pl. 5426.

“A really graceful and an elegant plant, having a succession of the pretty dark-eyed cream-colored flowers.” It is a native of India, and is easily raised from seeds which have often been sent to Europe without name. The foliage is long and narrow, and its delicate flowers should render it a favorite climbing plant; it is well worthy a prominent place in our gardens. (*Bot. Mag.*, Feb.)

758. *GLADIOLUS SERICIO-VILLOSUS* Hook. SHAGGY-STEMMED  
*GLADIOLUS.* (Iridaceæ.) Cape Colony.

A greenhouse shrub; growing three to four feet high; with yellowish-green flowers; appearing in summer; increased by offsets; grown in good garden soil. *Bot. Mag.*, 1864, pl. 5427.

A new gladiolus, quite unlike any of the numerous species figured in botanical or horticultural works, and equally unlike any of the Cape species in Dr. Hooker's herbarium, and is a striking plant from its size—three to four feet high—the very long and densely-flowered spike, and the beautiful long shaggy-silky clothing to the stem and spathes, while the rest of the plant is free from hairs. The color of the flower is very peculiar, yellow green, but tinged with pale yellowish brown. It is a decided novelty, and, if easily grown, a valuable addition to our gardens. (*Bot. Mag.*, Feb.)

759. *TRICHA'NTHA MI'NOR* Hook. SMALLER-LEAVED TRI-  
*CHANTHA.* (Gesneriaceæ.) South America.

A greenhouse plant; growing three feet high; with brown and yellow flowers; appearing in autumn; increased by cuttings; grown in light rich soil. *Bot. Mag.*, 1864, pl. 5428.

A new and novel gesneraceous plant, introduced by Mr. Veitch from tropical America. As beautiful as the gloxinias, achimenes, &c., are, "none perhaps" of this family, says Dr. Hooker, "exceeds this in elegance of form and structure and beauty of color." It forms a small climbing plant, its slender stems being of a crude red; its small ovate leaves, green above with red nerves beneath, and the flowers, which are tubular and an inch or more long, appear in clusters with red bracts, the flowers being brownish purple on the outside and bright yellow on the limb, the bracts and flowers being covered with dense hairs. Beautiful specimens were received at Kew in November last, in full flower, and the plant appears to be a new and extremely fine addition to our collections. (*Bot. Mag.*, Feb.)

760. *CAUSCORA PARISHI* Hook. PARISH'S CAUSCORA.  
 (Gentianæ.) Moulmein.

An annual plant; growing two feet high; with white flowers; appearing in summer; increased by seeds. *Bot. Mag.*, 1864, pl. 5429.

Another new and very interesting annual found in Moulmein, growing on a pagoda, by Mr. T. Lobb, and also by Mr.

Parish. Seeds were sent to Kew by Mr. Parish, in 1863, which germinated readily. It is an annual of rapid growth, and is quite an ornament in the greenhouse in the summer months. The species is remarkable in having the leaves, which are circular, completely enclosing the stem one above the other, from the base to the top, as if the stem had passed through the centre. The flowers are axillary, bell shaped, open at the mouth, and pure white. It blooms abundantly and forms a new, novel, and very beautiful annual. (*Bot. Mag.*, Feb.)

761. DIEFFENBACHIA BARAQUINIANA *Versch. and Linden.*  
BARAQUIN'S DIEFFENBACHIA. (Araceæ.) Para.

A stove plant; growing two feet high; with green spotted leaves; increased by division; grown in light peaty soil. *Ill. Hort.*, 1864, pl. 387.

A new and fine species of the beautiful Dieffenbachia, with ivory-white stems, and clear green leaves spotted with white. It was found in Para by M. Baraquin, and is decidedly superior to the old and well known species. It is one of the most useful of the variegated-leaved plants. (*Ill. Hort.*, Jan.)

762. DIANTHUS CINCINNATUS *Nob.* FRINGED-PETALED DIANTHUS. (Dianthaceæ.) Japan.

A half-hardy perennial; growing a foot high; with blood crimson flowers; appearing in summer; increased by seeds; grown in good garden soil. *Ill. Hort.*, 1864, pl. 388.

A new and fine Dianthus, nearly related to the showy *D. Heddewigii*, having very large single flowers deeply cut or frizzled at the end of each petal. It was received from Japan, and introduced by MM. Jacob, Makoy & Co. of Liege. It is perennial, but probably hardy enough to be kept in a cool frame during the winter. (*Ill. Hort.*, Jan.)

763. DEUTZIA CRENATA FLORE PLENO. DOUBLE-FLOWERED CRENATE DEUTZIA. (Philadelphiceæ.) Japan.

A hardy shrub; growing six feet high; with double white flowers; appearing in July; increased by layers; grown in good garden soil. *Ill. Hort.*, 1864, pl. 389.

Although this new and beautiful shrub is of such recent introduction that its hardiness has not been proved, there is so little doubt about it, that we claim it as the finest acquisition since the *Weigelia*. *D. crenata*, the parent, is as hardy as

*D. scabra*, and has flowered with us freely and abundantly for several years. The double variety only differs in its flowers, which are as double as the flowering almond; they are much larger, and as they are produced in dense terminal spikes, above the clear green foliage, they are more effective. The petals are pure white, but the reverse side is rose-colored, which gives a pinkish hue to the blossoms. It is one of the superb acquisitions of Mr. Fortune from Japan. (*Bot. Mag.*, Jan.)

764. *STENOGASTER MULTIFLORA*. MANY-FLOWERED *STENOGASTER*. (Gesneriaceæ.) Garden Hybrid.

A stove plant; growing three inches high; with purplish lilac flowers; appearing in summer; increased by offsets; grown in light rich peaty soil. *Ill. Hort.*, 1864, pl. 390.

A neat and delicate variety of the *S. concinna*, growing only a few inches high; with flowers similar to some of the achimenes. Its dwarf habit makes it a pretty plant for shallow pans or ornamental baskets. (*Ill. Hort.*, Feb.)

765. *CAMELLIA NINFA DEL TEBRO*. Garden Hybrid.

A new and fine Italian variety, raised at Rome by M. Del Grande. The flowers are large, perfectly imbricated to the centre, in six regular lines, and the petals rounded at the ends, color a bright cherry, with a large band of white running through the centre of each petal. Its growth is vigorous, the foliage ample, and the flowers open freely. (*Ill. Hort.*, Feb.)

## General Notices.

*RUSSELLIA JUNCEA*.—*Russelia juncea* is a stove plant from Mexico, and one of the most graceful plants in cultivation. It requires a compost of equal parts turfy loam and fibry peat, chopped with a spade, but not sifted unless through a riddle with inch meshes, and a liberal admixture of silver sand. We presume yours is a small plant, if so, pot it and keep it in a moist atmosphere to induce free but not luxurious growth. Shift into a pot a size larger, immediately the roots reach the sides of the pot. Repeat the same until the plant attains the size you wish, when you will give the last shift, double the sized pot of any of the former being employed. When this pot becomes full of roots the plants will show flowers, but much will depend on pinching the strong shoots back when they are a

foot in length. The branches may be tied to a stick, from which the laterals droop gracefully. It flowers more abundantly on moderate than luxuriant growths. You will, therefore, stop all strong and rampant growths, encouraging the weaker until growth begins to slacken, when stopping will be discontinued and syringing too, the plant being kept drier at the root and less moisture given above. Any straggling blooms to be removed if they appear whilst it is growing. Sudden changes of temperature are inimical to its well being; and it rarely does well after flowering once, consequently young plants must be ready to grow on to supply a worn-out specimen. It is easily propagated, either by single joints of the shoots or cuttings in a little bottom heat, or from suckers or division.—(*Cot. Gard.*)

---

**TRITELIA UNIFLORA.**—This is an elegant little blue flowering bulb from Buenos Ayres. It is almost if not quite hardy, but does well under greenhouse treatment. Keep it well supplied with water whilst flowering, and when the weather becomes warm, in the latter part of May, turn it out, plunging the pot in a dry sunny border. Take the pot up in September, and re-pot the plant, disturbing the ball as little as possible, taking care to secure good drainage. It does well wintered in a greenhouse near the glass. It usually flowers in June, and we should therefore fancy your plant has been rather warmer than is requisite; it will flower next year if not made weak by too much heat. We should like to know if any others of the tritelias are in cultivation at present, especially the North American species.—(*Cot. Gard.*)

---

**THYRSACANTHUS SCHOMBURGII, FOR DINNER-TABLE DECORATION.**—It is, when well grown, one of the most suitable for this purpose. Its long, tropical-looking, jointed stem, carries the crown above the line of vision, while its delicate pendent racemes of brilliant scarlet flowers show brilliantly by candle-light, without intercepting the view. I speak from particular experience at my own table.—(*Cot. Gard.*)

---

**THE CULTIVATION OF HUMEA ELEGANS.**—There are few plants whose beauty is so much augmented by cultivation as that of this, which when really well done, forms one of the finest ornaments of the flower garden; and when seen as it is usually done, is a poor, weedy, shabby thing. We remember many years ago going to Whiteknights, then the seat of the great gardening Duke of Marlborough, and seeing there such plants of humea as could hardly be conceived. They were from 10 to 12 feet in height, perfectly bushy, 8 feet in diameter at the base, from which they tapered to the top, presenting to the spectator a fountain-like mass of the most elegant auburn color; and, when agitated by the wind, spreading an agreeable and aromatic odor—an odor which I have heard pronounced very agreeable by connoisseurs in scents. It is a Chinese plant, and was named after Sir Abraham Hume, late of Wormleybury, Herts. It is a biennial: and as it flowers the second year, it is most important to cultivate it most vigorously during the first season. It should be sown in February in pots, in a gentle

heat. The soil should be sandy loam and peat. When it has come up it should be pricked off into 60-pots, and from them to sizes larger and larger as required. About the end of July it may be hardened to stand out of doors; and here its growth will be very rapid, if shifted according to its rooting. At the time of housing—say the early part of October—they will be fine plants; and as it will be prudent to grow some supernumeraries, the best plants should be chosen and housed; giving them a slight shift to carry them on through the winter. This shift I regard as most important to the future progress; they keep forming roots slowly, and it prevents their forming weak and premature flower stems. Their treatment at this time is of importance; they must not be huddled together at the back of other plants, but should be placed near the glass, with plenty of air and space all round them. There is a peculiar disease they are subject too—the damping and rotting of the leaves, something like the rot in geraniums. To prevent this, the plants should be kept free from the syringe in winter, and every specked leaf removed as it appears. I have seen fine plants wholly spoiled by this disease. We will now suppose that the plants have passed through the winter, and it is the middle of February. Some very large pots must be procured, and the plants shifted into a good compost of peat and loam. They must now be set growing, for which a vinery just started will do very well; and as the temperature is increased they can be moved into another succession-house. They may now be duly syringed, and the heat and moisture will soon force them into luxuriant growth. By the beginning of June they will be fit to harden off in a cooler house. This must be carefully done with shading, so as not to injure the luxuriant and ample foliage, which has been making itself in the vinery. When brought entirely out they must be inured to the rays of the sun by degrees. If all this is well and properly managed they will be magnificent plants, and the person who has the charge of them will not grudge the trouble which has been bestowed upon them. Having now detailed the progress of cultivation, we would make a few observations as to the situations proper for the stations of such plants in the flower garden. In all large gardens certain episodes of peculiar character may occur, without detracting at all from the general expression of the place as a whole; and I know of no plant more fit to give a marked and peculiar character to such spots than *Humea elegans*. I have seen plants of it stuck out on terraces, with weak slender stems, looking most miserable and inviting one's pity—indeed, scarcely have I ever seen them placed with proper effect. What could be more lovely than in the midst of charming pleasure grounds to come suddenly upon a small nook or terrace decked out with these fine *Humeas* to give it character, and filled with specimen pots of Japanese lilies, blue hydrangeas, lobelias, and other plants from the far East? Several of these spots might be made in a place; and we think that the charming interest they would create would be felt and acknowledged—the whole being of different characters. We could write a great deal more on this subject, but feel that we are approaching the limits of our space. It is often contended that intricacy destroys breadth. But we do not assent to this; we



think that there may be the most perfect intricacy, with all due respect to the latter quality. In writing this paper, I will conclude by assuring my brother horticulturists that I have penned nothing but what I have seen and practised; and I hope that my humble endeavors may be useful in rescuing a fine plant from a state of obscurity.—(*Gard. Chron.*)

**STOCKS FOR VINES.**—Shortly after the introduction of Snow's Muscat Hamburg, a great many gardeners, and myself among the number, prophesied that it would soon slip out of cultivation, even that its excellent quality would not sustain it, owing to constitutional debility; and judging from the ordinary way in which grapes are grown, there existed cogent reasons for the supposition. The result of my experience, after having grown it for three consecutive years, is, that I could never produce a sound bunch; more than three parts constantly shanked, while many of the berries not unfrequently remained green to the last; not grown on its own bottom, but grafted in a shoot of the Golden Hamburg. What staggered me, and set at defiance every attempt to solve the problem, no shanking ever occurred with the Golden Hamburg; many of the bunches exceeded 3 lb. in weight, and many of the berries were  $3\frac{1}{2}$  inches in circumference. We would naturally suppose, under such circumstances, the Muscat Hamburg could find no excuse for shanking, unless under the plea of pertinacity; however, its unsatisfactory proceedings eventually led to its expulsion. Three years next June I went to see Mr. Snow of West Park, who, I am informed, stands sponsor to this grape; and here it failed to exhibit itself to much better advantage than elsewhere. It also may be noticed, that I have never seen it produced at our metropolitan or provincial shows, in a state to deserve attention, till entering the exhibition rooms of the Edinburgh Horticultural Society last September, my eye caught the noble bunches produced by Mr. Fowler, gardener at Castle Kennedy. While telling Mr. Thomson of my unsuccessful efforts, he at once said—"Graft it on the Black Hamburg and your troubles will cease." So, without one word more, off we started to see his performance. Judge of my surprise to find ordinary sized canes, the produce of grafts put on in 1862, each carrying six bunches, many of them considerably over 5 lb. in weight, without a shanked or deformed berry. This utilitarian stroke, if I may use the expression, at once convinced me that Mr. Thomson's experiment was a decided success, and I at once resolved to put it into execution. While discussing this matter, the conversation turned over to the question, "What is the best stock on which to work delicate growing vines?" when Mr. Thomson at once introduced the Black Hamburg as the best qualified for every purpose; nor does our present knowledge allow us to impugn the validity of his statement, more particularly when looking at what he has accomplished in the case of the Muscat Hamburg. But, said he, "the Barbarossa is the worst—no grape is found to do well on it." This I know, to my extreme regret, to be experimentally true. When this useless variety was first introduced I planted nearly the whole of our late vinery with it, but ultimately, owing to its bad flavor, I found it necessary to cut it down, and

had it grafted with the following kinds:—White Muscat of Alexandria, Golden Hamburgh, Black Hamburgh, and Lady Downes' Seedling, neither of which, with every care and attention, could be made to produce more than half a crop, and that of so miserable a description as to induce me to keep every one out of the house unless upon business. The bunches were long and straggling, the berries set imperfectly. I have nothing to complain of in the way of shanking, but the stems yearly shrivelled, and the skin became as tough as Morocco leather. The border cannot be charged with any defect, as in the same house West's St. Peter's yearly produces excellent crops. In one of our early vineries the Barbarossa has been used as a stock for the Buckland Sweetwater, and although the effect is not so decided as in the former case, the inferior condition of the fruit fully testifies that the deteriorating influence is at work. The above detail has caused me to wander somewhat out of my way. I can only claim the liberty of having done so in my anxiety to prevent others running into the same mistake, and to support with practical testimony the truth of Mr. Thomson's assertion.—(*Gard. Chron.*)

**BEDDING DAHLIAS.**—Without professing to have any very strong affection for the dahlia as an ornamental flower garden plant, we are yet ready to admit that there are varieties of what are called Bedding Dahlias, which come in very useful amongst the larger plants which are required to carry out the present system of parterre gardening. In admitting this we may add, that Bedding Dahlias are now very different objects from what they once were. Time was when the brightly-colored sorts which were found useful in flower-beds on account of their colors, had to be pegged down to the earth to hide their gawkiness, and the display they produced was confined to such as might be yielded by a thicket of branches. Now, however, the perseverance of florists, who have forestalled the Darwinian system of natural selection by themselves selecting and breeding from the varieties which most nearly meet their wants, has secured for the flower garden a race of varieties which, while displaying florid masses of color, present these color masses in something approaching to a definite and symmetrical form. As the season is now again approaching for providing material for dahlia beds, we venture to direct attention to a few of the best sorts we fell in with last season, our memoranda being chiefly gleaned from the Chiswick collection.

Taking into account the various desirable qualities of dwarfness, gracefulness of habit—that is, neither too much stiffness nor laxity in the disposition of the “blooms,” and fulness or quality in the “blooms” themselves, we must give the preference to the following half dozen varieties, namely: 1, Dwarf Queen, a 3-foot plant, very free, and yielding a fine head of blossoms, the color being amaranth tipped with white; this is a very showy dahlia, and exceedingly effective. 2, Little Wonder, growing 3 feet high, free and showy, and every way adapted for beds; the color a light bright red-scarlet, not quite brilliant enough to be called a true scarlet, but yet a telling color. 3, Joy, a 3-foot plant, blush-white tipped with purple, free,

and altogether the best of the light tipped sorts. 4, Queen of Summer, 3 feet high, a showy white, heavily laced with rose-purple. 5, King of Dwarfs, a 2-foot plant of capital habit, the blooms good, and of a showy purple or deep amaranth color. 6, Pluton, 2 feet high, with large, well-formed, clear yellow "blooms," and a habit in every way adapted for bedding purposes. The last two sorts were perhaps hardly so much advanced as could have been wished, but their indications were all in the right direction.

A grade lower in merit, come the following half dozen:—1, Alba floribunda nana, 3 feet, clear white, with an open eye, but good in habit; 2, Royal Purple, 2½ feet, purple, a fine variety; 3, Sunlight, 2½ feet, showy, dark red scarlet; 4, Duke of Newcastle, 3 feet, large bright pure yellow; 5, Lilac Lilliput, 2 feet, remarkably bushy and branching in growth, with large late lilac flower-heads; 6, Variegata, 3 feet, with the leaves distinctly margined with cream color.

Of a stiff dwarf habit, only 2 feet high, and with huge "blooms" on short stalks set down closely amongst the leaves, the flower-heads being of a glowing crimson-red, Prince Arthur must not be overlooked in glancing over the better sorts of bedding varieties, for stiff and ungainly as is its growth, we have seen it in favorable seasons more effective than any other dahlia used in the flower garden. Of the same habit, but also very effective in certain positions, the old purple-flowered Zelinda yet claims honorable mention; and the same may be said of the dwarf and brightly-colored, but otherwise indifferent Crystal Palace Scarlet. Then Meteor, which was blooming well, though only a foot and a half high as we saw it, was of a good clear yellow, and must not be lost sight of; nor must a very dwarf white, of about the same height as the last, called Empress of the Whites, a variety clear in color and promising in character, but as it came under our notice, hardly enough developed to admit of a positive opinion being formed respecting it.

From amongst the foregoing, may be selected varieties adapted for all purposes where dwarf or bedding dahlias are required—varieties which will alike give satisfaction in regard to the quality of the blossoms, and their habit of growth. But dwarf as are many of these, the process of dwarfing by selection will doubtless yet go on—certainly if a demand for dwarfer varieties is kept up. We hope to see this process judiciously applied to the pompons.—(*Gard. Chron.*)

---

**THE PEACH TREE AND ITS FRUIT.**—A peach, I believe, ranks next to a pine apple, the king of fruits; and yet how few people obtain out of doors a full crop of this most delicious fruit. I have a full crop, grown out of doors by the river side, in a hoar-frosty valley, this year. The trees are very old and very vigorous; and there is not a blighted or curled leaf upon either of them. Mr. Sturt and Lady Charlotte, my old and kind friends, have paid me a visit this week (April 21), and have reviewed the few things in my garden that I take an interest in, namely, roses, strawberries, raspberries, pears on the quince stock, and peaches. Of this last fruit, Mr. Sturt took away specimen leaves to show his gardener. There was not to

be seen a single specimen of blister, curl, blight, or other defect, on my three peach trees. This seemed to astonish him. I cover annually with a sheet, which is a better anti-radiator than a cloud, inasmuch as it keeps the blossoms dry, and also stops back radiation. Last year I saved and brought to net 348 peaches from these three trees. The average netted in the six previous years was 517 per annum. I have disfruited the trees this year, and taken off 1823 fruit, leaving on for the present 847 peaches. I propose to disfruit them yet further, so as to net from 500 to 600 fruit. Of course allowance must be made for "dropping," which, I believe proceeds from various causes, viz., from immature wood, from previous over-cropping, from hypertrophy, from hydropathy, from want of water at stoning time, from leaving on too many fruit, or from general ill health of the tree, arising from the outward violations of the weather during winter, or afterwards, either by the elements, or the hand of man, or by his neglects. Ill health often arises from destruction of the foliage by aphides.

I do not hold the doctrine of "impossibility." I remember what Napoleon I. said, "Impossible is not French." I also say it is not English, though I often hear it. On hiring a gardener, the first thing to do is to examine his dictionary, and if he has not scratched out the word "impossible," don't hire him. I bar Yorkshire, Lancashire, and Scotland, as I do not know the severity of their spring frosts after the blossoms are unsealed; but in Dorset, even in a place as exposed to wind as the Eddystone lighthouse, and otherwise a wretched situation, the results show me that "impossible" is not English at Rushton. Your readers are welcome to come and see. My heart will hold more than my house, but they shall have a good reception. I am soon going to invite to a horticultural re-union the head gardeners of the neighborhood. Salmon and saddle of mutton always promote "unanimity."

My chief object now is to cause a greater and more sure growth of peaches. I will therefore endeavor to say briefly what I believe is essential:—

1. If trees are old (I know nothing of young trees—mine are from 28 to nearly 45 years of age; and two are the strongest trees that I ever saw) they must be cut down; their radial and perpendicular roots must be cut off, the former to about 30 inches from the stump, the latter close. The ground must be renewed with strong loam and dung, and the trees must be let up again. Give me an old tree and a sound stump.

2. Peaches like stiff, well drained ground. Mine is light, but I water and tread it till it is as hard as a pavement. I only open the ground in a 30-inch radius round the stump. There only do I manure. Round this radius peach trees should be mulched, both winter and summer.

3. Two or three inches of the top mould all over the border should be taken away every third year, and new maiden mould should replace it in November. If the soil is of a light character, the whole border should be rammed to prevent quick growth. If young trees are planted, and the wood is sound, don't cut them; but, as the tops are usually unripe, do not

cut off more than one-third. The harder you cut, the longer you will have to wait for a crop.

4. Beware of the barbarous act of disbudding. The foreshoots may be taken off, or spurred; and after cropping they may be removed. I firmly believe that the removal of leaves produces ill health, bare limbs, superannuation, a few peaches under the copings, blister on the leaves, a fit of gum (aided by rind violation from the weather) and death!

Mr. Rust, of Fulham, has told you a great peach truth—"keep the blossoms dry!" I will tell you another—you must never allow the tree in winter, or the leaves in summer, to be "violated." My sheets are put on in winter, when the weather is bad, long before blossoming time. In summer the leaves are protected by the sheets from gales of wind, to which I am exposed. Good leaves are good lungs, and good lungs are "good health."

5. If you cover with sheets, you must make up for the loss of dews by giving water at the stump. Water the stump (in hot weather, even if the nights are cold) on Monday, and, omitting the stump, water the whole surface on Thursday. If you can, take off the chill, then water the stump, and the surface may be watered at the same time. By surface I do not mean superficial. No watering does good unless it touches all the points of the roots.

6. I thank Mr. Thompson for his late excellent article on "Peach Pruning," I have rectified my trees, as far as I can, by his advice. Fan-fashion is the best as a rule; but I grow, as case may be, peaches on spurs, fan-fashion, or zig-zags. My object is to spread the peaches equi-distant, four or six per foot, all over the trees; they are so spread over this year.

7. Peach growing is dependent on attention to the tree all the year round, especially to managing the shoots in the summer. Instead of disbudding, spur the shoots and leave the others for training. The best peaches grow on spurs—they are nearer "home."

Finally, don't forget the salmon and saddle of mutton, and come and see. In the natural world seeing is believing.

I may add, my three trees are 9 feet high and 54 feet in width. Two of them are as healthy, strong, and fine trees as any in Europe. My peaches are pronounced by a gardener to be the Royal George. The sheets are put on at 1 o'clock in the afternoon, and taken off at 10 o'clock, A. M. If the weather is bad they are left on all day. My pear trees on the quince stock, of which I will give a future account, are also covered at night.—(*Gard. Chron.*)

---

RECIPROCAL INFLUENCE OF THE STOCK AND GRAFT, AS REGARDS FRUIT TREES.—As this is a subject of considerable importance, and apparently yet unsettled, the following extracts from a communication by M. Jules Liron d'Airoles, which appeared in the "Revue Horticole" for March, 1864, may not be without interest. He says, that "for our own part, we are of opinion that in the union of graft and stock, made between the same species or between species closely allied, such as that between different pears on wild pears raised from seed, the quality of the fruit of the graft ought to be very little changed. What supports this assertion is the con-

tinual reproduction of the same variety with the same flavor, the same sweet or sharp quality, the same nature, whether breaking or melting, throughout centuries. Everybody knows that of late years the greater number of our stocks are taken from the forests; and these stocks certainly come for the most part from the seeds of the small wild astringent pear, which is more wild and primitive in its nature than our perry pears that have been cultivated for many years. We ought also to take into account the alternate grafting on the quince and pear stocks. All things taken into consideration, one must come to this conclusion—that the sap of the stock is to the graft what the juices of the soil are to the root, or rather that the stock only transmits to the graft the principle of life drawn up by the roots. From this it follows that the quality of the fruit is affected more by the quality of the soil than by the influence of the stock. In support of this opinion we may mention the fact, well known in vine countries, that matured vines bear larger bunches and more abundantly than others not so treated, but the wine made from them is correspondingly impaired in quality.

M. Breitling, in the *Annales de la Société Centrale d'Horticulture de France*, says, "There has been much discussion on the reciprocal action of the stock and graft; this important question is, however, so far from being definitely settled, that even in this year (1860), the Federation of Sociétés Horticoles de Belgique has offered a prize for the best memoir relative to this subject, and has cited some facts difficult to reconcile with each other, and many almost contradictory. There is a general agreement in regarding the influence of the stock upon the graft as positive; but that of the graft on the stock is estimated as nil, or very doubtful."

In France, continues M. Liron d'Airoles, it is very seldom that we work the apricot on the apricot coming from the stone, but almost invariably on the plum stock, and consequently the fruits produced by the trees are good or indifferent according to the soil, aspect, or season. However the affinity of the apricot to the plum appears to us somewhat improper; and we regret that nurserymen do not work trees on stocks raised from the stones of apricots, and of good varieties of plums, which trees they might give to the planter with the indication that they are on free stocks raised from the stones of the same varieties as those ordered [for example, a Greengage worked on a stock raised from the stone of a Greengage. What says Mr. Rivers?] There is a chance of such a tree producing better fruit; and moreover it is likely to be longer lived. For certainly the interruption which the flow of sap undergoes when a strong-growing tree is made to support a weak-growing one, must have a great influence on its organization, sometimes causing death, or at least occasioning gum, to which stone fruits are so liable.

It is not so with the pear and apple. As is remarked by the German author, we have little to apprehend from the influence of the stock on the graft; and, as we have endeavored to show, that influence is almost inappreciable.

In the case of pears the sap circulates freely in all the varieties worked on the pear or free stock. The only exception is in the case of weak and

debilitated kinds which require an immediate pear graft of a less vigorous habit than the wild pear, but at the same time more vigorous than the quince.

As regards the influence of the stock on the fruit, it appears logical to conclude that owing to the sap passing with less force through the tissues of the quince than through the more open tissues of the pear, the tree which is nourished by the former, having a more limited supply of crude sap, its fruit will contain less water, and secrete more sugar, and consequently may be better. But the difference which we observe after paying the utmost attention to the production of trees grafted on both stocks, chiefly arises, in our opinion, from the nature of the seasons and the quality of the soil in which the trees are planted. In a year neither too wet nor too dry, it is very difficult to discover the least perceptible difference in the fruits from trees worked on either of these stocks. Under contrary conditions [in cold wet seasons], the fruit from the quince proves better than that from trees on the pear stock. Such, says Jules Liron d'Airoles, is our opinion.—(*Gard. Chron.*)

---

PREPARING AND PACKING SEEDS.—In drawing the attention of our readers to the new postal regulations by which samples of seeds can now be sent through the Post Office to the East Indies at a small cost, we promised to return to the subject in order to give some practical directions (1) how to select seeds for exportation; (2) how to prepare and pack them; and (3) to point out what kinds are most acceptable to friends in foreign countries. We will now endeavor to fulfil our promise. And, first of all, in the selection of seeds, it is of the greatest importance to take care that they are all new and fresh, that is, all lately gathered and not mixed up with old ones of a former season. It may be well enough to mix old seeds with new ones for home sowing, but this should never be done when the seeds are to be sent abroad. Old seeds, which would probably vegetate if sown in England, in many instances lose their vitality during a long sea voyage, and are perfectly worthless when they arrive at their destination in a foreign country. To illustrate the importance of selecting new seeds only for exportation, we may relate what happened in a case in which we ourselves were concerned a few years ago. A friend who had a garden, some 16,000 miles from where we are now writing, wrote to us complaining that he was very unfortunate in getting his seeds to vegetate, and begged our assistance. The late Mr. Catleugh, the well-known florist, who was then alive, offered to procure an assortment of new fresh seeds from his friend Mr. Charlwood, of Covent Garden. Mr. Charlwood, to whom the object in view was explained, took an interest in making the selection; all the seeds were consequently those which had ripened the same season, and now mark the result. When sown, after their long journey, they vegetated so thickly, and with such vigor, as to remind our correspondent of the way in which such seeds used to grow in his garden in England. Fresh seeds are therefore of the first importance, and they ought always to be secured for exportation. During a long sea voyage to the East, they are subjected

to great changes of temperature, and unless the vital principle be strong and vigorous, it is almost certain to be injured or destroyed. Any respectable seedsman will supply seeds of this description, and will give information when such seeds are ripe and fit for exportation. All who have gardens of their own, can make sure of having seeds in this condition by gathering them for themselves.

Having procured the seeds in the condition we have described, the next question which presents itself is how to prepare and pack them. The preparation of seeds for exportation is perhaps of more importance than the manner in which they are afterwards packed. In the first place they ought to be dried very carefully, so that all signs of moisture may be evaporated and driven off. If this is not attended to, the moisture is apt to induce them to vegetate while passing through warm latitudes, and their vitality is thus injured or destroyed. This important matter being attended to, they may be packed in almost any of the ways which are usually employed; they may even be put in bottles and sealed up, although this is a system of packing which has oftentimes been objected to, and is one which we do not recommend.

We mention the system of putting up seed in bottles merely to show the importance we attach to the seeds being carefully dried before they are put up. Some years ago Messrs. Wrench & Sons, of King William Street, London Bridge, were requested by the Horticultural Society of London to put up a collection of seeds in different ways for exportation as an experiment. Some of these seeds were put in bottles and sealed up, others were put in different kinds of paper, and others again in canvas bags. They were sent to China, round the Cape of Good Hope, and the voyage occupied about four months. When the seeds were sown, they all vegetated in a most satisfactory way; those packed in bottles grew quite as well as any of the others, nor could any preference be given to any one mode of packing over another. But then, it must be remembered that these seeds were carefully dried before they were put up. Had this part of the operation not been attended to, the result would probably have been very different; those packed in bottles would have perished, while those in brown paper and canvas bags might have survived. In availing ourselves of the pattern post which is now offered to us for the transmission of samples of seeds, there is only one mode of packing allowed, and luckily that mode is usually considered the best one. "Samples of seeds, &c., which cannot be sent in open covers, may be inclosed in bags of linen or other material tied at the neck." Had the Postmaster-General studied the mode of preserving the vitality of seeds during a long voyage, he could not have suggested a better plan.

As to the kinds of seeds which are likely to prove most acceptable to friends in foreign countries, we may remark that common well known things are more appreciated than anything else. Useful vegetables are always welcome, and common flowers, such, for example, as mignonette, wallflowers, stocks, geraniums, primroses, and plants of that class, are more highly prized than floral novelties with high-sounding names. Anything which recalls to the mind the flowers and home of childhood and youth has an



irresistible charm for those whose lot is to sojourn in countries far away from home.

There is a class of seeds which retain their vitality for a very short period unless they are sown in the earth, and therefore it is useless to attempt to send such things abroad in paper or canvas bags. Acorns, chestnuts, and seeds of a like kind belong to this class. If we wish to send these to a country as distant as the East Indies, they must be sown in earth in Ward's cases, and in this condition they will vegetate during the voyage. The seeds of some of the conifers, such as *Abies Kämpferi* for example, are very short-lived if they are kept long out of the ground. If the seeds of this species are cut open when they are ripe, the little germ will be observed already in a green and growing condition, and this circumstance will readily account for the difficulty which is felt in getting home seed of this fine species in good order. It is stated, and we believe on good authority, that the seed of some of the conifers which are so difficult to get home without having their vitality destroyed, ought to be gathered before it is quite ripe.

In conclusion, we congratulate our readers on the new boon which has been conferred by the postal authorities of England on all those who may choose to send samples of seeds to their friends in the East, or who may wish to receive oriental things suitable to our English parks and gardens.—(*Gard. Chron.*)

---

**ATHANASIA ANNUA.**—The Horticultural Society's Floral Committee, in its report on the experimental plants grown at Chiswick, approved the *Athanasia annua*, an old-fashioned annual, which was very effective for a considerable period during the summer months. The effectiveness of this *Athanasia* was owing entirely to good cultivation. Sown thickly on poor soil, as is the lot of too many of our annual flowers, the *Athanasia* is a mere weed; but here, transplanted singly into good soil, it formed a close mass, adorned with a profusion of its bright yellow flower-heads. The branching habit which the plant assumes under such treatment is highly favorable to the production of a succession of flowers. In the instance referred to, the individual plants formed dwarfish freely-branched tufts of about a foot in height, the ends of all the branches being decorated with a corymb of the peculiar rayless flower-heads.—(*Gard. Chron.*)

---

## Societies.

### AMERICAN POMOLOGICAL.

In conformity with a resolution adopted at the last meeting of this National Association, the undersigned give notice that its Tenth Session will commence in Corinthian Hall, in the City of Rochester, N. Y., on Tuesday, September 13th, 1864, at 12 o'clock, noon, and will continue several days. All horticultural, pomological, agricultural, and other kindred insti-

tutions in the United States and the British Provinces, are invited to send delegations as large as they may deem expedient; and all other persons interested in the cultivation of fruits are invited to be present and to take seats in the Convention.

The great Annual Fair of the New York State Agricultural Society will be held at Rochester on the following week, so that delegates who desire to do so can attend both meetings, and those who contribute collections of fruits to the Pomological Society can afterwards exhibit them at the State Fair.

Throughout a large portion of the country the prospects of the fruit crop are very encouraging, and as the Fruit Growers' Society of Western New York will place its entire collection at the disposal of the American Pomological Society, a display of extraordinary interest may reasonably be expected.

Among the prominent subjects which will come before the Society at this session will be that of the revision of the Society's Catalogue of Fruits. The Special Committee appointed for this purpose are now, with the various State and local Committees, actively engaged in collecting such information as will aid in determining what varieties are best adapted to the different sections and districts of our country, and this information, in the form of reports, will be submitted to the action of the Convention.

All the States and Territories are urgently invited to be present, by Delegation, at this meeting, that the amicable and social relations which have heretofore existed between the members of the Society may be fostered and perpetuated, and the result of its deliberations, so beneficial to the country at large, be generally and widely diffused.

Members and Delegates are requested to contribute specimens of the Fruits of their respective districts, and to communicate in regard to them whatever may aid in promoting the objects of the Society and the science of American Pomology.

Each contributor is requested to come prepared with a complete list of his collection, and to present the same with his fruits, that a report of all the varieties entered may be submitted to the meeting as soon as practicable.

All persons desirous of becoming members can remit the admission fee to Thomas P. James, Esq., Treasurer, Philadelphia; or to the President at Boston, who will furnish them with Transactions of the Society. Life membership, Ten Dollars; Biennial, Two Dollars.

Packages of Fruits may be addressed as follows: "American Pomological Society, care of James Vick, Rochester, N. Y."

JAMES VICK, Secretary.

MARSHALL P. WILDER, President.

---

## Massachusetts Horticultural Society.

*Saturday, May 7, 1864.* An adjourned meeting of the Society was held to-day—the President in the chair.

Capt. Austin, the Treasurer, reported that the tenants had left the Montgomery House, given up the keys, and paid all the rent up to May 1.

The following members were elected:—James M. Balch, C. W. Free-land, Gurdon G. Hammond, Dr. T. M. Brewer, Samuel Gould, N. Seaver, and Arthur Gilman, Boston; Miss S. C. Wingate, H. O. Allen, E. W. Seaverns, and Jas. M. Russell, Malden; G. W. C. Washburn and Joseph Morrill, Jr., Roxbury; Chas. Harris, E. C. Bates, J. C. Chase, Geo. C. Richardson, Cambridge; J. O. Wellington, Elisha Atkins, Belmont; Harrison Bird, Thos. S. Pettengill, Brookline; John Hastings, Lexington; Chas. L. Andrews, Swampscot; George Hyde, Charlestown; A. S. Bowen, Jamaica Plain.

Adjourned one month to June 4th.

THE OPENING EXHIBITION OF THE SEASON took place on Saturday, May 28. The contributors were limited in number, and the quantity of plants was not large. The principal display came from Hovey & Co., who had six superb azaleas, in fine bloom, comprising *Osbornii*, orange red; *Symmetry*, scarlet; *Criterion*, blush edged; *Carnosa Superba*, light rose; *Coronata*, deep crimson; and *Mad. Miellez*, white, striped with purple; six large heaths in fine bloom embracing *Ventricosa breviflora*, *V. Bothwelliana*, *V. purpurea*, *V. superba*, *Hartnelli*, and *Cavendishii*, all the specimens two to three feet high; also, six show pelargoniums, not so full of flower as usual, but very handsome specimens of the following: *Richard Bunyan*, *Glory of America*, *Napoleon III.*, *Governor General*, *Vestal*, *Lucifer*; and six fancies, viz., *Dolly Dutton*, *Helen Faucit*, *Zoe*, *Emperor*, *Beauty Supreme*, *Eulalie*; twelve greenhouse and stove plants, among them, *Latania borbonica*, *Yucca variegata* and var. *purpurea*, *Pandanus javanicus variegatus*, a superb specimen, *Maranta elegans*, and other plants. F. Parkman had a pretty specimen of the new variegated-leaved honeysuckle, *aureo reticulata*.

The cut flowers were mostly limited to choice hardy shrubs and plants. Messrs. Hovey & Co., had beautiful specimens of the new Chinese plum, new lilacs, and other hardy shrubs of the season.

PREMIUMS WERE AWARDED AS FOLLOWS:

AZALEAS.—For the best, to Hovey & Co., \$10.

PELARGONIUMS.—For the best six, to Hovey & Co., \$8.

For the best six (Fancy) to Hovey & Co., \$8.

HEATHS.—For the best six, to Hovey & Co., \$6.

GREENHOUSE PLANTS.—For the best twelve, to Hovey & Co., \$10.

We did not obtain a list of the premiums for cut flowers in season for this number.

---

## Obituary.

---

DEATH OF THE HON. CHARLES B. CALVERT.—The Washington papers announce the death of the Hon. Charles B. Calvert of Maryland, Vice

President of the United States Agricultural Society. Mr. Calvert was one of the formers of the United States Agricultural Society, and it had no more energetic friend and supporter than he was. Ever ardent and ever eloquent in the great cause of agriculture, he advocated most powerfully the establishment at the seat of government of a Department of Agriculture, and he lived to see such a department in successful operation, although not possessing those full powers of a department which he desired. Through his influence and indomitable energy the Agricultural College of Maryland was established, and in his death it has lost one of its most worthy founders and ardent friends. As a member of the House of Representatives of the Thirty-seventh Congress, Mr. Calvert proved himself a useful, business-like, and eloquent Representative.

At a meeting of the Executive Committee of the United States Agricultural Society, held May 17th, at Washington, the Hon. B. B. French announced the death of Mr. Calvert, and in some appropriate remarks alluded to his eminent services in the cause of agriculture, and the Hon. Isaac Newton submitted a series of Resolutions, expressing the sense of the Society, which were unanimously adopted.

---

## Horticultural Operations

FOR JUNE.

---

### FRUIT DEPARTMENT.

May, though dark, dull, and rather wet, has been on the whole a good spring month. It has been favorable for all kinds of planting, and trees have come forward strong and vigorous. As the heavy work of spring is over, now will be the time to commence pruning and training, so as to form handsome specimens and promote early fruiting.

GRAPE VINES in greenhouses and graperies will now be swelling their fruit rapidly and will need thinning this month; attend to this carefully and not cut away too many berries so as to form loose straggling bunches; it is better to thin too little than too much. Top laterals where they are crowding, and tie in any shoots for next year's crop. Keep the house well damped to maintain a genial moist atmosphere. Vines in cold houses will require similar care; guard against all cold draughts, and do not give air at the front in windy or cool weather. Hardy vines should be neatly trained, whatever the style adopted; rub off all superfluous shoots, which only grow to be cut away at the end of the year; it is better to throw the whole strength of the vine into the canes which are intended for bearing.

STRAWBERRIES will need attention; weed all the beds out clean, and then lay short straw neatly in the open spaces between the plants and between the rows. It will keep the ground moist and protect the berries from the dirt. Hoe and water newly planted beds, if the weather proves dry.

**ORCHARD-HOUSES** will need attention. Look very closely after the watering; in our dry climate many of the trees will need water twice a day. Mulch with cow manure if at hand, or with other manure, and as the fruit attains a good size give liquid manure once or twice a week. Air freely night and day.

**SUMMER PRUNING** should be commenced immediately; pinch off all laterals to two or three eyes, and stop all vigorous shoots which are not wanted to fill vacant spaces to form the tree.

**INSECTS** should be looked after. Apply whale oil soap if infested.

#### FLOWER DEPARTMENT.

In the hurry of spring many things are overlooked which should have careful attention even at this early season. Winter flowering stock is neglected until too late to make up for the loss of time. This is the time to re-pot and bring on young stock, and forward by means of hot beds and frames, hardening off as the summer advances. *Stevias*, *Hoitzias*, *Eupatoriums*, and similar plants, are such as we allude to. Plants suited to the summer decoration of the houses should also have attention, and be encouraged by re-potting, &c. Collect and prepare soils for autumn work.

**AZALEAS** will now be done blooming, even the latest flowering plants, and they should then have all the old flower stems picked off and the plants well syringed. Place in the warmest part of the house and syringe every day, they will soon begin to grow. Re-pot such as require it and prune in those of a loose and straggling habit.

**CAMELIAS** will now have completed their growth and made their flower buds. As soon as these are plainly seen remove to the open air, or if they are to be kept in the house let it remain open night and day, shading always from the mid-day sun. Young plants do best in pits sunk in the ground where they can be kept shaded and cool.

**CHRYSANTHEMUMS** will require attention; shift into larger pots before the plants are pot bound, and top the leading shoot; place in a frame or plunge or plant out in the open ground. See that the plants are never dry.

**PELARGONIUMS** will now be in perfection. Shade from the noon-day sun, and water more freely, occasionally using liquid manure on strong plants. Re-pot and encourage young plants intended to form specimens next year.

**CINERARIAS** will require care; scrape away the surface soil and top-dress with leaf-mould and sand; in about two weeks the young plants will be ready to pot off. Keep in a cool frame.

**FUCHSIAS** should be encouraged by an immediate shift into larger pots, and plenty of room in a cool airy house; pinch in the long shoots to form stocky bushy plants.

**ORANGE TREES** may be planted out in the open ground if in poor condition, or if in fine order top-dress with good rich soil.

**HEATHS**, of the free-growing kinds, should now be planted out in a well prepared bed, where they will do much better than in pots.

**ACHIMENES**, started early, will now require a shift into larger pots; and those started later, potted for a succession.

**MONTHLY CARNATIONS** should be planted out in good rich soil.

**WINTER-FLOWERING PLANTS**, of various kinds, such as *Stevias*, *Eupatoriums*, &c., should be headed in, and as soon as well broken re-potted into new pots.

**EUPHORBIAS** should be planted or plunged out in the open ground.

**TUBEROSES** should be shifted into 6-inch pots, and plunged out in the open ground.

**CALADIUMS AND BEGONIAS** should be re-potted and kept in a somewhat shady part of the house.

**AMARYLLISES** done blooming may be shifted into larger pots, to obtain a vigorous leaf growth, on which the flowering depends.

**POINSETTIA PULCHERRIMA** should be headed in short, and afterwards re-potted, as directed in the last number.

**CYCLAMENS** should now be planted out in a well prepared bed.

**CALLAS** may now be laid away, turning the pots on their sides to ripen off their roots.

**IXIAS** should be turned out of the pots and laid away in paper bags in a dry place.

**PALMS, YUCCAS, AGAVES**, and similar plants, should now be re-potted, if they require it.

**CHINESE PRIMROSES** should be removed to a cool frame.

#### FLOWER GARDEN AND SHRUBBERY.

The flower garden, or border, should now have all the beds or spaces filled with bedding plants or annuals; and beds filled with bulbs may be made ornamental and useful by keeping a stock in pots to fill up as soon as the bulbs can be taken up, which is about the 20th. Stake and tie up pæonies, and other flowering plants, which adds to their beauty materially. The lawn will now require cutting often, and repeated rollings, to obtain a smooth firm surface. Cut all edgings, and rake and roll the walks. Clip hedges and trim box edgings.

**GLADIOLUS** should be planted out at once if not already done.

**LILY BEDS** should have the surface stirred to permit a better growth.

**CARNATION PINKS AND PICOTEES** should be planted out in well prepared beds.

**BEDDING PLANTS** of all kinds should be put out.

**ASTERS** should be transplanted, making the soil rich and mellow.

**NEAPOLITAN VIOLETS** should be divided and planted out in beds where they can be shaded for a few days.

**ROSES** should be watered with liquid manure.

**DAHLIAS** should now be planted out, making the soil rich.

**TULIPS, HYACINTHS**, and other spring flowering bulbs, may be taken up soon.

**ERYTHRINAS** should be planted out in good rich deep soil.

**PERENNIAL AND BIENNIAL SEEDS** of all kinds may now be planted.

The Rose Slug and other insects will be at work; be ready with whale-oil soap to "give them a dose."

## THE MERITS OF VARIOUS PEARS.

WE have on many occasions, and in several articles in our previous volumes, discussed the merits of various pears, and have also noted the variableness in the quality of many sorts—sometimes delicious and at others indifferent—according to the season, the soil, location, or period of gathering and ripening; and we have endeavored, even with the fear of repetition, to collect and disseminate all the information important in the growth of this noble fruit, that its culture might be made familiar, and success attend all the efforts at the production of the very best varieties, now so numerous as to confuse and embarrass the amateur in the selection of sorts, especially where such varied opinions are expressed in regard to their merits; some cultivators considering one variety the very best, while another thinks it comparatively worthless. Such opinions it is to be expected will obtain currency in regard to the newer varieties, but such as have been introduced twenty or thirty years ought, by this time, to have their excellences or defects well known, or at least so well established with pomologists and experienced cultivators as to leave little or no doubt of their real value. In fact we believe this is so, but there are many cultivators whose experience of two or three years has been unsatisfactory, who raise doubts, or express opinions without that knowledge which time only will enable them to acquire, that one variety is often highly praised and another condemned, which a longer experience would probably induce them to revise the decision so hastily formed.

Pears have, however, perhaps more than any other fruit, a great many excellences and defects, and what would be considered one of the very choicest pears, as far as quality is considered, might prove unprofitable for general culture; while another, not of the highest quality, might be highly desirable for the same purpose. Their qualities are indeed a study; some pears keep but a short period, others a long

period ; some carry well to market, others are ruined ; some bear handling as freely as potatoes, others are almost spoiled by the same treatment ; some require to be marketed before they begin to yellow, others not until they are nearly or quite mature ; some must be gathered before a certain time or they are mealy and tasteless, others may hang upon the tree until nearly ripe without injuring their excellence ; some crack in one location and are sound in another ; some do well on quince, and others fail on the same stock. To know all these qualities it is apparent requires careful observation and study ; and it is a knowledge of them which, more than anything else, enables some to make pear culture profitable while others fail.

It is difficult to obtain such information, because there are few who are enabled to impart it ; the best amateur growers often care little about the market value of a pear ; while others grow for market and care little about the particular excellences which please the fastidious amateur ; and neither one or the other have the knowledge of the market-man as to many of the qualities which give a variety its greatest value. Hence we must take individual opinions and form our own judgment.

The American Pomological Society was established to give us the information we so much need, and their labors for fifteen years have done much to make known the qualities of many of the best fruits, and in time we shall undoubtedly have an accumulated mass of information, valuable to every cultivator.

To aid in this work should be the object of State and local societies, and where the latter combine among their members those who can give the varied information so much needed, reliable and satisfactory results may be obtained. We have, in the city of Cambridge, a horticultural society of recent formation, which we hope will do something to establish the merits of the best fruits. Located in a place famous for its superior pears, with many amateurs and cultivators who have repeatedly carried off nearly all of the highest prizes of the Massachusetts Horticultural Society, and embracing among its members the largest dealers of fruit in the Boston mar-



ket—universally confessed as the great pear market of the country—such a society ought to be able to give information of the greatest value. Its annual exhibitions, of which two have been held, have embraced some of the finest pears ever seen in the United States, including the newest and best varieties. The exhibition the present year is looked forward to with great interest, and will undoubtedly attract the attention of pomologists around Boston.

To fix the exhibition value of the finest pears is an important work. Now that cultivation has been carried to such a high degree, the difference in quality of two or more lots offered for premium is very slight, and the judges find this difference so nice as to require the closest examination to make a satisfactory award. Consequently, every variety has a fixed value—this value being EXCELLENCE, SIZE AND BEAUTY, AND VALUE FOR CULTIVATION. The two first are pretty readily ascertained, but the third is not, as the value of a variety for cultivation is estimated differently by the exhibitors and the judges, or rather the exhibitors do not know how high or low the judges may place some of the varieties; hence one or two or more points are lost or gained, which determines the award in favor of a party who may have apparently the poorest pears, in the estimation of those who do not know their value for general cultivation.

This rather arbitrary rule it has been the object of the Cambridge Horticultural Society to discuss, and, if possible, fix upon a value which shall, at least, be a law for their own judges in awarding prizes, and if it commend itself as correct to other associations. We suggested this as an important subject for action, and, our cultivators agreeing with us, it was decided to undertake the work, though one of considerable time.

The meetings of the past winter were set aside for these discussions, but so much time was consumed upon each variety, that only a limited number of kinds have yet been acted upon. These we now intend to refer to, and when others have passed the same examination we shall continue our notice.

It was voted to adopt the following standard for judging pears, viz. :—

Quality, 1; Size, 1; Beauty, 1; Value for Cultivation, 1. This was the highest standard, and any variety failing to come up to it would be estimated  $\frac{1}{2}$  or  $\frac{3}{4}$ .

BARTLETT.

This variety was named first for discussion.

Mr. J. V. Wellington (a fruit dealer in Boston market) said it was easier to sell one basket of the Bartlett than ten of any other. No other pear comes into market at the same time ahead of it.

Mr. H. Davis said it did well where any pear will grow; none generally grow better in so many places throughout Massachusetts.

Mr. J. Eaton thought it hardly No. 1 in flavor.

Mr. Wm. H. Brooks thought it was our duty to teach the public, and show them what the good pears are.

Mr. Davis thought no pear, from the time of planting, would produce so much money as the Bartlett.

Mr. Wellington thought it was already abundant enough, and would not plant any more of this than other good kinds; as he thought there were so many raised the market was likely to be overstocked.

Mr. A. Dickinson agreed with Mr. Wellington.

Mr. Brooks concurred; did not think it so very fine a pear, but had many merits.

Mr. P. B. Hovey agreed with Mr. Eaton; taking all things it must, however, be called No. 1, and none will answer better for general cultivation.

Mr. Wellington said it was not so good on quince on his land. (Light sandy loam.)

Mr. Eaton said with him it was full as good as on pear. (Loamy peat.)

Mr. Davis said with him it was best on quince. (Rich light loam.)

Mr. Dickinson said it did well on both.

Mr. Brooks. Bears better and larger on quince. (Heavy clayey soil.)

Mr. J. C. Merriam said the trees were healthy, not large, but bear well.

The Bartlett was placed at the highest standard for size, beauty, quality, and general cultivation.

## BELLE LUCRATIVE.

Mr. Davis. First class in all respects—quality and cultivation. Does not know of any September pear he would prefer; in eating a great while; may not be so good a market pear, but is one of the best of the season; bears early and annually; good on quince or pear.

Mr. Eaton. First quality.

Mr. Brooks. Thought it superior to the Bartlett.

Mr. Dickinson. A good pear—lacks for style—apt to turn black when bruised, which injures it for market; for eating, superior to the Bartlett.

Mr. Wellington. No pear, to benefit both raiser and dealer, should be sold till nearly ripe; and those pears which handle well, that do not discolor, are the profitable pears.

The President (C. M. Hovey) agreed with the members. The Belle Lucrative was a superior pear.

It was placed at the highest standard for size, beauty, quality, and general cultivation.

## BEURRE' SUPERFIN.

Mr. Davis proposed this rather new pear; thought it very handsome; quality not extra; rather too acid; very good grower and good bearer; thrifty on quince.

Mr. Dickinson. A good grower, good bearer, rather late; thought very well of it; tending to rot at core, but is a stylish pear.

Mr. P. B. Hovey liked it; thought it first-rate, sprightly and juicy; among the best.

The President said it did rot rather too quick at the core; quicker than some, yet not so much as some other good pears.

Mr. Eaton did not know much about it; not a sweet pear, and his preference was for sweet pears.

Mr. Wellington said sweet pears were preferred, nine times out of ten, in the market.

After further discussion it was voted to rank it as follows:

Size, 1; beauty, 1; quality, 1; general cultivation,  $\frac{3}{4}$ .

## LOUISE BONNE OF JERSEY.

Mr. Wellington said it was No. 1 for cultivation, either on quince or pear stock; a hardy pear, and good pear to handle; good size, good quality; No. 1 for size, for beauty, and for the market.

Mr. P. B. Hovey concurred with Mr. Wellington.

Mr. Davis. No 1 all round, better on pear than on quince.

Mr. Eaton. No. 1 all through.

Mr. J. Nudd. Better on pear; considered No. 1; good bearer and fine.

Mr. Merriam thought it No. 1 all round; one of the best in his collection.

Mr. L. Wheeler agreed with others; handsome and good; tree good bearer and good grower.

It was voted to rank as follows: Size, 1; beauty, 1; quality, 1; general cultivation, 1.

#### LAWRENCE.

Mr. Nudd. Rather moderate grower; very fine, very sweet; bears well, keeps well; December and January.

Mr. Dickinson agreed with Mr. Nudd; fully equal to expectations; colors up well, yellow and handsome.

Mr. Eaton agreed. Best pear for a party; thinks it equal to Winter Nelis.

Mr. Davis thought it No. 1.

Mr. P. B. Hovey thought it a good pear.

Mr. Wellington agreed; not quite so good a market pear as Winter Nelis.

The President thought it fine.

It was voted the highest standard. Size, 1; beauty, 1; quality, 1; general cultivation, 1.

#### WINTER NELIS.

Mr. Nudd thought it a great bearer. About as good a winter pear as any except Lawrence; good grower, handsome tree; on pear.

Mr. Dickinson thought well of it; hangs well on the tree, thick skin, and handled well; bears well every year.

Mr. Eaton thought it No. 1, all round.

Mr. Davis. One of the finest pears on quince.

Mr. P. B. Hovey. A fine pear.

Mr. Wellington. No. 1 in every respect; no pear gives such general satisfaction.

Messrs. Wheeler and Merriam agreed.

Adopted. Size, 1; beauty, 1; quality, 1; general cultivation, 1.

## BEURRE' D'ANJOU.

The President thought it a great grower; vigorous, hardy, and healthy; and quite No. 1.

Mr. Nudd. It don't rot.

Mr. Davis. Better than Winter Nelis.

Mr. Eaton. Fine, but does not bear well; has large trees, but does not get a heavy crop.

Mr. P. B. Hovey thought it first-rate.

Mr. Wellington. Not well acquainted with it; quality No. 1 for market; prefer it to Duchess; sells better.

Other members concurred in considering it No. 1.

It was voted: Size, 1; beauty, 1; quality, 1; general cultivation, 1.

## POMOLOGICAL GOSSIP.

BELMONT STRAWBERRY FESTIVAL.—In another column we publish a report of the Strawberry Festival held by the Belmont Farmers' Club, on Saturday, June 25th, delaying our Magazine a day or two to give such an interesting account of strawberry culture in the town of Belmont, now, if not already famous for the superior growth of this delicious fruit.

This is the sixth annual Strawberry Show, each one more successful than those previously held, both in the quantity and excellence of the fruit, with this exception, that the entries for Hovey's increase, while those of other sorts decrease. This year there were 79 entries, a greater part being Hovey's Seedling, and though drought more than usually severe has prevailed all the month, the berries were never better. Indeed Belmont excelled itself.

The great interest manifested by the public in the exhibition, as well as the desire among the growers to enhance if possible the size and beauty of the fruit, induced the members of the Club to offer unusually liberal prizes, with the hope of bringing out something new and superior to Hovey's Seedling, which has so long carried off the prizes, and a silver cup of the value of \$40 was offered for the best 4 quarts of

any strawberry, open to all competitors; and a second prize of \$25. But there was not even an entry of any other sort for competition, and the first prize was awarded to Varnum Frost for 4 quarts of as handsome berries as were ever raised.

The show was every way a success. The 100 baskets of berries, from 2 to 4 quarts each, filled the tables; and, in addition, there were superb bouquets, plants, flowers, &c., tastefully put up, liberal prizes being offered for them. The day was fine, the company large, and Yale's large tent, 150 feet long, was gay with the assemblage of ladies and gentlemen from Boston and the neighboring towns; a band of music enlivened the passing hours.

At the close, the basket of first prize berries was sold at auction for \$20, and the second for \$15.

STRAWBERRY CULTURE IN NEW HAVEN.—Among other items of interest to fruit growers, we extract the following from a letter from Col. Dewey of New Haven:—"The present condition of the strawberry market in this city—so far as I have been able to observe and make enquiry—confirms me in my previously-expressed opinion with regard to the superiority of your Hovey's Seedling. Unless some of the new varieties shall prove to be much superior to the kinds which now *usurp* the market, how gladly will *the people* hail the return of the 'good old times' when they could procure an abundance of Hovey's Seedling!"

THE YEDDO GRAPE.—"Grape vines, in my small vineyard, principally Hartford Prolifics and Concords, are blossoming well, (and how delightful is their fragrance?) and the prospect is good for a large crop of fruit. Among the novelties, in the way of grape vines, I have a young and thrifty 'Yeddo;' but its present appearance indicates a want of hardiness. I shall hardly venture to leave it out without protection during the coming winter.—Respectfully, yours, &c., D. S. DEWEY."

LA CONSTANTE STRAWBERRY.—Some fine specimens of this superb strawberry were recently exhibited by M. H. Simpson, Esq., of Saxonville. They were forced in pots, and Mr. Burns, the gardener, speaks in the highest terms of its excellence for forcing, being far superior to Triumph de Gand. The

habit of the plant is unusually dwarf, the leaf stalks short and few in quantity, the fruit stems short, yet so stout as to hold up the huge fruit. For this reason the plants can be kept close to the glass, the only place where strawberries can be successfully produced.

---

## ST. CRISPIN PEAR.

BY THE EDITOR.

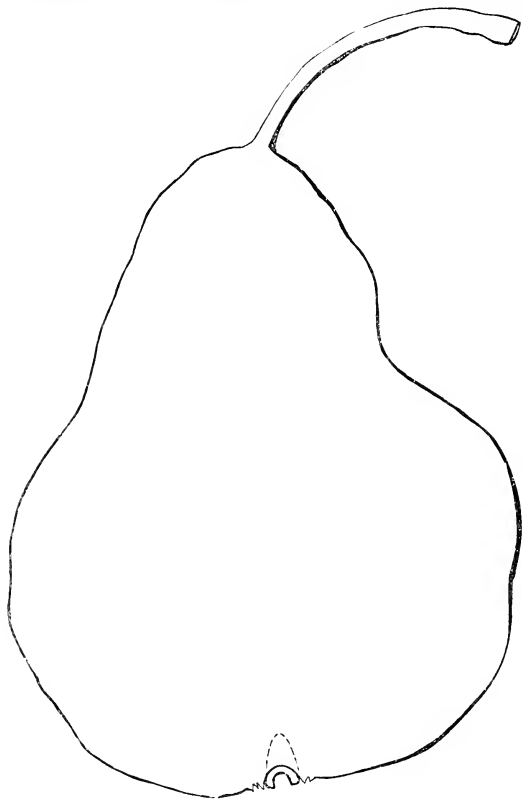
Two years ago, Jas. Oliver, Esq., of Lynn, sent us a specimen of a seedling pear, which he thought possessed very superior qualities. The specimen was either too ripe, or not a fair sample, as upon trial we did not find it superior to many pears of the season. Last fall, Mr. Oliver sent us specimens again, and these proved to be beautiful and excellent, promising to become a very valuable seedling.

In the previous autumn we made a description and a drawing of the fruit, and the past spring Mr. Oliver kindly sent us a scion of the tree, which we put into an old tree and is growing vigorously. Very recently, he has favored us with a beautiful model of a fine specimen, which shows it to be a very large fruit, having much the appearance of the Des Tongres, or Beurre Bose, but rather more uneven in outline, and bossed on the surface, and while it has the rich flavor of the above fruits, it is free from the acid which some pomologists dislike in the De Tongres.

The St. Crispin (FIG. 10) as Mr. Oliver calls the pear, was raised from seed by Mr. Israel Buffum of Buffum Court, Lynn, and has now fruited three or four years. The tree is a very strong grower, an abundant bearer, and the fruit large, specimens often weighing 14 ounces. It ripens in October. We annex the following description of the fruit:—

Size, large, about four inches long and three in diameter; Form, obtuse pyramidal, large and rounded at the crown, contracted at the middle, and obtuse at the stem; Skin, little rough, with an uneven surface, slightly knobby, greenish russet, and broadly tinged with red in the sun; Stem, long, about

one and a half inches in length, slender, curved, and inserted in a very small cavity, russeted at the base; Eye, large, closed, and inserted in a very shallow ribbed basin; segments of the calyx, medium length; Flesh, yellowish white, little



10. THE ST. CRISPIN PEAR.

coarse, melting, juicy, rich, and agreeably flavored; Core, rather small; Seeds, small, abortive. Ripe in October.

The St. Crispin adds one more to the list of superior American pears.



## HYBRIDIZATION OF FRUITS.

BY T. FRANCIS RIVERS.

WE are pleased to find that Mr. Rivers, whose many articles on fruit have, from time to time, appeared in our pages, has found an able coadjutor in his son, Mr. T. F. Rivers, and that the many experiments in the production of seedlings, at Sawbridgeworth, will not be lost, but rather augmented by the assistance of his son who shows, in the following article, his great interest in this branch of horticulture. We commend to all fruit growers these hints on the production of new seedling fruits:—

An ancient friend of Gil Blas laments that the peaches, which, in his boyhood, were as big as pumpkins, diminished sadly in size in his old age. Most of us have felt as he did with regard to the fruits of boyhood. By careful crossing Bakewell improved the ragged bony sheep of his youth into the full-fleeced fleshy sheep of the present day, and there is no reason why the present race of fruits should not by the means he employed be improved into a race nearly as big as the youthful pumpkins of Gil Blas' friend.

The introduction of orchard-houses has removed the obstacles which have hitherto existed; the uncertainty of out-door cultivation has been too disheartening to the English fruit grower, and our fruit gardens, with few exceptions, owe the introduction of improved varieties to foreign cultivators, who appear to have depended more upon chance than any skilfully arranged system; their efforts have however given very satisfactory results.

The Acton Scot peach, a hybrid obtained by crossing the Early Nutmeg and Royal George peach, raised by Knight, and more recently the Victoria and Prince of Wales pears, raised by Mr. Huyshe from the Marie Louise and Gansel's Bergamot, show that there is no lack of success in England, where skilful hands and heads are at work; these efforts have however been isolated, and it is during the years to come that the most important results may be expected from this interesting branch of horticulture.

In a well stocked and well cultivated orchard-house all the materials for the raising of seedlings exist, and as peaches hold the first rank among refined fruit, I will begin with them. The earliest peach known is the White Nutmeg, but valuable on that account only, the fruit being small and inferior; it should be improved by crossing with Grosse Mignonne, Noblesse, or Royal George; and to obtain size, with the Pavie de Pomponne or Catherine; probably the produce of the first generation will be a disappointment, but patience is a most needful virtue in everything connected with pomology, and the third or fourth generation may repair the defects of the first. Following the White Nutmeg we have the Red Nutmeg and Petite Mignonne, the latter a most delicious peach, but now too small; it has a great tendency to reproduce itself, but, fertilized with the large varieties already named, a very valuable early fruit may be hoped for.

The Early Ann, Early York, and Acton Scot are all excellent early peaches, but too small. The Early York reproduces itself from seed with little variation, and is likely with careful crossing to give the best results; it should be allied to the largest known varieties, irrespective of season of maturity.

The Shanghai peach promises to be a valuable hybridizer; it is very large, very hardy, and very productive, the flesh particularly firm and solid, withal a good melting peach; a good market fruit ought to be raised from this variety.

It seems like gilding fine gold to improve the flavor of the Noblesse, but if crossed with the Stanwick Nectarine this result is possible. To obtain size combined with flavor, the Grosse Mignonne, Noblesse, Galande, and Royal George should be crossed with large Clingstone peaches. Some of the Pavies in the south of France are enormous, and as a melting peach will produce a Pavie from seed, and a Pavie a melting peach, some good hybrids may be obtained.

To prolong the peach season, the late American varieties will be valuable; some of these will hang on the trees till November, and present an imposing exterior on the dessert table; they will not, however, bear the test of "degustation." They should be crossed with the Grosse Mignonne, Noblesse, and the Walburton Admirable.

The Deese and Boudin may be improved by an alliance with Stanwick Nectarine and Noblesse peach.

Dr. Lindley, when the Stanwick Nectarine was introduced, pointed out its great value as a hybridizer. Crossed with the Pitmaston Orange, the Elruge, and the very precocious Fairchild's Early Nectarine, some fine varieties will probably be obtained.

A race of late nectarines, originating from the Peterborough, a late melting sort, has been raised here; though large and handsome its flesh is too tough. Crossed with melting peaches and the Stanwick nectarine, the season of good nectarines, fully equal in quality to the earlier kinds, may be prolonged until November; the very large Newington nectarine will probably prove the parent of some fine melting varieties if allied to the freestone sorts.

In the orchard-house here are now 110 seedling peaches and nectarines, nearly all bearing fruit with the help of glass and pot culture; this satisfactory result has been obtained in the short space of from three to five years.

I had the good fortune two years since, when attending the Fruit Congress at Namur, to be introduced to M. Gregoire-Nelis. This gentleman has earned a just reputation for the excellence of his seedling pears; he was good natured enough to give me a history of his efforts, but he did not say that he had hybridized any varieties, his system consisting in the selection of the largest pips from the finest and best flavored fruits. If by this simple method so many good and diverse varieties have been obtained, a careful and systematic hybridization should give vastly superior results.

The Doyenné d'Été is the earliest of all pears, small, with an agreeable but not superior flavor; it is an abundant bearer and should be crossed with either Jargonelle, Beurré Giffart, Bon Chrétien (Williams), Beurré Superfin, or Louise Bonne d'Avranches, all possessing qualities in which it is deficient. The old fashioned Lammas, Green Chisel and Citron des Carmes, will probably be the parents of fine early pears, crossed with larger and finer varieties. The Jargonelle and Beurré Giffart, fertilized with their hardier cousins, may produce seedlings hardy enough for the North of England, without the protection of a wall.

The enormous size of the Uvedale's St. Germain renders it a most important parent; crossed with Beurré Superfin, Jargonelle, or Marie Louise, the produce may possibly possess the delicate flavor of the latter, combined with the enormous size of the former, a result most devoutly to be desired, as our pears may then at all events be as big as pumpkins.

The best of our winter pears, Winter Nelis and Josephine de Malines, are too small; hybridized with either Beurré Diel, Triomphe de Jodoigne, Duchesse d'Angouleme, or Easter Beurré, a greatly improved progeny may result. During February we have the delicious Bergamotte d'Esperen; this is too small, and should be crossed with Gansel's Bergamot, Beurré Rance, or Easter Beurré; in March and April the two last are large enough, but their flavor is not super-excellent. The recent introduction of Madame Millet has provided an excellent pear for May, and Bezi Mai and Morel will last till June, but though they look well on the dessert table, they must not be tried by any other organ than that of sight; crossed with high-flavored pears they will probably prove the parents of late varieties equal to Beurré Superfin, a very high standard.

There is a tendency in some pears to reproduce their race. The Beurré d'Arenberg is remarkable for this quality; the seedlings of this variety raised here differ from the parent only in the season of maturity. The excellent characteristics of the Passe Colmar are inherited by its descendants, and this quality will prove an important guide to the hybridizer. Before closing my notes on pears I may mention that Beurré Clairgeau and King Edward's, from their size and beauty, are undeniable; but they want flavor, and should be crossed with those of better quality.

If you will allow me, I will at some future time offer you some remarks on plums, apples, and other fruits. In the present race for improvement in all things, it would be a sad pity that pomology should lag. I may here remark that pot cultivation under glass is indispensable; out of doors the experimentalist would generally reap nothing but disappointment. To carry out hybridizing successfully, many varieties of fruit must be collected; and as not more than three or

four fruit on a plant will be needed, a moderate-sized pot may be used. The names of the parents from which seedlings are raised should be preserved, and the most minute attention given to all particulars connected with the races of seedlings, as the results are necessarily very slowly developed, and probably, to produce very marked progress, some generations of fruit must pass.

---

## THE CHINESE AZALEA.

FROM THE GARDENERS' CHRONICLE.

WE now conclude the series of papers on the azalea, by Mr. Barnes, and we hope they have been as interesting to our readers as they have been to us. Although the culture of this splendid plant has been made a speciality with us for some years, we had yet something to learn, and have profited by Mr. Barnes's advice. We trust the publication of these papers will extend the culture of the azalea, one of the most showy and valuable of greenhouse plants.

The selection of varieties by Mr. Barnes is excellent, but as it includes some very new varieties, those who have not the older sorts, and are not particular as to mere novelty, will find our list in a previous volume extremely useful. For the information of those who have not that volume at hand we annex a list of such as are free bloomers, showy and beautiful, though not so novel in color as some of those raised by Mr. Barnes:—

*White*.—Mont Blanc, America.

*White, with Stripes*.—Mad. Miellez, Beauty of Reigate.

*Rose or Peach*.—Triumphans, rosca magna.

*Crimson*.—Decora, coronata.

*Salmon or Pink*.—Criterion, Eulalie van Geert.

*Orange Scarlet*.—Chelsoni, Perryana.

*Variegated*.—Distinction, albo cineta.

*Lilac and Rose*.—Suzette, Petuniæflora.

Amateurs who possess these can select from the lists of Mr. Barnes:—

Presuming that we are now at the end of the season, with all the plants well furnished with bloom buds, what is now required is to give air liberally, to water carefully, and to keep the temperature of the house low, just sufficient to prevent frost from reaching the plants in winter. If any of them are required for forcing to decorate the conservatory, those should be selected that carry the most prominent buds; and these, if introduced into the stove, will soon expand their gay blossoms.

After the blooming season is past, the plants will require to be placed in heat again, and treated precisely in the same manner as they were in the previous season. All long shoots must be stopped, especially where there is a tendency to assume a straggling habit; this topping will cause them to throw out side shoots; and when these are long enough they are to be tied in as required. The roots must be closely examined, and if they are found in a healthy state and the ball well filled with them, the plant may have a larger pot, and should be placed again into comfortable quarters for the season's growth. By attention to the particulars which I have pointed out, the cultivator may have the pleasure of being the possessor of such specimens as those which adorn our exhibitions to the wonder and delight of all who see them.

The following is a selection of the finest azaleas in cultivation with which I am acquainted:—

Duke of Devonshire	Gledstanesii
Diadem	Glory of Sunning Hill
Holfordii	Extranii
Iveryana Improved	Stanleyana
Ardens	Admiration
Juliana	Gem
Perryana	Criterion
Beauty of Reigate	Magnifica
Symmetry	Perfecta elegans
Magnet	Eulalie van Geert
Vesta	Lecana
Maria	Louis Napoleon
Chelsonii	Madame Miellez
Lucens	Princess Mary of Cambridge

Petuniaeflora	Mad. Ambroise Verschaffelt
Roi Leopold	Etoile de Gand
Modele	Carnation
Rubens	Tricolor
Standard of Perfection	Roi des Doubles
Baron de Pret	Brilliant
Queen of Whites	Advance
Leopold the First	Dr. Livingstone
Duchesse Adelaïde de Nassau	Salmonia albo-cincta
Flower of the Day	Bernard Handre
Souvenir de l'Exposition	Reine Blanche
Variiegata superba	Flag of Truce
Sir H. Havelock	Elegantissima
Perfection	Marie Vervaene
President	Reine des Belges
Mars	Sinensis lutea
Kinghornii	Sinensis alba
President Claëys	Leviathan

Of these, which are of course too numerous to be all included in any one private collection, I would recommend as the best 12 of varied and distinct colors, the following sorts:—

*White*.—Queen of Whites, Marie Vervaene.

*White with Stripes*.—Flower of the Day, Madame Miellez.

*Rose or Peach*.—Standard of Perfection, Kinghornii.

*Violet Rose*.—Extranii.

*Deep Rosy Purple*.—Baron de Pret.

*Salmon or Pink*.—Criterion, Etoile de Gand.

*Deep rich Salmon*.—Gem.

*Rich Orange*.—Mars.

These are selected with special reference to their combining the points of freshness and vigor of habit, with abundance of blossom, distinctness of color, and superiority in the quality of the flowers. They may be regarded as the cream of the Azaleas now in our gardens. Another 12 of about equal merit with respect to the qualities just named, and which might be usefully added where a greater number of varieties was required, will be found in the following selection:—

*White*.—Reine Blanche.

*White with Stripes*.—Tricolor, Iveryana Improved, Beauty of Reigate.

*Rose or Rosy Peach*.—Dr. Livingstone, Modèle.

*Salmon or Pink*.—Variegata superba, Salmonia albo-cincta.

*Orange Scarlet*.—Juliana.

*Deep Red*.—Rubens.

*Rosy Salmon*.—Magnet.

*Rich Rosy Purple*.—Halfordiana.

There are many besides these which I have bloomed, or have heard others mention in very high terms, but the above list enumerates all I can confidently recommend at present. Many of those that I have bloomed, though very much praised, by some persons, I consider no better than the above, even if they can be reckoned equal to them. Other varieties have not yet bloomed, or have bloomed prematurely in consequence of the severe cutting they have to be subjected to for grafting, and these it would not be just to condemn without further knowledge. Any such that I may consider worth adding to the above selection I shall be pleased to mention at some future time.

Before closing this paper, I will offer a few hints to amateurs (who may not have already taken advantage of this plan) on the best method of obtaining a large plant of any new or scarce variety in a short time. There are in many places large plants of the original varieties such as Phœnicea, Woodsii, Prince Albert, Rosea Superba, Constantia Rosea, or other robust growers, that may have been discarded on account of the comparative poverty of their flowers. Such a plant then, if obtainable, should be placed in a moist genial temperature, and syringed two or three times a day; the stems should be scrubbed with a hard brush, to remove the accumulations that may have been forming for years, and to open the pores, which will cause the sap to flow more freely and bountifully; all small wood and any weakly branches that may be crowding others should be thinned out, and the wood regulated, so that it may be as equal as possible all through the plant. Any variety, of which a large plant is desired, may now be grafted upon this old stock, distributing the grafts over the whole plant, and of course keeping them on the



upper side of the branches. In grafting take off a small piece of the bark of the stock, cut the graft slantingly, and thin at the end, making it fit the place prepared for it, and then tie it down with bast or worsted. If the stock is very large some hundreds of grafts might be put upon one plant, and these, if preferred, might be of several varieties, if one important point is kept in mind, namely, not to put some strong robust-growing sort on the same stock with other sorts that are more weakly and delicate in habit. If this error is fallen into, the robust ones will soon take the lead, leaving their weaker brethren far behind, and ultimately causing them to perish. Always, therefore, select kinds for this purpose of as nearly the same constitutional vigor as possible. When the stock has been filled in this way with the kinds preferred, place it in a close damp place, and keep it well shaded. I have found cast-iron hand-glasses to make capital enclosures for such plants after grafting, as they can be raised as high as may be required by placing three or four of their square bottoms one upon the other, with one cap upon the top. The plant must be well shaded at first; but when the grafts begin to take hold of the stock, light and air may be admitted, though at first cautiously. The grafts must be well looked after, as their binding will soon decay in so close and moist a place, and fresh ones will be required, otherwise the graft may fall off, and if once loosened it is useless to attempt to replace it except by recurrence to the first process, or making fresh cuts both upon the graft and stock. I would however suggest, that no large plants of the old *Indica Alba* should be selected as stock either for this or any other kind of grafting, as I have invariably found that the grafts put upon this sort die in a short time. They may take to the stock, but as it throws its leaves so completely in winter, they will be sure to fail when the season arrives for them to commence their growth and thus not only the trouble of grafting and tending, but the grafts also, will be lost.

## FLORICULTURAL NOTICES.

NEW PLANTS.—The first of the Great Flower Shows, held in the Regent's Park last Saturday, the general features of which are described elsewhere, furnished the usual quota of New Plants, and these we now propose to pass briefly in review. Though none of them stood out with remarkable prominence, there was, as will be seen, a considerable number of subjects which may be expected to become useful in our gardens.

Taking the plants in flower first, and of these the hardy ligneous class, we have however to record a decided acquisition in the Japanese *Raphiolepis ovata*, an evergreen shrub, which now comes before us with the stamp of complete hardiness. This plant is one of vigorous growth, and is remarkable for the thick firm substance of its dark green, roundish ovate, excessively blunt leaves, as well as for the profusion of its large white racemed, rosaceous, red-stamened flowers. Upon this *Raphiolepis*, as we learn, the past long and trying winter has made no impression whatever, so that it may be set down as perfectly hardy in our climate.

Then there was a new double Scarlet Thorn, much superior to any which had previously come under our notice in the combined characters of depth of color and doubleness. The blossoms were in fact fully double, and the color a very bright and deep carmine red, so much so that we regard the variety as greatly superior to the ordinary double Hawthorns, with pinkish red flowers. *Stuartia grandiflora*, another hardy shrub which was shown, and one of Japanese origin, will doubtless be an acquisition in its way, its white blossoms, like small single Camellias, being very freely produced. To these hardy ligneous plants must be added a remarkably handsome hardy perennial herb, bearing the name of *Aubrietia Hendersoni*. This will be one of the most lovely of rock plants, forming dwarf close tufts of greyish lance-shaped sparingly-toothed leaves, and bearing a profusion of flowers set down close to the tufts of foliage, and of a deep violet-purple color with a white eye reminding one of the pips of the deep-colored Verbenas in the style of Mrs. Moore. The closer habit, and

the rounder and far deeper colored flowers of this *Aubrietia*, places it far in advance of any of those commonly known in cultivation. Less novel perhaps, but equally rare, and of remarkable interest to the growers of rock plants, were the examples of *Gentiana bavarica*, but unfortunately the dulness of the morning and some accident of travel, prevented these from expanding their blossoms of brilliant blue, so that by the visitors generally this lovely plant was not sufficiently appreciated.

Of half-hardy plants, there was *Ornithogalum thyrsoides*; this was brought in a very effective mass, and a showy telling plant it is when the thyrsoid spikes of bloom are thrown up strongly as was the case on this occasion, the growth having all the appearance of being that of freshly imported bulbs. We may however state for the encouragement of those who may fear to grow this *Ornithogalum*, lest there should be a falling off next year, that a gentleman of our acquaintance has by careful culture of the leaves one season succeeded in throwing sufficient vigor into his bulbs to get a very good display of blossoms in the second year after their importation. And this is the secret of growing bulbs with success, namely, to take care of the leaves; the flowers will then take care of themselves.

A species of *Genetyllis* from the Swan River, with a remarkably neat branching habit, small blunt regular decussate ciliated leaves, and nodding heads of flowers surrounded by oblong ciliated bracts of a pink color, is likely to make a good distinct greenhouse shrub, perhaps less showy than *tulipifera*, but in neatness of aspect certainly its superior. Then the Peruvian *Cypripedium Pearcei*, with its running rhizome, its long linear recurved grassy channelled leaves, and its green-veined spotted-rimmed tail-petaled flowers, evidently a very free-flowering plant, for all its suckers were showing bloom-spikes,—though deficient in color, must be regarded as a very interesting species, doubtless adapted to cool treatment, remarkably distinct in aspect, and probably hereafter destined to take a higher award than in its present state has been accorded to it. We may also mention a small-flowered *Sollya*, with slender hairy stems, lance-shaped leaves,

sometimes toothed, and abundant small bluish-lilac flowers. *Cordyline Banksii* too with its broad grassy leaves, and its abundance of small white sessile flowers in a scapeless twice branched panicle, a yard high and 2 feet across, deserves to be recorded as a good greenhouse plant of the hardiest character.

New hothouse plants in flower were not plentiful. The most remarkable were the bright red *Anthurium Scherzerianum*, a beautiful dwarf *Orontiad* recorded by us in former years, but we believe not yet sent out; *Pitcairnia tabulæformis* a Mexican plant, with a rosulate tuft of spatulate green leaves lying flat on the soil, and a short central raceme of light orange tubular blossoms; and an *Anthurium*-like plant under the obviously erroneous name of *Massonia camæfolia*, having ovato-lanceolate stalked leaves, and a tallish scape bearing a white ovate spathe and a white spadix, but not at all equal in beauty to the well known *Richardia æthiopica*.

Plants not in flower were more numerously shown, and there were some good things amongst them. Of the hardy herbaceous series the most remarkable was the striped-leaved *Gynerium argenteum*, called *albolineatum*, the leaves of which are very distinctly marked with white lines, and which when it comes to form a mass such as we see in the common form, must be a very telling object. Then there was the *Sedum Sieboldii medio-variegatum*, with yellow-centred leaves, which M. Von Siebold told the Congress at Brussels the other day that he himself had "made"—a pretty little plant in its way. Amongst hardy shrubs there were some interesting forms of *Aucuba*, besides the broad green-leaved *japonica* and *himalaica*. For example, there was a green-leaved form with long narrow sparingly-toothed leaves, 5 inches long and about  $1\frac{1}{4}$  inch wide, to which one exhibitor had attached the appropriate name of *longifolia*; this was a very distinct-looking and handsome evergreen, and will become a favorite. There was also a broad-leaved deeply-toothed variety, in which the leaves were irregularly bordered with a yellowish-green hue, sometimes becoming almost golden; this was indifferently called *marginata*, *aureo-marginata*, and *limbata*, the latter name being perhaps the most current in this country, and is

doubtless the handsomest of all the variegated *Aucubas*, on account of the breadth of its foliage, and its well defined and constant markings. *Prumnopitys elegans*, a hardy Chilean Conifer was produced in the form of healthy young plants of about a foot in height; they were of erect habit, with distichous leaves, and something of a Yew-like aspect. And there were examples of one of the handsome cut-leaved variegated forms of Japanese Maple, named *Acer polymorphum dissectum folroseo-marginatis*.

Of greenhouse plants the most novel exhibitions were the striped-leaved New Zealand Flax, *Phormium tenax variegatum*, which has the leaves boldly and definitely striped with cream color; and the *Gymnogramma Pearcei*. There was also a fine plant of *Agave schidigera*, which has been noticed in our report of the Brussels exhibition. *Coleus marmoratus*, a form of *C. Verschaffeltii* with bright green patches on its leaves, said to be hardier than the latter, of which it is a sport, but though the foliage is enlivened by the intermixture of green, it is not so rich-looking as *Verschaffeltii* itself. Then a *Camella japonica*, with white edged leaves, may be a pretty plant for conservative walls, if it be only as hardy as the type.

Palms were represented by *Stephensonia grandifolia* and *Astrocaryum mexicanum*, both species of bold character, and having spiny stems. Stove plants were plentiful. That which will probably be the most useful to cultivators was the New Caledonian *Dracæna Cooperi*, a recurved-leaved sort with the fine colors and markings of the best forms of *terminalis*, quite different from and much superior to a plant known as *D. latifolia pendula*, also shown, for which it has been sometimes mistaken; it differs in its longer, narrower, and more shining leaves, and in their more decidedly and uniformly recurved position, as well as in their deeper and brighter coloring. In *D. latifolia pendula*, the colors are more dull and the leaves are broader, the older ones only assuming the drooping character. What looked like a queer form of the latter, was shown as *D. robusta*; it had broad leaves, a vigorous habit, and slightly marked red margins. Another *Dracæna*, which might be called *limbata*, had narrow, erect, bronzy purplish

leaves, with a narrow border of red. Two of the Brazilian *Dieffenbachias*, introduced by Mr. Verschaffelt, were brought forward, but the plants are not yet sufficiently developed to show their true character. *D. Baraquiniana*, with its ivory white stalks and midribs, was one of them. *D. grandis*, with the leaf-stalks mottled, was the other. Both will doubtless hereafter prove to be good plants of their class. A dwarf *Maranta*, called *striata*, introduced from the Phillipine Islands, was remarkable for the profuse and well marked white streakings on its leaves. Finally we may mention that *Gymnostachyum Verschaffeltii*, which was shown by several persons, has established its distinctness—as a broader leaved and more vigorous variety doubtless—from the plant grown in England last year under the provisional name of *Eranthemum rubronervum*.

NEW AZALEAS.—At the grand display of plants at Brussels, quite a number of new Chinese azaleas were exhibited, some of which, according to the descriptions, appear to be very fine. The following are some of the most noted:—*Gloire de Belgique*, white, finely striped with red; *Hortense Vervaene*, with large flesh-colored flowers margined with white; *Mirabilis*, a telling light rose; *Roi de Doubles*, a fine showy double rose; and *Roi de Blanes*, a fine pure white; *Octave Van der Cruysen*, a very large cherry rose, with dense violet rose spotting; *Triomphe de l'Exposition Universale*, a very large white, striped with rose and carmine, and stained with greenish spots, but not good in shape; *Madame Van der Cruysen*, a fine deep violet rose of excellent form and very rich in color, also large, bold and well spotted; *Madame Vervaene*, a deep blush, with purple spots disposed in about four radiating series on the upper segments, the margins being white; *Guillaume III.*, a large, wavy margined, light brick red, slightly spotted and distinct in color; *Roi des Belges*, a showy deep rose, finely spotted, but reflexing. Older kinds, though new in America, collections were shown, such as *Rubens*, *Lorlei*, *Alexander II.*, and others. The plants were all in splendid flower and made a magnificent show.

751. *ARISTOLOCHIA LEUCONEURA* *Linden.* PALE-VEINED TREE  
*ARISTOLOCHIA.* (*Aristolochiaceæ.*) New Grenada.

A stove climber; growing ten feet high; with brownish flowers; appearing in autumn; grown in rich light soil; increased by cuttings. *Bot. Mag.*, 1851, pl. 5420.

"A very fine species," from New Grenada, and introduced into European collections by M. Linden, whose collector, M. Triana, found it on the Magdalena, between Honda and Magdalena. The singular blossoms are produced in the stove in September. The stem is large, rough and corky on the outside, two or more inches in diameter, and attains the height of ten or twelve feet. The flowers are produced in clusters from the lower part of the old trunk, brownish on the outside and pale yellow inside, marked with forked lines radiating from the mouth of the tube. (*Bot. Mag.*, Jan.)

752. *PELARGONIUM BOWKERI* *Harv.* MR. BOWKER'S PELAR-  
 GONIUM. (*Geraniaceæ.*) Cape Colony.

A greenhouse plant; growing one foot high; with light colored flowers; appearing in winter; increased by cuttings; grown in peaty loam and sand. *Bot. Mag.*, 1851, pl. 5421.

A beautiful species of the Cape geranium, too rarely cultivated in our greenhouses. Dr. Hooker calls it a graceful and elegant plant, both as to foliage and in the structure of the flowers. The flowers are light colored, and delicately fringed at the ends of each petal. The foliage is cut into the most slender parts. (*Bot. Mag.*, Jan.)

753. *SCHIZOSTYLIS COCCINEA* *Buckh. & Harvey.* CRIMSON  
*SCHIZOSTYLIS.* (*Iridææ.*) South Africa.

A greenhouse or half-hardy bulb or plant; growing three feet high; with crimson flowers; appearing in September; increased by offsets; cultivated in light rich soil. *Bot. Mag.*, 1851, pl. 5422.

This new and "lovely iridaceous plant" appears to be a rival to the splendid gladioli, not only in its general habit and style of flowering, but in the brilliancy of its large open crimson blossoms which appear in a long spike, with broad open petals, in the style of the ixia, and measuring more than two inches in diameter. It attains the height of three feet, with long sheathing sword-shaped leaves. This fine plant was introduced from South Africa, where it inhabits the eastern rivers of Kaffreland, and flowered in great perfection in the nurseries of Messrs. Backhouse of York in the fall of last year. The peculiar character of the root is not stated, but

the Messrs. Backhouse say that it appears "likely to form a corm, or bulb-tuber, at the base of the stem, and at the extremity of the runners (like *Tritoma rosea*) though at present there is no clear bulb formed."

If the *Schizostylis* can be easily cultivated it will undoubtedly become one of the most valuable of recently introduced plants. (*Bot. Mag.*, Jan.)

754. *MIMULUS REPENS* *Br. Prod.* CREEPING MONKEY-FLOWER. (*Schrophulariaceæ.*) Australia.

A halfhardy or greenhouse perennial; growing six inches high; with bright lilac flowers; appearing in summer; increased by seeds and division of the root; grown in light rich soil. *Bot. Mag.*, 1864, pl. 5423.

A new and exceedingly pretty species of the *Mimulus* from Australia, from whence seeds were sent to Kew, where it was grown in the greenhouse, flowering copiously; but Dr. Hooker remarks that "in all probability a common frame would suffice for its winter protection, and the open air in summer." In our warmer and brighter summers it will undoubtedly form a fine bedding plant. It is a handsome species, herbaceous perennial, with numerous branches, which are spreading, prostrate, quite glabrous and sub-succulent, with very small sessile oblong leaves, and sub-campanulate solitary flowers from the axils of the leaves; these flowers are bright lilac, paler on the lip and yellow in the throat. As a companion to the verbena, and similar prostrate plants, it is a decided acquisition. (*Bot. Mag.*, Jan.)

766. *QUAMOCLIT NATIONIS* *Hook.* MR. NATION'S QUAMOCLIT. (*Convolvulaceæ.*) Cordillera.

A greenhouse climber; growing ten feet high; with scarlet flowers; appearing in summer; increased by cuttings; grown in rich soil. *Bot. Mag.*, 1864, pl. 5432.

A new and very brilliant variety of the convolvulus tribe, of late years split up, as Dr. Hooker states, "on very insufficient grounds" into several genera. The present species has the general appearance of the old *Ipomæa coccinea*, recently introduced as the "Star *Ipomæa*," but the flowers are as large as *I. ficifolia* and of the brightest scarlet. It is perennial, and has a large tuberous root; grows with great rapidity and flowers all the autumn. In Kew it flowered in the greenhouse, but it will undoubtedly succeed here, planted out as



we plant other tropical climbers, and the root taken up and kept in the greenhouse in winter. (*Bot. Mag.*, March.)

767. *HELICHRYSUM MANNI Hook. f. l.* MR. MANN'S HELICHRYSUM. (Compositæ.) Africa.

A greenhouse plant; growing two feet high; with white and yellow flowers; appearing in autumn; increased by cuttings; grown in light rich soil. *Bot. Mag.*, 1864, pl. 542.

A very large and splendid species of the Everlastings, collected on the summit of the Peak of Fernando Po, at an elevation of 4,000 to 13,000 feet. It forms a half shrubby plant, growing two or more feet high, with broad, acuminate, amplexicaul leaves, and producing an immense terminal corymb of large white flowers, with a yellow disc. If it can be easily cultivated, it will form a superb greenhouse or summer-blooming plant. (*Bot. Mag.*, March.)

768. *BEGONIA MANNI Hook.* MR. MANN'S BEGONIA. (Begoniaceæ.)

A greenhouse plant; growing two feet high; with pink flowers; appearing in winter; increased by cuttings; grown in light rich soil. *Bot. Mag.*, 1864, pl. 543.

A very pretty species of the Begonia, with something of the appearance of the old *B. incarnata*, with this difference, that the leaves are larger, deep green on the upper side and reddish beneath, and the flowers are produced on short stems in axillary clusters along the stem. It is one of the discoveries of Mr. Mann, on Fernando Po. (*Bot. Mag.*, March.)

769. *ADA AURANTIACA Lindl.* DEEP ORANGE-FLOWERED ADA. (Orchideæ.) New Grenada.

An orchideous plant; growing a foot high; with orange-colored flowers; appearing in winter; increased by offsets. *Bot. Mag.*, 1864, pl. 543.

A rare and beautiful orchid, found in New Grenada at an altitude of 8,500 feet, and now for the first time introduced. It has pendent racemes of beautiful deep orange-colored flowers. It is a fine acquisition to any collection of orchids. (*Bot. Mag.*, March.)

770. *REIDIA GLAUCESCENS Miquel.* GLAUCESCENT REIDIA. (Euphorbiaceæ.) Java.

A stove plant; growing a foot high; with red and greenish-white flowers; appearing in winter; increased by cuttings; grown in leaf mould, peat and sand. *Bot. Mag.*, 1864, pl. 543.

A very pretty shrub, of a remarkably neat habit, with broadly oblong blunt leaves, and solitary axillary pendent flowers all along the stems, which are greenish-white with a

crimson centre. As a winter-flowering plant, particularly for bouquets, it appears a valuable addition to our stove or hothouse plants. (*Bot. Mag.*, April.)

771. *VIEUSSIEUXIA FUGAX De la Roche.* FUGACEOUS VIEUSSIEUXIA. (Iridaceæ.) Cape of Good Hope.

A greenhouse bulb; growing six inches high; with lilac-colored flowers; appearing in spring; increased by offsets; grown in light rich soil. *Bot. Mag.*, 1864, pl. 5138

An old and pretty Cape bulb imported years ago, but lost to collections, and recently re-introduced. It forms a pretty addition to all collections of Cape bulbs, having somewhat the appearance of a *Sparaxis*, with lilac-colored flowers, blotched with yellow on each sepal. (*Bot. Mag.*, April.)

772. *SCUTELLARIA COSTARICANA Wendl.* COSTA RICA SCUTELLARIA. (Labiatae.) Costa Rica.

A greenhouse plant; growing a foot high; with scarlet flowers; appearing in summer; increased by cuttings; grown in light rich soil. *Bot. Mag.*, 1864, pl. 5139

Most of the *Scutellarias* are weedy looking things; this species, however, is unlike all others that we have seen, and, as Dr. Hooker states, "certainly much more beautiful" than any of the eighty-six species. Its beauty consists in the great size and the coloring of the numerous flowers; these measure  $2\frac{1}{2}$  inches in length, of a rich golden scarlet color, with the mouth or inside of the lips of a deep yellow; its general appearance is that of a scarlet *salvia*. It will undoubtedly prove with us a fine bedding plant, treated like the *salvia*. (*Bot. Mag.*, April.)

773. *DENDROBIUM LUTEOLUM Batem.* PALE YELLOW-FLOWERED DENDROBIUM. (Orchideæ.) Moulmein.

A stove orchid; with yellow flowers. *Bot. Mag.*, 1864, pl. 5441.

A large, clear yellow species of the beautiful genus, *Dendrobium*, each flower measuring about two inches across. It was recently sent to Messrs. Low, from Moulmein, and is quite a new and fine species. (*Bot. Mag.*, April.)

774. *JACARANDA DIGITATIFLORA Nob.* FOXGLOVE-FLOWERED JACARANDA. (Bignoniaceæ.) Brazil.

A stove plant; growing six feet high; with purplish lilac flowers; appearing in winter; increased by cuttings; grown in light rich soil. *Ill. Hert.*, 1864, pl. 393.

A showy and beautiful species of the *Jacaranda*, with very large clusters of foxglove-like flowers, three or more inches

long, of a purplish lilac color with a white throat. The flowers appear in large panicles. It was found in Brazil, by M. Francois Devos, collector for M. Verschaffelt, who sent home living specimens which have flowered with all their native luxuriance. It is a superb plant for large and choice collections. (*Ill. Hort.*, March.)

#### 775. NEW FUCHSIAS. Garden Hybrids.

1, MARQUIS DE BELLEFONT; 2, MONSIEUR D'OFFOY; 3, MADAME WAGNER; 4, GRANDIS.

*Illustration Horticole*, 1854, pl. 393.

Four new and splendid varieties of the Fuchsia, raised by M. Clement of Ixelles, near Brussels. They are all very large and double. The first has very large flowers with crimson sepals reflexed, and a rose-colored corolla, shaded with purple. No. 2 has crimson sepals, and a rose-colored corolla, edged with purple. No. 3 has white sepals, and a white corolla, edged with crimson purple; and No. 4 has sepals of a deep crimson, with longitudinal lines of a darker shade, and so much reflexed as to stand erect; corolla rose, deeply edged with a bluish purple. They are all great improvements, both in color and size, on the older kinds, and are decidedly new and fine. (*Ill. Hort.*, March.)

---

#### GARDEN GOSSIP.

In a recent visit to some of the gardens in the neighborhood, we found several things worthy of note, and embrace an early opportunity to record our observations.

WELLESLEY, RESIDENCE OF H. H. HUNNEWELL, ESQ.—Last year we gave some account of our visit to this fine place at the time the rhododendrons were in bloom. By the kind invitation of Mr. Hunnewell we made another visit the present season, just as the rhododendrons were in full flower, and as they were in far finer condition than last year, the display was superb. A year ago last autumn, the plants were all reset, and of course did not have the vigor last season that a year's growth and a very favorable winter would give them. We

regret we had not time to take the names of several of the deep colored varieties that have proved perfectly hardy; Mr. Harris, however, will supply us, and we shall endeavor to give the list at another time.

But if the rhododendrons were fine, the coniferous plants were no less attractive. The winter has been favorable, and few, if any, even of the somewhat less hardy sorts, suffered. Four years' experience has now settled the hardiness of some of the new acquisitions from the Northwest. The beautiful *Cupressus Lawsoniana*, and the *Thujopsis borealis*, are hardy enough for every garden, and may be planted in all localities in this neighborhood.

Of the older kinds, the spruces have grown immensely since last year, and many of them are now 6 to 8 feet high, vigorous and fine. Even the *Cryptomeria* wintered well, and some of the specimens are very handsome. We noticed a very fine tree of *Thuja Hoveyi*, which compares favorably with any of the other *Thujas*. *Mahonia japonica*, a large-leaved species, has proved quite hardy, and from its fine form and large foliage, will prove one of the grandest evergreen shrubs.

Mr. Harris, the gardener, has propagated some of the new Japan plants, and has also a lot raised from seed; some of these have been planted out in a favorable spot, and next winter will enable Mr. Hummewell to try their hardiness. The little *Erica*-like *Retinospora* is quite hardy, and we have but little doubt several of the new ones from Japan, as well as other coniferous trees and shrubs, will prove hardy. The exquisite golden netted-leaved honeysuckle (*L. aureo reticulata*) is perfectly hardy, and quite a number of plants are growing in various positions.

The Italian garden, and the whole grounds, were in fine condition.

In the houses we noticed a very fine crop of grapes, particularly of the Golden Hamburg, Muscat Hamburg, Trentham Black, Bowood Muscat, &c.; the latter setting freely and showing very large and full clusters. In the peach house the crop was immense, and the trees trained in admirable order. The orchard-house trees had mostly been removed to the open ground; on some trees there was a heavy crop.

A visit, in company with several gentlemen, did not give us the opportunity to note but few things; at another time we hope to give a full list of all the coniferous trees with their height.

RESIDENCE OF W. C. HARDING, ESQ., ROXBURY.—Learning that Mr. Harding, an amateur lover of fruits and plants, was making the pot culture of grapes a kind of speciality, we visited his beautiful place some time in March, when the vines had just set their fruit. Under the care of his excellent gardener, Mr. Todd, they looked exceedingly promising, and gave evidence of a fine crop. Desirous of witnessing his attempt at growing grapes on so large a scale, we recently made another visit, just as the crop was in perfection; some of the earliest had been cut, but enough remained to show how successful Mr. Todd has been.

There are, we should judge, from 200 to 300 vines, all in 13-inch pots, in one house, arranged on four terraces or steps built of stone and covered with fine turfy loam. The house is heated with hot water, and forcing begun about the middle of January. Each vine has from 3 to 8 bunches of grapes, many of the clusters weighing one pound each, the berries large, as black as sloes, and with a beautiful bloom. We have rarely, if ever, seen finer grapes at this season of the year (June 15).

This experiment of Mr. Harding proves, we think, that for early grapes the system of pot culture is decidedly the most economical and sure; for, in our climate, it is almost impossible to keep up a sufficient heat in the border to perfect a good crop. Mr. Simpson, by the aid of wool waste, did this, and flued borders will do it, but both are expensive modes. In pots, the roots are under control, and no other warmth than the ordinary hot-water pipes is necessary to produce a full crop of splendid fruit. We think too the crop is very much greater than the vines would carry on the rafters.

These vines were small one-year old plants when they were potted in 8-inch pots, in April, 1863; they were afterwards shifted into 13-inch pots, in which they were fruited. Mr. Todd has another young lot, coming on for next year's crop, and the canes are even stronger and better than last year.

This experiment is a satisfactory proof of the system of pot culture for early crops, and we advise all who would have an abundance of good grapes in May and June, to adopt this plan.

In the grapery, some 80 or 90 feet long, the crop was unusually promising, and Mr. Todd will have some very large and fine clusters of the best grapes.

In the open ground, on a slope to the East, Mr. Harding has made four terraces, and these are planted with Adirondac, Concord, Delaware, Rebecca, Diana, Framingham, Allen's Hybrid, Rogers No. 4 and 15, Crevelling, &c. They were just put out, but the position is a fine one, and when the vines get well established they must produce some splendid grapes.

In the grounds, we noticed some fine beds of seedling and named petunias, which, notwithstanding the dry weather, were making a great show.

RESIDENCE OF WM. GRAY, JR., ESQ., ROXBURY.—Pot culture of peaches and grapes is a speciality with Mr. Gray, and all his houses are devoted to them. The crop of grapes was all ripe and nearly gone, but they had been fine, and there were still hanging some magnificent clusters of Bowood Muscat, with berries as large as plums. The peaches were in admirable order; full of fruit; and the young plants for next year's forcing, 100 in number, were the finest we ever saw. Mr. Gray has kindly promised us a photograph of one of his trees in full fruit, an engraving of which we hope to present to our readers ere long. It will show that plenty of fruit and handsome bushy trees are not incompatible objects.

The object of our visit was mostly to see a splendid bed of strawberries, containing the Oscar, La Constante, Marguerite, Triumph de Gand, Empress Eugenie, Duc de Malakoff, Princess Frederick William, and some others. We never saw a finer plantation, only one year old. The great favorites of Mr. Gray are, Princess Frederick William for earliness, and for size and beauty La Constante and Oscar. Marguerite is without doubt one of the most enormous bearers, surpassing any other of the foreign kinds. The berry is little soft, and of light glossy scarlet, but the quality is good. We have had

the variety four years, but, though we thought well of it, we had no conception of its productiveness till we saw it under the good management of Mr. Gray. The plants were set out in rows,  $2\frac{1}{2}$  feet apart, and one runner only allowed to grow on each side of the row; this gave three rows about eight inches apart, and the whole bed, some fifty feet long and twenty wide, was literally red with fruit.

It is gratifying to find our young amateurs giving so much attention to the cultivation of this fruit. We were delighted at the thoroughness of everything Mr. Gray undertakes.

## General Notices.

**VEGETATION IN THE DARK.**—At a recent meeting of the Paris Academy of Sciences, M. Boussingault communicated certain experiments of his, instituted with a view to ascertain the influence of light on vegetation. Galignani says:

M. Boussingault began by observing that, as soon as germination has commenced, the plant loses carbon, which is transformed into carbonic acid by the oxygen of the atmosphere. But no sooner have the first leaves developed themselves above the cotyledons, than a diametrically opposite action takes place, and the plant, instead of losing carbon, absorbs it from the atmosphere. Hence, during the first stage, the plant, still in embryo, constantly diminishes in weight, because a portion of its carbon is burnt by the oxygen of the ambient air, while in the second period the plant increases in weight, because it reduces a portion of the carbonic acid of the air.

This assimilation, however, only takes place under the action of light; for in the dark a plant always loses carbon. Hence, during its life time, a plant is subjected to two antagonistic forces, one of which tends to deprive it of matter, and the other to feed it. When the plant emits oxygen, the assimilating force is in the ascendant, although carbon is not the only element assimilated. When, on the contrary, the plant emits carbonic acid, the eliminating force prevails, although carbon is not the only element eliminated. Now the ratio of these two forces to each other depends entirely on the intensity of light and temperature; so that a plant placed in a condition to receive little light will remain stationary for months. In complete obscurity, the eliminating force alone subsists, and it is important to know what would happen if the embryo of a seed were left to develop itself without the admission of any light, in which case the plant constantly emits carbonic acid.

To ascertain this, M. Boussingault sowed ten dry peas, which produced plants of a pale yellow, and began to droop on reaching a height of 15

centimetres; however, they continued to grow along a plank placed there for their support, until they attained the length of a metre, when one of the plants began to wither. The vegetation had lasted 56 days, and the loss, consisting of carbon, water, and ammonia, amounted to 53 per cent. Our author then took two beans, A and B, one of which, A, was put into the earth in a dark place, while the other, B, was exposed to the light at a temperature of between 25 and 30 degrees. At the end of 24 days the stalk of A reached the height of 44 centimetres; its cotyledons were white and shrivelled, and the loss was more than half the weight; while B, 22 centimetres long, had 8 fine green leaves, and it had gained one-third in weight. M. Boussingault promises to continue the subject.

---

### Gossip of the Month.

**RHODODENDRONS AND AZALEAS.**—Having visited the grounds of Messrs. Hovey & Co. in Cambridge, for the purpose of seeing their rhododendrons and azaleas when in full bloom, it may be truthfully said that a more delightful show of floral beauty can rarely be seen than has been displayed there for many days and still continues, though less luxuriantly beautiful than at the close of last week.

Of rhododendrons, they have about 3000 plants, consisting of several species and numerous varieties. It is now about twenty years since they became interested in the culture of these magnificently beautiful, hardy, ornamental flowering shrubs. It is doubtful whether any other cultivator in our country has an equally large and so splendid a collection. This is the testimony of persons visiting their grounds and the gardens about New York and Philadelphia.

When looking at such an attractive show of hardy rhododendrons, no one hardly can fail to wonder that they are so very rare in cultivated grounds over the Commonwealth and New England. In how many collections beyond the immediate suburbs of Boston, or even within them, have they been or are they seen in flower? Not many, it may be safely said; yet they should be generally introduced wherever the soil is suitable and room is ample. Persons who have both should visit Messrs. Hovey's grounds and see for themselves; then would they wait impatiently for the season to come round again for transplanting. Meanwhile they might put their grounds in readiness, so as to nick the time when spring shall come again.

For decorative purposes, the value of this splendid genus of hardy shrubs is but little appreciated; hence, to speak of its merits is not superfluous, as it would be in England; but as common as it is there, says a writer, it is not half so generally cultivated as it ought to be. The hardy varieties are endless as it were, and have been produced by hybridizing the following species, to wit, *ponticum*, *caucasicum*, *cataubiense*, and *maximum*—the latter two are indigenous to America—with an Indian species, *arboreum*; the hybrids, or varieties, are now cultivated to the exclusion almost of the orig-



inal species. The *maximum* is, however, cultivated by Messrs. Hovey. It flowers later, and is very beautiful in the Medfield Swamp.

Dr. Joseph Hooker, the distinguished English traveller and celebrated botanist, has introduced several new and fine species, which are giving rise to new and beautiful varieties.

To succeed well, rhododendrons require a light, rich soil, free from stagnant water; a sandy peat, or heath-mould, is denominated best; a light, sandy loam, mixed with leaf-mould and rotten turf, does well. Tenacious, adhesive soils are unfavorable, as the fibrous roots within them soon perish. The soil may be prepared with compost and thoroughly decomposed vegetable matter. There is nothing better in this way than leaf-mould.

The location should be moist and shady, but not overhung by large trees, for they would prove injurious by drip from their leaves and the feeding of their roots. Trenching to the depth of two feet, with thorough underdrainage, is essential in preparing the ground for rhododendrons. These hints and suggestions may serve to aid those who feel desirous of transplanting this shrub on the arrival of planting time next spring. Why has not the Public Garden been thoroughly ornamented with the varieties of the rhododendron and azalea?

The hardy azaleas, by their brilliant colors and profusion of sweet-scented flowers, greatly add to the magnificent display of rhododendrons in early summer. As of the latter, so of the former, the varieties are numerous, presenting all shades of red, white and yellow, as well as a great diversity of marking of these hues. New seedlings are continually increasing the number of varieties. Messrs. Hovey have a large and beautiful collection of azaleas. Their culture is very similar to that of the rhododendrons, says Thompson in his *Gardener's Assistant*.

Let these suggestions serve to excite more interest in the cultivation of these beautiful ornamental shrubs, especially in the splendid suburban grounds of this city, than which, it would be difficult to find those more attractive in this country or abroad, as foreigners have voluntarily testified. Those, with the *Wistaria*, mentioned in a former communication, have been far too much overlooked or neglected.—(OBSERVER, in the *Boston Transcript*, June 17.)

---

## Societies.

---

### BELMONT FARMERS' CLUB.

The Sixth Annual Strawberry Festival was held in Belmont, on Saturday afternoon, June 25th. The exhibition was held in one of Yale's large tents and attracted a large crowd of visitors from the city and neighborhood.

#### AWARD OF PRIZES.

For the best basket of strawberries, containing not less than 4 quarts of any one variety, to Varnum Frost, for Hovey's Seedling, a Silver cup, valued at \$40.

- For the next best basket of strawberries, containing not less than 4 quarts of any one variety, to John S. Crosby, for Hovey's Seedling, a Silver Cup, valued at \$25.
- For the best basket of Hovey's Seedlings, not less than 3 quarts, to Wm. H. Locke, a piece of Silver, valued at \$20.
- For the next best, to Matthew Patterson, \$10.
- For the next best, to Wm.<sup>3</sup>H. Locke, \$5.
- For the best basket of Brighton Pines, not less than three quarts, to Wm. Richardson, a piece of Silver, valued at \$15.
- For the next best, to Varnum Frost, \$8.
- For the best basket of Triomphe de Gand, not less than 3 quarts, a piece of Silver, valued at \$15; not awarded.
- For the next best, to John F. Jolls, Providence, \$8.
- For the best 2 quarts of any other variety than those above named, to Chas. W. Winn, for Austin Shaker Seedling, \$5.
- For the best collection of 5 varieties, 1 quart each, to Wm. H. Locke, a piece of Silver, valued at \$20.
- For the next best, to J. O. Wellington, \$10.
- For the best pair of Table Bouquets, to E. Smith, a piece of Silver, valued at \$15.
- For the next best, to E. Smith, Brighton, \$8.
- For the best pair of Hand Bouquets, to Hovey & Co., \$10.
- For the next best, to E. Smith, Brighton, \$5.
- For the best Floral display, to Mrs. Wm. J. Underwood, a piece of Silver, valued at \$20.
- For the next best, to Mrs. C. B. Grant, \$10.

---

## Massachusetts Horticultural Society.

---

*Saturday, June 4, 1864.* An adjourned meeting of the Society was held to-day—Vice President Hyde in the chair.

No business of importance was transacted.

The following members were elected:—J. W. Sawtell, Fitchburg; Eben Dale, Francis Richards, J. W. Black, O. C. Wheelwright, Stevens C. Palmer, Boston; Everett Torrey, Charlestown; Varnum Frost, Belmont; Anna C. Kenrick, E. P. Bancroft, Newton; Howard G. Duncklee, Betsey Duncklee, Brighton; S. S. Scribner, Malden; Henry A. Piper, Cambridge.

Adjourned one month, to July 2d.

Exhibited. FLOWERS: The display of cut flowers, though not extensive, was choice and fine. The display of azaleas was large, and the varieties, particularly those from Messrs. Hovey & Co., embraced some 30 named sorts and a large collection of seedlings, among them some very brilliant colors. The show of azaleas for the Hunnewell premiums took place to-day, and prizes for those and for Shrubby pæonies were awarded as follows:

## AWARD OF PRIZES.

**SHRUBBY PÆONIES.**—For the best six flowers, to Hovey & Co., for the following: Osiris, Alexander II., Van Houttii, Elizabethi, Hissiana, Grand Duke de Bade, \$5.

For the second best, to M. P. Wilder, \$4.

**AZALEAS** (Hunnewell Prize).—For the best, to Hovey & Co., \$8.

Premiums and gratuities were also awarded for cut flowers.

*June 11th.*—Exhibited. **FLOWERS:** A superb show of rhododendrons was made to day, by H. H. Hunnewell and Hovey & Co., embracing many varieties and numerous specimens, containing a good variety of colors. Messrs. Hovey & Co., had an immense number of blooms, mostly seedlings of various colors, but only 18 or 20 named varieties, and Mr. Hunnewell had upwards of 30 named varieties, among which we noticed album elegans and album grandiflorum, good whites; there were five or six fine deep colored sorts, but we forgot to take their names. Messrs. Hovey & Co. had among theirs, Everestianum, a beautiful sort with crisped edges, and purpureum elegans, a very fine purple.

## AWARD OF PREMIUMS.

For the best display of named varieties, to F. L. Harris, gardener to H. H. Hunnewell, \$8.

For the second best, to Hovey & Co., \$5.

Premiums and gratuities were also awarded for cut flowers, baskets, &c.

*June 15th.* Exhibited. There was a fine show of pæonies and cut flowers. The exhibitors of pæonies were numerous, and we are glad to notice an increased taste for this splendid flower. Messrs. Hovey & Co. took the first prize with the following 10 varieties, the specimens of which were very superb: Festiva, Festiva maxima, Prince Prosper d'Arenberg, Dr. Bretonneau, Frances Ortegat, Ne Plus Ultra, Van Houttii, fulgida, Sulphurea, and Delachii.

## AWARD OF PREMIUMS.

For the best 10 flowers, to Hovey & Co., \$5.

For the second best, to Joseph Breck, \$4.

For the third best, to J. McTear, \$3.

Jonathan French sent six very superior specimens of gloxinias in pots. Dennis Murray, 76 species of native plants; and W. C. Strong and E. Stone, fine roses.

Premiums and gratuities were awarded for cut flowers, baskets, &c.

*June 25th.* **ROSE EXHIBITION.** The show of roses was unusually fine, particularly the hybrid perpetuals, the specimens of which from F. Parkman were very large and perfect. J. C. Chaffin also sent a fine collection. Of hardy June roses, Messrs. Hovey & Co. had a splendid collection, containing some light and delicate colors as well as the deep and rich shades; among the whites, was a new one called L'Albane, a compact and fine rose; also the rather rare but beautiful variety, Mad. Legras St. Germain. Showy herbaceous plants were exhibited by Hovey & Co. and F. Parkman, at this and the previous weekly show, and the premiums were awarded to-

day. Some very pretty things were shown in both collections. The cut flowers were very fine.

AWARD OF PREMIUMS.

**HARDY JUNE ROSES.**—Class I. For the best 20 varieties, to Hovey & Co., \$6.

For the second best, to Jos. Breck, \$4.

Class II. For the second best 10 varieties, to J. Nugent, \$2.

**HARDY PERPETUAL ROSES.**—Class I. For the best 20 varieties to F. Parkman, \$6.

For the second best to J. C. Chaffin, \$4.

Class II. For the best 10 varieties, to Hovey & Co., \$4.

For the second best to J. Nugent, \$2.

For the third best, to J. McTear, \$1.

**MOSS ROSES.**—For the best display, to F. Parkman, \$3.

For the next best, to J. Breck, \$3.

**TENDER ROSES.**—For the best display, to J. Nugent, \$4.

For the second best, to J. McTear, \$3.

**SWEET WILLIAMS.**—For the best, to F. Parkman, \$3.

For the next best, to J. McTear, \$2.

**PINKS.**—For the best, to Hovey & Co., \$3.

For the second best, to J. McTear, \$2.

**SPRING HERBACEOUS PLANTS.**—For the best display, in April, May, and June, to F. Parkman, \$5.

For the next best, to Hovey & Co., \$4.

For the next best, to Mrs. B. Bruce, \$3.

Premiums and gratuities were awarded for cut flowers, baskets, and miscellaneous objects.

**FRUIT:** The show of fruit was small, but contained some very remarkable specimens of Hovey's Seedling strawberries, from Mrs. T. W. Ward of Canton. They were the deepest colored we ever saw, and for size and general beauty they have rarely if ever been surpassed. Hovey & Co. sent Hovey's Seedling, Emma, Marguerite, and Triumph de Gand; Marguerite is a large, handsome and fine variety. From Wm. Gray, Jr., very fine Marguerite, La Constante, and Oscar; the last a large and very excellent sort.

---

## Horticultural Operations

FOR JULY.

---

The weather during June has been warm and unusually dry, only one light rain having fallen during nearly the entire month. Vegetation is almost at a stand-still; seeds sown late have not come up, and all crops have suffered more or less. The strawberry crop has been almost a total failure in light and dry soils, and in the best positions they have suffered much.

## FRUIT DEPARTMENT.

**GRAPE VINES** will now require good attention, giving air freely both night and day in fine weather; damp down the house, morning, noon and night; stop all laterals when they crowd the vines, and tie in all wood for bearing next year. Vines in cold houses will not be quite so forward, and thinning should now be attended to. Give particular attention to airing, as any cold draughts would cause mildew; air freely in good weather, and maintain a genial atmosphere by sprinkling the walks. Hardy vines should be thinned of superfluous wood, and the permanent canes laid in at full length. Thin the berries, and water in dry weather if fine specimens are wanted.

**ORCHARD-HOUSES**, in which the trees are kept in summer, should be well aired night and day. Mulch the surface of pots with manure, and water freely, using liquid manure occasionally. Attend to the stopping of young shoots, on newly potted trees, intended for bearing next year.

**FIGS** in pots should have abundance of water and liquid manure.

**STRAWBERRIES** should now have attention. Rake and clean off old beds, taking out all weeds, and, if run together, dig out alternate strips into which the young runners should be rooted. Spring-planted beds should have the runners regulated as they grow, and laid in at regular distances. Plants intended for hills or rows should have the runners clipped off. Prepare for making new beds next month. Plants for forcing should now be layered into small pots.

**SUMMER PRUNING** should be continued this month, as it is the time when the trees are making the most vigorous growth.

## FLOWER DEPARTMENT.

The dry weather of the month has been hard upon bedding plants, and newly transplanted things; the only remedy is thorough and copious waterings, but where this cannot be done, the "latter rains" must supply the much needed aid. Plants in pots, after so long a drought, often get so thoroughly dry at the bottom, from insufficient watering, as to be much injured; the remedy is to water copiously, rather than a mere sprinkle, as is too often the case. Now is the time to re-pot all winter flowering plants, heading in some, tying up others, and top-dressing when needed. Collect soils for autumn and winter use.

**AZALEAS** will now have made their growth, and may be removed to the open air, selecting a half shady, sheltered spot. Water freely, till the buds are well swelled, and syringe night and morning. Improve leisure time to tie the plants into neat shape. Re-pot and bring on young specimens, keeping them in a rather close pit, or warm house, syringing freely.

**CAMELLIAS** should have free and copious syringings every day, in dry weather. If the plants need repotting, this is the month to do it. Inarching may be done now.

**CINERARIAS** will require attention; shake out the old plants, and take off the young offsets, potting them in a light soil, and placing them in a frame where they can be kept rather close till rooted. Fumigate if there are any green-flies. Now is the time to sow seeds.

**CHRYSANTHEMUMS** should now be plunged in a warm dry place, watering freely every day. Stop all vigorous shoots, so as to secure compact bushy plants.

**PELARGONIUMS** will now require particular attention. Let the old plants dry off soon; then head them down to two or three eyes, keeping them rather dry till they begin to break; as soon as well started, shake out of the old pots, and put into smaller size, reducing the roots, and using light sandy loam and leaf mould. Put in cuttings for young stock.

**CHINESE PRIMROSES** should now be removed to a cool frame, where they can be shaded from the hot sun. Sow seeds for a fresh stock of single kinds.

**HEATHS** should now be pruned into shape, and young stock repotted, if they require it.

**FUCHSIAS** should be encouraged by a shift into larger pots. Keep in a cool house, and water with liquid manure.

**POINSETTIAS AND EUPHORBIAS** should be repotted.

**CACTUSES** may now be repotted.

**CALADIUMS** should have a shift into larger pots.

**TREE CARNATIONS** should now be planted out so as to get strong blooming plants.

**CALCEOLARIA SEEDS** should now be planted.

**OXALIS HIRTA AND BOWIEI** should be repotted.

**VERBENAS** for winter-blooming should now be repotted. Plunge in a warm dry place.

**TUBEROSES** for late blooming should be repotted and plunged in the open ground.

**FERNS** should have a shady situation in the house where they can be freely syringed.

**BOUVARDIAS** should be repotted, and plunged in the open ground.

**HELIOTROPES** should be headed in, and afterwards repotted.

**MIGNONETTE AND SWEET ALYSSUM SEEDS** may be planted.

#### FLOWER GARDEN AND SHRUBBERY.

The lawn has lost much of its verdure, but as soon as it recovers its growth, roll and mow. Clean and roll the walks, and stir the surface of the shrubbery, which will aid in keeping the soil moist.

**DAHLIAS** should be watered freely, if fine blooms are wanted. Prune and tie up often.

**CARNATIONS AND PICOTEEES** should be layered.

**ROSES** should be layered.

**PERENNIAL FLOWER SEEDS** may now be planted.

**DAISIES** should be divided and reset.

**NEAPOLITAN VIOLETS** should be replanted, if not already done.

Stake and tie up all tall flowering plants. Cut off the tops of *pæonies*, and gather all dead stems and old flower stalks, that the garden may have a neat and tidy appearance.

## JAPANESE TREES AND SHRUBS.

THE recent introduction of so many beautiful trees and shrubs is attracting—as well it may—great attention among both the English and American cultivators. Japan is the country of remarkable trees, and in reality it seems to be many hundred years in advance of Europe in the growth and cultivation of unique and curious varieties, without reference to the native or naturalized plants which are found throughout that part of the country which has been explored by European botanists. Dr. Siebold, who resided twelve years in Japan, recently stated at the Horticultural Congress at Brussels, that Japan had yielded more variegated plants than any other country. He described its geographical and meteorological conditions; and from the fact of the exposed northern latitude of Japan, laid down the principle that variegation was a disease. In proof of this opinion he stated that, under the tropics, one could not find the same species at once green and variegated; neither in Siberia were the plants variegated. The variegation was an affection which marked the leaves of those plants that were transplanted out of their normal climate. He had a work representing 800 variegated plants found only in Japan.\* From whence, he asked, comes this multiplicity? From a very simple fact, namely, that in Japan horticulture is millenary, whilst at home it is as yet only centenary. That explains why our normal native plants are so little variegated.

Perhaps Dr. Siebold's theory may be correct, for we find as plants are longer and longer submitted to cultivation, and repeated production from seed, they become variegated. Within a few years quite a number of variegated plants have been introduced, having either been found among seedlings or accidental sports, fixed, as the term is, by grafting. That cul-

---

\* A copy of this same work may be seen at the rooms of the Massachusetts Horticultural Society. It belongs to Dr. Hall, and was kindly loaned to the Society for examination by the members.—ED.

tivation in some way effects these changes is certain, for but few, if any, variegated trees or shrubs have been found growing wild. That most recent of elegant coniferous trees, the *Cupressus Lawsoniana*, was seen by thousands in the northwest, yet among a crop of seedlings, probably too from imported seed, Mr. John Waterer found a variegated plant which, for its clear and distinct variegation, is scarcely equalled among evergreen trees.

The theory developed by Dr. Siebold raised a very animated discussion in the Congress, in which several members took part; among others, MM. Planchon, Richenbach, Regel, Baron Hugel, Hoffinan, Rodigas, André, Kolle, Dumortier, &c., but no report was given of their remarks.

But our present intention is not to allude particularly to the peculiarity and beauty of the many plants which have been sent to Europe by Von Siebold, Fortune, and Veitch, and to this country by Dr. Hall and Mr. Hogg, but to allude to the climate of Japan, and to show that there is every reason to hope that many of these remarkable trees will prove quite hardy in our more severe climate. However so much we may admire the new and beautiful forms of the Japan conifers, or the curious and singular variegation of these and the hundreds of other shrubs, they will be of comparatively little value if they are too tender to stand our climate. The wealthy or enthusiastic amateur may, and undoubtedly will cultivate many of the choicest varieties, for the decoration of the greenhouse in winter, and the lawn or flower garden in summer, giving them such slight protection as will keep them from injury by severe frosts. But for the mass of tree lovers they will be of little more value than so many bedding plants.

It is not many years since the Tree pæony was cultivated as a greenhouse plant; but a specimen, accidentally left out during the winter, revealed the then remarkable fact that it was a hardy plant. So of the Japan lily (*L. lancifolium*) and very recently the *Lilium auratum*. When the former was introduced, twenty years or so ago, it was cultivated in the greenhouse, and thought to require protection from frost; but it has been found to be the hardiest of all lilies, even standing rougher treatment than our native *L. superbum*.



*L. auratum*, planted in the open ground last fall, by Mr. Parkman, proves as hardy as *L. lancifolium*, and already its glowing spotted flowers have begun to open. The exquisite golden netted-leaved *Lonicera* (*aureo reticulata*) proved entirely hardy at Wellesley, last winter. Thus we see that several plants, from a mild climate, have proved entirely hardy, while we have many trees from colder regions than Japan which will not live through our cold winters.

From the fact that the plants we have already named have proved quite hardy, it has been hoped that many of these new acquisitions would possess the same hardy characteristics, and though, in their present scarcity and high price, it would not be wise to risk a large number of specimens to the severity of the winter, a single one, or more, might be tried, which would test their hardiness as well as a larger number. In England, the beautiful *Thujopsis dolabrata* has been proved to be as hardy as the Scotch fir; yet this is no proof that it will stand our zero weather; the Scotch fir will stand something more than an English winter, and we trust the *Thujopsis* will do the same. It is only by actual experiment, however, that we can test the hardiness of a plant in our climate.

The last winter having been unusually severe in Great Britain, much information has been gathered from those who have plantations of Japan trees, and the *Gardeners' Chronicle*, in alluding to this additional experience, has some very interesting remarks on these Japanese introductions, showing why they appear to differ from trees from other countries even colder than Japan. It also furnishes some useful information, upon the climate of that country, gathered from a table kept by Dr. Hepburn, an AMERICAN Medical Missionary at Kanagawa. We annex the following extract:—

It may be regarded as a general rule, that the plants which are indigenous to countries where the winters are as cold or colder than our own, will prove hardy in our climate, provided our summers are hot enough to enable such plants to ripen their young shoots. And, *vice versâ*, plants which are indigenous to countries whose winters are milder than ours, will probably prove to be tender in England. As a general

rule this will prove to be so. And further, as many of our readers have learned by experience, sometimes dearly purchased, if an attempt be made to cultivate plants in a higher temperature than that which is natural to them, they usually become unhealthy, and eventually die out altogether. It therefore appears that excessive heat is as injurious to some plants, as cold is to others; and while some require a periodical season of rest and dryness, others prefer a high and even temperature, with much moisture, all the year round.

To all general rules, however, we believe there are certain exceptions, and this applies to the proposition which we have put forward in the remarks we have just made. We can point to one country at least which has winters apparently much milder than ours, yet its vegetable productions, when introduced into England, appear to be unaffected by the greater degree of cold which they are called upon to endure. The country we allude to is the one we have already named, which has lately opened its ports to foreign commerce, after having been almost shut up for upwards of 200 years. From all that we can learn, the winters of Japan are not nearly so cold as our own, and yet the trees and shrubs imported from that country appear to be nearly, if not quite hardy here.

Our information regarding the climate of Japan, although perhaps not quite so full as we might wish it to be, is still sufficient to enable us to draw the conclusion we have come to. The following table kept by Dr. Hepburn, an American Medical Missionary at Kanagawa, will give a good idea of the temperature of the central portion of the Japanese Empire.

It will be seen by this table that during the months of January and February—the coldest of the year in Japan—the temperature ranged between  $18^{\circ}$  and  $59^{\circ}$  in the year 1860, when these observations were made. In some seasons it probably sinks a little lower than it did at that period, but we feel assured that, if we except the extreme northern parts of the Empire, the winters in Japan are much milder than our English ones. In the island of Yesso, which is the most northern of the Japanese group, the winters are said to be of long duration and extremely cold; in that island, therefore, it is not improbable the thermometer sinks quite as low dur-

ing winter as it does in England. But most of the plants to which we have alluded, as having proved hardy with us, inhabit the central portions of the country, near where the following thermometrical observations were recorded. This is one example, therefore, of a race of plants which are capable of enduring the rigors of a winter much more severe than that to which they are subjected in the country to which they are indigenous—an exception to a very general rule.

		Thermometer, Fahr.				Clear days.	Cloudy days.	Rainy days.	Rain, in inches.	Snowy days.	Snow, in inches.	No. of earthquakes.
		Average at Sunrise.	At 2 P. M.	Highest.	Lowest.							
1860.	January,...	30	47	59	18	19	9	3	..	..	..	1
	February, ..	32	47	58	19	14	12	2	$\frac{1}{2}$	1	2	1
	March, ...	40	51	69	30	9	4	18	$6\frac{1}{2}$	3	$1\frac{1}{2}$	2
	April, ....	49	64	76	36	16	5	9	$3\frac{3}{4}$	..	..	..
	May, .....	58	69	80	44	18	..	13	$16\frac{1}{2}$	..	..	2
	June, ....	67	76	87	54	10	7	13	$18\frac{3}{4}$	..	..	11
	July, .....	75	82	92	63	17	1	13	$8\frac{1}{4}$	..	..	4
	August, ..	75	87	92	69	21	4	6	$1\frac{1}{10}$	..	..	2
	September, ..	72	80	89	62	14	4	12	$2\frac{1}{4}$	..	..	2
	October, ..	57	70	84	50	15	6	10	$7\frac{1}{2}$	..	..	2
	November, ..	45	58	68	36	18	7	5	5	..	..	4
	December, ..	38	50	71	22	19	5	7	$3\frac{1}{2}$	1	1	1

The student of natural history or vegetable physiology is naturally inclined to inquire into the cause which produces such a remarkable exception to a very general natural law. That the exception exists, as we have stated it does, cannot be doubted; how it is so, or what the cause is which produces this curious state of affairs, we are unable to explain. There are many of the operations which are going on continually in the great laboratory of Nature, of which we are entirely ignorant. It may be that the productions we write of had, at some earlier period, a more northern home. They may have inhabited the bleak mountains of Manchuria, on the main land of Asia, where the winters are excessively cold, and when they migrated to a more genial country they may have retained much of their hardy constitution, which enables them to withstand our severe English winters. All this is of course mere conjecture. The cause is a mystery, but the effects are plain and of great value.

It will be observed that the table we have given above has one division placed at the right hand side for a purpose happily scarcely necessary in English meteorological tables. This is the earthquake column, and shows the number of shocks that have been felt during the year. In the month of June there was no less than 11 shocks, and during the year the total number felt was 32! When we take into consideration the number that occurred during the hours of sleep, which were not felt and registered, we may have some idea of the activity of the volcanos of this extraordinary country. It may be that these subterranean fires have some effect upon the climate of the country at the present day, and render the winters less cold than they have been at an earlier period of the world's history. There can be no doubt, however, that one of the principal causes of the temperate climate is to be found in the rapid currents which flow in a northerly direction from the Pacific Ocean, and mix with the waters which surround and run between the various islands of Japan. These islands occupy a position on the eastern side of Asia, not unlike that of the British islands on the west of Europe, and are subject to influences of a like kind.

We may therefore say that there is little or no doubt that a great many of the beautiful evergreens, as well as the unique and beautiful variegated-leaved plants, will be hardy enough for our climate. Not altogether unexpected with some of them, yet to a less extent than appears to be probable from the experience of English cultivators, and the facts in reference to other well known Japanese plants.

It should be stated that the above table of Dr. Hepburn does not exactly represent the climate of the locality where many of the trees were found growing wild. Mr. Veitch, we think has stated, that some of them were from a very great elevation on the mountains, not far below the snow line; others higher or lower down, until the valleys were reached, where some of the same trees, which were there 100 feet high, were mere shrubs at the greatest elevation.

It is gratifying to have such evidence of the probable value of the Japan plants in our climate. They are new in style,

remarkable for novelty, and their introduction will be a source of increasing gratification, add greatly to the variety we already possess, and lend new beauty to every ornamental plantation.

### STRAWBERRIES.

BY W. G., JR., DORCHESTER, MASS.

I send you, as promised, an account of my experiments on strawberries for 1863-4.

The bed, sixty feet by thirty-eight, was planted May 1st, 1863, in rows two and one half feet apart—the plants being one foot apart in the rows. The ground was thoroughly trenched and drained, and moderately manured with street-sweepings. The soil, a dark loam, had been cultivated for many years. The plants were watered until they began to grow, then mulched with tan half an inch deep, and kept weeded by hand through the summer. Two runners were taken from each plant and pegged down on either side the main rows at a distance of eight inches from them, all others were cut off as fast as they appeared. The bed was covered with coarse meadow hay, after the first hard frost, and but three plants out of 2736 were lost during the winter.

As the number of rows of each kind varied, for the purpose of comparison I have reduced the product to the number of boxes in one row. The kinds planted were:—

	First Box gath- ered.	Last Box gath- ered.	Lasted in days.	Product in boxes, per row.	Flavor.	Remarks.
Princess Fred'k Wm.	June 19,	July 4,	16	7	11	Very poor.
Boston Pine, - - -	" 23,	" 6,	14	11	4	
Hovey's Seedling, -	" 23,	" 8,	16	14	6	
Brighton Pine, - -	" 23,	" 8,	16	20	3	
Marguerite, - - -	" 23,	" 6,	14	30	10	Tasteless and soft.
Scott's Seedling, -	" 24,	" 8,	15	21	9	Small.
Oscar, - - - - -	" 25,	" 7,	13	9	1	Largest size.
Empress Eugenie, -	" 27,	" 6,	10	6	5	" "
La Constante, - -	" 28,	" 13,	16	23	2	" "
Triomphe de Gand,	" 29,	" 13,	15	14½	8	Medium.
Duc de Malakoff, -	July 8,	" 8,	1	1½	7	Needs more than one year's trial.

The markings of "Flavor" I leave without comment, it being a matter of individual taste.

In future I shall only plant La Constante, Brighton Pine, Hovey's Seedling, and Oscar, (the latter for its unrivalled size and flavor) and in the proportion of one half Constante, one fourth Oscar, and one eighth each Brighton Pine and Hovey's Seedling. I should state here that I have heard that in some places the Oscar is a total failure. Duc de Malakoff and Empress Eugenie are not good bearers enough to keep on with. Princess Frederick William has a disagreeable taste. Boston Pine proved no better than the Brighton, and but one half as productive. Triomphe de Gand neither as good, large, handsome, nor productive as La Constante. Scott's Seedling was the smallest of all. Marguerite, the most fruitful and of the largest size, has a skin too delicate to bear picking when ripe, and is almost tasteless. On the whole I think the Constante unequalled. It is the handsomest, the hardiest, with a single exception the most fruitful, keeps in bearing the longest time, and in flavor has but one superior, the Oscar. It also bears handling as no other strawberry will.

The product of the bed was 387 boxes, equal to 7500 boxes per acre. On La Constante, Brighton Pine, Scott's Seedling and Marguerite it was equal to 11,000 boxes per acre. I do not claim to have raised a large crop, but only to have given an accurate report of the comparative merits of these kinds of strawberries.

It is gratifying to receive such a careful account of these strawberries as that furnished by our correspondent, and it is equally gratifying to hear such high praise of La Constante—undoubtedly the most remarkable of all foreign strawberries, and we might almost say of any strawberry yet produced—for although it does not exceed in size or productiveness the Hovey, as raised by the Belmont cultivators, it does so under the system of culture as that given by our correspondent to the several varieties. We have a bed of La Constante which has the present dry year been wonderful—the crop literally immense—the berries all large, and the first crop gathered June 25th, the last July 17th, making a period of bearing of

twenty-two days. We have an account of the whole crop of the bed which we shall give in another number.

Oscar, which is placed first for flavor, is a large and very fine berry, but only a moderate cropper, and not therefore valuable for general cultivation. Duc de Malakoff is also a peculiar flavored berry and very large, but a poor bearer and not a good color, and of very irregular form. Marguerite appears to be the greatest cropper, but too soft for market. Scott's Seedling, which has been called by some a poor bearer, produced thirty per cent. more than the Triomphe de Gand, and is third on the list.

We need not, however, comment further upon this reliable and valuable report. If we can only have more of them, from various sources, we shall soon learn the exact merits and value of every strawberry.—ED.

---

#### SOME THOUGHTS ON THE PEAR AND APPLE.

BY D. W. LOTHROP, WEST MEDFORD.

FORTY or fifty years ago, the culture of the pear in this country was an accident—very few only suspecting its capabilities, and hence caring nothing about it. Now it is an art and a science, based upon a broad and substantial foundation, extensively and systematically supplying communities with the most delicious fruit. This advance is to be ascribed to the general dissemination of horticultural knowledge, and in a good degree to the efforts of Messrs. Lowell, Manning, Kenrick, Wilder, and others; to this and other similar Magazines, and to the Massachusetts Horticultural Society, by its exhibitions and other means adapted to excite and spread a love of fruit culture. In fact, no branch of agriculture has surpassed it.

But, notwithstanding all these influences—successful as could be hoped—there is yet a great field for progress, and many prejudices to overcome. Among the farmers in some districts, a good pear is rarely raised. Even in Massachusetts there are some cultivators, who grow apples with success, who

seem to doubt whether pears can be raised without a care which their value would fail to compensate. The question, "Can we grow pears?" was publicly asked a few years ago in Western New York, and was very sensibly commented upon by Mr. Cabot, in the Transactions Massachusetts Horticultural Society, for 1859. Some cultivators were astonished that such a query should be put afloat, where pears are grown in so great perfection as in that State, and felt certain that the negative could not be sustained in the region of Boston. But pear culture, like everything else in civilization, appears in a variety of phases to different men; and it is not to be wondered at. Men's opinions change too, from year to year; now looking more favorably upon the matter, now less. In fact, we raise nothing that is not pretty severely canvassed; and it would be strange indeed if different cultivators did not take opposite or varying views. The world would stand still if it waited every one's assent or aid before it moved. On these conditions we could not defend our country.

In the volume of the Massachusetts Agriculture for 1863, by Mr. Flint, is a Report on Fruit for the County of Plymouth, by Charles Burton, which is more severe on pear culture than anything often published. He admits the pear is the most delicious of fruits, yet avers that it is the most difficult to cultivate. "Many have engaged in the culture," he observes, "with high expectations; a few have succeeded, most have failed; some have obtained great profits; others have met with serious losses. It seems to be foreign in its nature, and it has not yet been fully subjected to our soil and climate. Among the hundreds of varieties, there is scarcely one which, in some seasons, though planted in the most favorable soil, is not worthless."

While many cultivators will recognize some truth in this picture, pear culture is not responsible for the "high expectations" which some novices entertain. Neither will it permit its trees to be "purchased without judgment, planted without skill, and cultivated for two or three years without care," as was the case of a "member of this committee," (probably Mr. Burton,) whatever may be their subsequent treatment.



Much disappointment, however, attends *all* fruit culture from season to season. The *canker-worm* has now become so numerous, and has assumed so formidable an attitude, that many farmers have declared their determination to root up their apple trees rather than to submit to its ravages. Nevertheless, we raise great quantities of apples some seasons, though the pest alluded to has been in our orchards since the first settlement of Dorchester. The pear, it should be remembered, escapes this evil; and if small cultivators do not cling to it and manage it, they will not have much besides; as the cherry is transient and uncertain, the peach sure of premature death, and the plum a merited outcast.

When questions are agitated affecting the comparative and general value of the pear with the apple, the latter must take the higher stand; for the apple tree is hardier, grows larger, more rapidly, and of course yields a greater quantity of fruit when in its best condition. Besides, the apple will keep nearly the year round, while it enters largely into family consumption, and is almost regarded as a necessity. The pear is more a luxury, principally confined to the summer and autumn months; and while it is not subject to so many casualties as the apple—such as the canker-worm, the borer, the caterpillar, and the too general dropping of its unripe fruit, (which in some varieties, like the Gravenstein, almost entirely disappear even when the tree sets full)—the question suggests itself, whether the pear cannot be raised nearly as easy as the apple. Of course, some varieties are very uncertain, poor growers, &c.; so with the apple in a high degree. The fact that the Bartlett pear in some seasons has sold as low as one dollar a bushel, is a significant comment upon this point, and upon the ability of the pear to grow in the region of Boston, or throughout Massachusetts! True, the pear is subject to blight, to which the apple is not; but it does not seem to attack many trees in this region; and it is probable that as many apple trees are destroyed by the borer, and a thousand times as many ruined in fruit by the canker worm, as the pear by blight. *Bearing every alternate year*, at least, is what we expect of the apple; yet only a very few varieties fulfil this expectation. Theoretically we anticipate the same

in the pear. But if no better in this respect, it is no worse than the apple, besides having the virtue of holding its young fruit with much greater tenacity. Plant a garden with an equal number of the best bearing varieties of the apple and the pear, and give them good and equal care, which will produce the most fruit the first fifteen years?

The introduction of *quince roots* has complicated the culture of the pear, and rendered it an art more difficult; but, when well understood, enabling it to give better results. For these roots the demand has been very great of late; and as there has not been sufficient discrimination in the selection of varieties, disappointment has frequently followed, and pear culture to an extent has suffered. But the line of demarcation between the relative value of the two roots, though now irregular and somewhat obscure, is becoming more and more defined from each year's experience. That the quince root will produce larger and better fruit in those varieties with which the pear well affiliates, is generally conceded; and by proper *double working* most every variety can be made to attain to these advantages. As to earliness, some bear to a fault; and in this respect, those varieties are satisfactory on their own roots. As is well known, the pear grows more rapidly on its own than on the quince root, not requiring so high culture; and when scions from *bearing trees* are used in working, the difference between the time of bearing of the two stocks is not so wide as many have supposed. Herein is an advantage. With such scions I have had the Swan's Orange bear after four year's growth, the Superfin after three, and the Beurre d'Anjou after two. The stocks, however, were of good size, of four or five years' growth.

Requiring such nice discrimination, general care, &c., as does the quince root, it must be regarded as the exception to the rule, and the pear root the royal method in pear culture. But there are those who doubt it. At a meeting of the Western New York Fruit Growers' Association, one member observed that if he had a garden to plant again, all his pears would be on the quince, "but of the right sort." Mr. Yeomans has an orchard of three thousand trees, and is well satisfied with them. In from eight to ten years, such trees pro-

duce about one bushel each. On the contrary, a writer in a Western paper thinks we might as well have *dwarf cattle!* In this region, with professional fruit growers, such orchards are becoming common. The amateur or inexperienced cultivator, however, before planting largely of them, would do well to discriminate, and confine himself to only a few well-tried varieties.

---

### RICHARDSON'S SEEDLING PEAR.

BY THE EDITOR.

In our previous volumes will be found a notice of many seedling pears, and among them one or two raised by John Richardson, Esq., of Dorchester, and noticed as Seedlings, Nos. 1 and 2. Mr. Cabot has also, in his Annual Report to the Massachusetts Horticultural Society, for 1863, referred to in a previous number, briefly described these seedlings, among others, tested by the committee last autumn.

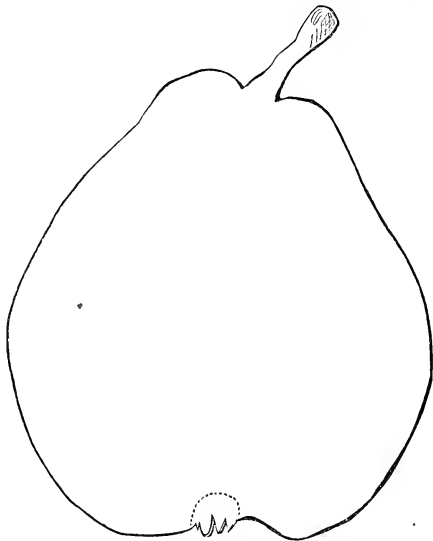
Mr. Richardson is an enthusiastic amateur, and has raised many seedling fruits, plants, and flowers, during the last ten or twelve years, and though but few of them have been generally distributed, they have enriched the collections of his friends, to whom he has freely given scions, roots, or cuttings. Through his kindness we received scions of his two seedling pears, which are growing finely, and we hope soon to have an opportunity to test them from our own grounds.

These seedling pears were both raised from the Bartlett, and are additional evidence, if any is needed, that seeds of the best pears will produce superior fruits, and that we have only to continue the process to secure, with judicious selection, many new and fine varieties. Both of the seedlings resemble the parent.

That which we now describe is the one received as No. 2, which we call Richardson's Seedling, doubting not that Mr. Richardson will give some distinctive name to No. 1, rather than have it distributed under a number. Specimens of these pears were first tried by us in 1861, and again last year, when

the specimens were larger and finer than at the previous date. We annex a description of the pear:—

Size, rather large, about three and a half inches long, and three in diameter; Form, obovate, pretty regular, largest about the middle, full at the crown, and obtuse at the stem; Skin, fair, smooth, greenish, becoming yellow at maturity, little mottled with green, and slightly traced with russet;



11. RICHARDSON'S SEEDLING PEAR.

Stem, medium length, about an inch long, rather slender, and slightly inserted in a very small contracted cavity, highest on one side; Eye, medium size, open, and set in a very shallow slightly furrowed basin; segments of the calyx, thick, roundish, projecting; Flesh, yellowish white, little coarse, melting, with a sprightly saccharine juice, and very pleasant flavor; Core, medium size; Seeds, medium size, rather broad, short and dark. Ripe in October.

## ARBORICULTURAL NOTICES.

NEW ORNAMENTAL SHRUBS.—The Gardeners' Chronicle translates from the *Revue Horticole* the following account of several new shrubs, some of which appear to be highly desirable additions to American collections, as there is little or no doubt of their entire hardiness. They can all be obtained of M. Dauvesse of Orleans, France:—

The introduction of new ornamental trees and shrubs, whether by seed-raising or by importation, is one of the most interesting of horticultural pursuits. We are therefore glad of the opportunity to notice certain plants of this class adapted for garden decoration, to be found in some of the French nurseries, our information being mainly derived from an account of them by M. Pépin, in the *Revue Horticole*. Most of the plants referred to were growing in the establishment of M. Dauvesse of Orleans.

CEANOTHUS AZUREUS LATIFOLIUS.—One of the most remarkable of the novelties referred to was a fine hardy variety of *Ceanothus*, called *C. azureus latifolius*; this had been selected from a bed of seedlings which had been raised from *C. americanus*, fertilized by *C. azureus*. The plant is described as being now abundant enough for distribution, and as having erect-growing stems and branches; oval leaves, hoary beneath and toothed at the margin; and long compact thyrsoid panicles of flowers, which open pale blue, but become deeper colored as they get older. These flowers are produced from June till October or November; and it is recommended that the plants should be cut down annually, this treatment causing them to throw up young shoots, which bear very fine panicles of flowers. From the scarcity of blue flowers at certain seasons, and the profuse and continuous blooming of this new *Ceanothus*, M. Pépin concludes that it will be found useful for making contrasts, both in the shrubbery and the flower borders, and that it will take a prominent place amongst decorative plants. It is said to increase readily by cuttings and layers, and also by seeding, but the seedling plants are not to be relied on to reproduce either the early and continuous

blooming qualities of the parent or the lively and decided color of its flowers.

*SPIRÆA CALLOSA ALBA*.—Another interesting plant of the same establishment is a white-flowered variety of *Spiræa Fortuni*—that species which has been introduced to commerce under the name of *S. callosa*. This variety is remarkably handsome, its white flowers being as numerous as those of the type, and disposed in a sort of corymb. Planted alternately with *S. Fortuni* itself, which is rose-colored, the contrast is said to be very fine. Both the bark and leaves are paler-colored than the type.

*ACER WAGENERI LACINIATUM*.—Then there is an *Acer Wageneri laciniatum*, a variety of maple, which M. Pépin concluded had been obtained by seeds from *A. eriocarpum*, one of the finest of the American maples. The young wood of this new tree is purple and glaucous, and its leaves, which are very much lacinated, are glabrous above and white and downy beneath. This variety, the writer observes, from its light and carved foliage, will not fail to be chosen for the ornamentation of parks.

*MACLURA AURANTIACA VARIEGATA*.—Another shrub of garden interest is *Maclura aurantiaca*, with the leaves streaked with white. This is new, and remarkably effective. M. Pépin also refers to *Fontanesia Fortuni*, a plant brought from China by Mr. Fortune, as being hitherto rare, but now extensively grown by M. Dauvesse, and forming a fine shrub, with foliage having much resemblance to that of certain species of Japanese privet, vigorous in habit, and flowering abundantly.

*BIOTA ORIENTALIS AUREA*.—It is, we learn, to M. Dauvesse, that we are indebted for the elegant dwarf *Thuja* (or *Biota*) *orientalis aurea*, which was picked out from his seed beds of *Thuja orientalis* in 1845. And in 1861, he obtained in a similar way, *Cupressus Lawsoniana nana*, a variety which assumes a pyramidal form, and has short branches and a compact habit, which give to it a novel and peculiar appearance.

**RED-FLOWERED LOCUST TREE**.—We may also mention as a desirable addition to our hardy ornamental trees, a very handsome Red-flowered Locust Tree (*Robinia Pseud-Acacia*)

of which information has reached us from another source. This tree has been obtained by M. Villeveille, nurseryman at Manosque in the department of the Basses Alpes, and must prove a very decided acquisition. The flowers are as fragrant as those of the parent, and this quality, together with their color and the elegance of the foliage, cannot fail to render the Red Locust a favorite amongst flowering trees.

---

#### POMOLOGICAL GOSSIP.

NEW SEEDLING GRAPE.—Among the somewhat rare productions of new fruits, is that of a seedless grape, raised by M. H. Simpson, Esq., of Saxonville, well known for his mode of cultivating the grape so as to produce three crops in two years, and also for the excellence of all the grapes which he cultivates, especially those early forced and ripe from February to May.

The new grape, which we now briefly notice, but which we hope to offer a more complete account of by Mr. Simpson himself, was exhibited last year before the Fruit Committee of the Massachusetts Horticultural Society, and commended for the peculiarity of being free from seeds. By the kindness of Mr. Simpson we have now before us a beautiful cluster of this new grape, and a full taste of it increases our appreciation of its excellence. The bunch is not large, nor the berry of only medium size, but the cluster is full and even and the berries uniform in appearance, not unevenly sized, as they are in grapes which do not set and which do not swell up only such berries as have seeds. The color is jet black, with a fine bloom, and the flavor sprightly, rich and delicious. As a show grape it will not of course hold a high place, but for quality, and especially for the use of invalids, the absence of seeds renders it highly valuable. The skin is thin, and everything can be eaten. Amateurs of the grape, who do not care for show, will, we think, deem Mr. Simpson's grape a fine addition to their collections.

**FINE GRAPES.**—The recent accounts of the display of grapes at the exhibitions around London will be read with much interest by every grape grower. They show to what great perfection it has been carried by enthusiastic cultivators, and how good the specimens must be to stand any chance of obtaining a prize. We only hope it will awaken our own cultivators to the importance of doing something better than is usually seen at our exhibitions. We have an abundance of grape growers, but they are too easily satisfied with ordinary specimens; will not some zealous grower show us something nearly or quite as good as those named below? Thanks to Mr. Gray, Jr., for his liberal prizes given to the Massachusetts Horticultural Society, which we hope will do much to elevate the standard of good grapes.

Grapes at the Royal Botanic Society's Exhibition, June 11: Of these there were 25 dishes of Black varieties, 18 of White, and 3 of Grizzly Frontignan. Wonderfully fine Black Hamburgs, large, both in bunch and berry and finely colored, came from Mr. Hill of Rule Hall, and Mr. Meredith of Gars-ton, and good bunches of the same variety were also contributed by Messrs. Powell, Henderson, McKay, Cruikshanks, Miller, Wallis, and Penny; of Black Prince, magnificent clusters came from Mr. Hill, and Mr. Mead, gardener to R. Currie, Esq. These were so perfectly equal in point of merit that the judges awarded them equal first prizes. Mr. Hill's 3 bunches weighed together 8 lbs. 10 ozs., and Mr. Mead's 8 lbs. 10 ozs.; each of the clusters measured about 15 inches in length, they were finely colored and were altogether beautiful specimens of first rate grape growing. From Mr. Pottle came well ripened bunches of Black Prince, and Mr. Allport sent good specimens of West's St. Peter's. Of Golden Hamburg and Buckland Sweetwater there were some finely ripened bunches, and Mr. Mead, Mr. Drewitt, and Mr. Bailey showed famous examples of Chasselas Musqué, not a berry of which exhibited any symptoms of checking. Mr. Beasley, Mr. Bennett, and Mr. M. Henderson sent fine specimens of Grizzly Frontignan. Muscadines came from various growers, as did also Muscats, which were for the most part unripe. From Mr. Mead came very fine bunches of Trentham Black.



At a subsequent exhibition Mr. Hill exhibited 3 bunches of Black Prince which weighed 10 lbs. 6 oz.

Since writing the above, the report of the Society's Show, July 4, has been received, in which we find the following account of the grapes exhibited:—

That which excited the most admiration, as well as it might, was an exhibition of Black Prince grapes, from Mr. Hill, gardener to R. Sneyd, Esq., of Keele Hall. It consisted of six bunches, three of which weighed 13 lbs. 10 ozs., and the other three 11 lbs. 10 ozs., all of them measuring some 17 or 18 inches in length, well shouldered, and color as black as sloes. Could skilful grape growing be carried further? Surely these and other almost equally fine productions from the same excellent exhibitor, proclaim him to be one of the most successful cultivators of the vine in Europe. Worthy of association with Mr. Hill is also Mr. Meredith of Garston, whose Black Hamburgs have from time to time astonished even first class grape growers themselves. Their matchless color, great size, both of bunch and berry, plumpness and symmetry of form, readily distinguish them as "Merediths," even among multitudes of what might well be called first class grapes. Long may the two cultivators, who have just been named, enjoy their well-earned reputation.

Mr. Hill also showed, at the Royal Horticultural Society's Exhibition, July 6, three bunches of Buckland Sweetwater, which weighed together 6 lbs. 3 ozs. Three bunches of Chaptal were shown by Mr. Henderson, which were much admired for their beautiful clear look, and long tapering shape. Among white grapes were some very good bunches of Golden Hamburgs, a variety apparently likely to fulfil all that was said in its favor when it first made its appearance. Beautiful bunches of Trebbiana were also shown, but not quite ripe.

**DUCHESS OF BUCCLEUGH GRAPE.**—At the Show at York, June 15, Mr. Thomson, gardener to the Duke of Buccleugh, sent, not for competition, two bunches from plants grown in pots of his seedling, Duchess of Buccleugh. The bunches sent were 12 inches long, and weighed  $2\frac{1}{2}$  lbs. each. They were not quite ripe, but evidently have a strong Frontignan

aroma, when quite ripe, and are of a pale amber color. We understand it grows much larger when planted out, and is very fine and hardy. It looks like a valuable grape. The judges awarded a certificate of merit.

**PRIZE STRAWBERRIES IN ENGLAND.**—At the Royal Botanic Society's Exhibition Mr. Smith and Mr. Pottle showed magnificent fruit of Queen, Sir C. Napier and Rifleman. From Mr. Turner came a fine looking seedling named Sir J. Paxton, which will doubtless become a favorite. In general appearance it resembles President; it is said to have a fine musky flavor, and to be nearly as early as Keens' Seedling. Mr. Frazer again showed Reeves's Eclipse well fruited in pots.

**TRIUMPH DE GAND STRAWBERRY** is stated to have been on the whole about the best strawberry exhibited in New York. Finer specimens of this variety we venture to say were never shown than those exhibited by W. C. Harding, Esq., before the Massachusetts Horticultural Society, July 2, yet they would not compare for size or beauty with La Constante.

**THE SEASON IN ENGLAND.**—In a recent letter, Mr. Rivers, the well known nurseryman of Sawbridgeworth, writes us as follows, in regard to the season:—

“We have this season an enormous crop of apples and a good crop of pears, but millions dropped after swelling, owing to the blossoms having been perforated by some small insect, which laid its eggs in the germ, giving a large crop of small grubs; they ate into the roses; the pears dropped, and thus made their exit. The spring was most beautiful and delightful. I never saw trees and shrubs bloom in such profusion—no storms, no frosts, but we have had a cool, windy June. A gentleman from Philadelphia was here the other day, who is a great enthusiast in orchard-house culture and appears to be very successful. The difficulty in your climate must be the protection of the roots from frost in winter and keeping the trees back in the spring, for I presume your bright February sun would force them into bloom and the severe frosts in the nights of March utterly destroy them. There can be no difficulty in ripening the fruit out of doors in summer. Yours truly, T. RIVERS, Sawbridgeworth, July 7, 1864.”

GOSSIP ABOUT FRUITS IN WESTERN NEW YORK.—In another page we copy the account of the summer meeting of the Fruit Growers' Society of Western New York. As giving probably the condition of fruit growing in that region, it may be interesting to many cultivators; but the climate appears to be so unlike that of New England, we fear the report will be of little value. Probably the climate has undergone some very great change within a few years, as Mr. Hooker states that fruits which he could raise some years ago he cannot do it now.

---

### PÆONIES.

FROM THE GARDENERS' CHRONICLE.

PÆONIES are yearly becoming greater favorites. The French have for a long time given great attention to them, both Tree and Herbaceous, and the greater part of the superb varieties which now enrich our collections are of French origin. The Belgians are next to the French in their estimation of this flower, and have raised some magnificent varieties of the Tree pæonies, and M. Parmentier produced most of the very dark herbaceous kinds which have added so much by their brilliancy of coloring; but it is to M. Modeste Guerin that we are indebted for the first successful achievements, and in fact for a great number of the finest varieties

The English have been slow in their appreciation of the pæony. It is only very recently that even the Tree pæonies have attracted much attention, though Mr. Fortune sent home some of the most distinct and remarkable varieties—varieties which for richness of color surpass any that have been raised in Europe. Undoubtedly this inattention has been in some degree owing to the climate, which is so variable that the blossom buds are almost invariably injured or destroyed by late frosts, and this uncertainty in the growth of the plants has induced Mr. Bateman to cultivate them in the orchard-house, where they form superb objects and bloom in a profusion hitherto unknown. But with all the grand additions of

Mr. Fortune, and the ready access to the Parisian collections, their culture has been so much neglected that Mr. Bateman has presented a collection of plants to the Royal Horticultural Society, to be grown in a special house, that their flowers may be seen. In a notice of this present the Gardener's Chronicle says, "With such beautiful plants in our hands (those sent home by Mr. Fortune) it may be naturally thought that good use would have been made of them in this country; such however has not been the case. Instead of producing a marked and charming effect in our gardens they have been almost entirely neglected. There are two drawbacks to their successful cultivation—they are slow to propagate, and could not be multiplied like verbenas and geraniums, and they required a little knowledge in order to cultivate them successfully. The result has been that many of these fine things have either been entirely lost to Europe, or can only be met with on the continent, where they are more appreciated than they have hitherto been with us, and where indeed, new varieties have been produced."

To some extent these remarks apply to our own country. The Tree pæony is yet rare in our gardens. It is too slow a plant for us Americans. We must have something like a verberna, which can be had in full bloom and sells cheap. This the pæony, especially the Tree, will not do. It is slow to propagate, slow to grow, and good plants are consequently high priced, but when once a good plant is obtained it grows readily and blooms abundantly. But to the Herbaceous pæonies there are not the same objections. They propagate readily, transplant easily, grow quickly and bloom freely, and withal are not dear. The only objection we have ever heard to the more general introduction of them into our gardens is that "They are too common." This is certainly true of the old fashioned kinds but not of the new sorts, which are yet very rare, but as many think a pæony is only a pæony, without knowing the difference in their beauty, they are neglected for some inferior plant because rare. Let us hope however, that this objection will no longer be made; all who do not know what magnificence is in store, even in a few of the best kinds, should see a collection of a hundred varieties, when they will,

we think, freely admit that for grand effect, as well as for individual magnificence, there are few plants to compare with the Herbaceous pæonies.

We make these few remarks prefatory to a notice of some new varieties recently produced by M. Guérin, and to a few brief remarks on their culture, which are well worthy of attention. These varieties are still new, and some have not yet been introduced to the trade, but we have an abundance of superb sorts which will answer till these are to be obtained:

M. Rouillard, in the *Journal de la Société Impériale et Centrale d'Horticole*, has given a very copious account of some new pæonies raised by M. Guérin-Modeste, of Charonne, accompanied by some cultural remarks. Some very handsome seedling Tree pæonies were produced from M. Guérin-Modeste's garden, at the spring exhibition of 1863; and at a later period several very meritorious varieties of Chinese Herbaceous pæonies were submitted for examination. This induced M. Rouillard to visit the collection which had yielded such interesting novelties.

The Herbaceous and Tree pæonies of China are well known to rank amongst the most ornamental plants which have found a place in our gardens. Their large flowers, disposed in elegant disorder, or with graceful regularity, assume the most varied colors, and are appreciated not only by florists, but also by artists, who produce them in their ornamental designs. The plants are, moreover, very hardy, and they have an indefinite longevity.

The Tree pæonies thrive in peat earth, either pure, or mixed with fertilizing substances, and generally in any sweet porous garden earth rendered fertile by well-decayed manure. They commence growing so early in spring that the first shoots and flower-buds are sometimes destroyed by frosts if not protected. Nevertheless they generally develop themselves, in spite of such accidents, from the lower eyes, which give fresh flowers, and in all cases the plants themselves are not affected in respect to their vitality. Some persons cultivate Tree pæonies in conservatories, in prepared earth which is renewed from time to time; and thus sheltered from all

hurtful atmospheric influences they develop in perfection their splendid flowers, the duration of which is prolonged by means of shading.

The Herbaceous pæonies succeed in nearly all soils having sufficient depth for their strong roots. They have the advantage of flowering after the Tree pæonies, so that the flowering season may be prolonged from the beginning of May to the end of June.

All pæonies love water, and principally the Herbaceous sorts, which ought not to lack it, not only from the moment where the flower buds commence to form till they have perfected their flowers, but also from the beginning of August, continuing until the rains of autumn, to favor the production at the base of the stem of strong eyes, capable of yielding vigorous flowers in the following season. To secure the flowering of pæonies in full perfection, it is essential to place them in very open positions, but where they may not receive the sun during the hottest part of the day.

When masses of the Herbaceous pæonies have become strong, and the ground has been exhausted by them, it is indispensable to take them up and separate them, preserving for planting portions having two or three strong roots, and the eyes well fed, and then to change their position; this operation should take place every six, eight, or ten years. As a general rule, when the flowers become few and diminish in size, the roots should be transferred to fresh soil. In the case of certain varieties it is beneficial, when the young stems are rising in spring, to take away the weakest, leaving only those which are more vigorous.

The multiplication of Chinese pæonies is easy. All of them may be increased by division. However, as the Tree varieties grow slowly, and one would have to wait many years for the tufts to become strong enough to be divided, it is found better to propagate these by grafting. To this end, strong roots of Herbaceous varieties are procured; these are kept growing, and then grafted, a branch with one or more buds being inserted upon the side of the root. The grafted roots are put under bell-glasses or in frames, placed by preference in a north aspect, and the grafts soon become united,

and commence to grow promptly, producing roots for themselves. The grafting is performed from the middle of July to the middle of September.

Few raisers of seedlings take this genus in hand, because it requires so much space to grow the large number it is necessary to plant out, in order to have a fair prospect of gaining some remarkable novelties, and it is besides necessary to wait for their flowering for seven, nine, or ten years, and even more in the case of the Tree pæonies. However, MM. Guérin-Modeste, Verdier Père, Mathieu, and Lémon, of Paris; Thomas, of Saint Denis; Hiss, of Versailles; Callot, of Douai; Parmentier, of Enghien, and several others, among whom the Italian growers must be especially mentioned, have obtained many new Tree pæonies as well as Herbaceous varieties, magnificent sorts not yet distributed. To these must be added those introduced direct from China by Mr. Fortune. Several of these varieties of Tree pæonies remain as yet without equal in respect to the regularity of their form and the beauty of their colors.

Many pæonies, both ligneous and herbaceous, are to be found in commercial catalogues; but, as in the case of all flowers of which the varieties are numerous, one has to restrain one's choice to those among them which are most perfect, rejecting those which are inferior.

Among the new pæonies M. Guérin-Modeste has obtained, are several Herbaceous varieties—M. Malet, M. André, Zoè Verniory, Dr. Nestor Pelassy, Madame de Vatry, and Princesse Nicolas Bibesco, which were distributed in 1863, and others which will not be distributed till the present year. Of Tree pæonies he has raised the following:—

CHARLES ROUILLARD.—Vigorous; leaves yellowish green; flowers very large, nearly full, brilliant fiery rose, softer rose towards the edge; a magnificent variety, with very fine flowers, and not yet in commerce.

HENRI PINGARD.—Vigorous; leaves glaucous green; flowers very large, nearly full, rose amaranth towards the base of the petals, pearly white at the top; a magnificent flower, not yet in commerce.

PRESIDENT BRONGNIART.—Vigorous; leaves glaucous green,

tinted yellow; flowers large, well raised in the centre, rose amaranth, softer towards the outside, velvety white, very lightly tinted with carnation towards the centre; a superb variety, of which the flowers are of excellent form. This variety was let out in 1863.

**DU MONT DE COURSET.**—Vigorous; leaves deep green; flowers large, nearly full, clear satiny amaranth of uniform shade; a very fine variety, not yet distributed.

The Herbaceous varieties noticed by M. Rouillard were the following:—

**M. MALET.**—Amaranth purple, shaded with delicate salmony pink; very full.

**M. ANDRE.**—Rosy purple, shaded with light salmon-pink and rosy-purple centre; nearly globular.

**MADAME DE VATRY.**—Rosy purple, the centre creamy yellow intermingled with delicate rose; very full.

**ZOE VERNIORY.**—Light rosy purple, the centre cream color with rosy tips; very full.

**ASPASIE.**—Yellowish white, very lightly tinted with rose; full and very elegant.

**LAIS.**—Pearly white, scarcely tinted with rose, the centre yellowish, sometimes marked with purple; very full and delicate.

**MARION DELONNE.**—Rosy purple, with white and creamy salmon, at the centre, some petals marked with lively purple; very full.

**DR. NESTOR PELASSY.**—Amaranth purple, tipped with clear white intermixed with small petals of lively red; full and very fine.

**PHRYNE.**—Lively purple tinted with bright carnation, yellowish towards the centre; new and delicate, very full.

**PRINCESS NICOLAS BIBESCO.**—Light rosy purple, creamy yellow mixed with rosy purple at the centre; the colors soft and agreeable, very full.



## FLORICULTURAL NOTICES.

LILIUM AURATUM.—Mr. Veitch exhibited a plant of this superb lily, Jan. 23, in a comparatively small pot, with no fewer than nine blooms on a single stem. So much for the profuse way in which this glorious lily flowers.

NEW CLEMATISES.—Among the greatest varieties in new plants, at one of the London exhibitions, were two clematises, from Mr. Townsend, St. Mary's Nursery, Hornsey. They were reddish purple, or rather purplish violet varieties of the *C. lanuginosa*. One was called *C. l. venosa*, another *C. l. violacea*, and of the two the last was the best. It is nearly the same color as *Pleroma elegans*, and when better known cannot fail to be a general favorite.

776. ALSTRÆMERIA CALDASH *Humb. and Kth.* CALDAS'S  
ALSTRÆMERIA. (Amaryllidaceæ.) South America.

A greenhouse plant; growing two feet high; with yellow-spotted flowers; appearing in summer; increased by the roots; grown in light rich soil. *Bot. Mag.*, 1854, pl. 5412.

A new and "most lovely *Alstrœmeria*, lately imported from the Quintinian Andes, where it was discovered by Humboldt and Bonpland." It is a strong grower, and produces terminal clusters, fifteen or more in number, beautiful yellow blossoms spotted with scarlet. All the *Alstrœmerias* are pretty plants, but they are neglected by our cultivators; the present species is so fine it may revive afresh the taste for this pretty tribe, which is easily cultivated, being almost hardy, requiring only to have the roots protected from frost. It was introduced by Mr. Veitch of the Chelsea nursery. (*Bot. Mag.*, April.)

777. WAITZIA CORYMBOSA *Wendl.* CORYMBOSE WAITZIA.  
(Compositæ.) Swan River.

An annual; growing a foot high; with white or pink or yellow flowers; appearing in summer; increased by seeds; light garden soil. *Bot. Mag.*, 1854, pl. 5443.

"A lovely herbaceous and probably annual plant, presenting a great variety of colors in the same species. Three colors are figured, 1, White; 2, Deep rose color; 3, Entirely yellow. The seeds were received from the Swan River settlement, by Mr. Thompson of Ipswich, in 1863, and produced

these three varieties. They belong to the Everlastings, and form a beautiful ornament to the flower garden, having erect stems and dense globose heads of blossoms. Dr. Hooker thinks it will form a valuable bedding-out plant. (*Bot. Mag.*, April.)

778. *ECHINOCACTUS SCO'PA De Cand.* BROOM ECHINOCACTUS. (Cactacæ.) Brazil.

A greenhouse plant; growing a foot high; with yellow flowers; appearing in summer; increased by young off-shoots; grown in light rich soil. *Bot. Mag.*, 1861, pl. 5445.

A pretty cactose plant, growing a foot or so high; furrowed its whole length, and studded with white cottony pulvuli, from which radiate tufts of long white setaceous bristles mixed with brown or purple spines. The flowers are yellow, about two inches in diameter, and appear on the top of the plant. It is a pretty addition to a collection of this tribe. (*Bot. Mag.*, April.)

779. *DENDROBIUM BARBATULUM Lindl.* BEARDED-LIPPED DENDROBIUM. (Orchideæ.) Moulmein.

A stove orchid. *Bot. Mag.*, 1861, pl. 5441.

An exquisite species with dazzling white flowers, with a crimson tinge in the centre; these are borne in graceful racemes a span long. It should always be grown on a block of wood. This is a beautiful orchid which we hope some day to see grown in our collections. (*Bot. Mag.*, April.)

780. *DENDROBIUM INFUNDIBULUM Lindl.* FUNNEL-LIPPED DENDROBIUM. (Orchideæ.) Moulmein.

A stove orchid. *Bot. Mag.*, 1861, pl. 5446.

Another noble species, with white flowers measuring four inches across, the lower lip spotted with yellow. It flowers in great profusion, and is a very great acquisition. It is impatient of moisture and should be grown in a pot of potsherds and moss. (*Bot. Mag.*, April.)

781. *CEROPEGIA GARDNERII Thwaites.* MR. GARDNER'S CEROPEGIA. (Asclepiadææ.) Ceylon.

A stove plant; growing two feet high; with white spotted flowers; increased by cuttings; grown in light peaty soil. *Ill. Hort.*, 1864, pl. 396.

A very beautiful species of the *Ceropegia*, which forms a slender twining plant, producing at the axils of the leaves

curious shaped flowers, which are white, covered with leopard-like spots, quite unique and rare in its coloring. (*Ill. Hort.*, April.)

782. CAMELLIA PETAZZI. Garden Hybrid.

*Illustration Horticole*, 1854, pl. 397.

Another of the numerous seedlings which are yearly introduced into the Belgian collections of this splendid flower. C. Petazzi belongs to the *perfect* flowers, having an imbrication to the centre. The outer petals are large, rounded, and of a cherry rose; those of the centre, paler, with a band of white running through the centre of each petal. It grows freely, opens easily, and is a fine variety. It was raised in Italy.

783. SAXIFRAGA FORTUNII, VAR. TRICOLOR. FORTUNE'S THREE COLORED SAXIFRAGE. (*Saxifragaceæ.*) Japan.

A greenhouse plant; growing six inches high; with white, pink, and green foliage; increased by runners; grown in light rich soil. *Ill. Hort.*, 1854, pl. 398.

A very beautiful variegated variety of *S. Fortunii*, having green leaves, blotched and deeply edged with white, and tipped with deep pink. In general habit it is nearly allied to the well known *S. sarmentosa*. Its variety of foliage is remarkable. Its triple colors vary greatly in intensity and shade in the same plant, according to the development of the leaves, passing from red to rose and pink and white, all disputing the place of the sombre green but always pink underneath; the petioles are blood red. A plant in the collection of M. Verschaffelt rivals, in its rich and bright colors, the geranium Mrs. Pollock. Its habit is the same as *S. sarmentosa*, and it will prove a rich acquisition for hanging vases and baskets, where its tri-colored leaves will show to great advantage. For edging beds in the open ground in summer it will be a superb plant. (*Ill. Hort.*, April.)

## General Notices.

VARIATION IN PLANTS.—At the late Congress of cultivators held at Brussels, various subjects were proposed for discussion, among which was the following: "Coloration of Plants, variegation, is it hereditary by the

seed and contagious by the graft?" The question led to considerable discussion. M. Von Siebold explained the observations he had been able to make during a stay of twelve years in Japan, which country he said had yielded more variegated plants than any other. He described its geographical and meteorological conditions, and from the fact of the exposed northern latitude (*latitude franchement boreale*) of Japan, laid down the principle that variegation was a disease. In proof of this opinion he stated that under the tropics one could not find the same species at once green and variegated; neither in Siberia were the plants variegated. The variegation was an affection which marked the leaves of those plants that were transported out of their normal element. "I will present to you," observed M. Siebold, "a work representing 800 variegated plants, found only in Japan. From whence comes this multiplicity? From a very simple fact, namely, that in Japan horticulture is mellenery, whilst at home it is only centennery. That explains why our normal native plants are still so little raised." M. Von Siebold then related that from among the large number of Japanese plants he had introduced, he had himself "made" those which were variegated. Each one of them had arisen from a plant with the leaves of a plain green color, and which, having suffered accidentally, became variegated. Amongst others, this was the case with *Sedum Sieboldii medio variegatum*, which had been brought into commerce and had been thought a variegated plant from Japan, although in reality the fact was not so. "This *Sedum* does not," he observed, "come from Japan, since it was I who made it." There was yet another fact to be mentioned, viz., that the variegation was not produced directly by disease of the seeds, but by that of the plant while exposed to air and sun. To sum up, the mother plants were healthy and green, the variegated plants were chlorotic. "These," remarked M. Siebold in conclusion, "are the observations I have made during my travels, and I will continue to apply them with success in the manufacture of variegated flowers." [Laughter and applause.]—(*Gard. Chron.*)

---

**DONT SAY IT IS TOO LATE.**—In the first week of June last year, I was called upon to put in a crop of vegetables on a large estate. The place was an open field, which had to be manured, ploughed, harrowed and rolled. Bush beans, beets, carrots, parsnips, salsify, Lima beans, peas, Evergreen corn, endive, broccoli, melons, okra, parsley, &c., were all put in the same week, and celery, Late Drumhead, and Savoy cabbages, Sweet herbs, &c., were sown in cold frames. In a month after that, the celery was pricked out into another cold frame, and well watered. Cabbages and broccoli were all planted out, so were tomatoes, peppers, Egg plants, &c. The celery attained a good size, and was planted in trenches in August, and in late autumn it was a foot blanched. All the crops were heavy ones. Another planting of Evergreen corn was made in July, and lasted until frost in autumn. Drumhead cabbages and Savoy cabbages grew to great sizes, and the broccoli was all that could be wished for; the root crops were remarkably large and tender. In short, a better crop of vegetables never

grew. Ruta Baga and Yellow Aberdeen turnips were raised in July; and Red Tops in August, all yielding heavy crops notwithstanding the severe drought that prevailed all last fall. So I would say to all who read the above and who may have fallen a little behind hand with their garden work—dont say it is too late.—(*Culturist.*)

**HARDY VARIEGATED PLANTS.**—Within the last few years these plants have become favorites in gardens, so much so, that they are now considered essential for decorative purposes both in-doors and out. It is fortunate that such a class of plants exists, especially in the case of amateur gardeners, who are frequently dependent upon hardy things, not having glass at command to winter the ordinary bedding subjects. These plants, too, are easily managed, being readily increased without fear of losing stock, and, the principal of them at least, are hardy enough to withstand our average winters, if only placed in some sheltered nook. Another inducement to their cultivation is the little attention they require. Most of them are increased by division of the roots in the open ground. Some plants of this class are likewise suitable for cultivation in pots, for stands in windows, and for small vases. I may mention a few of them:—

*Dactylis glomerata variegata* is an elegant grass, and forms an effective line for a small ribbon border, while for decorative purposes, grown in pots, it is most graceful; small portions detached from the neck of the plant root readily, and grow rapidly.

*Saxifraga umbrosa variegata* is a most useful thing for various purposes; it is most at home out doors in a partially shady place, and like the rest of the *Saxifragas* is propagated by division.

*Arabis*, of which there are several variegated kinds, yields neat growing plants, all beautiful, and worthy to be more extensively grown, well adapted for small beds, or a dwarf row in a ribbon border. They are increased readily in autumn or spring, small pieces rooting in any common garden soil.

*Ajuga reptans variegata* is another useful plant, hardy enough, and finely marked, the white parts of the leaf being well defined; it is readily increased and grows rapidly.

*Scrophularia aquatica variegata* [miscalled *nodosa* in gardens] if grown in good rich soil, rather wet, and kept free from snails, which are apt to riddle its leaves and disfigure it, is most distinct and well marked; a good row of it is very telling; small pieces from the neck of the plant root freely. I fancy this would be more extensively employed than it hitherto has been, if it were better known.

*Gnaphalium lanatum* is a fast-growing hardy plant, and is propagated rapidly; it requires to be handled pretty freely to keep it within bounds. Pegging down is the readiest and neatest way to manage it.

*Tussilago Farfara variegata* is admirably adapted for ribbon work; when grown as it ought to be it is an elegant thing, and has a striking appearance; small pieces of the root chopped up, say an inch and a half long, each produce a plant, if covered over slightly with sandy soil.

*Achillea Millefolium variegata* is a graceful looking thing when kept within bounds; its tendency to bloom, however, is apt to spoil its appearance, and must be prevented by repeated pinching. There is no difficulty in propagating this Yarrow, perhaps more in destroying it.

Ivy, like *Vinca*, is only suitable for certain purposes. Some of the varieties are beautifully marked, and form very pleasing edgings for large raised beds, and carriage drives.—(*Gard. Chron.*)

---

**SEEDLING GARDEN FLOWERS.**—The seedling garden flowers exhibited on the 1st of June at the South Kensington Show, belonged chiefly to three or four groups—those of azaleas, rhododendrons, petunias, and pelargoniums.

Amongst Indian azaleas there was from Mr. Veitch a very fine variety, called *Vesuvius*, which is a good deal in the style of Mr. Veitch's superb seedling *Stella*, that is to say, one of those bright orange scarlets in which the upper segment is suffused with a distinct violet tinge. Flowers of this character are novel and very beautiful, and the present was a fine and no doubt a first-class variety, though we somewhat hesitate to adopt an opinion which we heard expressed, namely, that it was probably the best of its class, for that would place it above *Stella*, which we are hardly prepared to do. It, however, well deserved the first-class certificate which it gained.

Then, amongst Hardy Rhododendrons, Mr. Young had one called *Princess of Wales*, which had some merit, as well as novelty of character. It was a light-centred flower, with a border of pale purple and spotted, a new style amongst the pale-centred class.

Amongst the petunias, one called *striata purpurea*, shown by Mr. Holland, who is well known for his capital strain of this flower, was a very delicate variety of considerable promise, but required more growth. It had a rosy ground-color, and was marked by broad bands of white.

The majority of the subjects shown were, however, of the pelargonium race, and of these, amongst what are called the "show" varieties, was one of great beauty, and of a most distinct character, called *John Hoyle*. The shape of this flower, and the texture and substance of its petals, were in every respect unexceptionable; the color was a rosy scarlet shaded and deeply veined with maroon crimson, the upper petals being entirely of a deep rich maroon, except a narrow sharp edge of carmine. This is undoubtedly, so far, the crack flower of the year, and far outdistances all the rest, richly meriting the first-class certificate which it received. The other most noticeable sorts of this class were *British Sailor*, a fine deep purplish rose with white centre, in the way of *Diadem*, but darker; *Profusion*, a well-formed soft rosy carmine with dark blotch, white centre, and pale rose lower petals; *Sunny Memories*, a smooth orange scarlet, with dark maroon blotch, pale lower petals, and white throat; and *Exhibitor*, a deep rose with dark blotch, white throat and pinkish under petals, remarkable for its prolificacy of bloom, and likely to be useful as a market plant. The Fancy class received one or two useful additions, in *Anne Page*, which was a very pretty bright rosy carmine flower, the lower petals blush with small spots;

and Mrs. Dorling, which bore a good truss, and had upper petals of a deep rosy carmine, and lower petals slightly tinted with carmine. Blair Athol, with dark ruby-red flowers, was not in good condition, but had desirable qualities about it. The first-named, however, was the best.

Of the class of zonates there were several very nice flowers shown, but as it takes much to beat those already known, these did not meet with much favor from the censors. Sir Fitzroy Kelly, a pretty light scarlet; Enamel, in the way of Blackheath Beauty; Princess of Wales, a scarlet zonate white-edged variegated resembling Fontainbleau; and Eve, a very pleasing pale rose-pink, were among the most deserving of mention. The latter, which has now been shown on two or three occasions, promises to become an acquisition; it certainly improves on acquaintance.

We ought also to mention the tropæolum called Cooper's Defiance, a very bright scarlet of the Lobbianum class; but of course, beyond the fact of its brilliant color, no idea could be formed of its utility when planted out.—(*Gard. Chron.*)

---

ROSE INFORMATION.—I cannot but be gratified by Mr. Kent's notice of me and of Rushton. I must not, however, accept the title of the first rosarian of the day. That distinction belongs to Mr. Hedge of Reed Hall, and to many others, whose superiority I am glad to acknowledge. A pains-taking rosarian would be ample praise. By painstaking, the roses, so afflicted last year, are now in most abundant, and, I may say, magnificent bloom. I have had large parties here this week who read your paper and the Dorset County Chronicle, and they have expressed themselves much gratified. To-day (June 11) my old friend Sir Edward Baker and a party from Ranston honored my gardens with a review of peaches, strawberries, and roses, and seemed highly pleased. As Mr. Kent has pronounced me to be a "safe authority," I have thought it might be of advantage to rose propagators, nurserymen, and amateurs, to say that the following roses should be largely propagated, viz., *Senateur Vaisse*, *Comtesse Cecile Chabillant*, *Madame Boll*, *Victor Verdier*, *John Hopper*, *Maurice Bernardin*, *Duc de Rohan*, *Charles Lefebvre*, *Madame Boutin*, *Madame C. Wood*, *Madame Julie Daran*, *L'Eblouissante*, *Madame Clemence* (properly *Florence*), *Joigneaux*, *Maréchal Vaillant*, *Francois Lacharme*, *Beauty of Waltham*, and *General Washington*, a good and grand fall rose. These varieties have been thoroughly tried here, and may be called truly splendid and also constitutional roses. They are now in abundant and beautiful bloom. The 13 first are especially grand and good here at all points. There are some good roses of last year. I have budded a good many Briars and some Manetti stocks with the first I name, a valuable rose for its color, and of fine growth and foliage, and a free bloomer; it is a much improved *Frederick the 2d.* *Alfred de Rougemont* and *Le Rhone* are as yet the two best of last year. These are very good and can be safely propagated; *Vainquer de Goliath*, *Lord Macaulay*, *President Lincoln*, *Madame Freeman*, a beautiful white rose, and a better grower than *M. Bounaise*, *Baron de Rothschild*, *Peter Lawson*, glowing scarlet, and *Mrs. W. Paul*. These

seven are as yet the best, and I have no hesitation in recommending them. The following are also good, viz., *Souvenir de Charles Montault*, and *Jean Gonjou*. These two have not yet been quite full; but they are good growers and good garden varieties. Mr. W. Paul sent me a bloom of *Lord Herbert*, a superior rose of fine color and perfect in shape; but I have no specimen here to enable me to recommend it from experience. As regards roses of 1864, I have, as yet, only bought *André Leroy*, which has not yet bloomed. A light rose has been sent out for this, which is very dark, as figured in the *Florist*. I should say that the above is a perfectly safe direction. I have others, which have not yet bloomed; of these, if worthy, I will speak hereafter.—(*Gard. Chron.*)

---

## Societies.

---

### FRUIT GROWERS' SOCIETY OF WESTERN NEW YORK.

The Summer Meeting of this Society was held in Genesee, June 22. There were not as many present as usual, and the exhibition of fruits was comparatively small.

The following subjects were discussed:

1. *What are the requisites for the successful cultivation of the strawberry in all seasons—wet, dry and otherwise?*

H. N. Langworthy—The soil should be well drained and enriched and the beds be made as deep and as fine as possible. A wet, undrained soil is not suitable.

The question was asked whether there was any profitable means of watering the strawberry in seasons of drouth like the present.

Mr. Kennedy alluded to a large market gardener near Chicago, who cultivated the strawberry very successfully on light sandy soil, by the free use of water obtained from hydrants. He obtained berries of large size and very heavy crops.

Charles Downing mentioned a similar instance in Westchester county in this State. The berries were very large and commanded a high price in New York.

Geo. Ellwanger thought that as a general rule, if the plants were set out in rows three feet apart, and the runners kept off, and the cultivator and hoe freely used through the season, there was little danger of injury from dry weather.

Mr. Moore, of Brighton, thought the short crop this season was not so much owing to the drouth as to the cold winds in the spring blasting the blossoms.

Mr. Moody, of Lockport, said that the cold weather in January last accompanied with such severe wind, killed the strawberry plant. Many acres had been ploughed under in his neighborhood.

Mr. Hoag, of Lockport, thought strawberry plants in hills were more liable to winter-kill than when allowed to run and occupy the ground.

H. E. Hooker was of the same opinion.



2. *What is the result of another year's experience with the Russell Prolific Strawberry?*

Mr. Schuyler, of Seneca Falls, said it proved very hardy and productive. He thought that with good treatment 400 bushels per acre could be obtained. He would set them in rows two feet apart and the plants sixteen inches apart in the rows, and allow no runners to grow.

H. E. Hooker spoke of its great productiveness from what he saw of it last season. He thought it was clearly a pistillate variety and would consequently require some staminate variety to fertilize it. He thought it would fertilize more readily than its parent—the McAvoy Superior.

J. J. Thomas agreed with Mr. Hooker on these points. He also spoke of its productiveness.

Mr. Keitch, of Waterloo, spoke strongly in favor of the Russell. Admitting that it needed a fertilizer, what was easier than to set out a plant of Wilson or other staminate sort to each twenty-five plants of the Russell? This would insure a crop.

Mr. Hoag, of Lockport, thought it was very productive.

Mr. Smith, of Geneva, also spoke of its great productiveness. In quality it was hardly equal to Triomphe de Gand, but better than Wilson's Albany.

3. *What treatment should the strawberry plant receive before setting out, also how deep planted?*

H. N. Langworthy—Cut off the roots from three to four inches in length. Then, if they have been obtained from a distant nursery, dip them in clay water up to the crown. Set them in the holes as deep as you can without smothering the crown.

J. J. Thomas had made an experiment this spring. He set out some rows in the ordinary way with the roots close together in a mass, and some rows with the roots carefully spread out. It was but little more labor. The plants set out in this way did very much better than the others. The growth up to this time had been *twice as great!* He believed it would pay to do things in the best manner.

4. *What is the average period of popularity of the different highly lauded varieties of the strawberry?*

J. J. Thomas had given some attention to this subject for many years, and thought that with the exception perhaps of one in twenty, *five years was the average duration of popularity* of any highly lauded fruit. Cultivators who pay a high price for a few plants of a new variety of fruit take good care of them for a few years and consequently obtain excellent crops. When the plants become plentiful and cheap, and get into general cultivation, they receive nothing more than ordinary care and turn out to be no better than ordinary varieties.

H. E. Hooker asked if there was any truth in the idea that varieties of plants deteriorate. Formerly he used to raise excellent crops of Hovey's Seedling strawberry, but can not do it now.

Mr. Moore—Hovey's strawberry is certainly a humbug.

Mr Barry said at Boston the Hovey is the best variety grown. Dealers cared for no other. They would not look at a Wilson. He supposed climate

and soil made the difference. It took several years to test the character of new fruits, and they ought not to be recommended till they had been fairly tried.

5. *What are the best varieties of hardy grapes for wine making?*

Mr. Moody, of Lockport, thought the Delaware would make a nice sweet wine that would suit the taste of most Americans. Old wine drinkers might require some other variety mixed with it. Had made some good wine without sugar, from Diana.

6. *What are the best grapes for marketing?*

Mr. Hoag, of Lockport, named Hartford Prolific and Delaware as the most profitable market kinds. Concord was not so profitable on account of its cracking on the way to market.

Mr. Reynolds said the Concord did not adhere well to the stem, but by wilting it a little before packing it could be sent to market in good condition, and then on account of its fine appearance, it would sell for a high price. Had seen it sell in New York for 40 cents per pound.

7. *What varieties are the best keepers?*

Charles Downing was called upon. He said he had never succeeded in keeping grapes.

H. N. Langworthy, who is quite successful in keeping grapes, said his method was simply to put them in boxes holding five or six pounds each, boring a few holes in the bottom and sides.

Mr. Fish had kept the Isabella till the first of April. Diana would keep better than any other kind. Concord is a poor keeper.

Mr. Ross sawed a barrel in two and nailed on a rope for a handle. These half barrels he fills with grapes and puts them up stairs in a clothes press in the centre of the house where they will not freeze. He has kept Isabellas till March.

J. J. Thomas said the great point in keeping grapes was to have them well ripened before picking. If a man succeeds in keeping his grapes it is an evidence that he is a good cultivator.

8. *What soil is best adapted to the growing of grapes?*

H. N. Langworthy—All soils will grow good grapes if in good order.

Mr. Moody thought *for wine*, a rather heavy well drained clayey soil was desirable.

Mr. Barry said that a few years ago it was thought that a sandy soil was the best, and it was usual to select a sandy knoll for a vineyard, but now a rather stiff loamy soil is considered preferable.

9. *Which is the best recently introduced apple that has been tested and can be recommended for family use and marketing?*

Tompkins County King was named by several gentlemen, and it seemed to be the favorite of the meeting. Some of the members said it dropped from the tree, and that it should be picked ten days earlier than other winter apples.

10. *Do hogs in an apple orchard benefit the fruit by way of destroying the apple insect?*

H. N. Langworthy had kept hogs in his apple orchard for eight years

and thought the fruit was as much affected with insects as ever. The larvæ of the insect which stings the fruit works its way out before the apple falls, and therefore the hogs by eating up the fruit do no good. The hogs are a nuisance in the orchard. If they would root over the ground evenly they might do some good, but they will not. They root deep holes and leave the orchard in a very unsightly and unpleasant condition. An old sow, if the branches of the trees are low, will rear up on her hind legs and shake off several bushels of fruit and then eat them up. He has known a sow shake twenty bushels from a tree!

J. J. Thomas said hogs were useful in the early part of the season by eating up the stung fruit and the larvæ of insects that were in them.

Mr. Barry concurred in this opinion, and thought that when it was not convenient to turn in hogs, the fallen fruit of all kinds, such as pears, plums, cherries, apples, &c., should be swept up and burnt, and in a few years we should by this means greatly lessen the number of insects.

11. *What is the best protection against cold winds for an amateur garden of one acre or more, to include all kinds of tree fruits, on dwarf stocks, and especially grapes, and other small fruits?*

H. N. Langworthy said if he had not time to raise hedges he would make a tight board fence six feet high round the garden. This would keep off the winds, and at the same time grape vines could be trained to them. He knew of nothing so good for grapes as a tight board fence. He would even put them inside the garden, two or three rods apart, running east and west, and train grapes to them. They would afford splendid protection for other crops and you could also raise the finest of grapes.

Mr. Fish thought they would shade the garden too much.

H. N. Langworthy—"They would shade it somewhat, but they will pay."

J. J. Thomas was in New Jersey a few days ago, and Isaac Pullen of Hightstown called his attention to the effect of a screen made by some trees left in a nursery row. They made a belt of trees, twenty feet high. You could see the beneficial effects of this belt for twenty rods or more. Mr. Pullen said that the crops of all kinds were fifty per cent. better than where they were exposed to the winds.

Mr. Moody would set out Norway spruce. They cost but little, grow rapidly, and being evergreen afford protection in winter as well as in the spring and summer. You can set them out six feet high, so that you would not have long to wait for a sufficient protection. He thought if such screens were set out round our orchards and gardens we could raise peaches as successfully as when the country was new.

Mr. Barry also thought it was better to set out evergreens. The beneficial effect of such a screen was well known to every observing horticulturist.

12. *Seeing that varieties of fruit which compel good culture, are a benefit to the community, by teaching the best management, should not such as grow without culture be repudiated as retarding improvement.*

Little was said on this subject. We suppose the question was intended

to combat the too prevalent idea that fruits which will bear neglect and bad treatment are to be preferred to those which require more careful culture.

---

## Massachusetts Horticultural Society.

---

SATURDAY, JULY 2, 1864. The stated quarterly meeting of the Society was held to-day—the President in the chair.

The President read the following letter from H. H. Hunnewell, Esq. :

Boston, 2 June, 1864.

CHAS. M. HOVEY, Esq., President Mass. Horticultural Society, Boston.

Dear Sir:—Believing that the appropriation of a small fund, by your Society, for the encouragement of the Art of Landscape Gardening, would be an acceptable addition to your means, in meeting a want not now supplied; and would tend to the dissemination of a more correct and refined taste for elegant rural improvements than now exists, in laying out and planting our country places, which I fear are often the result of chance rather than any well directed plan, I am induced to offer for your acceptance the enclosed sum of \$2000.

I make this donation, with the request that it shall be kept entirely distinct from all other funds of the Society, for the specific purpose here designated, viz., that the income shall be allowed to accumulate for periods of two, or three, or more years, and distributed from time to time, after sufficient notice, under such regulations as may be deemed expedient by a committee appointed for that purpose, in one or more prizes, to the owners of estates of not less than three acres in extent, who shall lay out and plant them with the most rare and desirable ornamental trees and shrubs, in the most tasteful and effective manner, developing the capabilities of the locations in the highest degree, and presenting the most successful examples of science, skill, and taste, as applied to the embellishment of a country residence. The trees to be under the most thorough cultivation, the grounds in high keeping, and the prizes to apply equally in cases where proprietors take professional advice, as well as when acting on their own judgment in their improvements.

I take advantage of this opportunity to assure you of my continued interest in the welfare of your Society, and trust that the new hall you are erecting at so great an outlay of capital, and which will be such an ornament to our city, will be duly appreciated, and awaken throughout our community an increased zeal in the advancement of horticulture generally, and thus encourage you to persevere in your labors to promote the cause to which you have devoted so much of your time and energies.

With great regard, Yours very truly,

H. H. HUNNEWELL.

On motion of L. Wetherell, the thanks of the Society were voted for the munificent donation, and the President authorized to acknowledge the re-

ceipt of the letter; and that the details of the prizes be referred to the Executive Committee.

The following members were elected:—Geo. Hill, Mrs. Eliza A. Pierce, West Cambridge; James A. Dupee, Wm. D. Philbrick, Brookline; Wm. H. C. Copeland, John A. Whipple, James R. Osgood, Samuel T. Ames, Boston; James T. Heywood, Roxbury; G. M. Thompson, Waltham; Geo. N. Noyes, Melrose; David P. Cox, Geo. W. Clark, Malden; Dr. J. R. Webster, Milton.

Adjourned one month, to August 6.

---

## Horticultural Operations

FOR AUGUST.

---

### FRUIT DEPARTMENT.

Throughout this part of the country the most severe drought has prevailed that has been experienced for many years. It is now nearly eight weeks since we have had anything but one or two light showers. Vegetation is suffering greatly, and in many localities the fruit trees are shedding their leaves and dropping their fruit. Unless rain falls soon the crop will be severely damaged; so far, trees have made but little growth.

**GRAPE VINES** in the greenhouse and graperly will now begin to color, and will still need good attention. If the crop is large, the border should have had a good watering, and this should be repeated if dry weather continues. The house should still have occasional waterings, to keep up a moist atmosphere, until the berries are pretty well colored, when it may be lessened gradually till it is discontinued altogether. Look to the laterals, and top where growing too freely. Vines in cold houses will not yet be safe from mildew, but it will rather be the critical period, especially if cold rains set in. Guard against draughts of air, and maintain a humid genial atmosphere by frequent wetting of the walks; air freely at the top in good weather. Hardy vines should be looked over, and all small superfluous wood cut out.

**STRAWBERRY BEDS** will need attention; keep the runners of new beds laid in regularly, of such kinds as grow best in this way, and cut off those which are grown in single rows or hills. Stir the ground often. Prepare for new beds, which may be planted the last of the month.

**ORCHARD-HOUSE TREES**, now ripening off their fruit, will need more moderate supplies of water. If red-spider is troublesome, syringe, and dust with sulphur.

**SUMMER-PRUNING** should be continued during the month, where dwarf and handsome shaped specimens are desired. Thin out, also, all superfluous wood from the centre of the trees.

### FLOWER DEPARTMENT.

After so long a drought, heavy rains, and probably a cool and wet August may be expected, which will save all the labor of watering; but as all

signs have failed for six weeks, dry weather may still hold on; if so, resort must be had to watering, which should be given in abundance at occasional intervals, rather than often and little at a time.

**PELARGONIUMS** should now be headed down, if not already done. Let the plants be rather dry, and cut to the second or third bud, of the current years' wood; turn the pots on their sides, for two or three days, when they may be again watered very sparingly till the young shoots are well started; then shake out of the pots, reducing the roots, and repot in a smaller size, shading for a few days till well established. Fumigate if the green-fly attacks the plants. Put in the cuttings in pots or boxes, and keep in a frame till ready for potting off.

**CHRYSANTHEMUMS** will be growing vigorously, and will need occasional waterings with liquid manure.

**AZALEAS** will now have made their growth and set their flower buds. Remove them at once to a half-shady, sheltered situation, in the open air, syringing them every day. If the thrips or red-spider infest them take the proper means to destroy them at once. See Mr. Barnes's advice in a late number.

**EUPATORIUMS**, and other soft-wooded winter-flowering plants, should now have a shift into their blooming pots.

**OXALIS BOWIEI** AND **HIRTA** should now be potted.

**ROSES** for winter-blooming should now be repotted and plunged in a warm sunny place, picking off all flower buds in order to get strong vigorous plants.

**MIGNONETTE** AND **SWEET ALLYSSUM SEEDS** should now be planted in pots.

**CAMELIAS** should be freely watered and syringed every day. Now is the time to repot if they require it.

**BEGONIAS** should now have a final shift into good-sized pots.

**ACHIMENES** may be repotted if large specimens are wanted.

**CACTUSES** should now be freely watered.

**INSECTS** should be looked after; particularly the red-spider.

#### FLOWER GARDEN AND SHRUBBERY.

Little will be required to be done to the lawn just now, but after refreshing rains the growth will be rapid, and rolling and cutting should be attended to at once. Keep the walks clean, by frequent cleaning, raking, and rolling.

**DAHLIAS** will require attention; water freely in dry weather, and mulch with coarse manure; prune off superfluous shoots, and tie up the main branches.

**WHITE LILIES**, and other lilies which bloom early, may be taken up, divided, and reset this month.

**ASTERS** should have a good watering if the weather continues dry.

**PERENNIAL PLANTS** raised from seeds may be transplanted into well prepared beds.

**GLADIOLUSES** as they come into flower should be tied up to neat stakes.

## THE PELARGONIUM.

FEW, if any, of the plants which ornament our greenhouses in winter and spring, and our gardens in summer and autumn, possess so many attractive qualities as the Pelargonium, or Geranium as it is often erroneously called. Originally from the Cape of Good Hope, they early attracted the attention of English cultivators, and were soon improved by seeds, and from their ease of cultivation, abundant and long continued bloom, they at once established themselves as the favorite flower of the greenhouse. So popular indeed was the pelargonium, almost half a century ago, that a work was exclusively devoted to it, and all the more beautiful species and varieties figured and described. This was the *Geraniaceæ*, by R. Sweet. Possessing so many claims upon the attention of the cultivator, they were yet rendered more popular by the publication of Mr. Sweet's beautiful work, and they have continued to maintain if not surpass their early hold upon cultivators as the most beautiful family of greenhouse plants.

For many years, but little attention was given to the production of new varieties. They were, indeed, numerous, but they were mostly chance seedlings, and compared with the present improved varieties would be considered scarcely worth a place in a collection. The process of hybridization, which has given such important results, had not then begun to attract attention; neither had the popular taste been educated up to a point which required a superior class of flowers to render them popular; a slight alteration in color, or some little deviation in the spotting, was sufficient to constitute a new variety. In fact, it was not dreamed for some years to what extent this flower was capable of being improved, and the beautiful circular outline, and regular petals, of the fine varieties of the present day, were scarcely thought of by the most enthusiastic admirer of the pelargonium. We now cultivate, as a sort of memento of what the flower was, that

once popular and splendid variety, Tam O'Shanter, raised more than twenty-five years ago.

Compare the present race of Scarlet pelargoniums, also erroneously called geraniums, with those of former days. Then the petals were narrow, unevenly formed, and the flowers in small trusses. Now they are as circular and regular in outline as a twenty-five cent piece, and of almost every shade of color. Their habit of growth is also improved, being short and bushy, with immense flower heads; as popular bedding plants, perhaps no flowers, unless we except the verbenas, are so popular or so showy. Then we have the variegated or Zonate varieties, with silver and gold edgings and a zone of darker green, each with lighter or darker flowers, and presenting a rich mass of various colored foliage, beautiful and effective in the flower border, and rich and attractive in vases or pots.

The English for a long period appeared to be the sole improvers of the pelargonium, but, starting from a point the English cultivators had scarcely thought of, the French brought forward a new and superb class, called the Spotted pelargoniums, as unique and distinct as they were new and attractive. Previously, nearly if not all the flowers had but three spots on the petals; the French added two on the lower petals. Thus from the original introduced species we have the Large Flowered, Fancy, and Spotted pelargoniums, as well as many varieties intermediate, and also the numerous varieties of the Scarlet or Zonate group.

At the present time the pelargonium is one of the most popular of exhibition flowers, as it is the most beautiful of greenhouse and parlor plants. Through the zeal and exertions of many amateurs in the production of new varieties, and the skill of cultivators in the growth of the plants, it now stands with the azalea, unrivalled as a show plant.

American cultivators are but just beginning to appreciate the beauty of the pelargonium, and few who have not had the opportunity to see to what perfection it may be grown, know in reality what a treasure it is; but as our horticultural societies increase in number, and demand superior specimens of skill, it will we doubt not receive more attention,



and increase in popularity. We have, in our previous volumes, given our own mode of cultivation, and that of many of the most successful growers, and we shall continue to give all the information which will in any way interest or instruct the amateur cultivator.

We have made these remarks prefatory to the introduction of the report of a lecture delivered before the Royal Horticultural Society of London, a few weeks ago, upon the pelargonium, doubting not it will be read with great interest, and revive the taste for a plant combining so many requisites of popularity:—

Mr. Wilson Saunders then delivered a very interesting and instructive lecture on pelargoniums, of which the following is a condensed report. He commenced by pointing out the difference botanically between pelargonium and geranium. He then alluded to the geographical distribution of pelargoniums, which he said all came from the Cape of Good Hope, with the exception of a very few, which were natives of New Holland, St. Helena, Canaries, and Abyssinia. One, called *Endlicherianum*, came from Asia Minor, and it was remarked that as this was nearly hardy, it might yet be the parent of a race less tender in constitution than any we are now in the habit of cultivating. As regards duration, pelargoniums were stated to be either perennials or annuals, and the difference of form among them was most remarkable, not only in the stems but also in the leaves. As regards stems, some were spiny, gouty, climbing, and succulent; and with respect to the leaves, in addition to the peculiar shape which some of them took, nearly all of them were deliciously scented. The flowers next engaged the lecturer's attention. They were stated to embrace different shades of yellow, white, pink, purple, scarlet, crimson, and very dark brown. Some of them gave out an agreeable odor at night; and it was remarked that when the flowers were perfumed the leaves were scentless. With respect to introduction, the first pelargoniums, consisting of *triste*, *cucullatum*, *capitatum*, and a few others, made their appearance amongst us about 238 years ago, but they appeared in larger numbers between the years 1790 and

1810, since which period few additions to their numbers have been made. With regard to the pelargonium in an economical point of view, it was mentioned that some are astringents; that one of the tuberous-rooted species allied to *triste* is eaten by the Kaffirs; and that in the south of France and in Algeria, an essential oil is obtained from *P. Radula rosea*. For gardening purposes, Mr. Saunders divided the species into groups as follows, viz. :—1, sorts remarkable for the beauty of their blossoms; 2, kinds worth attention on account of the beauty of their leaves; 3, species valuable for the scent yielded by their leaves; and 4, species remarkable for the odor of their flowers. These were then compared with some of the best florists' varieties contributed by Mr. Turner, and allusion made to some of the species from which they originated.

With respect to hybridization, Mr. Saunders stated that it was not at all certain when the first hybrids among pelargoniums were raised, but he remarked that it was certain that many existed at the latter end of the last century, and we might perhaps not be far from the truth in saying that some were known 100 years ago. The first no doubt were the result of chance, through the agency of bees or other accidental circumstances. The scarlet Fothergill pelargonium was raised by Dr. Fothergill, in 1780; and during the first ten years of the present century some very marked improvements upon the original species had taken place—indeed the commencement of the present races of florists' varieties had been started. Color was there, spotting and marking were present, but size was wanting, except in one or two instances, as well as shape and substance of petal.

The fine pelargoniums which now annually grace our exhibition tables were next adverted to, the sections into which they are divided pointed out, and the names of some of the principal raisers mentioned. Among these was Mr. Hoyle of Reading, from whom the following letter was read:—

“My acquaintance with pelargoniums commenced 32 years ago, when I began to cultivate them; and for the last 24 years I have annually raised a batch of seedlings numbering some ten or twelve hundred.

“One of the first I possessed was *Davyanum*, at that time

a prime favorite, but it would be considered now to have scarcely one good point, though at that time a good deal of progress had been made. I possess some petals gummed on paper about 40 years ago, and in shape they remind one of the sails of a windmill. To estimate correctly what has been done, it is necessary to compare the best examples of the present time with the figures which floral and botanical works have given us from time to time; the early numbers of the "Florist," especially the first volume, give several examples. Improvement it will be seen has been great in all points in reference to a good flower; form, color, substance, abundance of bloom and size—each of these might furnish much matter for remark. I believe however that there is yet plenty of room for further progress, and that the pelargonium may be as much advanced in the next twenty years by judicious and persevering cultivation, as it has been during the last twenty years; it is just that time since the idea was given me that a purple with a white eye was a desideratum, and for eighteen years I have tried all I could to procure it, and I have the reward of my perseverance in that beautiful flower called *Diadem*. Some progress has been made with the *Scarlet* class, and soon it will be a rarity to see a *Show* flower with a dull eye. It is usual to call those varieties that are spotted on the lower petals *French*; but there are many that have not that origin. Years before the introduction of the *French* varieties I had raised *Saracen*, *Nonsuch*, *Ocellatum*, and *Sanspareil*, the last still always 'one in the ring,' and with its white sport *Fair Rosamond* will long be grown for exhibition."

Mr. Saunders next proceeded to indicate some of the points which should characterize a good florist's variety, and briefly alluded to the propagation of some of the *Cape* species.

The concluding part of his subject will perhaps have most interest in the eyes of raisers. He said:—

"Having now shown shortly what has been done with the pelargonium to the present time, I think we may glance at the future, and looking to the various characters of the species, see where progress may still be made by judicious crossing and selection. Although, as I have pointed out, more than 200 years have elapsed since the first pelargonium

was introduced, and nearly 100 years since the first crosses were noticed, yet with the knowledge we now possess of hybridization, and the advantage of selection, there can be no doubt that a very few years would effect great results in any new series of experiments for the further improvement of the pelargonium, commencing with the species themselves. It is most desirable that these attempts should be made, knowing as we now do how valuable the pelargonium is as a flower contributing to the gratification of such numbers of persons.

“To effect improvements in constitution, habit, foliage, flowers, &c., I would suggest experiments on the following species:—

“*P. ENDLICHERIANUM*.—Crosses from this plant may be expected to possess a nearly hardy constitution, and although it is of a low almost herbaceous habit, yet it forms a woody kind of root stem, with large and conspicuous flowers, good qualities for the hybridizer to work upon.

“*P. PATULUM*.—Here we have a plant with long almost trailing stems of a woody nature. It grows very quickly, and would clothe the side of a conservatory in a short space of time. Its flowers are small and inconspicuous, but properly crossed an improvement would soon take place here, and large blossoms might be expected, which would make the plant a very acceptable addition to our greenhouses.

“*P. PELTATUM*, THE IVY-LEAF.—This beautiful and graceful species, with numerous shining succulent leaves, beautifully zoned with darker color, and very free growing and trailing stems, is well worthy of more attention on the part of floriculturists. Some pleasing crossings have been produced, such as lateripes, hederinum, and scutatatum, &c.; sufficient to show how ready the plant is to yield to the wishes of hybridizers. Much, I feel confident, might be done with this plant.

“*P. SCHIZOPETALUM* AND *BOWKERI*.—These have deeply lacinated petals, very elegant in outline and large in size. The flowers are dull in color, but if they could be brightened by judicious crossing, very charming plants would be the result, and could a shrubby character be given to them, novelties would be obtained of a most striking character.

“With respect to shape of leaves, most of our hybrid pelargoniums with very showy flowers have leaves bearing a great similarity to each other. As the leaves of many of the species are so very varied in outline and so elegant, why should not attempts be made to produce beautiful leaves with beautiful flowers? There is a very wide field open here for crossing and producing new and valuable varieties.

“Again, as the pelargonium offers such varied and grateful perfumes in the leaves, why should not this character be imported into the leaves of the large and fine-flowered sorts. This would not be a difficult matter, and would certainly much add to the interest of the plant.”

The lecture was amply illustrated by living plants of the Cape species obtained from Mr. Saunders’s extensive and fine collection of them at Reigate; and by some admirably grown plants of florists’ varieties from Mr. Turner.

---

## CHERRIES.

BY T. RIVERS, SAWBRIDGEWORTH.

CHERRIES are almost a banished fruit. Where the canker-worm does not destroy the trees, the voracious robins eat all the fruit. We have not in twenty years—with a very large number of small and large trees—ever gathered a peck of cherries at one time, and scarcely a quart a year where we ought to have had bushels.

It would appear that in Great Britain, or some parts of it at least, the cultivators fare no better, for Mr. Rivers asserts that the birds devour all before they are ripe, and he has had to resort to the orchard-house to get a taste of this early and favorite fruit, once so abundant and cheap in our markets as scarcely to pay for gathering.

It may be said that here the cherry is no longer worth cultivating in the open air, except in the neighborhood of city gardens where the robins do not appear, and hence it must be grown in the orchard-house, or its place given up to the pear. We agree with Mr. Rivers, that there is something

“so bright and so cheery,” about these first fruits of summer, that we advise our orchard-house cultivators not to omit the cherry, but rather make it, with the peach, a speciality of growth:—

When I think of cherries, I seem to be cogitating on things that were and are not, for I go back in thought to my boyish days, some fifty years since, when numerous old trees of May Duke, Archduke, and Bigarreau cherries, planted by my grandfather, were a little past their prime, but bearing, as most old trees do, large and delicious fruit. The size of these trees may be imagined when I state that from six to eight bushels were often gathered from one tree; and “from the old Bigarreau,” now in the last stage of decay, I think I remember hearing that ten bushels had been in one abundant season gathered. All this now seems like a dream, for owing to the destruction of birds of prey by the gamekeepers, and I half suspect from their having been driven away by the noise of the railway, fruit-loving birds have increased to such an enormous extent that cherries grown in the usual way on standards are devoured before they are ripe. To illustrate their rapacity at the present day, I may mention that in July of last year I was led to look at two fine young standard Bigarreau cherry trees literally covered with fruit. I calculated that their produce would be from two to three bushels. I thought of old times and “mentally ejaculated” there will this year be enough for us all, meaning birds and self. This was on Saturday. On the Monday following I again visited my trees—not a cherry was left, but the ground was covered with stems; the birds had evidently made our day of rest a day of thorough enjoyment—instead of sweet cherries I had sweet songs, not quite satisfactory to one’s fruit appetite. I ought to say that for some years past, this voracious conduct of our “feathered friends” has been not the exception but the rule, much to my discomfort; for it seems to me a sort of fixed idea that what we dearly loved in boyhood, we fancy we love in old age. As far as cherries go, this is with me quite true, for there is something about these first-fruits of summer very charming—so bright, so cheery, so nice, but

only when they are gathered from the trees with one's own fingers and eaten at once; gathered cherries lose all their freshness of flavor in a very short time.

It is now some few years since I cast about to find some means of providing myself with ripe cherries, and for the last two or three seasons I have had the pleasure of gathering them from the end of May till the end of August, ay, even later. I have accomplished this by a very simple mode of culture—merely by planting the trees in pots, and placing them in my “cherry house,” a span-roofed structure 14 feet wide. A house of this width, 5 feet high at the side, 10 feet high in the centre, and from 30 to 40 feet in length, would supply a large family the whole of the summer with such fine and ripe cherries as are rarely gathered from trees in the open air now-a-days.

All the kinds of Duke cherries, such as the May Duke, Empress Eugénie, Archduke, Nouvelle Royale, a fine large late Duke, Duchesse de Pallnau, the Blanchoury cherry and some others, if grafted on the *Cerasus Mahaleb*, may be planted in the borders of the house as pyramids; they may be kept in a compact and fruitful state by pinching in their young shoots to three or four leaves all the summer, but such sorts as Early Purple Guigne, the finest and largest early cherry known, the Belle d'Orleans, of equal excellence with the above when grown under glass—they are both too delicate for open air culture except in warm and dry climates—should be grown in 13 and 15-inch pots, as must also the other fine kinds of Heart and Bigarreau cherries, such as Knight's and Warder's Early Black cherries, the Black Tartarian, the Bigarreaus of sorts, and some of the late Guigne cherries, which are so fine in the south of France and in South Germany. All these sorts of Hearts and Bigarreaus are generally grafted on the common cherry stock, so that their growth is too vigorous to be controlled unless they are grown in pots. They would if planted out burst through the tallest roof. If, however, they are confined to pots and cultivated as pyramids, they form by summer pinching the most fertile and beautiful of fruit trees. My trees are at this moment covered with their rich-colored fruit from “top to toe.”

I have mentioned my "cherry house" advisedly, for cherries should have a house devoted to them, for more than one reason. If they are placed among other orchard-house trees their fruit ripens so early, and is so tempting both to birds and boys, that it is almost impossible to preserve them till fully ripe; the former makes their way through the open ventilators as freely as if the trees were in the open air, and the latter—well, any boy, whether gentle or simple, that can keep his fingers from a ripe cherry must be of a very philosophic temperament—will pick them. My practice is to open the ventilators as soon as the cherries commence to ripen, to cover the apertures with double netting, and not to close them till cherries are over, *i. e.* towards the end of August; the free and constant admission of air gives flavor to the fruit. The door is always kept padlocked, and the key delivered only to a confidential man, who gives the trees water when they require it.

---

#### POMOLOGICAL GOSSIP.

BEURRE' SPAE PEAR.—This is the name given to a new Belgian seedling, raised by Mr. Spae and figured in the *Illustration Horticole*. It is described as very large, roundish turbinate in form, often swollen towards the crown, tapering towards the stem, which is inserted obliquely in a moderate cavity sometimes doubly furrowed. Skin, yellowish, very pale, spotted, and irregularly mottled with brown on the sunny side. Flesh, very juicy, fine, sugary, melting, and highly perfumed. It is called a pear of the first quality, ripening in November. The tree is very vigorous and very productive, cultivated as a standard. It was obtained from seed by M. Fr. Spae, horticulturist of Gand, who found it, some ten or twelve years ago, among a lot of seedlings produced from good pears; the tree began to bear when only five or six years old. Mr. Spae grafts it in preference upon the pear; it grows more vigorously and more beautiful, and produces fruit as abundantly as upon the quince. This point,



however, remains to be decided in the future cultivation of the tree.

**MUSCAT HAMBURG GRAPE.**—Quite a difference of opinion has prevailed among English grape growers respecting this grape, some asserting that it should always be grafted on the Hamburg, or some other free growing sort, to get fine bunches and large berries. This we had thought was the general opinion, but a recent number of the *Gardeners' Chronicle* states to the contrary, as follows:—We find in a northern contemporary the following remark respecting the Muscat Hamburg grape—"We are clearly of the opinion that the Muscat Hamburg, where properly managed, will do best on its own roots." Two cases are quoted in support of the opinion thus advanced; Mr. Fowler's grapes were all that could be desired, and Mr. Henderson, of Wemyss Bay, had fruit no less remarkable for finish; and these were both "on their own roots." The question is of some importance, and it would be desirable to ascertain what general verdict thereupon is to be formed on the evidence which may be producible.

**PASSE CRASSANE PEAR.**—A fine figure and full description of this pear appeared in a late number of *L'Horticulteur Francais*. According to the authority of this journal, the *Passé Crassane* is a pear of a robust, thick set, and free branching habit of growth. It succeeds either grafted upon the quince or upon the pear stock, and hitherto its fertility has been all that could be desired. The branches form a very open angle, sometimes even a right angle with the trunk; they are short and often thorny; the bark is brown, speckled with ash color, and spotted with numerous creamy-red lenticular markings; the leaves are roundish-oval and saw-toothed, and the flowers, before quite open, are tinted with rose at the back of the petals.

The fruit is large, roundish, and depressed, sometimes angular; the skin, is thickish, deep green, dashed with pale red and marked with brown patches, taking on a yellowish shade when mature. The stem is firmly fixed in a deepish cavity; and the eye is somewhat contracted, with but slight indication of the calyx lobes. The flesh is fine and delicate, becom-

ing somewhat less so towards the centre, melting, juicy, and sweet, with a slight briskness and a fine and agreeable aroma. The period of maturity is variable, extending from December to March.

According to M. Ballet, this is one of the most valuable of modern pears; and it has won for M. Boisduval fils, of Rouen, a gold medal from the Société Imperiale et Centrale d'Horticulture. The tree will, it is said, succeed in all situations favorable to the pear, doing equally well in warm or cold exposures. The fruit withstands wind perfectly, and last year, though gathered late, was found firmly attached to the branches, notwithstanding the dry season of 1863.

---

### PYRAMIDAL PEAR TREES.

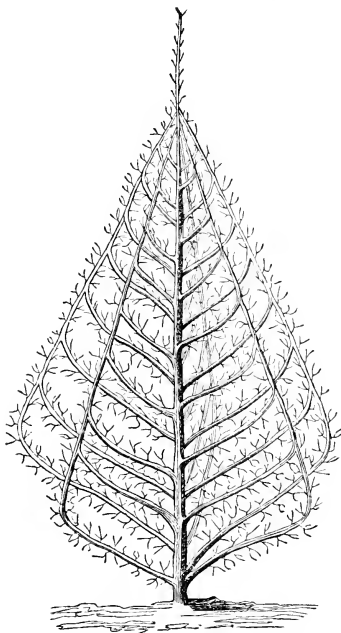
FROM L'HORTICULTEUR FRANCAIS.

THE French are world-renowned for their skill in pruning and training fruit trees, and their gardening works, from La Quintinye down, are profusely illustrated with all the various styles which their fancy and skill could devise. Many of the more common are well known through English works, but there are many different and ornamental modes which can only be found in the original works of French authors.

We have in our previous volumes copied several new and apparently valuable systems of training the pear, which would really be highly ornamental if completely carried out. The generality of cultivators are not supposed to have either the time or the skill to do this thoroughly, but there are many amateurs who have leisure, and we do not know of anything more pleasant and interesting than the labor of training a tree in some symmetrical and beautiful or novel form.

Believing that, as our amateurs increase in number and become more skilful and zealous in their cultivation, they will not stop short of exhibiting their practical knowledge in the way of beautifully trained trees, like those for example of Capt. Austin's, or in other equally symmetrical and fancy

forms, we copy from the Gardener's Chronicle a notice of a new mode of pyramidal training called the Pentagonal pyramid, (FIG. 12) and commend it to our cultivators as a desirable and elegant form for small gardens, where there is a scarcity of room, and where a few finely trained trees will form showy and conspicuous objects, aside from the advantages which are



12. PENTAGONAL METHOD OF TRAINING PEAR TREES.

claimed for the method by M. Croux, viz., that no part of the tree needs any support when in full fruit:—

The pyramidal mode of training dwarf pear trees, growing upon the quince stock, is one which finds much favor with cultivators, but we have observed in the continental gardens

a variation of it which seems to have some special points of merit. In the ordinary pyramid pear tree the branches are allowed to proceed from the stem in all directions, so that when perfect the outline is that of a filled-up tall cone. In the variety to which we refer, the branches which issue from the upright main stem are all brought into five radiating lines, and fixed one above another, so that their points indicate a pentagon, with the stem in the centre. The advantage of this mode of training appears to be that light and air are admitted directly to the centre of the tree from five different points, and consequently the fruits growing on the sides of these regularly disposed tiers of branches are more thoroughly exposed to the influences of these necessary agents; while to some extent they are also sheltered.

Something of the same mode of training has been described in a recent number of *L'Horticulteur Francais*, under the name of the *PENTAGONAL PYRAMID*, by M. Croux of Seeaux, and his few remarks are accompanied by a sketch, which we here reproduce (FIG. 12). In this the branches receive the same direction as in the cases we have referred to, but the tip of each branch is carried upwards at the circumference of the tree, and grafted into that next above it, so that the whole system of branches is held firmly by means of this series of artificial unions, and the branches are at the same time kept at regular distances. When this plan is adopted, M. Croux points out that no other means of support is needed for any part of the tree, and consequently that the trouble and expense of providing trellis work are entirely done away with.

Whatever practical benefits there may be in M. Croux's plan of grafting together the tips of the branches of his pentagonal pyramid pear trees, we cannot but regard the pentagonal method of training as advantageous, for the reasons which have been mentioned.

These pentagonal pyramids, occupying lines along the walks of the kitchen or fruit garden, would be far more attractive than espaliers, and we hope to see them introduced.  
ED.

## THE RHODODENDRON.

FROM THE COTTAGE GARDENER.

AGAIN the season has returned when the magnificent rhododendrons will command attention wherever this prince of shrubs is known and appreciated. September is the favorable time to prepare ground and plant them out, and we do not forget our promise, long ago made, to make every effort to render them the ornaments of every complete garden—we say complete, for we are sure they will not display their regal splendor under the hap-hazard treatment of ordinary shrubs, and therefore we shall only expect to find them where there is taste to appreciate, zeal to encourage, and skill to cultivate them in the simple but yet proper way in which alone they display all their magnificence.

A well prepared soil, and a suitable location are the requisites of success in cultivating rhododendrons, or even azaleas and kalmias, all allied tribes. Every volume details how this should be done, but we still add the sound advice of a Scotch planter, which will supply any deficiency in our own advice, or the advice of others who have written upon this superb shrub.—Ed.

It is as little to be doubted that the rhododendron is the prince of ornamental evergreen shrubs, as that the rose herself is the queen of flowers. And think of the season of its commencement, and the period of its continuance—from the middle of April to the end of June—leading us through many a scene of floral beauty to the very opening of rose-tide, as that again conducts us into the glories of the autumnal flower garden. So is Flora's bright chain woven, and the year is clothed with beauty. Why should not the lovers of flowers possess and enjoy them all?

We confess that we are somewhat old-fashioned and conservative in our tastes. We have even gone so far as to deprecate excess in the bedding-out system. But after seeing the flower gardens at Dalkeith and Dirleton we surrendered our convictions on this point, and beat a retreat into the position of the wise man, viz., that "everything is beauti-

ful in its time." It cannot be doubted that families who spend their autumn only at their country residences, and who have no particular interest in individual plants, will prefer the fashionable flower garden of the present day. We retain so much of our old faith as to have a special predilection for the mixed style of flower gardening, and think it best fitted for a garden attached to a residence permanently occupied. We are not content with bare spaces in spring, and blank panels in summer, when we can have a succession of ornamental plants from February to November. To a man of such tastes flowering shrubs are indispensable, and of these, as already said, the rhododendron is prince. There is no plant that suspends in air such masses of conspicuous and varied colors, none that is possessed of more diversified interest to the florist; and with it at his command no one, without attaching blame to himself, can continue to speak of "the shrubbery's insipid scenes." It may be added, that if the amateur has a turn for observation and experiment, there is scarcely any province of hybridizing so full of promise and enjoyment.

But the objection may be started by some, "We are not in the vicinity of peat, and the formation of a proper rhododendron soil would be to us both operose and expensive." Let them hear what Mr. John Waterer says on that point:—"The commonly received opinion we find is still prevalent that the most choice kinds of American plants cannot be grown without the aid of a rich peaty soil; nothing, however, is more erroneous. Still we do not deny that a good peaty soil is preferable, but the absence of it need deter none from planting on that account, as abundance of material of a highly suitable character in every locality can at any time be found. However, in absence of peat (which is more or less to be found on nearly every estate), the subjoined will be found to answer every purpose. Leaf-mould and turfy loam in equal parts, with a small admixture of white or other sand; or the top spit of any plantation, wood, or grass land—the more it is impregnated with vegetable particles the better; the thickness of the spit will depend on the composition of the soil—the more turfy the better for the growth of plants; a small

portion of sand, with well rotted stable manure—the proportions of the latter being one barrowful to six of the former ingredient. But numberless instances are recorded of their thriving in almost every kind of soil, particularly in light fertile loams.”

One does not like to modify, much less contradict, the opinions of a man of such experience as Mr. Waterer. We believe that in damp localities, with abundance of shade, rhododendrons will grow in any soil, except where it is charged with lime, but in such situations they do not flower freely. On the other hand they become stunted in open situations, and on clayey soils. For our part, we would not venture choice sorts on common exhausted garden mould, or on any soil in which peat and sand did not predominate. Doubtless they might live in almost every kind of soil, but we would rather be without them altogether than see them scraggy and ill-grown. Any one near a railway in Scotland may easily obtain a few trucks of peat. Many have free access to abundance of leaf-mould; and common pit sand is sufficient for the other ingredient. We warn our readers against crossing soils when they are intended for rhododendrons. A layer half-a-foot thick of moss digged into clayey or gravelly soil, or exhausted garden mould, is just so much labor and expense thrown away. This we have learned from numerous instances, both of observation and experience. If only such a thin layer is to be had, let it be kept on the surface, and not much interfered with by digging. The great secret is to keep the soil loose and free near and around the neck of the plant, and it probably matters little whether this is done by means of sand and leaf-mould, or sand and peat, only in dry weather the former will require more watering than the latter. Any soil that clots or bakes into a sort of concrete is unsuitable for the fine fibrous roots of this shrub.

Last winter we formed a compost for rhododendrons, and apparently with complete success. From a peculiarity in the district the chief difficulty was to procure suitable sand; and for this ingredient we were obliged to content ourselves with the finer dressings of the sandstone of Binny Quarry—that from which the new buildings in Edinburgh are being erect-

ed; these dressings were passed through a wide wire sieve. The peat was carefully broken down with a coarse rake, and mixed with the sand and vegetable mould, the heap being repeatedly turned over. A layer of about 16 inches thick of this material was placed in the beds excavated for the purpose, and the surface was sharpened by a copious sprinkling of silver sand obtained from the neighborhood of Tranent. In these beds a number of rhododendrons, after a long journey of some hundred miles, were planted about the middle of April; they have stood all the late droughts without being watered; not one of them has lost a leaf; not a few of them have bloomed beautifully, and they are now making shoots which we trust will blossom another year. We would say to the reader—go and do likewise. At all events we never had greater satisfaction in any gardening operation we ever performed.

---

#### FLORICULTURAL NOTICES.

NEW DECORATIVE GARDEN PLANT.—The French journals give an account of a very ornamental plant for garden decoration, which M. Bonard calls *Nicotiana wirgandoides*. It is now the fashion, he says, to cultivate ornamental foliage plants, and he thinks this is a fashion of which we need not complain, for in former days the capricious goddess has favored the evergreens, and the turn of the flowers may in due time come. When that eventuality occurs, those plants which make a great display, and have persistent foliage, and elegant fragrant flowers, will not be neglected; and such as this, according to M. Bonard, is the *Nicotiana*, to which he alludes. Planted in the spring, in the open ground, it develops itself vigorously, and attains as much as 8 or 10 feet in height in the course of a year. Its stem bears large leaves, measuring some 2 feet in length and 1 foot in breadth, and sufficiently numerous to give the plant a well furnished appearance; the young leaves, moreover, have a silvery appearance, on account of the compact white down which clothes them, and which completes their ornamentation.



This plant, it is said, far surpasses the famous *Ferdinanda*, whose leaves are like elephant's ears, wanting support. It rivals the *virganda* of Caraccas, which it excels in vigor and robustness. As with many of its congeners, this *Nicotiana* continues to grow during winter, unless indeed it is preferred to use the stems and leaves for destroying insects. In an orangery where the frost did not penetrate, M. M. Baltet of Troyes had an enormous floral bouquet developed last winter. The plant was in spring placed in the open air where it produced a novel and very fine effect. In the sample of the flowers sent to Paris the color was a dull yellow. When it is remembered that this plant is a tobacco, it will be understood that the production of seed is most abundant. The *Nicotiana wirgandoides*, when isolated in the middle of a flower bed, or basket, or grouped on a lawn, or collected in masses, in appropriate parts of the flower borders, is considered by our French neighbors as a splendid decoration for the garden.

*WEIGELIA HORTENSIS NIVEA* is the name given, by M. Von Siebold, to a fine ornamental Japanese shrub which he has introduced to the gardens of Europe. It is a plant of vigorous habit, and is described as having the leaves largely veined, and the flowers very large, of a pure snowy white, retaining these points during the whole time of flowering. Both this and Mr. Fortune's white *Weigelia* will be valuable for the purpose of contrasting with the deeper colored kinds already common in our gardens.

**NEW BOUVARDIAS.**—Three new varieties of this beautiful tribe are announced in the French journals, viz., *grandis*, carmine orange, with flowers three times larger than the type; *floribunda*, with very abundant flowers, in magnificent panicles, and larger than in other hybrids, of a cochineal rose during summer, and carmine orange in autumn; and *splendida*, with the habit of the variety called Hogarth, and the fine color of *leiantha* itself. All are varieties of *B. leiantha*.

**NEW DOUBLE FLOWERED POTENTILLAS.**—M. Lemoine of Nancy has been highly successful in producing several double potentillas, having made its culture a speciality, and earned a great reputation therefrom. His new sorts are—1, *Dr. Andry*, with enormous flowers of a deep orange with scarlet veins;

2, Louis Van Houtte, very large, velvety crimson scarlet; 3, M. Dandin, dwarf, with large crimson-red flowers; 4, M. Rouillard, large transparent vermilion; 5, V. Lemoine, with enormous incurved convex flowers, garnet colored, shaded with vermilion and bordered with yellow; 6, Wm. Rollison, with large flowers of Indian yellow, bordered and shaded with very lively reddish orange.

784. *ÆCHMEA DISTICHANTHA* Hook. DISTICHOUS-FLOWERED  
*ÆCHMEA*. (Bromeliaceæ.) South America.

A hothouse plant; growing two feet high; with rose-colored flowers; appearing in spring; increased by division; grown in light peaty soil. *Bot. Mag.*, 1864, pl. 5447.

A showy species from the province of St. Paul (South Brazil) producing a dense spike of pale rose-colored flowers. The leaves are long and covered with short spines. (*Bot. Mag.*, June.)

785. *TRICHINIUM MANGLESII* Lindl. MR. MANGLE'S TRICHINIUM. (Amaranthaceæ.) Swan River.

A summer annual or greenhouse plant; growing two feet high; with rose-colored flowers; appearing in summer; increased by seeds; grown in light peaty soil. *Bot. Mag.*, 1864, pl. 5448.

"Few more lovely plants," says Dr. Hooker, "have been introduced to our gardens of late years than this, which was received from Mr. Thomson of Ipswich." It was imported from Swan River, and is one of the many species he has been successful in cultivating. Thus far it has been treated as a greenhouse plant, but there is no reason why it should not be treated as a summer annual, as many Australian plants are, to the great decoration of the flower garden. It produces slender stems terminated with a dense spike of rose-colored blossoms. (*Bot. Mag.*, June.)

786. *THIBAUDIA SARCANTHA* Batem. FLESHLY-FLOWERED  
*THIBAUDIA*. (Vaccinææ.) New Grenada.

A hothouse plant; growing two feet high; with green and scarlet flowers; appearing in spring; increased by cuttings; grown in peaty soil. *Bot. Mag.*, 1864, pl. 5450.

A beautiful species of the pretty tribe of Thibaudias, with ovate, evergreen foliage, and drooping racemes of tubular flowers on pendent branches. It was received by Mr. Bateman from New Grenada, and grown and exhibited by him at the late shows of the Royal Horticultural Society. (*Bot. Mag.*, June.)

787. *DESMODIUM SKINNERI* VAR. *ALBO LINEATA*. MR. SKINNER'S WHITE-LINED *DESMODIUM*. (Leguminosæ.) Guatemala?

A stove climber; growing ten feet high; with purple flowers; appearing in winter; increased by cuttings; grown in light rich soil. *Bot. Mag.*, 1854, pl. 5452.

A very pretty climber, received from the Belgian collections under the name of *Rhynchosia*, but it appears to be a variety of *Desmodium Skinneri*, a genus allied apparently to the *Kennedyas*, having the same style of growth, and long slender racemes of pretty purple flowers. The leaves are small, trifoliolate, and have a white line down the centre. Trained along the rafters of the stove, its numerous flowers have a pretty effect. (*Bot. Mag.*, June.)

788. *AUCUBA JAPONICA* *Thumb.* JAPAN *AUCUBA*. (Cornaceæ.)  
Japan.

A half-hardy shrub; growing six feet high; with scarlet flowers; increased by layers; grown in rich garden soil. *Ill. Hort.*, 1854, pl. 3:9.

This is the original and true *Aucuba*, sent from Japan by Mr. Fortune, having clear green leaves and clusters of brownish purple flowers, which are succeeded by clusters of large scarlet oblong berries, forming a brilliant contrast with the rich evergreen foliage. The common *aucuba*, or gold dust tree, is only a variegated-leaved variety, the original species having never been introduced until now; and unfortunately the former was a female variety, and has never fruited for want of fertilization. Mr. Fortune had the good luck to secure a male plant, and sent it home to Mr. Standish, in whose collection it flowered, when other plants were fertilized and produced the superb clusters of berries represented in the plate.

In England the *aucuba* is perfectly hardy, but with us it is thought to be scarcely so, though we do not know that it has been well tested. Its hardiness remains yet to be fully ascertained. Perhaps the original species is hardier than the variegated-leaved variety.

Such a superb shrub, whether hardy or only half-hardy, is well worthy of introduction. It will form a fine object for ornamenting the lawn in summer, and the cool conservatory in winter; its rich deep-green foliage, set off with its bright coral berries, being at all times a beautiful object. (*Ill. Hort.*, May.)

## Massachusetts Horticultural Society.

SATURDAY, AUG. 6.—An adjourned meeting of the Society was held to-day—the President in the chair.

No business of importance was transacted.

The following gentlemen were elected members:—N. B. White, N. J. Prescott, Jas. Barrett, F. Morandi, C. H. Moulton, Ed. Sands, George Brooks, Amasa Farrier, Geo. D. Allen, Joseph McIntire, D. W. Lathrop, G. A. Godbold, Geo. P. Hayward, Jona. F. Hall, J. W. Brookhouse.

Adjourned one month, to Sept. 3d.

The Committee on Fruits awarded the following premiums:—

### AWARD OF PREMIUMS FOR FRUITS.

**FORCED GRAPES.**—For the best specimens before the third Saturday in July, three varieties, two bunches each, to M. H. Simpson, \$8.

For the second best, to R. W. Turner, \$6.

For the third best, to Mrs. F. B. Durfee, \$4.

**PEACHES, (Forced).**—For the best twelve, before the third Saturday in July, to C. Holbrook, \$6.

For the second best, to J. F. Allen, \$5.

For the third best, to R. W. Turner, \$4.

**CHERRIES.**—For the best two quarts, to G. B. Cordwell, for Black Tartarian, \$1.

For the second best, to C. E. Grant, for Napoleon Bigarreau, \$3.

For the third best, to J. W. Foster, \$2.

**STRAWBERRIES.**—For the best display of the season, to Hovey & Co., \$10.

For the best two boxes of Triomphe de Gand, to W. C. Harding, \$4.

For the best two quarts of La Constante, to Hovey & Co., \$4.

For the best two quarts of Jenny Lind, to Geo. Leland, \$4.

*Special Premium, offered by Wm. Gray, Jr.*—For the best four varieties, two quarts each, to Hovey & Co., \$25.

SATURDAY, AUG. 13.—A special meeting of the Society was held to-day—the President in the chair—for the purpose of making arrangements for laying the corner stone of the new building on the Montgomery House estate.

On motion of G. W. Pratt, a committee of ten were chosen to make arrangements for the ceremonies on the occasion. The chair appointed, G. W. Pratt, E. W. Buswell, F. Lyman Winship, Wm. Gray, Jr., S. H. Gibbens, Wm. H. Spooner, J. C. Hovey, D. T. Curtis, C. H. B. Breck, and R. M. Copeland, with full power to make all necessary arrangements.

On motion of L. Wetherell, it was voted that every member be notified of the occasion. The meeting was then adjourned to Thursday, Aug. 18, at 9 o'clock.

THURSDAY, AUG. 18.—An adjourned special meeting met at 10 o'clock, and was called to order by the President, who requested the members and invited guests to join the procession formed by the chief marshal, and adjourn to the site of the new building, to participate in the ceremonies of laying the corner stone, when the meeting would be dissolved.

Under the direction of Samuel Hatch, Esq., the procession was formed in the hall, and marched through West street, and up the mall, through Tremont street, to the site of the new building, in the following order:

- Band.
- Police.
- Chief Marshal.
- Committee of Arrangements.
- President of the Society, and Chaplain.
- Building Committee.
- His Honor Mayor Lincoln, and City Government.
- Officers of the State.
- Invited Guests.
- Officers of the Charitable Mechanics' Association.
- Trustees of Mt. Auburn Cemetery.
- Officers of Massachusetts Historical Society.
- Trustees of Public Library.
- Officers of Natural History Society.
- Officers of Massachusetts Agricultural Society.
- Officers of Boston Numismatic Society.
- Officers of Institute of Technology.
- Members of the Society.

The Brigade Band was the musical escort. On arriving at the spot upon which the stately edifice is to be erected, the members of the procession, numbering several hundred, were arranged upon the platform around the corner stone. Outside of the temporary fence upon the sidewalk, quite a crowd of spectators collected. The exercises began with the following address from the President, C. M. Hovey:—

*Gentlemen of the*

*Massachusetts Horticultural Society:*

We are assembled here to-day, agreeably to your direction, to take the first formal step towards the erection of a building for the use of the Society, to more effectually carry out "its purposes of encouraging and improving the science and practice of Horticulture, promoting the amelioration of the various species of trees, fruits, plants, and vegetables, and the introduction of new species and varieties."

Such were the original objects of the Society, as named in the act of incorporation, and such, I am happy to say, they have always been, and I doubt not, ever will be, as long as this beautiful edifice you are about to erect shall endure.

This is the second time that you have, in the course of your organization, erected a building for the society. It will be just twenty years on the 14th of September next since the corner stone of Horticultural Hall in School street, erected on the site of the old Latin school-house, was laid by your late President, the Hon. Marshall P. Wilder, now prevented from uniting in these ceremonies by long continued illness. It was the only important act of the society since its foundation in which I have

not been present or taken a part; but absence abroad prevented me from witnessing the services on that interesting occasion; and I esteem it a source of the highest gratification, that, through your continued kindness and great confidence, I have now the honor not only to be present with you, but to take so prominent a part in laying the corner stone of another and more magnificent structure, which will undoubtedly be the home of the society long after we and many succeeding generations have passed away.

The Massachusetts Horticultural Society was organized February 24th and incorporated June 12th, 1829, and it is highly gratifying to me and I doubt not to every member, to recognize among those who are assembled here today, gentlemen whose names are borne upon the charter, and many others who were prominent and active members the first year of its organization. Though thirty-five years have glided away, and age may have lessened their active labors, it has not checked their enthusiasm, diminished their zeal or lessened their devotion to the interests of a pursuit which, in their younger days, was a source of instructive occupation and pleasure, and which now amuses and solaces their declining years.

It would scarcely be possible, should I make the attempt, in these brief remarks, to recount the progress of the society, from its small beginning in State street up to that period when the old hall in School street was erected, since which time its history is more familiar; but I should be recreant to duty did I not, standing on these solid foundations, refer to one who did more than all others to place the society in its present flourishing condition, and enable it now to undertake the building of an edifice of such magnitude and architectural beauty. Need I say I refer to the late General Dearborn? Without detracting in the least from the labors of a band of intelligent and distinguished men, who were pioneers in the enterprise, it is not too much to say that to him are we indebted for that "sacred garden of the dead," Mount Auburn Cemetery, and the consequent results from his plan of an experimental garden. His enlarged knowledge, liberal views, accomplished mind, practical skill and elevated character, alone carried the project through. His pen was never idle in gathering facts and writing reports to show the undertaking a safe one, and the objects to be attained worthy the consideration of the whole community. By the happy combination of an experimental garden and cemetery, horticulture was to be recognized as an art and science, and the dead removed to secluded and shady groves, away from the busy marts of crowded cities; and though a combination of circumstances changed a part of his favorite scheme, it is undoubtedly owing to its failure that we are indebted for the means to erect this Temple, no less calculated "to foster and extend a taste for the pleasant, useful and refined art of gardening." We love and revere the name of such a noble man; we shall never forget his unselfish labors, and when our edifice is completed, it will, I am sure, be the hope that his statue may have a prominent place within it. But whether statue or bust shall ever grace our hall, this building will be the enduring memorial of his genius and services, and his name will be held in grateful remembrance by a thousand generations.

But it is since the completion of the former hall that the progress of the society has been more rapid, and its influence felt throughout the entire country. New life and fresh vitality were infused into the society. It had the sympathy, as it had the substantial aid, of the public. It was appreciated as it founders intended it should be. Its objects seemed all at once to become apparent. It encouraged and promoted the science and practice of horticulture;—it stimulated the production and introduction of new flowers, fruits, trees and plants;—it rewarded the cultivator for the best specimens of his skill;—it gathered together for the use of the members a library of the most celebrated English and French works on gardening;—it made known through its weekly and annual exhibitions all the choicer productions of the garden, the orchard and the greenhouse;—it awakened a taste for ornamental and landscape art, and it disseminated through its annual reports a vast fund of information upon every branch of horticulture.

Who does not see, in whatever direction he may turn, the results of the influence which has gone out from the Massachusetts Horticultural Society? Beautiful villas enrich and embellish all parts of the country; suburban gardens of greater or less extent give a cheerful and picturesque aspect to our towns and villages; and even the little gardens and city lots denote some unseen influence which has changed these weedy and neglected places into verdant and fertile spots. Who will compare the rural aspect of the country thirty-five years ago with its present appearance, and say the Massachusetts Horticultural Society has wasted the resources with which a liberal public have in part endowed it, for objects so beneficent, and for purposes which confer both individual comfort and happiness upon the people.

Thanks to the generous men of Boston, that after they had witnessed our good stewardship, they reposed every confidence in us, and came forward liberally with their aid, determined that no loss should come from an enterprise then deemed hazardous for our means. Yes, gentlemen, we were the owners of a new hall, but beyond that we had but little to accomplish the great objects in view, namely, to create a laudable competition by the offer and distribution of liberal prizes, and thus attract the people to see the superior specimens which the skill of our cultivators could produce. We had not, fortunately, any occasion to wait; and I deem this a most fitting opportunity to allude to their liberal acts. Few of the large number of members who have recently joined us, know by what means we have reached our present prosperity; and if they did, we should be ungrateful were we to forget those among the dead or those among the living, to whom we are indebted for aid to more effectually carry forward the great objects of our association.

This building, it is true, is erected by the funds of the Society principally received from our interest in Mount Auburn Cemetery. This beautiful location, however, was only secured by the most persevering efforts of the committee appointed for that purpose, who believed it possessed

all the facilities the society required, and was just within the means of the society to purchase. Two years have your committee assiduously labored to bring the work to its present state. We hope and believe the society will never have cause to regret what they have done.

And we have established funds, the income of which is distributed yearly in premiums. This has been the life of the society, and the larger the amount at our disposal, the more rapidly will the art of Horticulture be promoted, and a genuine taste for gardening be encouraged.

And now let me name, because first, and just at the right time, just as we had expended our funds in the building of the old hall, came the liberal donation of the venerable merchant, Samuel Appleton, whose many benefactions to various public institutions will render his name honorable and cause his memory ever to be cherished.

Next we have the same generous gift from the public spirited and well-known gentleman, the son of one who presided at the first formal call to organize the society, and whose name is intimately associated with every thing connected with the early improvements in horticulture around Boston. Need I name John A. Lowell. "Not being able," as he says in his letter to the society, "to actively coöperate with you, but wishing to contribute in a moderate way, I send you one thousand dollars." May he long be spared to witness the good results of his timely aid.

And now, standing conspicuously in the group of our many benefactors, we have another name, not only associated with horticulture and agriculture, but with the finer art of landscape gardening. Who does not remember the once, and yet, elegant demesne at Waltham, where, years gone by, the beautiful deer might be seen bounding o'er the lawn, or gently reposing beneath some graceful elm? Need I name Theodore Lyman, Jr., who bequeathed to us the munificent sum of \$10,000, having during his life made the same generous gift as those already named. His memory will be ever dear to us and our successors.

And yet we have the aid of that kind-hearted and liberal merchant, Josiah Bradlee, whose aim it was to see the effects of his liberality during his own life. Not only was his donation of one thousand dollars most gratefully received, but his many acts of friendship towards the society, in its time of need, are indelibly recorded in our memory.

Then we have the legacy of one who was among the earliest friends of the society, always an active and honorable member, and for many years one of its Vice-Presidents; whose special and successful culture of one of our most valuable fruits has been of great service to pomological progress. The appropriation of the income of the French fund to the encouragement of one particular fruit, has already been highly beneficial, and the yearly exhibition of superior specimens of apples will always remind us of his early and later participations in the prominent acts of the society.

Others among those who have gone from us, and whose ashes repose beneath the fragrant turf, or lie beneath the shady groves of Mt. Auburn, have made us participators of their bounty. Each and all will be remembered by every member of our association.



But, gentlemen, there is one at least among the living who has given us recently and so liberally,—encouraging us by his sympathy and devotion to our interests,—that I think I shall not be transgressing the bounds of friendship to mention. I refer to H. Hollis Hunnewell, whose beautiful country residence at Wellesley so many of you have seen and admired, and which displays so much taste in its arrangement and keeping. His generous gift of \$2500, just now that we wish to increase rather than curtail our premiums, is most opportune. Mr. Hunnewell is now absent in Europe; and from these foundations we waft across the broad Atlantic our best wishes for his health and prosperity and a safe return to his home.

Of other donors it would be a pleasure to speak but I am not permitted to do so.

But the most colossal edifice which associated wealth could erect, though it might be a perpetual monument of architectural taste and skill, would be of little avail without the aid of a zealous and coöperative association; and while we recount with pride these many benefactions, we ought not to forget that to a host of intelligent amateurs and cultivators—to Cook, Downer, Lowell, Manning, Kenrick, Winship, Perkins, Prince, Phinney, Cushing, Vose, Walker, Harris, Teschemacher, Haggerston, Williams, and many others—not to enumerate the living—are we indebted for the invaluable services and unflagging zeal which have given to the society a renown second to no other horticultural association in the world.

And, now, gentlemen, as we are to place beneath this granite block the records of what we have already accomplished, with the object of transmitting them to distant generations, let us hope that, whenever, at some very remote day, these walls may crumble and decay,—for decay, though slow, is the destiny of all earthly things,—and these memorials shall come to light, they will at least serve to show that the objects of the society were solely to promote all those pursuits which bring pleasure and happiness to the social and domestic life; to enrich and embellish our homes and country; to create a refined taste, and to open new and exhaustless sources of instruction and wealth.

With the increased means with which the liberality of the public have in part endowed us,—the resources from the investment now believed to be so judiciously made,—and the greater facilities afforded by this edifice, we shall be called upon for fresh exertion, greater activity, and the same persistent zeal which have thus far given us a name and reputation at home and abroad.

We feel the responsibility of the task, but an appreciating and enlightened public will cheer us on; and as those who have been so prominent in our councils are soon to pass away, and the “places which know them shall know them know more,” may our successors, animated with their zeal, stimulated by their example, roused by their energy and enlightened by their knowledge, not only preserve the society in its present flourishing state, but extend its usefulness, increase its popularity, and give it an imperishable renown.

The ceremony of depositing the box under the corner stone then followed, in which the President, who was presented with a beautiful steel trowel, assisted.

The box was 12 inches long, 10 wide, and 4 deep, and contained the annexed list of articles:

1. Silver Plate, upon which was engraved the following:

This Edifice is erected  
by the  
MASSACHUSETTS HORTICULTURAL SOCIETY,  
For the purpose of encouraging and improving the  
Science and Practice of Horticulture,  
And this Corner-Stone laid, August 18, 1864,  
By the President,  
CHARLES M. HOVEY.

*Building Committee:*

C. M. HOVEY,	JOSEPH S. CABOT,	H. H. HUNNEWELL,
M. P. WILDER,	JOSIAH STICKNEY,	J. F. C. HYDE,
W. R. AUSTIN,	C. O. WHITMORE,	L. WETHERELL.

GRIDLEY J. F. BRYANT and ARTHUR GILMAN, *Architects.*

To this Society the community are indebted for the foundation and consecration of Mount Auburn Cemetery.

Mass. Hort. Society.

Incorporated the 12 day of June, A. D. 1829.

Present number of members, six hundred eighty.

President, CHARLES M. HOVEY.

Vice Presidents, J. F. C. HYDE, C. O. WHITMORE, H. HOLLIS HUNNEWELL,  
W. C. STRONG.

Treasurer, WM. R. AUSTIN.

Corresponding Secretary, EBEN. WIGHT.

Recording Secretary, F. LYMAN WINSHIP.

2. Proceedings of the Society, from 1843 to 1864.
3. Publications of the Society, containing its History, &c., by Gen. Dearborn.
4. Boston Almanac for 1864.
5. Catalogue of Proprietors of Mt. Auburn Cemetery.
6. Copies of Hovey's Magazine of Horticulture for 1864, containing Reports of Building Committee.
7. Copy of Fruits of America.
8. Boston newspapers of August 18.
9. Silver Medal of the Society.
10. Bronze Medal.
11. Appleton Bronze Medal.
12. Coins of the United States, dollar, half dollar, and smaller, of the date of 1864.

In addition, the box taken from the corner stone of the old hall, with the contents intact, was also deposited with the above.

At the conclusion, a prayer was offered by Rev. Dr. Lothrop. The whole assembly then joined in singing Old Hundred, and the ceremonies closed with a benediction.

The occasion was one of deep interest to the Society, and upwards of 150 members were present. The day was delightful, and the ceremonies passed off to the gratification of all.

**AUG. 13TH.—EXHIBITED. FLOWERS:** There was a very excellent display of flowers, considering the dryness of the season. Phloxes, though poorer than usual, comprised some good specimens and several handsome seedlings from F. Parkman. Cut flowers in variety were contributed by J. Comley, Joseph Breck, Hovey & Co., Washburn & Co., F. Parkman, J. McTear, and others.

Hovey & Co. sent a fine plant of the superb *Lilium auratum*, with two flowers. It was a somewhat different strain from those before shown.

#### AWARD OF PREMIUMS.

**PHLOXES.**—For the best, to J. McTear, \$5.

For the second best, to Washburn & Co., \$4.

For the third best, to Joseph Breck, \$3.

Premiums were also awarded for baskets, cut flowers, &c.

**AUG. 20TH.—EXHIBITED. FLOWERS:** From J. Comley, Jos. Breck, F. Parkman, J. McTear, Hovey & Co., and others, a variety of cut flowers. Very fine collections of petunias were contributed by J. Breck, Hovey & Co., J. McTear, Jas. Nugent, and others. George Craft sent a very handsome collection of gladioli, comprising several seedlings of considerable merit. Mrs. T. W. Ward exhibited some beautiful cut flowers of *Allamanda Schottii*, *Stephanous floribunda*, and glloxinias of sorts.

#### AWARD OF PREMIUMS.

**PETUNIAS.**—For the best, to J. Breck, \$3.

For the second best, to J. McTear, \$2.

For the third best, to J. Nugent, \$1.

**BALSAMS.**—For the best, to J. Breck, \$3.

Premiums and gratuities were also awarded for cut flowers, baskets, &c.

**FRUIT:** The exhibitions of fruit, with the exception of grapes, have been limited up to the present time. To-day, however, the show was large and varied. From M. H. Simpson came very superb Early Crawford peaches and Elruge nectarines. From J. Breck, Boston nectarines. From Hovey & Co., 10 var. summer pears, as follows: Rostiezer, Boston, Manning's Elizabeth, Sterling, Dearborn's Seedling, Passans du Portugal, Brandywine, Supreme de Quinper, Summer St. Germain, and Bloodgood. Very splendid Williams apples from E. Luke. Pears from H. Vandine.

**AUG. 27TH.—EXHIBITED. FLOWERS:** Premiums for gladioli were awarded to-day, and the occasion brought together one of the finest displays of this showy flower ever made by the Society, and was a strong confirmation of the policy of extending and encouraging its culture by the offer of liberal premiums. Some 10 or 20 stands were put up, of 10 and 20 spikes each, besides an immense number of seedlings, many of them of the greatest merit. Messrs. Geo. Craft, F. Parkman, E. S. Rand, Jr., Jos. Breck,

J. McTear, W. C. Strong, and Washburn & Co. exhibited seedlings, and also fine collections of named varieties.

Among the seedlings, Mr. Craft's flowers were conspicuous, embracing some new and distinct colors, and very large, smoothly formed petals, well arranged upon the stalk, in which characteristic there is great difference in the varieties; one nearly pure white was extra, and the best of its class. Mr. Strong had two in the way of La Poussin, distinct and good. Mr. Rand one in the way of Bertha Roubourdin, and Mr. McTear a striped or feathered one, in the way of Mad. Souchet. Mr. Breck's were also fine.

Unfortunately some of the stands put up for the first class prizes of 20, were wrongly named, or had duplicates, which disqualified what would otherwise have taken the premium. We noticed in the different lots very fine spikes of La Poussin, Mad. de Vatry, Mad. Souchet, Reine Victoria, Comte de Morny, El Dorado, Ophir, Edulia, Mad. Vilmorin, Mad. Roubourdin, and many others.

The display of collections in spikes of four of each sort made a brilliant appearance; Brenchleyensis, for its deep rich scarlet, being especially conspicuous, and thus far one of the most effective of its color. Mad. de Vatry, one of the best light colored, appeared in strong contrast with the former, and Mad. Souchet, with its delicate feathering of deep rose on a pink ground, had an effective appearance. Indeed the display was in every way grand, and gave indication of what skill in hybridization will do for this showiest of summer flowering bulbs. We need no longer look to European catalogues for additions to our collections; a gratifying fact (under the present rate of exchange and duties) to all who wish to add these splendid bulbs to their gardens.

The show of cut flowers generally was very fine, and greatly improved since the light but most welcome showers.

#### AWARD OF PREMIUMS FOR GLADIOLUS.

##### Class I.

All the stands disqualified.

##### Class II.

Disqualified.

##### Class III.

For the best display, in bunches of four spikes of one variety, to W. C. Strong, \$8.

For the next best, to Geo. Craft, \$5.

For the best single spike, to W. C. Strong, for Mad. de Vatry, \$3.

For the next best, to E. S. Rand, Jr., for the same, \$2.

For the third best, to J. McTear, for Comte de Morny, \$1.

For the best Seedling, to Geo. Craft, the Society's silver medal.

For the second best, to Geo. Craft, the Society's bronze medal.

Gratuities were also awarded to Washburn & Co., and J. McTear, for seedlings.

**FRUIT:** The exhibition was limited. Hovey & Co. had Brandywine, Boston, Hanners, and other pears. F. Clapp, Clapp's Favorite. F. Dana, Delaware grapes raised under glass. Melons from Geo. Leland. Tyson

pears from W. P. Jenney. Beautiful McLaughlan plums from A. J. Dean. Rostiezer pears from J. B. Loomis; and other fruits by various contributors.

---

## Horticultural Operations

FOR SEPTEMBER.

---

### FRUIT DEPARTMENT.

The severe drought to which we alluded in our last number has continued with unexampled severity up to the present time. Less than five inches of rain has fallen during the months of June, July, and August, which is less than the average for either of the months. All kinds of vegetation show its effects. Trees are making but little growth, and fruit is very small and inferior. In consequence of this, there has been little need of the usual summer pruning, and unless rain soon falls in quantity these operations may be suspended altogether.

**GRAPE VINES** in greenhouses and graperies will now be quite ripe, or will already have been gathered, and there will be little to do, except to keep the laterals from becoming too crowded and to air abundantly in all fine weather, that the wood may be thoroughly ripened, upon which the excellence of next year's crop depends. Cold houses will now be ripening their crop, and unless well advanced will still require attention to prevent the appearance of mildew. If any appears, dust the walks and border with dry sulphur and keep the house rather warm for a day or two to dissipate its fumes. Keep the laterals topped, where growing too strong, and discontinue damping the house after the crop is well colored. Hardy vines should still have attention; cut away all small superfluous shoots and lay in the main branches at full length.

**STRAWBERRY BEDS** should be hoed and kept free from weeds, laying in the runners regularly if grown in beds, or cut them off if grown in hills. If the weather continues dry, newly planted beds should have a thorough watering.

**ORCHARD-HOUSE TREES**, where the fruit has been gathered, should receive less supplies of water, in order to thoroughly ripen the wood.

### FLOWER DEPARTMENT.

Where abundance of water has been easily obtained, the flower garden presents a very good display of blossoms. Continue to water freely as long as the drought renders it necessary. Every cultivator will have seen the necessity of having a good supply of water to guard against such droughts as we have just experienced; for without moisture the flower garden presents a great dearth of blossoms.

Now is the time to make preparations for housing the plants. It is not safe to leave any tender things out after the twenty-fifth of the month, and to prevent crowding and confusion good tight frames should be in readiness

to receive all the smaller kinds, which will remain healthier there for a time than in the house. See that the flues and heating apparatus are in good order and have everything in preparation to receive the plants.

**AZALEAS** should be removed to the house before cold rains occur, which are apt to injure the plants. See that they are perfectly clean and free from red spider and thrips. Place in a cool situation.

**PELARGONIUMS** not yet repotted should be attended to at once. See our directions for last month. Cuttings now rooted, should be potted off and placed in a frame until well established.

**CAMELLIAS** should be more sparingly watered as the weather becomes cooler. Remove to the house the last of the month.

**CHRYSANTHEMUMS** should be now shifted into their blooming pots. Water occasionally with liquid manure and remove to the house before severe frosts.

**POINSETTIAS** AND **EUPHORBIAS** should be removed to the house before chilly nights.

**CINERARIAS** AND **CALCEOLARIAS** should be kept in frames close to the glass as long as the weather will permit.

**VERBENAS** for winter flowering should now be shifted into their flowering pots.

**CALADIUMS** should be kept rather dry and warm after their foliage begins to decay.

**MONTHLY CARNATIONS** should be potted and removed to the house.

**ACHIMENES** that are done flowering should be placed away under the stage.

**CHINESE PRIMROSES**: keep these in a frame, close to the glass, as long as the weather will permit.

**HEATHS** should be kept in a cool frame until November.

**CUTTINGS** of **Verbenas**, **Petunias**, **Scarlet Geraniums**, and all other bedding plants should now be propagated for a spring stock.

**CYCLAMENS** should be potted and kept in a cool frame as late as possible.

#### FLOWER GARDEN AND SHRUBBERY.

In consequence of the dry weather the lawn and walks have required very little attention, as there has been little or no growth. Continue rolling, if rain falls, and rake and clean when required.

**DAHLIAS** will require attention. Water freely, keep the plants tied up, and prune off superfluous branches.

**CARNATIONS** AND **PICOTEES** layered last month should be removed to frames where they can receive some protection during winter.

**PEONIES** may be transplanted this month.

**PANSY SEEDS** may be sown in frames for a spring supply of plants.

**ERYTHRINAS** should be taken up before heavy frost.

**NEAPOLITAN VIOLETS** should now be planted in frames, or taken up and potted if wanted in the house.

**PERENNIAL PLANTS** of many kinds may be transplanted this month.

**GLADIOLUS** must be taken up before severe frosts.

## PROGRESS OF GRAPE CULTURE.

THE great interest which is manifested throughout the entire country in the cultivation of hardy grapes, and the production of new and superior varieties, induces us to again revert to this subject, and make known all the information which a year's observation and experience has afforded us, in this branch of fruit culture.

Knowing that actual knowledge, gained from personal inspection of the different varieties growing in various localities, in different latitudes and in dissimilar soils, is the only means of forming a correct opinion of the merits of the numerous varieties now under cultivation, we have taken considerable pains to obtain all the information which would be valuable to grape growers, and during the last month we have inspected the vines of several cultivators in our own State, in Vermont, in Northern New York and Western New York, a circuit of several hundred miles extent, and embracing considerable variability in the weather in summer and winter. Within this region of country the same results may undoubtedly be obtained which we are about to record, and it is a source of the highest congratulation that so much has been gained in the short period of less than a dozen years.

There has been so much uncertainty in regard to the ripening of grapes, in different parts of the country, that it is satisfactory to know, by personal observation, that it has mostly arisen from defective modes of culture, or no culture at all, or of great unsuitableness of location or soil. It is true, that either owing to more general information, or less prevailing prejudices of cultivators, but little now is said about the earliness or lateness of many grapes which a few years ago were said to be two or three weeks earlier or later with one cultivator than another; one grape grower's Delawares were ripe while those of another were quite green; the Concord in one locality was ripe with the Delaware, while in another it was later than the Isabella. It is pleasant to see these inconsis-

tencies diminishing, and under a more intelligent and rational system of culture something like correct opinions take the place of mere prejudice or ignorance.

One important fact which, though often overlooked, has had a special bearing upon these crudely formed opinions. All grapes, without an exception, do not show their true characteristics on young vines; while in the vigor of growth they fail to mature their fruit; and it is not until the fourth or fifth year of bearing that their period of maturing can be established. Hence a young vine just showing its first fruit will not mature so early by two or three weeks, as when it produces its fourth or fifth crop; and the more rank and vigorous the variety, the later it is in maturing its fruit. Thus the old parent vine of the Concord, in Mr. Bull's ground, ripened on the 7th of September, while on young vines it was not mature until two or three weeks later. The quantity of the crop is another great cause of variableness in ripening; if too heavy, at least one or more weeks are lost in the period of ripening, and it is finally of very inferior quality, never becoming well colored. The old vine of the Rebecca at Hudson, a high, cold and bleak locality, ripens its crop by the 15th of September, but on young vines it rarely is eatable until the 1st of October. There is no exception to this rule with any variety, and all who plant a young vine should await patiently until proper age will establish its true period of maturity.

On the first of September we made a trip to Vermont, upon the shores of Lake Champlain; a beautiful region of country, with a good soil, and a climate undoubtedly modified by the lake, shut in as it is by the range of mountains on the east. Here, by the invitation of Mr. F. J. Meech of Shelburne, whose grounds we shall have occasion to notice, we found a large plantation of all the different grapes, grown with much skill, and then just beginning to ripen. The situation is about a mile from the lake shore. A trellis, three hundred feet long, was filled with such sorts as the Concord, Diana, Rebecca, Delaware, Hartford Prolific, Isabella, Catawba, &c., besides younger vines of the Iona, Framingham, Winchester, Adirondac, and other new sorts. The Hart-



fords were already colored and somewhat sweet; the Delaware nearly as early, the Concord next, and the Rebecca and Diana beginning to show signs of maturity. Isabellas were just beginning to change. Their maturity, compared with vines in and around Boston, was not more than three or four days later, if even that; all were vigorous, free from mildew, showing how well the ground had been prepared and the vines skilfully pruned and trained.

On the third of September, agreeably to a previous invitation of Mr. Meech, and in company with him, we visited the grounds of Mr. J. W. Bailey of Plattsburg, to see the Adirondac grape. Plattsburg is distant about twenty-five miles across the lake. We found Mr. Bailey at home, and had a most excellent opportunity to inspect, not only the Adirondac, but several of the more popular grapes, and their comparative earliness in the same locality.

The Adirondac was of course our first object. We found the vines in various stages of growth, none very large, as it is only three or four years since it was planted in his grounds, but an abundance of young vines of all sizes. The oldest vines had, however, begun to bear, and to our great surprise we found the grapes quite well colored, and would soon be ripe. As regards vigor, we could see little or no difference between it and the Isabella or Hartford Prolific, on the same trellis; no mildew whatever. Its comparative period of ripening was our next object; this was obtained by tasting the Hartford Prolific and Delaware, which were not so much advanced as the Adirondac, being about the same as Mr. Meech's at Shelburne. The Diana, Rebecca, and Isabella, were also in just the same condition. Thus we had the proof before us of the earliness of the Adirondac, as well as its vigor and general habit.

Our visit was short but every way satisfactory, for we form our judgment on what we see and not what we hear; as we were leaving, Mr. Bailey said he had just received a box of Adirondac grapes from the parent vine at Port Henry, and he gave us two or three bunches which were fully colored, though not quite sweet; yet it showed that even so far north it was the earliest good grape yet produced.

On our return home we examined our own vines, and visited the gardens of some of our grape growers in Cambridge, and found they were but a few days in advance of those we have just noticed. On the ninth of September we visited the grounds of Mr. Strong of Brighton, who has a fine collection planted out in a good location, on the southerly slope of the high ground on which his nurseries are situated. Here we found the Hartford Prolific nearly or quite ripe, certainly sweet and very good; the Delaware well colored and nearly ripe; the Concord perfectly black but not mature; and the Rebecca, Allen's Hybrid, Union Village, many of Rogers's Nos., and other sorts, all looking well and bearing good crops, mostly free from mildew. Allen's Hybrid and Rebecca are superb grapes; Rogers's are late, and we fear too much so to be depended upon in our climate; all, without an exception were quite sour. Mr. Strong has a fine location, and his vines show the best results, without, as he states, any high culture or very particular attention. We were highly pleased to witness the fine appearance of his grapes.

On the thirteenth of September we visited Rochester, N. Y., to attend the meeting of the Pomological Society, and to inspect the grape culture of that locality. Of the numerous specimens of grapes exhibited we shall have occasion to speak again. We now confine ourselves to an examination of the collection of grapes of Messrs. Ellwanger & Barry, planted on their grounds about a mile or so beyond their home nurseries, and upon the southerly slope of a hill, precisely like that of Mr. Strong; the plantation covered about an acre and embraced some forty or more sorts, or nearly every kind recently brought to notice, planted four or five years ago with a view to test their worth. All the vines were trained to stakes eight or ten feet high, and planted six or eight feet apart each way. Here we found the prominent sorts were the Hartford Prolific, Delaware, Crevelling, Concord, Allen's Hybrid, Rebecca, Diana, Isabella, To Kalon, Union Village, many vines of each, with a specimen or two of the other kinds making up the collection, including some twenty or more of the Rogers grapes, nearly all in bearing, but not any of them ripe, though one marked No. 9, a red sort, was near-

ly so. Mr. Barry fully agrees with us, that after the closest examination he cannot discern the least admixture of the foreign grape. Several of them are quite as *wild* as the Sage, which has been said to be the parent on one side, and most of them are pulpy and somewhat foxy. Nos. 4 and 15 are undoubtedly the best, though No. 44 is very much like No. 4. Some are so late as to require a southern latitude to attain the least maturity, and none of them as early as the Concord.

The finest show was the Concord; full of large bunches, quite black, and covered with the beautiful bloom which sets off this good grape. Delaware was beautiful, but very small. If as large and vigorous as the Concord, it would take a very high rank. Crevelling, good, does not fall from the bunch; berries large, and, though a day or two later than Hartford Prolific is to be greatly preferred to that sort. Rebecca needs no praise, it speaks for itself; age increases its earliness and brings out its delicious aroma. Diana still holds its high rank; if a little earlier it would be hard to beat. The ripening of all these was about in the order we have above named.

We had not time to note down all the information we gathered here, but we recollect that Mammoth Catawba was nothing but Catawba, and Catawba Muscat the same. Two or three sorts (we forget the names) received as new, were only Isabellas. Several highly reputed seedlings are little better than the Clinton. Two or three rows of vines were seedlings of the Delaware, raised here; one, a black grape, was ripe, and appeared to be very good, larger than the Delaware; the vines are yet young and only a few of them in fruit; it will be a good chance to see what the Delaware will bring out without any hybridization, at least artificially, whatever bees or the wind may have done to affect it. The experiment thus far confirms this fact, that the variations in the Delaware, without hybridization, are quite as great as in the Sage with hybridization; and that black, red, and other colored fruit, may be obtained from the Delaware, to say nothing of the shape, size and quality of the berries.

We ought perhaps to remark that we saw most of the popular kinds we have named, as well as many new sorts, in the grounds of Messrs. Frost & Co., trained on trellises, in fine

perfection, particularly the Concord, Delaware, and Rebecca. These energetic proprietors are fully alive to the introduction of the best sorts, and have cultivated largely the best kinds, as have also Messrs. H. E. Hooker & Co.

Thus we have given a brief sketch of our tour of observation, which we hope will add something to the stock of grape information. It has enabled us to say, without any reserve, that thus far the Adirondac, Hartford Prolific, Iona, Delaware, Crevelling, Allen's Hybrid, Concord, and Rebecca, are unexceptionable in every respect, and may be planted with a certainty of success—unless in some cold and exceptional seasons—from Boston to Rochester, N. Y., and as far north as Burlington, Vt. To these may be added, with pretty sure indications of success, the Union Village, Winchester, and perhaps Rogers Nos. 4 and 15, though we need more experience with them. Of course we can say nothing of such sorts as the Framingham, Cuyahoga, and some others, yet too new to be found in bearing; nor do we include many sorts which ripen early enough, like Northern Muscadine, Dracut Amber, North America, Black Cluster, and some others too poor to merit any record with the above kinds. Our remarks are confined to eatable varieties.

When the proceedings of the Pomological Society are published, we shall notice more fully these and other sorts which were discussed at its session just closed; but to direct grape growers in the right direction is the main object of our present article.

---

#### NEW VARIETIES OF BLACKBERRIES.

BY WM. KENRICK, NEWTON, MASS.

DEAR SIR:—I send you for publication in your most valuable Magazine, an account of four new white varieties of the blackberry. Some of these have been most highly spoken of, as extraordinary new fruits, by Dr. Warder of Cincinnati and Mr. Elliott of Cleveland, Ohio, and by others who have proved them. Of all the indigenous edible fruits adapted to

our climate, the blackberry possesses as we believe more medicinal virtues and efficacy in certain disorders than any other; which may perhaps be owing, at least in part, to a certain peculiar but slightly astringent or bitter principle which it contains. Of all the diseases with which the soldiers of our armies who go down south, during this war, are afflicted, the diarrhœa is the most prevalent or universal, as the greatest scourge; which, when it becomes chronic, is pretty sure death, if not cured within a certain limited space of time. The blackberry has, it is said, been found by the surgeons of the army to be the only sure and sovereign remedy for the disease, if taken in due time, even after all other medicines hitherto known have failed. Therefore it has been much sought after, north as well as south, and large quantities, as I understand, of the juice of the fruit, in the form of jelly, wine, or brandy, or cordial, and medicine, have been sent on by the Sanitary Commission of New York and by others, for the use of the sick in the hospitals of our armies of the south. It has been recommended that the fruit should not be sent on or used in the form of the *dried fruit*, or of *jam*, together with all the *seeds* of the fruit; but that only the juices of the berry should be used, which may be preserved either in the form of jelly, or of wine, or of blackberry brandy, which, according to the most approved receipts, is thus prepared:—

**BLACKBERRY BRANDY.**—To 2 quarts of blackberry juice, put  $1\frac{1}{2}$  lbs. of white sugar,  $\frac{1}{2}$  oz. of cinnamon,  $\frac{1}{2}$  an oz. of nutmegs,  $\frac{1}{4}$  oz. of cloves, 1 oz. allspice; let it simmer but for a few moments and, when cool, add one pint of brandy.

**ALBION.**—A new white variety of the blackberry (*Rubus villosus*) found growing wild in Albion, Edwards Co., Illinois, by Mr. John B. Orange of that place. The foliage is bright green, the fruit very large, full as large as the New Rochelle, oblong, some of them measuring two inches long, of a clear pink color, sweet, and of superior quality. It is of vigorous growth and productive. [MS. letter of Mr. John B. Orange.]

**ORANGE'S CRYSTAL.**—Raised by Mr. John B. Orange of Albion, Illinois. New and distinct. The spines are few and weak, the plant vigorous, the foliage bright green. The fruit

is pure white, nearly transparent, large, in long clusters like pearls, flavor sweet and very delicate; very productive when grown near other varieties. When grown alone it is too decidedly pistillate to be very productive, but will still bear a fair crop. [MS. letter of Mr. John B. Orange.] Mr. Elliott, in "*The Western Fruit Book*," describes this fruit as the "*Crystal White*." "Fruit very large, oval roundish; juicy, sweet, and high flavor; vigorous, hardy, very productive."

DR. WARDER.—New; raised by Mr. John B. Orange of Albion, Illinois, and so named by him in honor of Dr. Warder, the eminent pomologist of Cincinnati, Ohio. The size is rather shorter and thicker than the Albion, but nearly as large. The color of a dark rosy red; quality good; and will prove equal to the Albion. [MS. letter of Mr. John B. Orange.]

COL. WILDER.—Another new and very superior white variety, raised by Mr. John B. Orange of Albion, Illinois, and so named by him in honor of the Hon. Marshall P. Wilder, President of the American Pomological Society, and which Mr. Orange regards as the best of all raised by him. The fruit is of a bright cream color, of large size, oblong, almost pointed, of very superior flavor and quality, very productive, and, according to Mr. Orange, it cannot be recommended too highly. The foliage is rather darker than that of the others. He further remarks that, with the same cultivation, all these four varieties will produce as large fruit as the "*New Rochelle*," and of very superior quality. I remark, that Dr. Warder, in the Cincinnati papers, has spoken exceedingly highly of some of these new kinds, the fruit of which he has proved.

---

## GRAPE VINES ON THE CLOSE SPURRING SYSTEM.

BY J. W. RUSSELL, NELSON, N. H.

As this is the season to prepare grape vines for a crop, on the close spurring system, I send you a few practical details on the method to be pursued, to be successful.

In order to succeed without a possibility of failure, *disbudding* is indispensably necessary. The time to disbud is when

the foliage is discolored, and its support to the vine having ceased its functions for the season; the petiole or leaf-stem may yet be green, which must not be injured in the process of disbudding. A man can do a great deal of this in one day with a penknife. Every bud of the present year's growth must be cut off close to the main stem of the vine, leaving nothing but the cluster of dormant buds at the base of all the bearing shoots.

WINTER OR FALL PRUNING.—The close spurring in of the vine to commence as soon as the leaves and petioles fall from the vine. There must not be any delay in performing this work, for on it depends the success or failure of this system. The result of thus early pruning gives the dormant buds the necessary food to become fruit-bearing buds. I have proved this system, and know of what I speak. All of the old grape growers failed in close pruning by not being acquainted with the above principles. The vine, when pruned, has the appearance of a straight growth of wood, as there is not one spur left.

In the spring, the vines must be placed in a horizontal or drooping position until the buds have started; then take up the vines to their fruiting position. The operator must leave all the growths on the vine until they are nine or ten inches in length. Then select the one, and only one, out of each cluster, for fruiting, rubbing all the others off with finger or thumb. Care must now be taken not to attempt to train the young growths too soon; this must be done gradually, a little at a time.

Grape vines that do not set their fruit regularly may be made to do so, by the simple method of striking the vine, when in full flower, with the hand, at mid-day, in fine *sunny weather*.

In the early days of our Magazine, when the number of thoroughly educated practical gardeners were few, our correspondent, Mr. Russell, then living in the vicinity of Boston, was one of those who aided us with frequent communications, containing much valuable information upon the culture of both fruits and plants, and more particularly the grape under

glass, having shown by the management of graperies under his charge, that he fully understood the culture of this delicious fruit. More than thirty years ago we witnessed better crops of grapes upon his vines than we have seen since, with but few exceptions; indeed we would hardly make one.

It is, therefore, highly gratifying to hear from such an old contributor, who, after nearly forty years of active life, in gardening and farming, and for nearly twenty has laid aside his pen, now gives his valuable advice to young cultivators of the grape.

A reference to a previous volume (XII., p. 384) will show how able Mr. Russell is to impart information on grape growing. In that volume will be found a full record of a complete course of culture of the grape under glass, extending over five years, from 1841 to 1846, and nothing that has been published, from that time to this, is more thorough or practical; and no greater success has been attained than that of Mr. Russell, with the vines of which he gave so detailed a statement.

The close spurring system is one of the neatest forms of training, and, when thoroughly understood and skilfully carried out, is eminently successful. There are no longer or shorter ill-looking scraggy spurs, as are generally seen, but only a single straight rod, which every season shoots forth its dormant buds (prepared as advised above) followed by a luxuriant crop of large and beautiful grapes.

We hope, after so long a silence, Mr. Russell will continue to give us the result of his long experience in the culture of grapes and other fruits.

---

### MUSCAT GRAPES.

FROM THE GARDENERS' CHRONICLE.

THERE has been considerable confusion in the nomenclature of Muscat grapes, and a number of kinds have long been cultivated under different names as if they were distinct sorts. Some have affirmed their distinctness, while others have be-



lieved many of them to be synonymous. To settle this question, the London Horticultural Society resolved to try all the kinds in one house, and report upon their merits. This has been done the past season, and the result is, that several of the reported varieties are in no way dissimilar from the old and established kinds. We have long thought there was little or no difference in some that we have cultivated, and so asserted long ago. We are glad to see that our opinion was correct.

The question as to the difference between them seems now to be pretty well settled, at least for all practical purposes, and the result is, that there are but two really distinct grapes, the Muscat of Alexandria and the common Muscat, though it is admitted that as regards setting, and some other peculiarities, the Bowood Muscat and Tynningham Muscat may be more desirable, though in fact of no great difference in other respects.

We are glad to record this experiment, because we have long thought that the Muscat of Alexandria and at least five of those named below were the same, but we can hardly admit that, taking the Canon Hall for one, it "matters little which of the remaining sorts is taken to represent the other." However so much alike they may be in size of berry and quality, there certainly is great difference in setting, as well as growth, and in this the Bowood Muscat is far more certain than the Canon Hall. Under favorable conditions of culture the Muscat of Alexandria and Canon Hall may be the only two worth notice, but under the general treatment of the grape, Bowood Muscat, and perhaps the Tynningham Muscat are valuable varieties.—ED.

Is there any difference between the varieties of White Muscat grapes allied to the Muscat of Alexandria?—if so, how much? and in what does it consist? These have been some of the vexed questions amongst fruit growers for some time past, and there has seemed to be little prospect of obtaining unanimous replies. The very causes which, as we suppose, have operated in giving origin to some at least of the reputed varieties, have been more or less actively at work in perpetu-

ating a diversity of opinions on these points. It cannot be doubted that some of the so-called varieties may be traced back to the exhibition of—or at least the production of, remarkably fine samples of fruit, whose very excellence has seemed to set them apart from the rest, but which excellence has been produced, perhaps, by a combination of favorable circumstances of a more or less permanent character, and have disappeared under other conditions; while others, there seems as little doubt, have been seedlings whose apparent divergence from the original has been rather dependent on the advantages they have derived from experimental cultivation, than in any permanent distinctive character.

Such being the unsatisfactory condition of this Muscat question, it was resolved some two or three years since that one of the houses at Chiswick should be devoted to the clearing up of the mystery; and with this object in view as many varieties as possible were got together—young healthy vines of the following reputed sorts, procured as far as possible from authentic sources, being planted, namely:—Muscat of Alexandria, Charlesworth Tokay, Muscat Escholata, Denbies Muscat, Barnes' Muscat, Canon Hall Muscat, Passe Muscat, Tynningham Muscat, Bowood Muscat, Tottenham Park Muscat, and the Zibibo of Sicily. It was thought that the best way to test their distinctness was to bring all the varieties together, and to grow them as nearly as possible under the same conditions. This was done; vines of the same age were planted in the same border, and last year these vines yielded their first fruits, with very little promise of diversity amongst them. This year they have borne a fair crop, and the suspicion of sameness which was excited last year has been more than confirmed. Excepting only the Canon Hall variety, which stands out prominently from the others, there is no perceptible difference to be found in the whole series, now that the fruit is matured and fit for table. There are diversities observable, it is true, such as the presence of rounder or more oblong berries, with more or less of looseness or compactness, more or less of shouldering, more or less of tapering elongation in the clusters; but the differences in the berries are here seen to occur indifferently on the clusters of

the same vine, and the differences in the clusters occur indifferently through the whole series of vines. The only observable difference of flavor is readily traceable to the more or less ripened condition of the particular berry or bunch, and cannot in any case be traced as characteristic of the variety. Thus, for all useful purposes, the so-called varieties are identical; nor are there any distinctions to be observed, independent of the fruit, in the wood or in the foliage.

It appears, however, from observations made during the earlier stages of growth, that although it may have vanished by the time the fruit has matured, there is a difference perceptible in certain cases while development is going on. Some of the kinds are found to set their fruit better—that is to say more abundantly, more uniformly, and more certainly—than other kinds, and this, in one sense at least is to be regarded as an advantage. The better setting kinds are the Bowood Muscat, Tynningham Muscat, and Passe Muscat, which all agree in this peculiarity, and which do not otherwise present any differences among themselves. Perhaps it should also be mentioned that the Charlesworth Tokay was just a shade less ripened than the others, indicating lateness, but the difference was hardly perceptible.

To sum up, therefore, the result of this experiment is to show, that leaving out the Canon Hall Muscat, which is diverse, all the other varieties mentioned are either identical or so closely similar as to present no appreciable difference at the period of maturity, but that the three varieties just above specified have the advantage of being what in garden parlance is called better setters. We understand that a resolution somewhat to this effect has been unanimously agreed to by a pretty full meeting of the Fruit Committee, which has just made this a special subject of examination. For ourselves, we do not hesitate to affirm, that neither the foliage nor fruit of these young vines, grown under identical conditions, and really excellent in quality, could by any possibility be correctly distinguished by any outward character, or inherent quality, if once they were intermixed.

But if there are no actual differences between them, what is the explanation of all the supposed distinctions which have

gone to swell up our lists of Muscat grapes? That differences have been presented, chiefly of course in the size and form of the berries and bunches, is apparent enough; and that they have been differences sufficient to mislead good judges is equally apparent, for no doubt, at this very moment, some at least of the varieties which have been mentioned, are believed in as distinct by good gardeners. We suppose the explanation, on the one hand, to be, as already indicated, that the samples which have mystified growers have been the result of peculiar, and it may be unappreciated advantages of soil or situation, of something eminently favorable to the crop in the very material or construction of the border, or of healthy vigor, whether it be that of young vines just come to their prime, or of old vines well established in a position where their roots are fed independently of all borders, there being combined with some one or other of these advantages that kind of judicious treatment which has turned them to their full account, and resulted in well-swelled and thoroughly-matured grapes. The differences amongst Muscat grapes attributable to mere position and treatment we know to be by no means inconsiderable, from the evidence which any great fruit show will furnish; and we can hardly refuse to go a step further, and admit that the diversity may sometimes give the impression of a distinct variety; and if such an impression becomes once established, it is not without difficulty overcome. It is fair to mention, that in one or two of the above cases the new names are not to be set down to the account of the original growers. This applies especially to the forms distinguished as Barnes's and the Denbies Muscats, which were included in the trial merely from a certain reputation they had acquired, the names being added to distinguish them.

On the other hand, no doubt some of the supposed distinct Muscats have been seedlings. Now we know that in the case of flowers a seedling plant, in its first flush of vigor, will often indicate qualities which it does not maintain when it falls into the ordinary routine of cultivation; and it is only reasonable to infer that something of the same kind may occur in respect to fruits. And then, if a choice seedling fruit,

like a grape, does really seem to indicate any distinct and desirable qualities, it is petted and coaxed on in a way which may keep up the delusion for a time, until it is brought to the test of a rigid comparison, such as has been made in the case to which we refer; and all this in perfect good faith on the part of the grower. Thus we think, in one or other of these ways, may the occurrence of so many supposed varieties of White Muscat grape be accounted for.

Now for the practical result, so far as it may be considered settled at this stage of the Chiswick experiment. It is that there are only two of these White Muscats, where we have hitherto counted at least ten; and the Canon Hall being one, it matters little which of the remaining names is taken to represent the other. On the whole the preference might be given to the Bowood or Tynningham or Passe Muscat, from their setting better. It ought not however to be overlooked, that if these varieties do set more freely than the rest, they give more trouble in thinning.

Those who have no difficulty in "setting" the old Muscat of Alexandria—and that many growers have not our fruit shows well testify—need give themselves no trouble about the rest. We do not go so far as to say that they are all identical, but we do say the differences between them, if any, are so slight as to be of no practical importance, and are not like those between certain forms of Black Hamburg, distinctly appreciable.

---

#### POMOLOGICAL GOSSIP.

THE AMERICAN POMOLOGICAL SOCIETY held its 10th session at Rochester, N. Y., on the 13th of September, continuing three days, and closing on the 16th. The attendance was large, and nearly all the Northern States were represented, though a less number of members than usual were present from New England. The show of fruits though not extensive was good, and contained quite a large number of hardy grapes. The prominent contributors were Messrs. Ellwanger

& Barry, H. E. Hooker & Co., C. J. Ryan & Co., Hooker, Farley & Co., and Frost & Co., of Rochester; Maxwell & Brother, and Bronson, Green & Co., of Genesee.

President Wilder being absent from illness, Dr. Warder was appointed temporary chairman, and after the appointment of the usual committees, the meeting proceeded to business, first taking up the apple for discussion. The second day was devoted to the grape, which seemed to be a subject of absorbing interest, and called out many remarks from various members. The exhibition of superb specimens of the Adirondac by Mr. Bailey, who was present, was the signal for full information as to its growth, &c., and Mr. B. was called up to give the general characteristics of this grape, which was accorded the highest rank by all who saw and tasted the variety. We have no space or time, so late in the month, to give a report of the discussion, but it appeared to be conclusive as to its very great value. It was earlier than the Hartford Prolific, almost equal to the Black Hamburg in quality, vigorous in habit, and as hardy as the Isabella. Its fine berries and large bunch appeared in strong contrast with many of the very superior but too small hardy sorts. The Iona was exhibited by Dr. Grant; very handsome specimens and quite ripe; this sort also takes a high rank, being as large as the Diana, as good as the Delaware, if not superior, and possessing more vigor and equal hardiness with the latter.

Rogers's Hybrids were freely discussed, with numerous specimens of many of the kinds before the meeting; but not one of them was mature, and the members generally thought they had been greatly overrated, several of them in fact being quite worthless. Their hybrid character was discussed, and Mr. Barry addressed the meeting taking the same view of them as we have already done; that he could not see the least mixture of the foreign grape in any of the kinds. They were referred to the committee on native fruits, to select such as they considered worth cultivating, and report to the next meeting, giving a name to each. Allen's Hybrid did not appear to be generally known; but those who had given it a fair trial highly commended this sterling sort. Concord was

highly praised by all the southern and western members. Crevelling was also liked for its excellent qualities of earliness, size, and color, but it was feared might be defective in the looseness of the bunch; this however requires to be substantiated by further experience. Rebecca is rapidly gaining friends, and a prominent place among hardy sorts. Diana holds its reputation well; some had failed to ripen it well, but these appeared exceptional cases. Israella is an early black grape, ripening before the Hartford, and better, and promises well for a very early sort. Other kinds were discussed, but generally they were of secondary consideration.

The third day, the forenoon was devoted to the pear, and the rest of the time to the smaller fruits. Sheldon, Doyenne du Comice, De Tongres, and Dana's Hovey, were the principal new sorts before the meeting; other older kinds were considered and some additional information obtained; but generally the newest pears elicited but slight discussion from the simple fact that they are yet comparatively unknown.

The discussion on strawberries we did not hear, but when the report is published we shall give an abstract of it, with that of the other fruits.

By invitation of Dr. Edwards of St. Louis, the Society adjourned to meet in that city in 1866.

**BUCKLAND SWEETWATER AND GOLDEN HAMBURG GRAPES.**—These two fine grapes were shown in very good condition at the recent exhibition of the Massachusetts Horticultural Society: not, certainly, very large bunches, particularly of the former, but large berries of the latter, of the rich golden hue so characteristic of the variety, and deliciously sweet, very melting and rich. Specimens from a cold grapery weighed about  $1\frac{1}{2}$  pounds the bunch, and resembled the Hamburg in all but color. The Buckland is a similar looking sort, not acquiring quite so yellow a hue, but of somewhat of the transparent color of the old Sweetwater. Both are excellent grapes and well sustain the reputation which preceded their introduction into our collections.

**THE SUSQUEHANNA PEACH**, noticed by us a few years ago, has obtained but a limited cultivation, though one of the largest and best peaches. In the vicinity of its origin (the

Susquehanna river) it is considered a most valuable acquisition, and deserving of extended culture by all who appreciate large and beautiful fruit. It is considerably larger than the Crawford, and quite as good a peach.

THE NEW FRUITS before the American Pomological Society were few in number the present year. The only pear was the Edmonds; two or three apples of no particular merit, and a peach similar to the Crawford, but ripening intermediate between the Early and Late, and very good.

---

---

### THE ELLIS PEAR.

BY THE EDITOR.

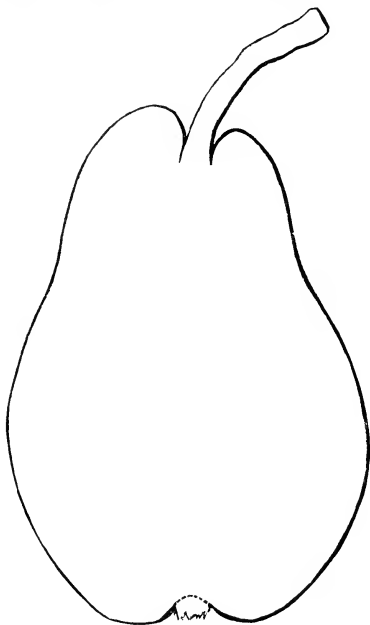
NEW seedling pears continue to be brought forward annually, and among them are some of much excellence which will undoubtedly become popular kinds. We have from time to time noticed quite a number which have promised well, and we doubt not this year's experience will enable us to decide with more certainty upon their real merits.

The Ellis pear, which we now bring before our cultivators, is, however, one that is entirely new, at least to us, though it has been well known for some time in the locality of its origin. Our first knowledge of it was obtained from Mr. W. P. Jenny of Fairhaven, Mass., who has eaten the fruit for four or five years, and whose good judgment we could not question. He described it as one of the finest varieties, well worthy of cultivation, and kindly sent us scions from the original tree; he also promised to furnish us specimens for trial. Agreeably to his promise, he sent specimens for exhibition at the recent show of the Massachusetts Horticultural Society, which pleased us so much that we at once made a drawing (FIG. 13) and description, which we now present to our readers.

The Ellis pear was raised by Mrs. Annie E. Ellis of New Bedford, Mass., from the seed of Seckel. It does not, however, in any way resemble that fine old pear, being nearly



three times as large, of a different shape and entirely different quality, so much so as to raise a doubt about its being the parent. The Ellis is a large, elongated, greenish pear, with a refreshing juice, more resembling the Urbaniste than the Seckel. The tree is a thrifty grower, very hardy, and an abundant bearer. We annex our description:—



13. THE ELLIS PEAR.

Size, large, about four inches long, and two and three quarters in diameter; Form, elongated, or obtuse pyriform, contracted near the middle, swollen on one side, rounding off to the crown which is small, and obtuse at the stem; Skin, green, little rough, becoming of a dull yellow green when mature, considerably mottled with russet around the stem and eye, and thickly dotted with large round conspicuous russet specks, with occasional greenish patches in the shade and a

slight bronzy tint in the sun; Stem, rather long, about one and a half inches in length, pretty stout, and obliquely inserted in a deep contracted cavity, formed by ribbed or knobby projections; Eye, rather large, open, and but little depressed in a very small shallow basin; segments of the calyx, short, thick, stiff; Flesh, yellowish white, little coarse, very juicy and melting, with a brisk sprightly vinous flavor; Core, small; Seeds, medium size, rounded, plump, sharply pointed, light brown. Ripe October 1st, and does not appear to rot easily.

## General Notices.

**HARDINESS OF JAPANESE PLANTS.**—Referring to inquiries in your paper of the 7th of May last, we beg to state that plants of *Retinospora pisifera* and *obtusata*, which were planted out last year in our nurseries here, have survived the past winter without sustaining the slightest injury, and are at present in vigorous growth. It is but right, however, to mention that they were protected with a mat for three or four days during a severe storm in the end of December. *R. pisifera* is three feet three inches, and *obtusata* three feet seven inches in height. We may mention that our specimen plant of *Wellingtonia gigantea*, which is 10½ feet in height, three feet in girth at the ground, and measures 20 feet round the branches, has withstood the winter without any damage, as it has done all the winters since being planted many years ago. *Lonicera aureo reticulata*, *Euonymus radicans* fol. var., *Bambusa Metake*, and *Arundinaria falcata* are also quite hardy with us. If not giving too much trouble, we should feel very much obliged by being made acquainted with the names of the various trees which have from time to time been publicly planted throughout the country by her Majesty and the late Prince Consort, with their sites and dates of planting. This, we venture to imagine, might prove interesting to many.—(*Gard. Chron.*)

**JAPAN LILIES.**—Few plants are more attractive than Japan lilies. They come into bloom at a time when the beauty of New Holland plants is over, and when an actual paucity of flowering plants exists, wherewith to decorate our conservatories and greenhouses. They produce a gorgeous display either in-doors or out; and as they are quite hardy they may be liberally planted in the open border, and thus constitute one of our best autumnal flower-garden plants. The cultivation of them in pots is by no means difficult. Immediately when the bulbs go to rest in autumn is the proper time to re-pot them. By no means destroy the old roots, but carefully place them amongst the fresh soil. If large examples for particular display are required, large pots may be employed, and half a dozen large flowering bulbs placed in each pot. Rough peat, intermixed with a little loam and silver

sand, is the best kind of soil for them. The pots should be well drained, and the crown of the bulb should be covered with the soil; when potted they should be placed in a cold pit or frame, in order to prevent the soil from freezing, although frost will not injure the bulbs. Where room under glass is an object in winter, they may be plunged in the open air in coal ashes, in a manner similar to potted hyacinths. There is scarcely any plant which is so much benefited by liquid manure as this lily, more especially before expanding its flowers. If used in a clear state, and considerably diluted, this water alone may be applied for at least a month before the plants come into flower. If the object should be out-door cultivation entirely, they should be planted in beds, in which in favorable seasons their effect is exceedingly grand. Excavate the soil 18 inches deep, and fill in the bottom a foot deep with very coarse peat, intermixed with one-fifth of decayed manure or leaf-mould. The remaining six inches may be entirely peat. If the bulbs are large enough to bloom, plant them 12 inches apart every way, and if beds of different colors are well contrasted one with another, the effect will be magnificent. *Lilium lancifolium speciosum* or *rubrum* is one of the handsomest of these lilies; and those who can afford it cannot do better than add to their collection the glorious *L. auratum*, of which so many fine specimens have been exhibited this season. The old japonicum is also worth growing.—(*Gard. Chron.*)

**EARLY FLOWERING BULBS.**—The return of August brings with it the usual announcements of the importations of bulbs, and that catalogues of them are on the eve of publication; and many a well-compiled little tract invites attention and assails the pocket. In fact, the "Postman's Knock" is already introducing to notice some of these lists, and I always peruse them with pleasure, even though but few additions are made to last year's subjects.

Of all the divers varieties of bulbs that can be pressed into the service of winter decoration, two of them can be had in bloom remarkably early, viz.: the Roman Hyacinths, perhaps more generally known as the white Hyacinths of Paris, and the Paper-white Narciss, perhaps more popularly known as the single Italian Narciss. These two are pushed on into bloom to a large extent to supply the exigences of the market in the shape of cut flowers; and also to render good service in the conservatory, mixed with chrysanthemums and similar plants.

For window or conservatory decoration during winter, Paper-white Narciss are invaluable. They are easily and early obtainable, and they are easily cultivated; they flower freely, and remain in bloom for a considerable time. I find that two importations of this flower are made into the London market. The largest quantity, and which is also the earliest flowering, comes from Paris; the other, and in the case of which the bulbs flower some two months later, comes from Holland or the Channel Islands. How there is such a difference in the time of flowering I do not know, but the fact exists. By employing both the Parisian and the Dutch bulbs, a succession of flower can be obtained from the beginning of November till the end of April. The first are already in the market, so forcing can

be commenced at once. Then as a companion there is the Parisian Double Roman Narciss, not nearly so beautiful but yet very early in blooming. It is true that you can get but three or four flowers at once on one of its muscular-looking stalks; but then, at such a season of the year, who is disposed to be fastidious? Why, in the midst of the short, dark, fog-stricken days, or those of intense biting frosts, or of snow-clad houses and streets, the dullest looking flowers are treasured up with tender care—the uncolored blossoms of a Christmas rose even—and are welcome there as a bunch of spring violets.

The little azure-blue *Scilla sibirica* also comes in with the preceding, and so do the old single Duc van Thol tulips. By the assistance of a little warmth, a constant supply of this charming yet tiny tulip can be maintained, till the larger members of its family, together with hyacinths and crocus, come in abundantly. And so you can draw around you a family circle of little floral pets, whose pleasant influence can fill the heart with deep thankfulness, and cause the outward gloom to become a ministrant to the cheerfulness within.—(*Gard. Chron.*)

---

**CLIANTHUS DAMPIERI.**—Like Mr. Boston I have succeeded in growing this well in a pot, and therefore the following notes on its cultivation may not be altogether uninteresting to those who wish to grow this plant under similar circumstances. I commenced in April by filling about one-third of a 3-inch pot with charcoal, broken rather small for drainage, and then completing the operation with a soil composed of two parts good loam, one part peat earth, and one part charcoal, broken small, the whole being well mixed together. The soil was pressed rather firmly and made into a little cone in the centre of the pot; this was pressed down so as to make it firm; a hole was then made in the centre of it about a quarter of an inch deep, and one seed dropped in and covered with a little charcoal dust, peat, and sand mixed together. The pots were then placed on a shelf in the greenhouse, and very little water was given until the plants came up. In watering I always poured it gently round the rim of the pot, never allowing it to rise high enough to touch the stem of the plant. This is, I believe, most important, as a contrary practice is probably the cause of so many failures from damping off taking place while the plants are young. When they were about two inches high they were shifted into pots two sizes larger than those they occupied, and in September they received their final shift into pots similar in shape to those sometimes used for hyacinths, *i. e.*, rather deeper than common pots. Great care was taken not to break the ball of earth, which is easily done in shifting in consequence of there being few roots to hold the soil together. After receiving their final shift they were replaced in the greenhouse, and during the winter months were given only just sufficient water to prevent them from being dust dry. When the syringe was used for other plants, we never allowed a drop of water to touch them if we could avoid it. In February they began to grow a little, and from that time they received more water, and they were in bloom in April, and were admired by all who saw them.—(*Gard Chron.*)

**TRANSPORTING LILY BULBS.**—The stems of the lily, like those of many other bulbs and tubers, die off in autumn, after having perfected their blossoms and laid up a supply of nourishment in fresh bulbs for the production of leaves and flowers in the following year. For several months during autumn, winter, and early spring, the bulbs remain almost dormant in the ground, neither adding to their resources nor diminishing them. This state of repose is natural to these plants, and it is only by our giving heat and moisture in an artificial way that they can be induced to grow at this period of the year. It therefore follows, as a matter of course, that this is the proper season to send bulbs from one part of the world to another. The importations to which we have just alluded had, no doubt, been dug out of the ground just after the plants had completed their summer growth, and when they had gone to rest for the winter, and this was one of the reasons of the successful result. Then they were on their voyage at that season of the year during which they are not naturally inclined to grow unless they are compelled to do so by artificial means. Thus far, therefore, the importer had gone to work in the right way.

Having taken the bulbs out of the ground at the proper season for sending them home, the next matter to be attended to was the best mode of packing them. And here, too, a better method could not have been hit upon than that employed in the instance in question. They were packed in *dry earth*. This earth had two important properties; it was to a certain extent a non conductor, and preserved the bulbs from the effects of sudden changes of temperature, and while it kept them in a plump and healthy condition, it absorbed any superfluous moisture and prevented them from rotting.

Such is the theory of the matter, and certainly the success which attended the experiment was most complete. We have no means of knowing whether the merchant who sent these cases home knew anything about the theory and practice of horticulture, but he certainly did the work as theory would have directed, and well deserves the success which attended his venture.

A little knowledge of the habits of plants, so as to enable one to know how to treat them, is oftentimes of great importance to those who endeavor to send them to distant countries by sea. It frequently depends on the application of this knowledge whether the plants reach their destination alive and healthy, or dead and worthless.—(*Gard. Chron.*)

---

**THE CULTURE OF THE PERPETUAL CARNATION.**—The Perpetual Carnation, on account of its vigor, accommodates itself to all soils, but it prefers open manured ground, through which water will pass readily. The soil should be rather freely manured, and the manure dug in deeply. The surface of the ground should be occasionally broken up with a hoe, especially after much rain, in order to break the crust which hardens under the action of the sun. They require water but seldom, but it should be given plentifully. In order to obtain strong plants, cuttings should be put in at

the end of April or the beginning of May ; they will then yield a very fine show.

To preserve the plants for several years, and to keep them dwarf, it is necessary to shorten each flower-stalk, after the bloom is over, to some two or three inches above its base. In this way there will be obtained every year a great quantity of flowers.

To enjoy the flowers in winter the plants should be put in an orangery or temperate greenhouse, giving them air as freely as possible. They ought only to go into the house when in flower or bud, because the buds restrain the ascending growth of the stalks. If, on the contrary, they are put in the house with the flower-stalks not yet provided with their buds, these stalks will lengthen out, and in the spring yield only some mis-shapen flowers, while the plants will be poorly furnished. In the month of October the plants should be repotted with fresh earth in pots five or six inches in diameter. They afterwards require shading for 8 or 10 days, and should be removed to the house only when they become liable to suffer injury from frost. Those plants which do not produce buds may be wintered in a pit, which can be covered with a frame and mats during intense cold, but it is necessary to avoid too much moisture ; or they can be left in the open ground, where they will survive if the ground is well drained. In this case it is a prudent measure to cover them with straw, in order to shelter them from the sun, which is so fatal to plants when they have been frosted.

The following are new Perpetual Carnations, sent out in the spring of the present year by M. Alégatière, of Lyons :—

*Secretary Cuzin*.—Slate color, and fiery scarlet ; new shade of color.

*Madame Bondet*.—Straw-yellow, strongly bordered with a fine violet color, flowers very large.

*Madame Pecond*.—Fiery orange, edged with slate color ; new shade.

*Robert Fortune*.—Pure white, heavily bordered with amaranth ; dwarfish, vigorous, and free-blooming.

*Ernest Benary*.—Deep fiery scarlet, striped with maroon ; very fine.

*President Fairre*.—White, with a broad cerise band ; flowers enormous, and well formed. This vigorous and abundant flowering variety is quite an acquisition amongst the Perpetuals.—(*Gard. Chron.*)

---

## Massachusetts Horticultural Society.

SATURDAY, SEPT. 3D, 1864.—An adjourned meeting of the Society was held to-day—the President in the chair.

Delegates were appointed to attend the Pomological Society's meeting at Rochester, of which the President was chairman.

On motion of Dr. Wight, the thanks of the Society were voted to the President, for his interesting and felicitous address, at the laying of the corner stone of the new hall, and requesting a copy for publication in the Proceedings of the Society.

Thanks were also voted to Dr. Lothrop, for his services as Chaplain on the same occasion.

The Publication Committee were authorized to publish the President's Address, with some account of the ceremonies of laying the corner-stone, for distribution among the members.

The following members were elected:—James N. Smith, Newton Corner; J. P. Bush, Boston; Herman Winship, Brighton; Mrs. C. B. Chase, Medford; W. A. Blodgett, Waverly; Daniel E. Chase, Watertown; Abner Child, Jamaica Plain; Miss Eliza W. Smith, West Medford.

Meeting dissolved.

THE THIRTY-SIXTH ANNUAL EXHIBITION of the Society was held at Andrews Hall, Central Court, on Tuesday, the 20th, and closed on Friday evening the 23d of September.

Andrews Hall is a large and handsome room, well adapted for an exhibition of the kind; it is nearly 70 feet square, of good height, and well lighted from a dome at the top. The arrangements were similar to those of the Music Hall, viz., a centre table devoted to specimen plants, and two tables on each side for fruits; the flowers occupying the tables against the walls. The stage at the head was filled with plants, and a table in front for bouquets and baskets of flowers; on either side the stage immense bouquets for the Jones and Bradlee vases were tastefully arranged, and the general effect, on entering the Hall, was exceedingly fine. The basement was appropriated to the vegetables, of which the display was large and very choice.

The centre table, filled with the plants, had a very beautiful appearance. The arrangement was tastefully made. The numerous variegated plants and ferns were backed by tall and handsome plants of various kinds. Large yuccas, palms, and choice evergreens in pots, also formed an effective back ground for tables upon the stage; altogether the show was noticeable for the excellence of the specimens and absence of inferior plants.

PLANTS IN POTS. Though these were the contributions of only two or three exhibitors, they were generally beautiful specimens. Mr. James Comley of Worcester sent large plants of *Croton pictum*, *Yucca aloifolia variegata*, *Annanassa sativa variegata*, *Begonias* of several kinds, eight or ten handsome *Caladiums*, *Ferns* and *Lycopods*, *Marantas* and *Dracænas*, *Cissus porphyrophyllus*, &c. From Hovey & Co. came a very fine *Rhopala corcovadensis* 8 feet high, *Yucca aloifolia variegata*, *Y. filamentosa variegata*, *Y. pendula*, and others; *Pandanus javanicus variegatus*, *Latania borbonica*, *Dracæna terminalis*, *Begonias* of sorts, several *Caladiums*, *Ferns*, and *Lycopods*, and large specimens of *Thuja borealis*, *Cupressus Lawsoniana*, &c.

BOUQUETS AND BASKETS. Large bouquets were furnished by Hovey & Co., J. Nugent, and W. C. Strong, and parlor and hand bouquets by M. P. Wilder, Hovey & Co., J. McTear, J. Nugent, and others. Baskets of flowers were extensively contributed, numbering eighteen or twenty, all good, and a few of them arranged with exquisite taste. This feature of the Society's exhibitions has become very attractive; all the contributors were ladies.

CUT FLOWERS were numerous, though the dry season has had its effect, and, though good, not up to the usual standard. Gladioli, Japan Lilies, and Asters, were conspicuous in all the stands. Messrs. Craft and Strong had seedling gladioli, including many very fine ones. Hovey & Co. were the principal contributors of Japan lilies and asters. J. Breck had a very fine show of annuals. From D. Murray and Jas. Barrett came collections of native flowers.

DAHLIAS were few in quantity but very good; among them we noticed several of the new sorts, such as Bob Ridley, Peri, Una, Lord Derby, Reliance, Duke of Wellington, as well as handsome specimens of Triumph de Pecq, Mr. Stocken, Wm. Dodds, Alba multiflora, &c. The award of premiums was as follows:—

PREMIUMS FOR PLANTS, FLOWERS, &c.

PLANTS IN POTS.—For the best collection of twenty, to J. Comley, \$25.

For the next, to Hovey & Co., \$20.

SPECIMEN PLANT.—For the best, to Hovey & Co., for *Rhopala corcovadensis*, \$5.

VARIEGATED-LEAVED PLANTS.—For the best, to J. Comley, \$10.

VARIEGATED PLANT.—For the best, to J. Comley, for *Annanassa sativa variegata*, \$5.

For the next, to J. Comley, \$3.

CALADIUMS.—For the best six, to J. Comley, \$4.

For the next, to Hovey & Co., \$3.

CUT FLOWERS.—For the best display, to Jos. Breck, \$15.

For the next, to W. C. Strong, \$12.

For the next, to Geo. Graft, \$10.

For the next, to J. E. Westgate, \$8.

For the next, to E. Wasson, \$6.

For the next, to J. McTear, \$4.

DAHLIAS, (First day).—For the best twenty-four blooms, to Hovey & Co., \$4.

For the best specimen bloom, to

(Last day).—For the best twelve, to J. Parker, \$2.

For the next, to Hovey & Co., \$1.

For the best specimen bloom, to C. J. Power, \$1.

GRATUITIES were also awarded to numerous contributors.

FRUIT. The display of fruit was far superior to the expectations of every cultivator. The unparalleled drought it was thought would tell severely upon the crop; but, happily such was not the case, and, with some few exceptions, the varieties were fully up to the standard of excellence, and some even surpassed it. The specimens shown for the Whitmore prize were every way remarkable, and showed that, even in an unfavorable year, our enthusiastic cultivators know how to overcome the effects of severe drought, at least so far as the exhibition of specimens is concerned. The entries for the single dishes were more numerous than ever, and the specimens all very fine, some extra; the number exceeded fifty. There



were eight entries for the Class of 20, and four entries for the Whitmore prize. The entries for the other classes were also more numerous than usual, indicating a deeper interest in the production of fine fruit. It is very difficult to particularize among so many fine pears, but those which struck us as remarkable were, the De Tongres, of Mr. Dana; the Beurré Superfin, of Capt. Austin; Bartlett, of H. Emerson; Louise Bonne, of J. C. Poer; Seckel, of C. E. Grant; Beurré Diel, of A. Dickinson; Beurré Bosc, of Mr. Stickney; Sheldon, of Hovey & Co.; Easter Beurré, of Capt. Austin; and the Moore's, of Hovey & Co., a really magnificent pear. Indeed we should fail of space to enumerate half of the fine specimens exhibited. Of apples, the show was rather limited, but some extra fine Gravenstein, Washington, and Dutch Codlin, came from Mr. Clapp; and Fall Pippin, and Washington, from Mr. Stetson. Mr. Clapp's twenty varieties were every way superb. Of Foreign Grapes, the exhibition was good, with some few of extra quality. Conspicuous among them were some Barbarossas from R. S. Rogers, Esq., Danvers, very large bunches, fifteen inches long, well colored, compact and fine; Muscat of Alexandria, from M. H. Simpson, very large and ripe; Canon Hall, from Mrs. Durfee, with immense berries; Black Hamburg, from W. C. Harding; Barbarossa, from H. H. Hunnewell; and Champion Black, and Buckland Sweetwater, from R. W. Turner. Some Golden Hamburg, by E. H. Luke, from a cold house, were the best we have ever seen of this magnificent grape. Native grapes were numerous in quantity, in large variety, and in many instances extra in quality. Most noticeable were the Delaware, Rebecca, Allen's Hybrid, Iona, Adirondac, Framingham, Crevelling, Concord, Diana, and Isabella. The Crevelling, from Mr. Brackett, were unusually compact and handsome; all these were quite ripe. Mr. Strong exhibited a large number of sorts, among them some ten or more of Rogers's grapes, not one of which was ripe. The Adirondac came from Mr. Bailey of Plattsburgh, N. Y., and were perfectly ripe, sweet, and fine. Some seedlings were shown which we shall report upon at another time. The Iona and Adirondac are two valuable acquisitions.

PREMIUMS AND GRATUITIES FOR FRUITS.

APPLES.—For the best twenty varieties, to F. Clapp, \$20.

For the second best, to Asa Clement, \$15.

For the third best, to A. D. Williams, \$12.

For the second best fifteen varieties, to J. Eustis, \$10.

For the best ten varieties, to J. W. Foster, \$8.

For the second, to B. Bruce, \$6.

For the third, to J. Newhall, \$4.

For the second best five varieties, to W. W. Wheildon, \$5.

For the best twelve apples, to F. Clapp, for Gravenstein, \$5.

For the second, to S. W. Fowle, \$4.

For the third, to B. Bruce, \$3.

For the fourth, to J. Nugent, \$2.

PEARS.—For the best twenty varieties, to J. C. Chase, \$25.

For the second, to Walker & Co., \$20.

For the third to A. D. Williams, \$16.

- For the best fifteen varieties, to Jos. Stickney, \$15.  
 For the next, to W. A. Crafts, \$12.  
 For the next, to R. W. Ames, \$10.  
 For the best ten varieties, to Jesse Haley, \$10.  
 For the second, to A. Dickinson, \$8.  
 For the third, to C. N. Brackett, \$6.  
 For the best five varieties, to J. Eaton, \$6.  
 For the second, to J. R. Poor, \$5.  
 For the third, to J. De Wolf, \$4.
- SPECIAL PRIZE**, by C. O. Whitmore.—For the best twelve varieties which, in the opinion of the exhibitor, are the most desirable for general cultivation, to Hovey & Co., \$25.  
 For the second best, to Hervey Davis, \$15.  
 For the best twelve Bartlett pears, to H. C. Emerson, \$5.  
 For the best twelve Beurré Bosc pears, to Jos. Stickney, \$5.  
 For the best twelve Seckel pears, to C. E. Grant, \$5.  
 For the best twelve Swan's Orange pears, to J. De Wolf, \$5.  
 For the best twelve Louise Bonne pears, to J. R. Poor, \$5.  
 For the best twelve Urbaniste pears, to H. Davis, \$5.  
 For the best twelve Duchess pears, to \$5.  
 For the best twelve Beurre Diel pears, to A. Dickinson, \$5.  
 For the best twelve Beurre d'Anjou pears, to J. R. Poor, \$5.  
 For the best twelve of any other sort, to \$5.
- PEACHES**.—For the best collection, to H. Davis, \$5.  
 For the next, to A. Clement, \$4.
- GRAPES (Foreign)**.—For the best three bunches of Black Hamburg, to G. W. Harding, \$5.  
 For the next, to R. W. Turner, \$4.  
 For the best three bunches of any other black sort, to R. S. Rogers, for Barbarossa, \$5.  
 For the next, to G. W. Harding, for Black Prince, \$4.  
 For the best three bunches of Muscat grapes, to M. H. Simpson, \$5.  
 For the best three bunches of any other white sort, to R. W. Turner, for Syrian, \$5.  
 For the next, to W. C. Harding, for Golden Hamburg, \$4.
- SPECIAL PREMIUM**, offered by Wm. Gray, Jr.—For the best six varieties, two bunches each, to R. W. Turner, \$25.
- SPECIAL PREMIUM**, offered by the President, C. M. Hovey.—For the second best, to R. S. Rogers, \$15.  
 For the best two varieties, two bunches each, to R. W. Turner, \$5.  
 For the next best, to E. H. Luke, \$4.  
 For the best collection, to Mrs. Durfee, \$10.
- GRAPES (Native)**.—For the best six bunches of Isabella, to J. V. Wellington, \$4.  
 For the best six, Delaware, to E. A. Brackett, \$4.  
 For the best six, Diana, to B. B. Davis, \$4.  
 For the best six, Concord, to W. C. Strong, \$4.

For the best six, Hartford Prolific, to W. C. Strong, \$4.

For the best six, Crevelling, to E. A. Brackett, \$4.

For the best six, Rebecca, to C. E. Grant, \$4.

For the best six, Allen's Hybrid, to W. C. Strong, \$4.

For the best six, of any other, to E. A. Brackett, for Winchester, \$4.

**GRATUITIES FOR PEARS.**—For collection of 150 varieties, to Hovey & Co., \$20. To M. P. Wilder, for collection, \$15. To A. C. Thatcher, N. R. Childs, R. W. Turner, J. R. Savage, J. E. N. Gilley, G. W. Ireland, S. Sweetser, E. O. Holmes, H. Emerson, M. P. Kennard, J. Breck, J. French, C. D. Hancock, and J. Gilbert, \$3 each. To F. Skinner, W. Bacon, and A. Beal, \$5 each. To H. Vandine, \$7. Several other gratuities were awarded of \$1 each.

**GRATUITY FOR APPLES.**—To Jas. A. Stetson, \$3.

**GRATUITIES FOR GRAPES.**—To State Reform School, for Delaware, F. Dana, for collection, and M. P. Kennard, for collection, \$3 each. To W. C. Strong, for collection, \$6. J. A. Whitney, for Concord, \$2, and G. B. Cutter, for collection, \$2; with other gratuities, of \$1, to various exhibitors.

The following were the twelve varieties of pears which obtained the Whitmore prize: Sheldon, Swan's Orange, Louise Bonne of Jersey, Urbaniste, Beurre d'Anjou, Bartlett, Seckel, Merriam, Lawrence, St. Michael Archangel, Belle Lucrative, and Hull.

We have no space for a report of the names of all the fruits exhibited. Messrs. Hovey & Co. sent about 150 varieties of pears, and M. P. Wilder about 100. Messrs. Vandine, Bacon, Williams, Walker & Co., Eaton, Stickney, Davis, and others, from twenty to thirty varieties each, and numerous contributors from five to ten varieties each.

**VEGETABLES.**—The display of these was extraordinary for the season. Cabbages weighed 44 pounds each! Sweet corn of great size. There were numerous specimens of Yokahama and Turban squashes, and fine Hubbard and Marrow. Purple Eggs were unusually large. Miss Lucy A. Bruce of Hingham exhibited 100 varieties of beans, all correctly named; a collection which attracted great attention, made, as it was, by a young Miss of 13. The committee awarded a gratuity of \$10. The exhibition was large and unusually fine.

---

## Obituary.

---

**DEATH OF MR. DENNIS MURRAY.**—Died suddenly, in Boston, on the 22d of September, Mr. D. Murray. We record with deep regret the sudden decease of Mr. Murray, a gardener by profession, but known to a large circle of friends as a great lover of nature, and an ardent collector of native plants, and a man of much proficiency in the study of mosses and

fungi, as well as plants in general. He was a keen observer, and gathered several new species which had been overlooked by others.

At the recent exhibition of the Massachusetts Horticultural Society, Mr. Murray, as usual, was present with his interesting collection of native plants gathered around Boston. He had not finished placing them in the stand for exhibition when he was suddenly taken ill, and was removed to his home, where he sank rapidly and died before the exhibition closed.

We copy the following notice of Mr. Murray, by one who knew him well, and could appreciate his worth :—

He came to this country some years ago at the instigation of one of his sons who was established here. He followed the same avocation after his arrival, and was gardener to several of our wealthy gentlemen. But the same thirst for information led him to apply himself to the study of our cryptogamous plants, as well as to the observation and collection of our general flora. He became familiar with every thing that grew near Boston, far from which he was, of course, unable to travel; and was particularly known to botanists for detecting the occurrence of European plants among us. He studied our mosses and fungi and added many new species to those already known. Dr. Curtis, our great mycologist, has given his name a deserved perpetuity by affixing it to more than one of his discoveries in the difficult field of mycology. At the exhibitions of our Horticultural Society his collections of native plants were always a peculiar feature. He was untiring in his explorations, and at an age when most men are content to sit still and enjoy their evening days in rest and ease, he was as earnest and assiduous in his long woodland walks, and as delighted at the discovery of something novel and interesting as in the days of his youth. But this was not all. He had tastes and sympathies beyond his station. He loved poetry and music; and, in an humble way, would exhibit these tastes at home. He was refined in many things in which one would be led to expect the opposite. Loving the beauties of Nature to an unusual degree, for one whose whole life was hard toil, he shared with those far above him in position and means of gratification, the more sensitive and delicate sympathies which are generally thought to reside with the highly cultured and highly stationed.

---

## Horticultural Operations

FOR OCTOBER.

---

FRUIT DEPARTMENT.

Up to the present time, the drought still continues, though slightly lessened by a few light rains; the ground, a foot below the surface, is without rain since the early part of June. Now is the time to prepare ground for transplanting fruit trees, either the present autumn or in spring; it is far better for the trees, than after the cold and heavy rains of October, which

sodden the earth, and when moved, render it stiff and cloggy; it will also have time to settle before planting. Transplanting may commence as soon as the leaves fall.

Grape vines, in houses to be forced early, will now require to be pruned carefully, if not already done, as forcing usually commences in November, to obtain a crop in April or May. See that the border is well prepared, and covered with manure, or litter, to keep out the cold rains and early frosts, which soon chill the ground. Have everything in readiness in good season. Grape vines in greenhouses or cold houses, where the crop is gathered, will need little care until next month, when the latter should have all the vines well pruned, and laid down and protected before severe frosts. If the crop is to be allowed to hang on the vines, kindle light fires in cold damp weather, to keep an even temperature and dry up the moisture. Hardy grape vines may be pruned the last of the month, so as to be ready for protection before very hard frosts.

ORCHARD-HOUSE TREES should be sheltered from cold rains, either by turning down on their sides, or removing them to the house, or a dry shed. Upon the approach of hard frosts see that they are well housed. Now is a good time to re-pot if the trees require it.

STRAWBERRY BEDS will now require attention, as the plants, refreshed by the autumn rains, will make a fresh growth; keep the beds clear of weeds, and lay in runners where needed to fill vacancies; or continue to cut them off if grown in hills; if the ground is poor, a good top-dressing will be of great benefit to the next year's crop. Plants for forcing should be placed in frames, where they can be sheltered from heavy rains; re-pot if not already done.

FRUIT TREES of all kinds may be transplanted as soon as the leaves fall.

FRUIT of all kind should be gathered soon. Even the late pears are but little benefited by remaining too long upon the trees. Gather into barrels and keep in a cool airy place until the frost is so severe as to endanger their freezing.

INSECTS should be looked after; wash with whale oil soap for the white scale, and tar or protect against the canker worm.

#### FLOWER DEPARTMENT.

Everything should be removed to the houses, or placed in frames, where they can be protected from heavy frosts; the latter being the best places for all but the very tender plants until cooler weather. See that the pots are all washed and clean, and the soil top-dressed if necessary. Give air abundantly in good weather, and do not light the fires oftener than possible as a good hardy constitution cannot be obtained under the forcing system.

CAMELIAS, as soon as they are all arranged, should be syringed in good weather, and the house be kept cool and airy, unless there is a mixed collection.

AZALEAS should all be housed, or placed in cool frames, where they can be sheltered from frosts and heavy rains; see that they are free from the thrip.

PELARGONIUMS should now have a cool airy place on the shelf near the glass. If well established, water sparingly. Young stock should be placed near the glass, and cuttings not potted off should be attended to immediately.

CHRYSANTHEMUMS should be removed to the house before hard frosts, as they often injure the buds. Water often with liquid manure.

CINERARIAS AND CALCEOLARIAS should be kept in frames as long as the weather will permit; remove to the house when necessary and place on a shelf near the glass.

CALADIUMS should now be dried off gradually, and kept in a temperature of about 60°; cooler than this they are liable to rot.

FERNS should be more sparingly watered, unless there are means of keeping them along in a growing state.

ROSES planted out in the open ground should be taken up and potted, and placed in a close frame until well rooted.

OXALISES should be potted, if not already done.

IXIAS should be potted; place three or four bulbs in a 5-inch pot.

CYCLAMENS should be kept in a frame until the weather is too cold, when they may be removed to an airy place in the house.

CACTUSES should now be very sparingly watered.

NEAPOLITAN VIOLETS should be potted and placed in a cold frame.

PANSIES in pots should be kept in a cool frame.

CALCEOLARIAS should be potted off and placed on a shelf near the glass.

CUTTINGS of bedding stock may yet be put in, and those struck early potted off.

SWEET ALLYSSUM AND MIGNONETTE should have a good place on a shelf near the glass. Re-pot if they require it.

CALLAS should now be liberally watered.

PREPARE AND HOUSE SOILS for winter use.

#### FLOWER GARDEN AND SHRUBBERY.

After the autumn rains the lawn will put on a new growth, and will need cutting. Rake and roll the walks. Make preparations for filling any vacancies, and prepare ground for new plantations.

LILIES may be planted all the month.

HYACINTHS AND TULIPS may now be planted.

HERBACEOUS PLANTS divided and re-set at this season make stouter specimens.

GLADIOLUSES should be taken up before hard frosts.

DAHLIAS should be taken up, the roots dried a little, and placed in the cellar out of the danger of frost.

TIGER-FLOWERS, and all tender bulbs and bedding plants, should be taken up.

CALADIUMS AND CANNAS planted out in beds should be taken up carefully, placed in boxes with quite dry earth, and set in the cellar or under the stage of the greenhouse.

EVERGREENS, or other ornamental plants, in pots, should be removed to the cellar or shed before the frosts are severe.

## GATHERING PEARS.

THOUGH our advice may come too late for this year, it will be none the less useful for reference hereafter. Indeed we had supposed, after the information we have from time to time given in reference to gathering and ripening fruit, that only those who have just commenced fruit growing, and had not the opportunity of acquiring the requisite knowledge, could be ignorant of the facts connected with the gathering and ripening of our finest pears. Yet we find we are mistaken, and that even old cultivators are neglectful, or have not yet acquired that information which shall direct them aright, in ripening many of the finest varieties.

It was but very recently that a small party of fruit growers assembled together to taste some of the pears of the season, and, as usual, the conversation turned upon the difference in the quality of many pears, attributed so often to soil, or some other cause. Some beautiful specimens of Swan's Orange were presented for trial, and they proved how excellent this fine pear is when gathered at the right time. This was the middle of October, and the specimens had been gathered nearly a month. One cultivator remarked that he had gathered his upon that very day! They had continued to grow, did not incline to drop, and were therefore left upon the tree; others had done the same, and they were surprised to learn that such specimens would be nearly or quite worthless.

Now it would hardly be expected that we should know exactly the period of gathering a new pear. Time and observation alone teach this. We think it was M. De Jonghe, who has stated that a certain pear, in the fourth year of its bearing, was ripe in November, and the fifth year did not commence to ripen until the end of January. This shows how little we can know of the exact period of maturity of a new pear. The season, too, has considerable influence upon the period of ripening, as well as length of keeping; but with older pears, a series of three or four years, with the crop of

a well established tree, will enable us to ascertain, pretty correctly, the average period of ripening and the time of gathering.

Many pears have had their reputation injured by injudicious gathering. Such a pear, we often hear, rots at the core, and is therefore considered of little value. Now this characteristic of rotting is a serious defect with some varieties, and a fatal one with a few; but it is often attributed to some pears which have no greater tendency to do so than others. The old Jargonelle, called, thirty years ago, the "queen of autumn pears," will often rot upon the tree before the fruit is fully ripe; yet this variety has no such reputation in pomological works; indeed, in the London market, where we ate it twenty years ago, it was good enough, and did not appear the same pear that it is in our climate. The warmth of our season forces its growth, and it is not gathered until all the juices are exhausted. Gathered two or more weeks before its usual period of maturity, and ripened in a cool temperature, it would undoubtedly materially lessen its liability to rot, if not obviate it altogether, at least as much so as other varieties of its season. All the summer pears, as a general rule, soon rot at the core, some of them so quick, that we think it was Mr. C. Downing who said the *Beurré Giffard* must be "watched as a cat watches a mouse," to know the period of eating. Yet we have found that even the summer pears did not rot so very rapidly, if they were gathered in due season. *Brandywine*, one of the very best, we had one year in perfection for a long time; another season, we accidentally forgot to gather them so early by a week, and they were comparatively worthless; some were dry and flavorless, and all soon rotted at the core. The *Boston pear*, however, is the most remarkable of all as respects its ripening. If they are allowed to hang upon the trees one week after a certain period in their growth, not one in ten will become the rich, juicy, melting, delicious-flavored pear that it truly is; on the contrary, they will be mealy, and almost tasteless. Several cultivators who have tried it have been disappointed in its character, wholly owing to improper gathering. *Dearborn's Seedling* and *Manning's Elizabeth* are small pears, and seem less



affected than the larger fruits; though better than many others, when gathered nearly ripe, they are incomparably finer if picked two weeks before eating.

The late summer or early autumn pears exhibit great variation, according to the period of gathering. Some possess the excellent quality of ripening up well, when gathered long before they have attained their growth; while others are astringent, or shrivel in the process of maturity. The Bartlett is one of those which ripen up gradually, and may be gathered at any time, though attaining its greatest excellence when fully grown; and losing its flavor when allowed to get the least yellow upon the tree. The Merriam, a rather new pear, and very good if gathered seasonably, is comparatively worthless for eating if allowed to remain upon the tree after the 22d of September; it does not rot at the core, but it then becomes mealy and soft. It is astonishing that two or three days should effect such a change, for, when picked on or before the above period, it is a very juicy, melting pear, and ripens up of that rich cinnamon russet so taking in its appearance. Following close upon this is that grand pear, Swan's Orange, pronounced by some an acid fruit, but whose acid is tempered by a sufficiency of sugar to render it rich and refreshing. If this is allowed to hang upon the tree, as it often does, it becomes dry and rots at the core. It should always be picked about the 20th of September, and ripened in a cool room. Beurré Hardy and Beurré Superfin require to be picked in good season, or they will have, as they are obtaining now, the taint of rotting at the core. These are two nice pears, and we do not wish to see their great excellence injured by injudicious ripening. Flemish Beauty, when forced into vigorous growth, and thinned out to produce the large specimens which it will under such treatment, soon rots at the core; yet we found the present year that moderate sized pears, gathered early, kept as well as any other variety of the season.

As we come to the later pears, there is less danger of allowing them to hang too long upon the tree; yet there are some sorts which are not improved. The Urbaniste, one of our very best pears, should never be allowed to get a yellow tint

upon the tree, but be gathered when quite green. The same may be said of Marie Louise; both of these incomparable pears keep a long time.

Of the winter sorts, most of them may be allowed to hang upon the trees as long as the leaves are fresh and green; when these begin to drop, as some sorts do quite early, the sooner the fruit is gathered the better. Beurré Diel and Winter Nelis often drop their leaves very early, while Le Curé and Beurré Langelier hold them up to the first severe frost.

Thus we have noted some few pears which are more exceptional than others, as regards the period of gathering, though the rule which has been generally adopted holds good, that is, that when a few yellow specimens are seen here and there over the tree, the crop is ready for picking; at least ten days before they are ready for the table. In all cases this will not be a safe guide; but probably with a majority of kinds. Observation and experience must be the sure test, though we need assistance till these are obtained. It is this aid that we wish to extend as far as possible, and we have not thought it unseasonable, now that we are eating the fruits already gathered, to be reminded of past errors, and to guard in time against their repetition.

We might extend our remarks, upon the keeping and ripening of the different varieties of pears, which would occupy more space than we have to spare. For some general hints we must refer to our previous volumes, promising, however, to renew our remarks in another article.

We ought not, however, to omit here to say one word as to the process of gathering pears, which has much to do with their keeping. The pear requires very gentle handling; some sorts are much more delicate in this respect than others. Swan's Orange has a very thin skin, and the least bruise is sure to be followed by decay. Lawrence is another of the same kind. Cleanliness is also essential; pears put into dirty boxes, or boxes not sweet and clean, are sure to imbibe any disagreeable or unpleasant odor, in the course of ripening; if they are to be packed, to be sent any distance, sweet hay, cut short, is the best material, first wrapping each pear

in a piece of soft paper. This will prevent the chafing and rubbing, which is often followed by discoloration of the skin, giving the fruit a spotted and unsightly look. In fact, all pears should be sent away before entire maturity, as it is almost impossible in that state to prevent them from being slightly injured.

We had just concluded our article, when we read the following, in a late number of the *Florist and Pomologist*. Though it refers to the whole subject of storing fruit, it is so seasonable that we finish our remarks by copying it entire, and commending it to the attention of cultivators:—

To gather fruit at the right time, to preserve it in good order, and to ripen it properly, is an art in itself, and one for which considerable accommodation and convenience are indispensably necessary; and yet, strange to say, but no more strange than true, a structure properly adapted for the keeping of fruit is only occasionally to be met with. In many places we find the most wretched make-shift for keeping fruit—a shed, cellar, or loft—the very opposite of those principles upon which a fruit-room should be built. In building a fruit-room, the principal points to be secured are a low uniform temperature, dryness, darkness, and means for thorough ventilation when required. The interior fittings should consist of boarded shelves and drawers. The boards for the shelves should be planed smoothly, and should be fitted close together. In most places it is usual to have the shelves made of narrow laths, with openings of an inch or more between, than which nothing can be worse, as all the finer or tender-skinned pears get marked by the sharp edges of the laths, and in consequence never look well when dished up. All fruit intended for keeping should be most carefully hand-picked. This is one of the most important points to be attended to, as the slightest bruise or injury is fatal to their keeping; and yet it is too common a practice, even when hand-picked, to throw the fruit roughly into a basket, thereby seriously damaging a great portion of it. This is not perceived at the time, but after the fruit has been a short time in the fruit room, the spawn of fungi soon establishes itself on those parts of the fruit which

were injured ; decay takes place long before people are aware of it, and when discovered they are astonished and say fruit keeps badly, not thinking that they themselves are to blame. Fruit should always be handled with the greatest care and gentleness, and not thrown roughly from one basket into another, and then on to the fruit-room shelves. Some people make it a rule to gather the fruit at a stated time every year. This is a great mistake, as it is ready two or three weeks sooner some seasons than others. All fruit intended for immediate use, or that is fit soon after gathering, should remain on the trees until nearly ripe ; but all fruit intended for late keeping should be gathered before ripening proceeds too far, as when fruit once arrives at the proper state of ripening it begins to lose its quality, and ere long it will begin to decay naturally. Every sort should be gathered separately, and all the small, spotted, or shrivelled ones should be put aside ; then the finer ones should be laid carefully on the shelves in single layers, if there be sufficient space for all the fruit ; but, if not, the common sorts may at first be laid two or three or more layers deep, and as the earlier sorts are used they can then be laid thinner. After the fruit is got into the fruit-room no light should be admitted, as it would cause the fruit to lose weight, and would accelerate maturity. Air should be admitted night and day until about the 1st of November ; by that time the sweating of the fruit will to a great extent be over, and the house can be closed. The choicer kinds of pears and apples, after sweating, should be put, when quite dry, very carefully into the drawers. All the sorts should be properly labelled with the date when gathered, and the time they generally ripen at. The whole of the fruit should be carefully looked over every other day, and every fruit the moment the slightest spot or sign of decay is perceived should be removed as, if allowed to remain to decay, the spawn of the fungus will spread in all directions and settle on every fruit that has the smallest speck of injury. During the whole of the winter months ventilation should only be had recourse to when absolutely necessary to carry off any exhalations or impurities that may be in the atmosphere. A uniform, steady, low temperature, with a dry atmosphere, should at all times be main-

tained, and the fruit should be handled or touched as little as possible. By attending carefully to these matters I have never experienced the least difficulty in keeping pears and apples a long time in the best possible condition. Gathering the fruit carefully at the proper time; handling it as little as possible and with gentleness; keeping the atmosphere dry, and maintaining a low, steady, uniform temperature of about from 40° to 45°; looking over the fruit frequently and picking out any that show the slightest symptoms of decay the moment it is perceived;—these are the great points to be attended to and when properly attended to they never fail to give the most satisfactory results.

---

### ONE HUNDRED VARIETIES OF BEANS.

BY MISS LUCY S. BREWER, HINGHAM, MASS.

**MEMORANDA** of 102 varieties of Beans displayed at the exhibition of the Massachusetts Horticultural Society, September, 1864, by Lucy S. Brewer.

1. **BAGNOLET**—(Burr). A variety deserving of general cultivation, but not generally known. A prolific bearer and one of the best for stringing.

2. **BLACK EYED CHINA**—(Burr). Well known and excellent, especially for baking.

3. **BLUE POD**—(Burr). The well known white bean of commerce.

4. **CANADA YELLOW**—(Burr). Recommended as good for shell beans and for baking.

5. **CHILIAN**—(Burr). Not a good bearer, but one of the best for string or shell.

6. **CRESCENT EYED**—(Burr). Better known as "Half-moon." Yields well, good for baking or for shelling.

7. **DUN COLORED**—(Burr). Recommended as a string bean.

8. **RED CRANBERRY, DWARF**—(Burr). Not generally cultivated.

9. **DWARF HORTICULTURAL**—(Burr). Worthy of general cultivation as a shell bean or for baking.

10. SABRE, DWARF—(Burr). A good shell bean.
11. SOISSONS, DWARF—(Burr). Excellent for shelling.
12. RED EYED CHINA—(Burr). One of the best and most familiar kinds.
13. RACHEL, QUAIL'S HEAD—(Burr). One of the earliest ; great bearer ; good for stringing.
14. VALENTINE—(Burr). An excellent string bean, but not early, and badly affected by drought.
15. GOLDEN CRANBERRY—(Burr). Prolific, excellent as a shell bean, or for baking.
16. LONG YELLOW, SIX WEEKS—(Burr). Well known as one of the earliest. Of no other special merit.
17. MOHAWK—(Burr). One of the most common string beans.
18. NEWINGTON WONDER, EARLY SNAP-SHORT—(Burr). Recommended for soups, and as a string bean.
19. PEA BEAN—(Burr). Of great commercial value.
20. POTTAWATOMIE—(Burr). One of the best for shelling or for baking.
21. RED FLAGEOLET—(Burr). A beautiful shell bean, but little known, and difficult to preserve unmixed.
22. RED SPECKLED—(Burr). Good for shelling.
23. REFUGEE—(Burr). A well known variety, excellent either as a string bean, for shelling, or for baking, and very prolific.
24. RICE—(Burr). Good as a string bean, or for pickling.
25. ROB ROY—(Burr). A good shell or baking bean. A great bearer ; bears a drought well.
26. ROUND, SIX WEEKS—(Burr). An old variety, but of no great merit.
27. SOLITAIRE—(Burr). An imported variety, but little known, and of no special value.
28. SWISS CRIMSON—(Burr). A fine shell bean.
29. TURTLE SOUP, BLACK TAMPICO—(Burr). Well known as excellent for soups ; also a good string bean.
30. VICTORIA—(Burr). One of the earliest varieties. A good shell or string bean. Generally confounded by seedsmen with the Dwarf Horticultural.
31. WHITE'S EARLY, FEEJEE ISLAND. The earliest ; good for stringing.

32. WHITE FLAGEOLET—(Burr). Of no particular value.
33. WHITE KIDNEY. An excellent shell bean, good for baking and a great bearer.
34. WHITE MARROW—(Burr). One of the best for shelling or baking.
35. YELLOW EYED CHINA—(Burr). One of the best for baking.
36. CASE KNIFE—(Burr). A well known pole bean, valued chiefly as a shell bean.
37. CORN BEAN—(Burr). A curious old variety, a great bearer, and a good string bean; pole.
38. HORTICULTURAL—(Burr). Pole, a well known and excellent shell and baking bean.
39. INDIAN CHIEF, ALGERIAN WAX BEAN—(Burr). Pole; the best string bean.
40. MOTTLED CRANBERRY—(Burr). Half dwarf, curious but not of special value.
41. MOTTLED PROLIFIC—(Burr). Half dwarf, little known; of no special merit.
42. PRED-HOMME—(Burr). Pole, resembles the "Rice."
43. BAY-STATE. A new white variety, a great bearer, suffers from drought.
44. RED CRANBERRY, POLE—(Burr). An old variety but not among the best.
45. RED ORLEANS. An imported variety; dwarf; seeds from Fearing Burr, Jr., Esq.; resembles No. 63.
46. RHODE ISLAND BUTTER—(Burr). Pole; good bearer, excellent shell bean; suffers from drought.
47. POLE SABRE, SCIMETAR—(Burr). A very prolific, excellent shell bean.
48. POLE SOISSONS, WHITE CLUSTER—(Burr). One of the most abundant bearers; a fine shell bean.
49. WHITE CRANBERRY—(Burr). Pole; an old variety, excellent for shelling and for baking.
50. WILD GOOSE—(Burr). Half-dwarf; of no special value.
51. YELLOW CRANBERRY—(Burr). An old variety, pole, now nearly gone out of use but one of the best for baking or shelling, and a very vigorous and abundant bearer.

52. SNAKE. A curious variety ; seeds from Nourse & Co.; little known and of no special value.

53. LIMA—(Burr).

54. DRAB TAMPICO. Seeds from Thorburn ; a new soup bean of great value ; excellent for stringing.

55. NEW MOTTLED. (Thorburn's catalogue for 1863). A new pole-bean of great promise ; of vigorous growth ; wonderfully productive, and probably valuable for any form of use. Requires a late season for its development.

56. SCARLET RUNNER—(Burr). A well known flowering variety ; pole.

57. PRAGUE'S PINK. An imported variety ; seeds from F. Burr, Jr., Esq.; resembles Dwarf Horticultural, but is sufficiently distinct in size and growth.

58. WHITE RUNNER—(Burr). Pole, well known.

59. SIEVA—(Burr). One of the best of shell beans.

60. MOTTLED SIEVA—(Burr). A curious variety of 59.

61. A new variety, dwarf, prolific and probably a good shell bean, but objectionable for color, which is black.

62. THOUSAND TO ONE. A variety of 23, but constantly distinct in its markings ; of equal excellence.

63. SCARLET ORLEANS—(Burr). Pole ; very early ; excellent in all respects ; seeds hardly distinguishable from No. 45.

64. PRAGUE'S SCARLET. Imported ; seeds from F. Burr, Jr., Esq.; probably a variety of No. 44.

65. FRENCH FLAGEOLET. Seeds from F. Burr, Jr. ; probable origin of No. 16.

66. GANNETT. A new variety, pole, value not ascertained.

67. CALIFORNIA. Seeds from Hovey & Co. ; pole ; an excellent shell bean.

68. RED AND WHITE. A new variety, equal to the Horticulturals in all respects ; dwarf.

69. WHITE, SPOTTED RED. Pole, new, resembling Horticultural in its quality.

70. LONG HORTICULTURAL. Pole, new variety, of great promise ; vigorous and productive ; a good shell bean.

71. PURPLE MARROW. Another variety of 23, smaller, brighter colored, and equalling in all respects.



72. **BROWN AND YELLOW.** A new pole bean, value not tested.
73. **BLUE AND DRAB.** A new pole variety, value not ascertained; very productive.
74. **BROWN SABRE.** A new pole bean, probably of no particular value, very productive but late.
75. **LONG HORTICULTURAL.** Dwarf, new; promises to be valuable for shelling.
76. **RED MOHAWK.** Common in seed stores, where it is often sold as the genuine Mohawk; probably a cross between 20 and 23; of no great value.
77. **CONCORD.** A new pole variety of great value; seeds from O. Ames & Co.; great bearers, excellent for shelling, and a fortnight earlier than the Horticultural.
78. **PURPLE AND WHITE.** A new variety of pole; value not fully ascertained; probably a good shell bean.
79. **LONG-PODDED NEGRO.** Seeds from Patent Office; a variety new to this country, but cultivated in Europe as a string bean and for soups.
80. A new variety, value not ascertained; dwarf.
81. A new, fine, glossy black bean, pole, productive.
82. **BROWN CRANBERRY.** A common bean, sold very generally as the dwarf Red Cranberry, but quite distinct; the earliest bean, but with no other special merit.
83. A new drab colored dwarf variety; value not ascertained.
84. **MOTTLED LIMA—(Burr).** A curious variety of 53, resembling it in all its other properties.
85. **ASPARAGUS BEAN—(Burr).** A curiosity for its long pods, but of no special value.
86. A new variety, resembling 23.
87. New, resembles 66; not valuable.
88. **IMPROVED MOHAWK.** Seeds from Hovey & Co.; vigorous grower, endures dry weather well, good for string.
89. **SLATE COLORED.** New, of no particular value.
90. **NONPAREIL.** An exceedingly valuable new variety, seeds from Thorburn, N. Y. A fine vigorous grower, abundant bearer, endures drought well, and excellent either for string, shell, or baking.

91. CHINA YARD LONG. Interesting only as a curiosity, not valuable; seeds from office of the Agriculturist.

92. THE MAIZEA. A new importation; its properties not ascertained; seeds from Agriculturist, N. Y.

93. TOWER'S PURPLE. A valuable new variety, pole, excellent for shelling, a great bearer.

94. BLACK MEXICAN. A variety of dolichos; seeds from Patent Office; recommended for soups.

95. EXCELSIOR. A new variety; resembling 14; seed from F. Burr, Jr., Esq.; excellent string bean.

96. New, pole, value not tested.

97. New variety, pole, merits not known.

98. New, value not ascertained; dwarf.

99. A beautiful new variety, dark mulberry color, pole.

100. A new pole variety, purple and drab.

101. New dwarf, light drab colored variety.

102. PAINTED-LADY RUNNER, VARIEGATED RUNNER—(Burr). Valuable only as a flowering bean.

We feel highly pleased in presenting our readers with the above account of one hundred and two varieties of beans, embracing among the number several new sorts never before described, and some of which appear to possess valuable properties. Specimens of all these were exhibited at the annual show of the Massachusetts Horticultural Society, held in September last, and attracted much attention, not only for their intrinsic merit, as displaying the difference in form and color of the several kinds, but more especially as having been the contribution of Lucy S. Brewer of Hingham, a young Miss, whose health requiring that she should be as much in the open air as possible, turned her attention to the production of specimens of all the different varieties of beans she could procure, affording as it did, in watching their varying growths, shape of pod, form and color of the beans, not only a source of instructive recreation throughout the summer, but the opportunity to add much useful information upon this valuable vegetable. With the aid of her father, Dr. T. W. Brewer, many of the new kinds have been well tested and briefly described, whose qualities might otherwise have remained un-

known, and their value for cultivation at least continued doubtful.

Mr. Burr, in his *Field and Garden Vegetables of America*, has rendered a good service in identifying and describing upwards of seventy varieties, and his authority is given for all enumerated by him. The additional kinds are from various sources, that are given when known, and some of them received without name. Undoubtedly Mr. Burr will add many of them to the new edition of his book. We are highly gratified to make this early record of Miss Brewer's labors in our pages.—ED.

---

## ORCHARD-HOUSES.

BY T. RIVERS.

THOUGH these are yet objects of experiment with our cultivators, and their real value in our climate still undecided, yet they have been so popular in Great Britain, and the many little obstacles to their complete success so thoroughly overcome, that we gladly avail ourselves of the experience of those who have been giving their attention to them. Of those who have done so, none have greater claims to notice than Mr. T. Rivers, our correspondent, the well known nurseryman of Sawbridgeworth, whose articles on these, as well as other matters connected with fruit growing, we have so often given in our pages. It is therefore gratifying to present a continuation of his long experience in orchard-house structures, from the *Gardeners' Chronicle*, giving, as he does, good and sufficient reasons for any alterations or improvements upon the plans already detailed by him. His views upon the best form and size of orchard-houses are valuable, and will be duly appreciated by all who are erecting such structures, and who find, amid the varied opinions of those who write much but practice little, great difficulty in coming to a satisfactory decision. We commend most heartily Mr. Rivers's advice. It is refreshing to find one English cultivator coming up so near to our American views of things; and to hear him denounce the prejudices

which exist amongst his countrymen, all being one routine of work, without as he truly says any "freedom of thought:"

This is the fourteenth year of my orchard-house culture, and I can truly say the fourteenth of unvarying success—of pleasurable cultivation. During that period much has been said for and against this most simple mode of growing fruit in an artificial climate; prejudice has, as usual with all new cultural modes, been very active, and even now sways some really good gardeners, for it is but a few days since that I heard of a very skilful grape-grower having said, on being shown a house full of healthy trees, "It is of no use,"—meaning orchard-house culture; and R T., one of my old friends, prunes his wall trees in cold weather in February, protects their blossoms in March, and when he happens to have a good crop he also says, "no other mode of culture can equal wall-tree culture."

Such men have always existed in England, and their ranks will never lack recruits as long as some men move on in one limited routine of thought and action. They are to be excused, for what can be more perfect than a well-appointed nobleman's garden, with fine walls well furnished with trees, Peacheries, Pineries, and Vineries? All is done well, and success is perfect. A good gardener educated under such circumstances feels that nothing more is wanted, and accordingly looks down with a degree of contempt on all other modes of culture. I sometimes endeavor to place myself ideally in the same position, and am more than half inclined to think that I should do likewise; so when I hear of an experienced gardener saying of orchard-house culture, "It is of no use," I freely forgive him, and only regret that he has not been able to acquire freedom of thought.

I find I have rambled from my intention, which was merely to give you in a few lines some account of the progress I have made in this mode of culture, flattering myself that at least some of your readers will feel interested in my ways and words. And first, with regard to the form of those structures called orchard-houses: there are two, the lean-to and the span-roofed. For a few years I was quite successful

in growing good peaches and nectarines in low lean to houses, and I perfectly remember having seen some fine trees full of fruit in 1854 in the garden of Mr. T. Bewley, at Rockville, near Dublin, grown in low lean-to houses built with boards and asphalte felt; he has long repudiated such structures, and now calls them by the undignified name of "shanties," thus scorning his first love. Well, I soon found that much care was required to keep trees in health in such houses, and so turned to the span-roofed form, which, as a rule, I believe to be the most perfect of all for fruit-tree culture, owing to the facility with which low lateral ventilation—the great essential of orchard-house culture—can be carried out. As all my numerous houses are thus ventilated, and all are without roof ventilation, I am able to lay down some rules with the confidence gained by experience, for more healthy or more luxuriant trees were never seen than those cultivated here—no red spider ever making its appearance, even during the hot and dry weather of the past summer.

The amount of ventilation required for houses of different widths is as follows:—A span-roofed house 14 feet wide (no house should be of less width) should have a continuous shutter 1 foot wide on each side opening downwards, the lower part of the aperture 18 inches from the ground. A house of this width should be from 5 to 6 feet high at the sides, and from 10 to 12 feet high to the ridge. A span-roofed house from 18 to 20 feet wide should have a continuous shutter on each side 15 inches wide. A house of the same form 24 feet wide should have a shutter 18 inches wide. A house 30 feet wide should have a shutter 2 feet wide. A house 40 feet wide should have one  $3\frac{1}{2}$  feet wide. In all these cases the shutters should be continuous, to be made to open downwards, and the bottom of the aperture should be not more than 20 inches from the surface of the ground outside and inside. I have not yet seen a single span-roofed house 40 feet wide, and I am not aware of any advantage to be derived from so wide a structure, but with sides from 8 to 9 feet in width, and low ventilating shutters 3 or  $3\frac{1}{2}$  feet wide, I have but little doubt of their success. The great object is to have the two low lateral currents of cool air to

come in with sufficient force by their own gravity, so as to meet in the centre of the house, the large body of air to become rarefied, and ascend to the roof through the leaves of the trees, and then to make its escape through the small triangular apertures under the gable at each end. So apparent is this ingress of cool air in a sultry sunny day, that the centre of the house is always agreeable, although the temperature may be from 80° to 95°.

My favorite width for houses—favorite because of the perfect success attending the culture of the trees in them—is 24 feet; these houses are 5 feet high at the sides and 12 feet to the ridge, but from closely observing the fine robust and healthy growth of my trees, although in pots I am quite inclined to recommend a greater height, say 8 feet at the side and 15 feet to the ridge. The truth is, my ideas of the extent to which orchard-house culture may be carried have, like my trees, grown slowly but healthily, and I can now see no reason why a peach tree cannot be grown in an orchard-house, so as to bear a bushel of fine fruit.

With respect to the culture of trees in pots, or planted in the borders of orchard-houses, a few words, the result of several years' experience, may not be out of place. Trees in pots require a considerable deal of manual labor in watering, unless, as should be the case, the water is laid on so that a hose can be used; but they are so convenient for forcing or retarding, that their use will never be discontinued. The great fault of most cultivators is the not feeding them sufficiently; scarce any surface dressing can be too powerful, but the best ever yet discovered is the compost so often recommended—horse droppings and malt or kiln dust, equal quantities well mixed—spread out and then saturated with strong liquid manure; it should not be made into a ridge or heap, for then fermentation is so violent that the smell is perfectly intolerable. This compost, used as a summer surface dressing, commencing in May, and renewing it three or four times till the end of July, has a most remarkable effect. The trees seem to be gifted with reason, they do not attempt to root through the pots at bottom, but seem instinctively to come upwards and feed upon the compost till every portion of it is

full of fibres, forming a circular ridge round the pot on the surface. To every fruit tree in cultivation I have found this summer surface dressing acceptable; but mark! this strong compost brought into immediate contact with the roots would doubtless injure them to a great extent; it should be employed solely as a surface-dressing, while trees are in full growth. Fruit trees in pots are too often seen in a state of semi-starvation, owing to a lack of food—their fruit small, their leaves and shoots weakly; rich surface food will remedy all these defects, and make potted trees a great source of pleasure to the cultivator.

With some amateurs there is still an open question whether to plant all the trees required for an orchard-house in the borders, or to plant, *i. e.*, cultivate them in pots. For some few years I have closely watched both modes of culture, and at last feel that I can give a more decided opinion than I have ever yet done. In large span-roofed houses, *i. e.*, in houses 18 feet wide or upwards, with a central walk and a broad border on each side, trees may be planted in the borders with advantage; the only condition required is solidity of soil—a peach tree would grow and bear better in the centre of a turnpike-road, than in the deepest richest and most fertile border of a kitchen garden, if light and dry. It will, perhaps, be better that I describe what has been done here rather than give directions as to how a peach border in an orchard-house should be prepared. The soil on which my houses are built is a stiff calcareous loamy clay; this has been under nursery culture for upwards of a century, and not made rich by frequent manuring. Well, after the houses were built, the surface of the soil looked very solid from the trampling of the workmen; it was not stirred or dug in any way, but some holes 2 feet in diameter and 18 inches deep were dug. In these some standard and half-standard peaches were planted, some rotten manure being mixed with the soil in filling it in; some five or six gallons of water were given to each tree, when the roots were covered with soil, and then the remainder filled and left for a day till the water had soaked in; the earth round each tree was then firmly trodden down, and the work considered as finished. They now

stand in a firm, unbroken floor, and the only culture they have had is to stir the soil 1 inch deep round each tree in June, when the fruit is swelling, and spread over the circle a shovelful of rotten dung, merely to absorb and prevent the water running off as it otherwise would do.

They have no water from the end of September till early in March, when the blossom buds are swelling, and then water is given once a fortnight, till hot weather in June, when a good sound watering, say three gallons to a tree once a week, enables them to ripen their fruit in perfection.

The best description of tree to plant in span-roofed houses is the half-standard, with a stem about 4 feet in height. They have this advantage, their heads can be looked over, and the young shoots pinched in, and directed. The pinching need not be so close as for potted trees; six or eight leaves may be left instead of three, as in potted trees. In lofty houses, if the amateur wishes to form an avenue, and to walk under the shade of his peach trees, tall standards may be planted, but they are not so agreeably pruned or tended to as half-standards; the latter soon form fruitful umbrageous heads, and as I have proved are most satisfactory. These trees may be planted from 10 to 12 feet apart, and till their heads become large, pyramids in pots may be placed among them.

Pyramids are not eligible for planting out; the sap will go to the head, so that the lower branches become unfruitful and weakly; but cultivated in pots and their young shoots pinched in, they form the most beautiful of all trees; in fact I know of no fruit tree more attractive than a well managed pyramidal peach tree, full of fine fruit. If the soil be poor and hungry, the surface dressing recommended for potted trees may be given to those planted out, two or three times during the summer. Here, all our variations of soil, from loam to sand are full of comminuted chalk, and to this I impute the great luxuriance of all my stone-fruited trees. The three great requisites for the successful culture of orchard-house trees are solidity of soil, a calcareous soil, and a rich summer surface-dressing; the latter seems like nutritious food to animal life, and a common expression here in June is: "the trees require some fresh dressing, they have eaten up all they had in May."



The best description of trees for lean-to houses are bush trees in pots for the front border, and pyramids in pots for the border at the back of the house. The objection to lean-to houses is the difficulty of having a continuous ventilating shutter in the back wall at a low level, and the same height from the ground (18 inches) as the front. Sliding shutters to a certain extent may do, but I believe failures have often taken place from the lack of two continuous currents of air entering the house simultaneously. Lean-to houses should never be narrow—never less than 12 feet wide. I have seen a good and careful gardener fail in orchard-house culture in lean-to houses only 6 or 8 feet wide, in spite of his utmost care; it would seem that the draught of cool air is too sharp, the changes of temperature too sudden. I have a strong idea that the failure in apricot culture in orchard-houses is generally owing to the nature of the soil; here, they prosper and bear annually large crops of fine fruit, and trees, now some 12 or 14 years old, are more fruitful than ever; this is doubtless owing to our calcareous and rather stiff loam. Would it not, therefore, be advisable for cultivators who have loams non-calcareous, to mix powdered chalk with them? I think so.

---

#### ARBORICULTURAL NOTICES.

NEW JAPANESE SHRUB.—Mr. Standish has recently exhibited another most beautiful Japanese evergreen, with berries of the brightest vermilion red, and which is said must become a valuable acquisition for English gardens and shrubberies. Like the *Aucuba* it is one of Mr. Fortune's discoveries, and is a species of *Skimmia* (*S. oblata*), which promises to be remarkably distinct from all other *Skimmias*, as yet known, in the remarkably oblate figure of its bright red berries, so obviously different from the dull red oblong fruits of the *Skimmias* we have heretofore possessed. It is also remarkably distinct in its foliage, which is of a different texture, as well as in its habit, from the other species known to us. It is a free grow-

ing shrub, with dense clear green leaves, the panicles of light colored berries nestling among the foliage at the ends of the branches, and it is stated, unlike the other species, to bear exposure to the sun. The parent plant was shown on the 27th September, at the meeting of the Floral Committee, and received the unanimous and unhesitating award of a first class certificate.

**VARIEGATED OSAGE ORANGE.**—Mr. Hohen of Baltimore has sent us some very beautifully variegated leaves of the Osage Orange, from an accidental seedling growing on his grounds near Baltimore. The leaves were very conspicuously blotched and spotted with white, which variegation, quite unlike many of the so called variegated plants, stands our hot sun, and does not return to the green color of the parent. It is a distinct and pretty tree.

**LONICERA AUREO RETICULATA**, the golden netted leaved Japan honeysuckle, is one of the most valuable acquisitions. Aside from its beauty as a climbing plant, it forms a beautiful carpet, or groundwork of elegant foliage, planted in flower beds or among shrubs and plants. In this way it has been extensively used in London the past year. It has also been found a most effective and chaste edging. In another way, it comes into use as an object for ornamenting some greenhouse and stove plants, its delicate foliage twining up and covering the lean stems of *Dracænas* and similar objects. As a specimen plant handsomely trained upon a neat trellis it is highly ornamental.

---

#### POMOLOGICAL GOSSIP.

**FINE GRAPES.**—At the exhibition at the Crystal Palace in September many superb specimens of grapes were exhibited, of which we find the following report :

The grapes were wonderfully fine, especially Black Hamburgs, three bunches of which weighed together 11 lbs., 4 oz., were contributed by Mr. Meredith of Garsten. The basket of 12 lbs., from the same excellent grower, was also equally

good ; and beautiful fruit of Lady Downes also came from Mr. Wills and Mr. Henderson of Trentham. Of white grapes the best three bunches were furnished by Mr. Dwerrihouse, gardener to Viscount Eversly. The same exhibitor had also a bunch beautifully formed of the same sort, a seedling, which weighed 5 lbs. This was shown as the largest single bunch of any kind. It was, however, beaten by Child of Hale, a new variety, from Mr. Meredith ; the latter weighed no less than  $8\frac{1}{2}$  lbs. Marchioness of Hastings from Mr. Henderson weighed 4 lbs., 14 oz. ; and Muscat Hamburg from Messrs. Lane,  $4\frac{1}{2}$  lbs.

We record these accounts of superior grapes to show our cultivators to what perfection grape growing is carried by the English gardeners, and how much they have to accomplish before they can come near up to the standard now established. Muscat Hamburgs  $4\frac{1}{2}$  lbs. ! truly such clusters must have been remarkable.

NEW SEEDLING GRAPE.—We have not yet got to the end of the new grapes, for which, in the form of seedlings or foundlings, the last few years have been remarkable. Only the other day at South Kensington, Mr. Wm. Paul exhibited one which, so far as can be judged from cut fruit, promises to take the highest rank of merit. It has the Hamburg character of bunch and of berry, and something of the Hamburg's flavor, but with this is combined most distinctly that of the Frontignans. It is described as a cross between the Hamburg and Frontignan, and this its peculiar flavor seems to confirm. The only drawback to this new grape is its color, which is of a rather reddish grizzly hue ; but we suppose that, after all, the test of a grape lies in its flavor. Its large rich succulent berries will place it on a par with the Muscat Champion, or, as it was formerly called, the Champion Hamburg Muscat, which indeed it somewhat resembles in its outside aspect. We believe this, like the variety just mentioned, originates in the North.

DISCUSSION ON GRAPES, at the meeting of the American Pomological Society. As it will undoubtedly be some time before the proceedings of the last meeting at Rochester will be published, we embrace the opportunity to copy a very accu-

rate report of the discussion upon grapes from the Genesee Farmer, believing that the information will be interesting, and aid cultivators in their selection of kinds for fall or spring planting. This report will be found in another page.

**NEW APPLES.**—So numerous are the varieties of this fruit that it seems hardly necessary to record them, passing as they do out of memory, and hardly existing only in pomological works. Yet we cannot well omit the notice of such as appear to possess merit, that enthusiastic amateurs, who have plenty of time and room, may give them a trial. The following we find noticed in our gardening journals :

**ALL SUMMER APPLE.**—From Conestoga, Lancaster Co., Pa. Introduced by Caspar Hiller, a few years since, who named it All Summer from the fact of its being in use from 20th of June till September. A handsome grower, regular bearer, not failing in five years. The trees commence bearing in the nursery, and seven apples have been counted on a four year old tree, which was growing as thriftily as any others around it that had none on. Fruit, small to medium size, nearly round ; skin, greenish white, very clear pale blush tinge on the sunny side ; stalk, half an inch long, deeply imbedded ; calyx, small, closed, set in a deep regular basin ; flesh, very white, delicate, crisp, juicy, with a pleasant vinous but not high flavor. June to September.

**PITTSWON APPLE.**—Introduced by Mrs. Van Namee of Pittstown, N. Y. The editor of the Country Gentleman says he has given it a fair trial, not only as a table fruit, but for stewing and baking, and it appears to be a fine variety. It appears to be intermediate between the Fall Pippin and Fall Orange. It is of rather large size, measuring three inches in diameter, each way, roundish, slightly oblong, handsome, smooth, and regular ; skin, light yellow, often with a fine blush ; stem, in a wide and deep cavity ; calyx, with long segments in a wide wrinkled basin ; flesh, yellowish white, tender, mild, sub-acid, slightly spicy, with a good or very good flavor.

**WINFIELD APPLE.**—Described by Mr. S. Foster of Muscatine, Iowa, as one of the handsomest apples he has ever seen, and so say all who have seen it. It is a seedling, the original tree

standing in Mr. Winfield's orchard, in his neighborhood. Tree, pyramidal shape, top high, lower branches spreading, thrifty, and quite hardy, having stood many of the hard winters of Iowa uninjured; quite productive, a fine crop every year, and some years a very large crop. Fruit, medium size, very round and fair, somewhat resembling Maiden's Blush, but not as oblate, nor as deep a blush, and more of the white waxen appearance—most beautiful; flesh, tender, pleasant acid, very good for cooking, best even in July when two-thirds grown. Sells readily, and considered the best market apple for August and September.

**GREAT YIELD OF CONCORD GRAPES.**—Mr. Jobe of Clay, Washington Co., Iowa, raised this year, on half an acre, containing 800 vines, five years old, 8,665 pounds. He had the proof of this crop with him, and expected to get a special premium from the Discretionary Committee of the State Fair, for this most extraordinary crop of Concord grapes. He has about 4 acres, set mostly with Concord. His yield of wine, with some select lots, was a gallon to a little over eleven pounds, but the average, was about a gallon to fourteen pounds. A portion of his grapes were sent to Chicago and sold at 15 cents, netting him at home, 12½ cents per pound.

**THE SHELDON PEAR** is, just now, after a period of a dozen years, becoming generally known. It has been remarkably fine the present season, as indeed it always is, if the fruit is gathered in time, and ripened in the house. It may, we think, be set down as surpassing any other pear of its season, at present known, not excepting the Seckel. Specimens this year have weighed nearly a pound each.

**THE KITTATINY BLACKBERRY.**—This is the name of a new variety, about to be introduced to notice. It has been cultivated a few years, having been found in the mountains of that name. In the habit and vigor of the plant it resembles the Lawton, and is a most profuse bearer. The foliage is more coarsely serrate than the former, and the berries are longer and more irregular, some of them measuring one and a half inches long, and three inches in circumference. This description very nearly corresponds with the Dorchester, and like that kind, the berries are sweet, before they are quite

ripe, and are in eating, at the same time, viz. : from the last of July, to the end of August. Probably it may be a desirable variety.

**THE PETERS PEAR.**—A new pear, raised in 1848, from the White Doyenné, by Rev. Absalom Peters of Williamstown, Mass. It is perfectly hardy, a vigorous grower, an abundant bearer, and gives crops every year. It bore the present year over a bushel of fruit. The pear ripens in Williamstown the first week in August, at the time of the Madeleine. It is, however, said to be a much better pear, about the size of the Tyson, highly colored, and promises to be one of the best early summer pears. Rev. Mr. Clift, who describes it in the *Agriculturist*, says it is pronounced by competent judges, very good, if not best.

**GRAPES IN THE HORTICULTURAL SOCIETY'S GARDEN.**—Among other things, the grapes in the large conservatory, demand a word of commendation; they have been equally fine this year as in former seasons, and although now half cut, many beautiful specimens remain yet to be seen. Conspicuous among them are bunches of Barbarossa, some of which weigh as much as 6 pounds, and measure 18 inches across the shoulders, and as much in length. This variety, grafted on the Black Hamburg, produced more compact, and better colored bunches, than on its own roots, as well as ripening earlier. Indeed, so compact and handsome are they, treated in this way, that they might easily be mistaken for Hamburgs. The Muscat Hamburg, grafted on the Syrian, although larger in the berry, is, however, inferior in flavor, to fruit of the same kind on its own roots. Burchardt's Prince, as yet comparatively little known, is well worth attention. It is a valuable late grape, with a fine, vinous flavor, and is a good cropper. Golden Hamburg, has done well here this year, some of its bunches weighing as much as 2½ pounds, each, and they are very perfect, both in shape and color. Among Hamburgs, decidedly the best is the Frankenthal, large, finely colored bunches of which, nestling in the most natural way possible among the still bright green leaves, may yet be seen against the upright east end of this, in all respects, magnificent grapery.

## THE HOVEY PEAR.

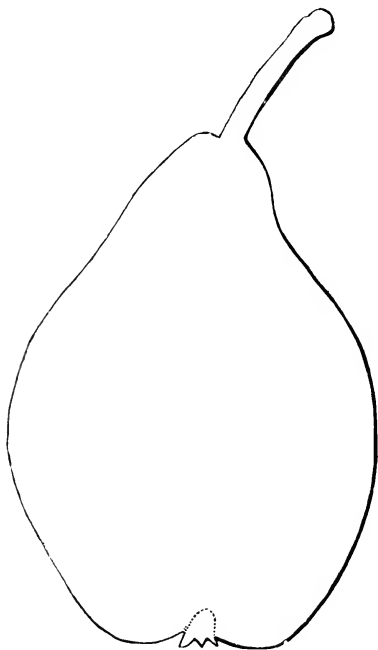
BY THE EDITOR.

A few years since we received from A. Leroy, through M. Desportes, a brief account of three new pears which had been raised or introduced by his establishment, which he had dedicated to his American friends, Messrs. Downing, Barry, and C. M. Hovey. They were described as fine pears, and worthy of introduction into our collections of this fruit. From A. Leroy we received trees of each kind, which were planted out in our specimen grounds, and all of them have borne fruit. The Downing, grafted into a large tree, first fruited, and we have already described and figured it in our pages, but either from having been put upon a poor stock, or the variety being a weak grower, it has not made much progress, nor produced any fruit since it first bore in 1860. The Hovey was also grafted into a large tree, which promised to be unusually vigorous, and the grafts grew so rapidly that the tree did not fruit until 1862; and the specimens were then so indifferent, and did not ripen up, that we could not judge of its merits. Last year we had a fair crop, and when ripe, made a description of the fruit, but omitted to take a drawing; the present year the tree again bore well, and we are now enabled to give both drawing (FIG. 14) and description of this very excellent late pear.

In general form and appearance it somewhat resembles the Dix, but is more regularly oval, with a slight neck; the skin is also smoother, and not speckled; but we name the Dix, by way of giving a general idea of its shape. It ripens in December and January, keeping well, and, when mature, has the same solid, yet melting texture of the Dix. It has every appearance of being a most valuable variety.

Our trees, received from Leroy, were upon the quince, but we do not think it suited to that stock, as they are now, after so long a time, rather stunted trees, and have borne very little good fruit, while that from the large grafted tree has increased in size. We therefore consider it not well suited to the quince. Our description is as follows:

Size, large, about three and a half inches long, and two and a half in diameter; Form, oblong oval, regular, large about the middle, rounding off to the crown, and tapering to the stem; Skin, fair, smooth, clear, shining green, becoming quite yellow at maturity, with a slight blush on the sunny side, and dotted with a few minute specks; Stem, medium



14. THE HOVEY PEAR.

length, about an inch long, moderately stout, and inserted without any cavity; Eye, small, closed, and set in a small, very shallow basin; Calyx, short, stiff, projecting; Flesh, yellowish white, rather firm, melting, with a rich, slightly perfumed juice; Core, medium size; Seeds, medium size, broad, obtusely pointed, brown. Ripe in December and January.



This pear, it will be remembered, is the Hovey pear of Leroy, quite distinct from Dana's Hovey, which was so called to distinguish it from the former, introduced about the same time.

The Barry proves to be a pear already introduced, and known as St. Mismere, in some collections, though we have never seen any authentic description under that name. The same error occurred with the Omar Pacha, introduced by Leroy, which proved to be an old pear that we received from Mr. Jamin in 1845, as the St. Menin.

It is at least gratifying to know that the Hovey of Leroy proves to be a most excellent pear, and we now publicly thank Mr. Leroy for the honor he has conferred upon us in associating our name with so fine a fruit.

## General Notices.

**PRUNING SPIRÆAS.**—According to M. Billard Fils there is an art in *Pruning Spiræas*. These beautiful shrubs are divisible, he tells us, into two distinct classes, according to the pruning they require. Generally, he observes, all spiræas without distinction are pruned—or rather sheared, for few take the trouble to prune them—during the winter; but this practice involves the loss of the flowers of certain species which blossom in spring. For this very sufficient reason, he argues that there should be two periods for pruning: one at the beginning of spring for those species which flower upon the buds of the same year, and the other immediately after the flowering season, for those which form their flowers upon branches of the preceding year. The following species, with their varieties, should, according to this view, be pruned at the beginning of spring, namely:—*S. salicifolia*, *Billardii*, *canadensis*, *Douglasii*, *callosa* or *Fortunii* (of which M. Billard mentions the varieties *paniculata*, *alba*, and *foliis variegatis*), *eximia*, *californica*, *tomentosa*, *rosea grandiflora*, *floribunda*, *corymbosa*, *Regeliana*, *semperflorens*, *pachystachys*, *Nobleana*, and *Gonthierii*. On the other hand, the following sorts should be pruned immediately after flowering:—*S. thalictroides*, *sorbifolia*, *pikowiensis*, *ariæfolia*, *Nicondertii*, *aquilegiæ folia*, *sinensis pendula*, *expansa nivea*, *Lindleyana*, *opulifolia*, *lævigata*, *bella rosea*, *prunifolia*, with its double-flowered variety; *ulmifolia*, *pubescens*, *crenulata*, *cana*, *adiantifolia*, *chamædrifolia*, *Blumei*, *Kamoun*, *rupes-tris*, *alpina*, *ablongifolia*, *amœna*, *hypericifolia*, *procumbens*, *grandiflora*, *speciosa*, *confusa*, *Thunbergii*, and *Hookeri*.

## Societies.

### CAMBRIDGE HORTICULTURAL.

The Third Annual Exhibition of this Society was held in Cambridge, at the City Hall, on Tuesday and Wednesday, the 30th September, and October 1.

The exhibition, though not quite so large as last year, was remarkably good for the season, and some of the specimens of fruit unusually fine. The grapes excelled last season owing undoubtedly to the absence of frost, and the fine weather which ripened up the crop so that even Isabellas and Catawbas were quite mature.

The whole number of entries for fruits, flowers and vegetables, was upwards of 80. Messrs. Hovey & Co. sent 100 varieties of pears; H. Vandine upwards of 50, and numerous collectors, from 10 to 20 varieties. Flowers, owing to the lateness of the season, were not numerous, though the asters and dahlias were fine. Messrs. Hovey & Co. had a fine lot of plants in pots, and cut flowers in variety. The tomatoes and Yokohama squashes were unusually large. We briefly notice the pears and grapes, the prominent objects of the exhibition:

**PEARS.**—There were many remarkable specimens of these. Six entries were made for the class of 10 varieties; 11 for the class of 5; and 25 for the single dishes. Among them were superb specimens of Beurré d'Arenberg, from R. Lamson; B. Diel, from J. C. Chas., Alderman Dickinson, J. Livermore, and M. Griffin, weighing about a pound each; Seckels, from E. M. Dunbar, Hovey & Co., I. Fay, and Hyde; Beurré Bosc, from C. L. Harding, and J. Eaton; De Tongres, from J. Haley; Sheldon and Moore's, from Hovey & Co.; Beurré Clairgeau, from J. Eaton, and I. F. Brackett; Bartlett, from J. C. Stiles, 12, weighing 8½ pounds. The best 10 came from Hovey & Co., who had Urbaniste, Doyenné du Comice, Moore's, B. d'Anjou, B. Hardy, Flemish Beauty, Bartlett, Sheldon, Swan's Orange, and Belle Lucrative. The best 5, from J. C. Stiles, who had Bartlett, B. Diel, B. d'Anjou, Duchess, and Louise Bonne of Jersey.

**GRAPES.**—Ninety dishes of grapes were exhibited, embracing the Adirondac, Rebecca, Delaware, Diana, Concord, Union Village, Isabella, Catawba, Harrington, (new), Clinton, and others; all well ripened, and the specimens large and fine. Cambridge is becoming as famous for its grapes as its pears; and our zealous cultivators are determined to show all the fine kinds. The Harrington, a new grape, from Hovey & Co., was excellent, and earlier than the Concord; berry reddish, like Diana. The Isabellas, from J. V. Wellington, were very large; Concords, from several contributors, all fine, and of Delaware and Rebecca, beautiful specimens.

The awards for fruit were as follows:

**PEARS.**—For the best 10 varieties, to Hovey & Co., \$4.

For the next, to A. Dickinson, \$3.

For the next, to Davis & Bates, \$2.

For the best 5 varieties, to J. C. Stiles, \$3.

For the next, to Lewis Wheeler, \$2.

For the next, to Hyde & Watriss, \$1.

For the best dish of Louise Bonne, to J. Haley, \$1.

For the best Seckel, to Hyde & Watriss, \$1.

For the best Swan's Orange, to E. H. Locke, \$1.

For the best Duchess, to Hyde & Watriss, \$1.

For the best B. Diel, to A. Dickinson, \$1.

For the best Winter Nelis, to A. Dickinson, \$1.

For the best Sheldon, to Hovey & Co., \$1.

For the best Marie Louise, to I. Fay, \$1.

For the best Beurré Bosc, to J. Eaton, \$1.

For the best Lawrence, to J. C. Chase, \$1.

For the best Urbaniste, to J. C. Park, \$1.

For the best of any other sort, to R. Lamson, for B. d'Aremberg, \$1.

GRAPES.—For the best Isabella, to J. V. Wellington, \$1.

For the best Concord, to E. Hyde, \$1.

For the best Delaware, to Dr. H. L. Chase, \$1.

For the best Diana, to Hovey & Co., \$1.

For the best of any other sort, to Hovey & Co., for Union Village, \$1.

Numerous gratuities were awarded for pears, grapes, apples, and peaches. Premiums and gratuities were also awarded for flowers, plants, &c., but we have no room for a report.

MISCELLANEOUS.—Very beautiful specimens of wax flowers were exhibited by Mrs. E. S. Leland, which were greatly admired. Seed wreaths, of much beauty. Tobacco plants, of huge size, grown by Master Walter A. Burlingame.

The exhibition was highly successful. The number of members has increased considerably, and there appears a strong desire among the zealous cultivators of Cambridge to maintain its supremacy in fruit culture, particularly in pears and grapes. The society now numbers more than 100 members, and, with a valuable library, it is hoped there will be large accessions, which will render it highly influential in promoting a taste for horticulture in the neighborhood of Boston.

---

## Massachusetts Horticultural Society.

SATURDAY, OCTOBER 3, 1864.—The stated quarterly meeting of the Society was held to-day—the President in the chair.

The meeting was for the choice of officers, for the ensuing year, and the following gentlemen were unanimously elected:

*President*—Charles M. Hovey, of Cambridge.

*Vice Presidents*—J. F. C. Hyde, of Newton; C. O. Whitmore, of Boston; W. C. Strong, of Brighton; H. Hollis Hunnewell.

*Treasurer*—William R. Austin, of Dorchester.

*Corresponding Secretary*—Eben Wight, of Dedham.

*Recording Secretary*—F. Lyman Winship, of Brighton.

*Professor of Botany and Vegetable Physiology*—John L. Russell, of Salem.

*Professor of Zoölogy*—J. W. P. Jenks, of Middleboro'.

*Professor of Horticultural Chemistry*—A. A. Hayes, of Boston.

*Executive Committee*—The President, Chairman; the Treasurer, Marshall P. Wilder, J. S. Cabot, Joseph Breck.

*Committee for Establishing Premiums*—Chairman of Committee on Fruits, Chairman; Chairmen of Committees on Flowers, Vegetables, and Gardens, Parker Barnes.

*Committee on Finance*—Josiah Stickney, Chairman; Marshall P. Wilder, C. O. Whitmore.

*Committee on the Library*—Francis Parkman, Chairman; William H. Spooner, Jr., G. W. Pratt, R. McCleary Copeland, L. Wetherell.

*Committee on Ornamental Gardening*—W. R. Austin, Chairman; W. C. Strong, H. Weld Fuller, F. Lyman Winship, Chairmen of Committees on Fruits, Flowers, and Vegetables.

*Committee on Fruits*—J. F. C. Hyde, Chairman; J. S. Cabot, W. C. Strong, P. B. Hovey, E. A. Brackett, Fearing Burr, D. T. Curtis.

*Committee on Flowers*—E. A. Story, Chairman; J. C. Hovey, James McTear, C. H. B. Breck, Geo. Craft, E. W. Buswell, S. H. Gibbens.

*Committee on Vegetables*—Abner Peirce, Chairman; James Nugent, Daniel Murray, B. Harrington, Joseph T. Walker, R. M. Copeland, C. N. Brackett.

*Committee on Synonyms of Fruit*—Marshall P. Wilder, Chairman; C. M. Hovey, J. S. Cabot, Josiah Stickney, Chairman of the Committee on Fruits.

*Committee on Publication*—Corresponding Secretary, Chairman; Recording Secretary, E. A. Brackett, Chairmen of Committees on Flowers, Fruits, Vegetables, and Gardens.

The President read the following reply to the letter of H. H. Hunnewell, Esq. :—

BOSTON, SEPTEMBER 1, 1864.

H. Hollis Hunnewell, Esq.

Dear Sir,—I have the honor, in behalf of the Massachusetts Horticultural Society, to acknowledge the receipt of your letter of June 2d, enclosing bonds of the United States, for \$2000, the income of which is to be devoted to the specific purpose of encouraging the art of landscape gardening. The Society most gratefully accept of your liberal donation, and have authorized the Executive Committee to take such measures as will accomplish the objects intended by you.

Allow me in behalf of the Society to again thank you for this renewed assurance of the deep interest manifested by you in the progress and welfare of the Society. Already have its exhibitions of the present year been augmented and enriched through the generous aid you have contributed for the encouragement of ornamental trees and shrubs, and particularly the rhododendron.

It is especially gratifying that you have selected for encouragement the elegant art of landscape gardening. Having so long made it a study, and exhibited so much taste in developing its principles in your extensive grounds at Wellesley, you can well appreciate its importance, and note the

many errors which are made by planters in the arrangement of their grounds, and in the proper selection of trees and shrubs. Let me hope that the aid you now extend, will enable the Society to offer such liberal prizes as to revive the taste for landscape art, and give us more examples of beautiful grounds, laid out according to the established principles of ornamental gardening.

Wishing you a pleasant tour abroad, and a safe return home, and trusting we may ever have your aid and council,

With great esteem, I subscribe myself,

Dear sir, your obedient servant,

C. M. HOVEY.

Mr. S. H. Gibbens read a series of resolutions upon the death of Mr. Dennis Murray, which were accepted and entered upon the records.

Adjourned one month, to Nov. 5.

---

## Horticultural Operations

FOR NOVEMBER.

---

### FRUIT DEPARTMENT.

October has been cool, and accompanied with heavy white frosts, which have quite destroyed all tender vegetation. But little rain has fallen, and the ground is yet dry for the season.

**GRAPE VINES** in the very early houses, where the crop is expected to ripen in April and May, should now be started. See that the borders are well protected from heavy rains and frost. Commence with gentle fires at first, syringing well till the vines are all well broken; increase the heat as the season advances. In other matters proceed as usual with grapes under glass. Vines in the graperly or greenhouse may now be pruned and cleaned before the plants are arranged in the latter; it will save time and much inconvenience, besides keeping the plants neat and clean. Cover the border with strawy manure or leaves before the frost penetrates too deep. Vines in cold houses, if not already pruned, should be attended to immediately, that they may be ready for protection before severe frost. Hardy vines should be pruned and prepared for covering up.

**ORCHARD HOUSE TREES** should be protected from heavy rains and severe frosts. Remove to the house, or, if intended for fruiting in the greenhouse or cold house, remove soon to a cool cellar.

**VINES AND FIGS IN POTS**, for fruiting, should have the same protection as orchard-house trees.

**STRAWBERRY BEDS** will now require but little care. Keep down any large weeds if the weather continues warm. Where the beds are old, or the ground somewhat exhausted, top-dress with old manure, working it well in among the plants. Cover with strawy manure, leaves, or meadow hay, before the earth freezes hard. Vines in pots, for forcing, should be protected in frames until wanted for removal to the house; water sparingly.

**FRUIT TREES** of all kinds may now be transplanted.

**FRUIT** should have attention. Look over the specimens from time to time, taking away any that show signs of decay. Keep cool, at a temperature of 40 to 45°. Fruit in boxes or barrels, placed in the open air, should be removed to the cellar before severe cold.

**INSECTS** should be looked after, particularly the canker-worm.

#### FLOWER DEPARTMENT.

The frosts of October have finished up the flower garden for the season. Prepare now for autumn planting of all kinds of hardy bulbs and hardy perennials, if not already done. Remove all decaying flower stems, and protect pæonies and other things with a light covering of manure or leaves. Proceed at once to arrange the houses, keeping back a stock of many things to succeed those that are now coming into flower. Prune in climbing plants that require it, and top-dress all such as need it. Prepare and store soils for winter use.

**CAMELIAS** will now be coming into bloom. Syringe in good weather, and keep the house cool.

**AZALEAS** should have attention. See that they are free from insects; keep cool, except such as are wanted for early bloom, which may be removed to the warmest part of the house. Water rather sparingly, and tie into shape when leisure will permit.

**PELARGONIUMS** will require attention; keep the old plants now as cool as possible and place on a shelf near the glass, watering cautiously; the object being to get a short stocky growth. Young plants, just potted, should be kept warm until they are established. Plants wanted for early flowering should be repotted.

**CINERARIAS AND CALCEOLARIAS** should be removed to the house when the frost is so severe as to endanger them in frames.

**CYCLAMENS** should be kept in frames as long as possible, removing them to a cool shelf when necessary.

**ROSES** in frames, now pruned in well and removed to the house, will bloom finely.

**HELIOTROPES**, and other free flowering plants, should be watered with liquid manure.

**CHRYSANTHEMUMS** should be kept in a cool dry house, where their fine blooms will remain in perfection for a long time.

**HEATHS** should be kept in frames as long as possible, covering them well in frosty weather.

**BEGONIAS** should be kept dry, unless there is a good warm house to keep up their growth.

**CHINESE PRIMROSES**, intended for large specimens, may now be repotted. Keep them in a cool airy place.

**STEPHANOTUS, CISSUS**, and other climbing plants, requiring heat, should now be kept rather dry and shady, unless there is a good warm house to keep up their growth.

**ORANGE TREES** should be carefully watered at this season.

**FLOWERING SHRUBS**, such as Deutzias, Spiræas, and Weigelias, wanted for early flowering in the house, should now be taken up and potted.

## THE PROGRESS OF THIRTY YEARS.

THE close of the THIRTIETH year of our Magazine is an event which we cannot allow to pass without some brief expression of our thoughts, and a cursory review of our labors, extending through so long a time, and over a period when horticulture has made the most rapid strides, exceeding all that its history affords. How thickly do the memories of these many years crowd upon us, and how many are the recollections which cluster around each and every year? Pleasant recollections are they all, but mingled with sadness as we call to mind the many devoted cultivators and friends who have journeyed with us, for a longer or shorter period, enriching our pages with their valuable contributions, enlightening by their knowledge, instructing by their experience, kindling by their enthusiasm, and aiding, by their illustrious example, in the dissemination of a taste for every department of gardening and rural art,—but now, alas! their ashes repose beneath the fragrant turf, and these volumes contain the record of the invaluable services they have rendered to horticultural and pomological science, wielding an influence that has not ceased with their labors, but still exerts a powerful stimulus to animate and excite all with an ardent desire to emulate their meritorious acts.

Had we the space, it would be interesting to go back and contrast the condition of horticulture thirty years ago, with its present state; but except in a general way we shall be unable to do so. As we take a retrospective view, we are ourselves amazed at the wonderful progress of horticulture. Month by month, and year by year, we have endeavored to chronicle this advancement, but the aggregate of these thirty years is truly surprising.

With all the wealth of Great Britain, and all the skill of the thousands of intelligent gardeners and amateurs, no such progress is recorded as that which our own country affords. From the formation of the London Horticultural Society in

1805, up to the period when our Magazine first appeared, through the coöperation of distinguished and eminent men, much was done to disseminate a taste for gardening, and establish horticulture as a science. But no such record is exhibited of those thirty years, as the subsequent period in our own country can show.

It may in fact be said, that at the time of the formation of the Massachusetts Horticultural Society in 1829, horticulture as a science was hardly recognized. There were indeed many excellent collections of fruit in various parts of the country; but these were exceptional cases, and pomological science was quite unknown. Our collections of fruits, with the exception of apples, were almost entirely of foreign growth, and these so few in number as now to be considered too limited for even the smallest garden. Graperies were thought only to be within the means of the wealthy, and greenhouses and conservatories the accessories of opulence alone. Both might be easily numbered at that period; while at the present time they may be counted by thousands. Half a dozen prominent nurseries in the vicinity of our large cities supplied the wants of the country for trees and plants, while at the present day they number many hundreds, extending over the whole loyal Union, covering an immense aggregate of ground, and many of them surpassing in extent anything in the old world.

But it is not on these specialities of fruits and plants, great as has been their increase, that we base our horticultural progress. It is more in the general aspect and improvement of our homes—in the more ornamental style and superior structure of our cottages and villas—in the greater adornment of our gardens and embellishment of our grounds—in the display of taste in their arrangement and planting—in the introduction of a greater variety of trees and shrubs, and plants and flowers—and last, though not least, in the establishment of rural cemeteries in the neighborhood of all our principal cities, where the loved and lost repose beneath shady groves and along secluded walks; where, surrounded with such associations, the bereaved can find solace, and the sorrowing consolation, in communion with those they have loved. These are indeed the triumphs of horticultural progress; they have



begun with the simple love of plants and fruits, and they have not ceased till they have embraced within their domain the great object of planting, beautifying, and embellishing the place where the sod shall cover us, and friends may visit and nurture the plants beneath which we repose.

It is from the period just noticed that we can easily discern the increasing and prominent taste for gardening and rural improvement; but the medium of communication of intelligent minds, so important in every improvement, was wanting, and the Society in their infancy had not the means by publications of its own, of supplying the great demand. Agriculture was well represented by the *New England Farmer* and other journals. It was just at this period, when all were aroused by the rapidly increasing intelligence of our zealous and energetic cultivators, that we determined upon the somewhat hazardous task of publishing our *Magazine*, as a ready source of communication, from whence might be brought into use the accumulated and valuable experience of all who had taken an active part in the introduction and cultivation of fruits and plants. It was an untried experiment, but, thanks to the many friends who came to our aid, it did not fail, and for many years it was the only horticultural work in the country; and when, after some years, other similar magazines were commenced, it still went on, in the accomplishment of its work, until we now have the record of THIRTY YEARS,—a period of intensely exciting interest throughout our country in everything connected with horticulture, pomology, floriculture, landscape gardening, and rural art.

The eminent and distinguished men who were the pioneers in the great movement of that period, and to whom the whole country is deeply indebted, labored assiduously to give success to their great conception, and Gen. Dearborn, John Lowell, Zebedee Cook, Jr., Sam. Downer, Col. Perkins, Robt. Manning, J. B. Russell, and others, devoted their time and energies to the especial work of arousing the public to the importance and usefulness of the association, and the influence it was destined to exert upon every department of rural industry. These appeals were not without effect, and in a short time they had numerous and ardent supporters, who worked with

fresh zeal in so laudable an enterprise. Fortunate in having an acquaintance with the gentlemen we have already named, who soon recognized the necessity of increased means of communication with the public, we had the promise of their aid in our endeavors to accomplish this task,—enough to give us the greatest confidence in our undertaking.

It would appear therefore almost superfluous to recall the names of these and others who appreciated and aided us in our efforts to extend the influences which the organization of the Massachusetts Horticultural Society had initiated; but, after thirty years have passed away, there are hundreds of our present readers who know but little of the labors of these pioneers of horticultural science in our country, or of the meritorious services they have rendered by freely communicating in our pages the results of their long and active experience in the various branches of horticultural science. We therefore now recapitulate the names of the distinguished men, both among the living and the dead, who have been frequent contributors to the earlier volumes of our Magazine, and by which its value may now be, if it has not been before, estimated:—Gen. H. A. S. Dearborn, President of the Massachusetts Horticultural Society; Hon. John Lowell, Robert Manning, the elder; Hon. John C. Gray, Sam'l Downer, A. J. Downing, Chas. Downing, Hon. M. P. Wilder, President of the Massachusetts Horticultural Society; J. E. Teschemacher, Dr. S. A. Shurtleff, Capt. Josiah Lovett, Elijah Vose, President of the Massachusetts Horticultural Society; David Haggerston, J. W. Russell, Prof. J. L. Russell, Samuel Pond, Col. T. H. Perkins, Thomas Lee, R. Manning, the younger; Hon. J. S. Cabot, J. F. Allen, O. Johnson, Wm. Kenrick, S. Walker, President of the Massachusetts Horticultural Society; Judge Buel, Thos. Hogg, Dr. E. W. Bull, Hartford, Conn.; Dr. J. S. Gunnell, Washington, D. C.; Dr. G. Watson, Philadelphia; Dr. T. W. Harris, J. M. Ives, Dr. H. Perrine, R. Buist, P. Mackenzie, Rev. H. W. Beecher, N. Longworth, A. H. Ernst, Wm. Oakes, E. Tuckerman, Jr., Ellwanger & Barry, Rev. Geo. B. Emerson, T. Hancock, J. B. Garber, Hon. J. Milton Earle, Wm. R. Prince, Wm. Reid, J. S. Skinner, Peter Henderson, Judge Hoadley, S. B. Parsons, Dr. H. Wendell, John Cadness, Wm. Saunders, E. Beck, London; Rev. A. R. Pope, Dr.

W. D. Brincklé, M. Desportes, Angers, France; Dr. J. A. Kinnicott, R. B. Leuchars, M. H. Simpson, Geo. Jacques, S. L. Goodale, Dr. S. P. Hildreth, T. Rivers, England; Dr. J. P. Kirtland, P. B. Mead, late editor of the *Horticulturist*; T. Meehan, editor of the *Gardeners' Monthly*, and others; and in later volumes many additional names. If there have been any prominent cultivators during the period of 20 years, from 1835 to 1855, that are not enumerated, we should be pleased to know them, and if the contributions of these well known amateurs and cultivators do not constitute an almost inexhaustible source of valuable and reliable information, adapted to our climate and the needs of our people, then we fear it will be sought in vain. As we look successively through and lay down each volume, we are surprised at the accumulated mass of valuable information on every subject connected with gardening, and especially on the higher branches of horticultural art—upon the culture of the grape under glass—the peach tree in pots—the pruning and training of the pear, the apple, and the peach—the growth of the strawberry—the culture of the cucumber under glass—the treatment of the Camellia, Rose, Pelargonium, Carnation, Azalea, Hyacinth, Chrysanthemum, Dahlia, Heath, Chinese Primrose, Gladiolus, Gloxinia, Japan Lily, Phlox, Verbena, Ranunculus, Cyclamen, Cineraria, Oxalis, and all other flowers—descriptions of modes of budding, grafting, layering, propagating, pruning and training plants—the construction of greenhouses, conservatories and graperies—descriptions and mode of culture of all our hardy ornamental trees and shrubs, particularly the Rhododendron, Azalea, Kalmia and Magnolia—general directions for laying out grounds of larger or smaller extent, with many plans—Essays on Landscape Gardening and Rural art, with hints upon the improvement of grounds—Extracts and gleanings from all the principal gardening periodicals in Europe—full and complete descriptions of all the principal plants introduced to Europe since 1835, more than 3000 in number—descriptions and engravings of more than 300 pears, with notices of many hundred more—descriptions and engravings of 100 varieties of apples, and notices of every variety introduced; also of cherries, plums, apples,

peaches, strawberries, grapes, currants, blackberries, raspberries, &c.—Reports of various Horticultural Societies—of every session of the American Pomological Society—the weekly, monthly and annual proceedings of the Massachusetts Horticultural Society, often with reports of the committees—and a calendar of operations for every month in the year, for thirty consecutive years; in all, nearly 20,000 pages of horticultural intelligence, and 2000 engravings illustrative of the various subjects. The literature of gardening does not contain a similar instance of continued exertion to record its progress. Loudon's Magazine reached its 19th volume, and the Gardeners' Chronicle, the prominent publication of Great Britain, at this day, is only in its 24th year. In our own country no kindred publication but the Albany Cultivator has such an early date as our Magazine.

It is not our intention to institute any comparison of the merits of the articles contributed by the numerous correspondents we have above enumerated; yet we think we should be ungrateful not to name at least one to whose eminent services in pomology the whole country is deeply indebted; we refer to the late R. Manning of Salem, whose long and ripe experience of twenty-four years, in the culture of fruits and the identification of varieties, is recorded in the first ten volumes of the Magazine, thus enabling us to place before our readers the accumulated knowledge of HALF A CENTURY. What Gen. Dearborn did for horticulture generally, Mr. Manning did for pomology specially, and we think we do not state too much when we say that but for his enthusiasm and love of fruits, which led him to gather trees and scions from every source, both abroad and at home, pomological science would not have attained the eminence it now holds. We ought, also, not to forget the labors of the late A. J. Downing, who for ten years was a constant and regular contributor to our pages, upon fruits and trees and rural art. He at all times expressed the warmest wishes for our success, and we had only to command to receive his aid. It was also our pleasure to continue a private correspondence during the whole time, and his numerous letters repeatedly attest the important aid our Magazine had rendered to horticultural science. Others might be men-

tioned, but all have been liberal in their labor, and, while they have maintained the high standard of the Magazine, they have contributed to the general fund of knowledge, which has carried the country onward in its triumphant course of horticultural renown.

It would be impossible here to enumerate many of the fruits and flowers and trees and plants and vegetables, which have first been made known through our Magazine. Their number is immense; but we have thought that a list of entirely new and really valuable American fruits, which have been first described or noticed in our pages, would best show the influence it has exerted in this direction. It is as follows:—

	PEARS.			
Adams,		Penn,		St. Lawrence,
Admirable,		Sterling,		Shiawasse Beauty,
America,		Swan's Orange,		Sutton Beauty,
Augustus Dana,		Tea,		Tufts,
Boston,		Wilbur,		Tompkins Co. King,
Bergen,		Wheeler.		Washington,
Cross,				Walpole,
Collins,		APPLES.		Wabash.
Columbia,		Beefsteak,		
Excelsior,		Burr's Sweet,	GRAPES.	
Edmonds,		Cogswell,		Diana,
Ellis,		Early Joe,		Hartford Prolific,
Howell,		Foster,		Concord,
Hampton,		Granite Beauty,		Delaware,
Hovey, (Dana's,)		Hawley,		Rebecca,
Hull,		Hartford Sweet,		Allen's Hybrid,
Merriam,		Holmes,		Framingham.
Moore's,		Leland Spice,		
Lycurgus,		Ladies' Sweet,	STRAWBERRIES.	
Lyon,		Manomet,		Hovey,
Le Breton,		Marston's Red Winter,		Boston Pine.
Nonpareil,		Mexico,		Scott's Seedling,
Shawmut,		Melon,		Brighton Pine,
Sheldon,		Mother.		Jenny Lind.
		Northern Sweet,		

But when we come to refer to the foreign varieties of pears, apples, grapes and strawberries, which were first made known to cultivators, their number is still greater, and there is scarcely a popular and highly esteemed fruit not known in 1835, but what may be found enumerated in our pages, their

qualities described, and all the information to be obtained concerning them given; and of hardy trees and shrubs, of which so many beautiful and desirable kinds have been introduced—and new, rare or elegant flowers and plants—both hardy and tender, whether for the greenhouse or garden,—these all are recorded, indexed, and easily referred to at any time.

Of new modes of culture, of modes of propagation, of the construction of graperies and other appliances of gardening, we need not spend time to mention; but, while some late writers claim all the honor of extending the culture of the grape, by the construction of cheap houses, we believe the first one of this kind was figured and described in our pages, and it has been the model for all similar structures throughout the country. An acquaintance with our thirty volumes, will speedily show that much that is considered new, by new beginners, has years ago been well known to all who chose to read. In fact many of our modern writers know but little of the real history of horticulture in this country.

Such is the summary of our labors, and the progress of THIRTY YEARS. We have left ourselves little space for further remarks. As we said ten years ago, so we may repeat now—distracted as our country is by a terrible war—“Everywhere throughout the country improvement is manifest. Structures for the growth of exotic and tender plants, and gardens for the display of the choicest flowers, are becoming more general. The vicinity of all our large cities is dotted over with beautiful villas and elegant grounds; and the homes of our rural population are more and more significant of comfort and increasing taste. Everything is encouraging of progress. Gardening—both as a practical art and an art of taste—is moving forward with a rapid pace in every direction throughout our land. With a climate and soil scarcely surpassed by any temperate region, and with accumulating wealth and knowledge, there is no obstacle in the way of the greatest enjoyment of all the blessings which a bountiful Providence has placed within our reach.”

Again we tender our sincerest thanks to our correspondents who have so long aided us in our labors, and to whose

intelligence so much of the reputation of the Magazine is due. To our many friends who have been with us for so many years, and to our younger readers, we tender our hearty congratulations, trusting we may long hold communication with them. May their numbers be increased tenfold, and may our exertions, however long continued, be as zealous as in times past.

---

## ORNAMENTAL PLANTING.

FROM THE GARDENERS' CHRONICLE.

Notwithstanding the very great—we might almost say remarkable—advancement in the general taste for horticultural and rural improvement within the last twenty years, there has yet been but slight progress made in Landscape Gardening, considered as an art. While suburban villas have sprung up everywhere in the neighborhood of our large cities, and been made attractive and ornamental by the planting of beautiful trees and shrubs, and town gardens have been rendered more attractive by the introduction of a few trees and flowers,—there have as yet been but few attempts made to lay out grounds according to the true principles of Landscape Gardening, or to introduce into them the varied materials with which our own country is so rich, or the increased variety introduced from other climes. There are happily some exceptions; but they are too few.

It is gratifying therefore to know that through the liberality of H. Hollis Hunnewell, Esq., who has undoubtedly noticed the slow progress of true art, and the want of more variety in and around our country residences—the Massachusetts Horticultural Society has been made the recipient of a munificent gift, for the especial improvement of ornamental planting. The income of the gift to be awarded in premiums to “owners of estates, of not less than three acres in extent, who shall lay out and plant them with the most rare and desirable ornamental trees and shrubs, in the most tasteful and effective manner, developing the capabilities of the

locations in the highest degree, and presenting the most successful examples of science, skill, and taste, as applied to the embellishment of a country residence."

The great results of such timely aid we doubt not will soon be shown, and we think we may look forward to something more than mere hap-hazard work—planting grounds with a tree or two at a time, without any definite object in view, and as too often happens, according to the taste of the proprietor, which may indeed be to his taste but by no means to that of the landscape planter. Sad indeed are the mistakes of many of those who lay out their grounds according to their own fancy.

Hoping at a fitting opportunity to enlarge upon this subject, and notice more fully Mr. Hunnewell's object, we are now pleased to present to our readers some excellent hints on ornamental planting, by Mr. Wm. Paul, communicated to the *Gardeners' Chronicle*. Mr. Paul's object is to show the great variety of material the planter now has at his command compared with former years, and though this is astonishingly greater in the climate of Great Britain, it is not so much increased for our northern latitude. So much therefore of his remarks as apply to the half-hardy pines and evergreen shrubs from California and Japan, have but little application north of Philadelphia. But leaving to the intelligent planter to make these deductions, there is much valuable advice in Mr. Paul's articles which we commend to the attention of all who enjoy the rich and varied foliage of spring, summer and autumn, and the dissimilar forms of the great number of trees, now accessible for ornamental purposes:—

#### SPRING.

I have somewhere met with the remark that the poet revels most in the beauties of spring, the painter in those of autumn. The Landscape Gardener when selecting trees should perhaps be conversant with and consider the effect they produce at all seasons. Spring is the time of promise in gardening, and I purpose in the present instance to confine my remarks to that season. The dominant features of tree-scenery in spring are:



1. The outline of the trees.
2. The colors of the flowers.
3. The colors of the leaves.

1. *The Outline of Trees.*—From among the various forms which trees assume, I may perhaps be permitted to instance the following as clearly defined points of departure—spreading, round-headed, pyramidal, and weeping. Not that it is intended to say that all trees are well defined examples of one or the other of these forms; for it is admitted that in many there is an absence of strongly marked character, and that a tree may be neither perfectly spreading, round-headed, pyramidal, nor weeping, but in the intermediate forms will generally be found a dominant habit which renders them easily referable to one or other of these divisions.

*Spreading.*—This is the form most prevalent in nature, and such must be the staple of ornamental planting. The ash, the beech, the oak, and its Spanish chestnut are of this character. Look abroad on the uncultivated landscape, and the probability is that nothing else will meet the view, unless it be a few Lombardy poplars, whose spire-like tops everywhere break into the blue vault above.

*Round-headed.*—Of these the *Robinia inermis* is perhaps the most strongly marked. This beautiful tree is not planted in England half so much as it deserves to be. In France it is met with at every step, and the dense masses of leaves of a fresh bright beautiful light green never fail to attract the attention of the traveller. Most of the round-headed trees are, however, of moderate or small growth, and therefore better fitted to fill various positions in the flower-garden than to adorn the distant landscape.

*Pyramidal.*—Pyramidal trees of large size are more numerous than round-headed ones. The Lombardy poplar, Turkey oak, and White Beam tree (*Pyrus Aria*), are well known examples of these. There are also pyramidal forms of the acacia, the common oak, the elm, the alder, and a beautiful new alder known in trade as *Alnus asplenifolia*. Then among evergreen trees we have the common eypress, the red cedar, and the Irish yew.

*Weeping.*—The weeping birch and weeping willow are both familiar trees, and form good illustrations of this group.

They are less common round London than many other kinds, but they are distinct and attractive, and not likely to be passed unnoticed.

2. *The Colors of the Flowers.*—Trees and shrubs which flower in spring are especially valuable, and, fortunately there is no dearth of such. A group composed of scarlet thorns, laburnums, and lilacs will furnish an example of what may be effected by the introduction of spring-flowering trees.

3. *The Colors of the Leaves.*—Some deciduous trees put forth their leaves early, others late; but at whatever time they appear, being constantly moistened with the showers of spring, they present the eye with an agreeable freshness which we in vain look for at a later date. The varied tints of the bursting leaves form a most agreeable feature in the landscape in spring—the blood red of the purple beech, the yellow of the Caragana, offer contrasts in themselves pleasing, but which lessen in intensity as the summer advances. With evergreens the difference in color between the new growth and the old, especially in the pine tribe, is too strongly marked to escape notice, and produces a very pleasing variety. The darkest and the lightest shades of green are often thus brought in immediate contact.

Within view of the spot where these lines were written, is a stream, whose margin, at the time they were penned, was overhung with the pale tender green spray of a weeping willow; behind were dark masses of the common yew, and still further beyond groups of blossoming hawthorn. The effect of this combination was admirable. Onward still, and in the distant upland, were trees innumerable; but so far as could be distinguished, each seemed but a counterpart of the other.

Although not in a severely critical mood, I have been indulging the fancy by obliterating certain objects within range of sight—some of the comparatively meaningless trees which in many instances have been planted by the hand of man, but more commonly by nature. In their places I have conjured up examples of the rarer and more modern trees, and the landscape thus improved lies before me in increased loveliness. I have gazed and am satisfied. The youth and freshness of spring are still there, but the monotony has disappeared; the whole landscape is inspirited.

In endeavoring to give utterance to these views I do not seek to ignore the fact that the prevailing color in tree scenery is green, varying in shades, but still green. This is as it should be, for no other color in nature is so agreeable to the eye. Let us then take this color as the ground-work of our operations, and retain its ascendancy, but let us vary and increase the pictorial effect of the landscape by a more liberal introduction of other colors. Every demesne should be in itself a picture, or rather a series of skilfully united pictures.

## SUMMER.

Whatever may be the beauty of trees in spring there is an incompleteness attending it—the incompleteness of progress; it is not until the arrival of summer, when the leaves have attained their full size that trees appear in full dress, and produce that depth of light and shade in which the lover of nature finds so much pleasure.

If we seek to produce variety through the diversity in form of leaves, we shall find no difficulty in doing so. There are the needle-shaped, of which the pines, firs, and junipers, are examples. The small-leaved, which include such trees as the oak, the elm, the beech; the large-leaved, to which belong the Catalpa and Paulownia; and the compound-leaved, grand examples of which are met in the Ailantus, Kœlreuteria, &c.

But the color of the leaves in summer is the most fertile source of variety. There are the light-green, for example, *Taxodium distichum*, and *Gleditschia*; dark green, *Fraxinus crispa* and *Castanea vesca*; purple, beech, elm, and sycamore; yellow, *Acer Negundo variegatum*, and silver poplar. I know of no trees so beautiful in the landscape in summer as the two latter, on account of the idea of coolness they suggest by the glitter of their white leaves. The aspen, too, is desirable at the same season, the ceaseless play of its foliage disclosing a breeze so faint as to be scarcely distinguishable by any other test.

Then as to shade—we want shade in summer. Trees which produce the densest masses of foliage should be selected for this purpose and planted in appropriate spots. Although “deciduous” trees are in their greatest beauty at

this season, we cannot altogether dispense with "evergreens." The latter are invaluable on account of the variety they produce, and also for the coolness and almost impenetrable shade which they afford.

"Before me rose an avenue  
Of tall and sombrous pines,  
Abroad their fan-like branches grew,  
And when the sunshine darted through,  
Spread a vapor soft and blue  
In long and sloping lines."

The *Abies Douglasii*, *A. Deodara*, and *Pinus austriaca* stand in the very foremost rank, both as summer and winter trees, for avenues, groups, or single specimens.

The examples above given are mostly trees attaining to considerable size and familiar samples of such. There are, however, others of medium and lowly growth similar in form, color, and general character.

Among novelties, I have not forgotten the remarkably beautiful trees introduced from Japan, by Mr. Fortune and Mr. Veitch. Some of these, the *Acers* especially, are wondrously beautiful, but are they hardy? Time is necessary to prove this. It is reported that some are difficult of propagation, and if so, it will require time before they become sufficiently reasonable in price to be generally available.

#### AUTUMN.

The prominent feature of tree scenery in autumn is the changing and varied colors of the leaves. As green is the dominant color of the mature leaf in summer, so is a russet brown that of the falling leaf in autumn. But there are some trees whose leaves grow brighter as they advance to maturity, and in the red, purple and yellow hues which they assume in autumn, we find materials to vary and increase the beauty of the landscape. The leaves of the scarlet maple and the scarlet oak change to a fine red; those of the Norway maple, the birch, the ash, the *Kœlreuteria* and the tulip tree to yellow; the liquid-amber dies a variegated mass of green, red, purple and yellow; and there are various intermediate tints, which, if less marked, are nevertheless of infinite value. These in our opinion, are seldom sufficiently used in the composition of tree-scenery.

The sumach (*Rhus typhina*) is valuable, not only for the brilliant tints of its dying leaves, but also for the feathery tufts of flowers which it produces, and which become dry and remain on the tree during autumn and winter.

Trees which bear fruits or berries are also worthy of notice at this season. The red and the yellow-berried mountain ash are beautiful. Then there are numerous varieties of the thorn (*Cratægus*), producing yellow, red, and black berries, some of them of large size; and the Siberian crab, and the Transparent crab, when laden with their respective fruits, are objects of matchless beauty.

As the greater number of English landed proprietors spend the autumn at their country seats, it becomes of first importance that every feature of beauty at that season should be fairly and fully developed. But what is the fact? We know of many first-class English residences where the monotony previously condemned in spring exists alike in autumn. From universal green to universal brown, and back again as the seasons revolve, is all the change that takes place. The flower garden, planted and arranged with exquisite skill, and taste, forms a series of glowing pictures; but everything beyond is dull, tame, heavy and monotonous. Now we would not that the garden should be a whit less beautiful, but the proprietor of a demesne is not expected to spend all his time there. The pursuit of country sports, if nothing else, will take him into the outlying parts of his estate, and as he traverses the dewy meads amid fogs and falling leaves, the intervals of sport may be enchantingly filled up by the contemplation of a varied, vigorous, and well-composed landscape. Whatever, therefore, is left undone, at least the park and the outlines of woods and plantations should be varied and adorned by all the forms and colors that can be drawn from the rich repertory of the vegetable kingdom.

At this season, as at others, there requires a due admixture of the deciduous and the evergreen to attain all that is desirable. The airiness, the grace, the glow of the former, is rendered far more beautiful when associated with the more solid-looking and durable forms of the latter. As the deciduous forms are stripped bare, and their leaves scattered by

the autumnal whirlwind, it is pleasant to contemplate the permanency and repose of the evergreens, fitly represented by the pine and yew.

---

#### POMOLOGICAL GOSSIP.

**THE BARBAROSSA GRAPE.**—This variety appears to attract much attention among English grape growers, and the question of its culture on its own roots or grafted on some other stock has been much discussed. We find the following notice of it in our English journals:

At a meeting of the Fruit Committee of the Royal Horticultural Society held in the autumn of 1860, a very noble bunch of grapes was shown of the Black Barbarossa vine, said to have been grafted upon the Black Hamburg. These grapes were very much finer than those of the Barbarossa generally are. This circumstance led in the spring of 1861 to a good strong rod of the Black Hamburg being chosen, in the large conservatory at Chiswick, as a stock for a graft of the Barbarossa, which was worked upon it about the latter end of April or the beginning of May, when the trees had shot sufficiently to prevent bleeding. The graft grew rapidly, and by the end of summer had grown to the top of the conservatory. The following season it was cut down to about 6 eyes, and allowed to bear a bunch of grapes; this proved to be an improvement upon the Barbarossa, on its own roots, but not so marked as in the following season, when the berries were much larger and blacker than on the parent stock. In the present season, the vine being strong, the bunches are larger, though not of the size of the Barbarossa itself, but the berries are infinitely superior, being nearly twice as large, and the color is a jet black, covered with a magnificent bloom. The vine bore about six bunches, some of which were superior in size to those exhibited last week at South Kensington. Some are still growing in the conservatory at Chiswick and are well worth a visit to see them.

The previous report of those exhibited is as follows:—The

Fruit Exhibition formed an interesting feature, inasmuch as it afforded the means of comparing the different varieties, as regards size, form and color, and consequently of forming an opinion as to the diversities of their cultivation. On looking them over with this view, we were struck with the very great difference between two bunches of Black Barbarossa, one of which weighed 6 lbs. 13 oz., and the other 3 lbs. 13 oz.; the latter, however, was by far the best, notwithstanding its lighter weight. It was more compact and more regularly formed than the other; the berries matched each other well in size, and were much larger and better colored than those of the larger bunch; they were also covered with a fine bloom, and were without even the most obscure tinge of red, from which this variety is seldom entirely free. All this superiority is attributable to the vine having been grafted on a stock of Black Hamburg; whilst the larger, but in other respects inferior bunch was borne by a vine on its own roots. The large bunch measured 18 inches in length and 19 across the shoulders; the smaller was 13 inches long and 11 or 12 across.

DISCUSSION ON HARDY GRAPES.—The discussion on grapes at the last meeting of the American Pomological Society, which was crowded out in our last, will appear in our next volume.

LARGE DUCHESS OF ANGOULEME PEAR.—A specimen of this pear was exhibited at the Massachusetts Horticultural Society on the 19th November, which weighed no less than 4 pounds! and measured  $17\frac{3}{4}$  inches in circumference, and 8 in length; probably the largest specimen ever raised of this or any other pear. It was grown by Mr. Charles Hora, Los Angeles, California, the land of big grapes, big trees, and big pears. After the exhibition it was presented to the National Sailors Fair, where it sold for \$20, and was drawn in a raffle by Mr. D. T. Curtis, who we understand intends to have it preserved in spirits, and presented to the Society, as a specimen of American growth.

BEURRE' LANGELIER PEAR has proved uncommonly fine this year, and established its reputation as one of our most valuable winter varieties, keeping better than Glout Morceau.

## SUBURBAN VISITS.

RESIDENCE OF CAPT. WM. R. AUSTIN, DORCHESTER.—It is always to us a great treat to see a fine collection of pear trees, at any time of the year, whether in fruit or not; for there is so much individualism in each variety that they always interest by their peculiarities, and are a study to one who knows their characteristics. Even when leafless are they attractive. But when in full bearing and ready for the harvest how much gratification do they afford. Every bough bending beneath the weight of luscious fruit, which peep out here and there from among the verdant foliage, or hang in rich perfection in the full sun, tinted with a rosy hue by its brilliant rays. This is the period of all others to enjoy the fruit garden.

It was at this season that our friend Capt. Austin—whose beautiful pear-trees trained *en gobelet*, or as he terms it on the *wine-glass* pattern—invited us to look through his collection. The invitation was in due season, but unfortunately, from other engagements by each of us, we had to postpone our visit until after the main harvest, when in company with the Fruit Committee of the Massachusetts Horticultural Society, and a few pomologists and friends, we had the pleasure of looking through his grounds and partaking of his polite hospitalities, passing a pleasant afternoon and evening, now talking pears, and then amused with the game of croquet, closing the day with the rich repast of his bountiful table.

As we have said, the pears were all gathered; but we forgot, one variety yet remained to show how rich and abundant was the crop. This was the Easter Beurré, several trees of which were well worth a visit of a hundred miles. The trees were loaded, and the specimens many of them weighed nearly a pound each, smooth and handsome, the perfection of this perfect pear. Capt. Austin has always been highly successful with this variety, so rarely seen in fine condition, and his success can only be attributed to GENEROUS culture; which Capt. Austin gives all his trees, and they well repay the trouble.

We have so often described these trees that we shall not repeat the description here, especially as we have a fine



drawing of one of his trees, taken from a photograph, which will appear in an early number of our next volume. Suffice it to say all the trees appeared in fine health, all of uniform size and shape, trained to one pattern, and for uniformity, which is in the fruit garden the synonym of beauty, we venture to say cannot be equalled by any trees in the country.

Of new pears, which the Captain adds with caution—not because they are not superior, but because they do not readily submit to his mode of training, or have not a superior market value, from their large size and color—he pointed us to the Doyenné du Comice, with three or four immense specimens hanging from the tree. Sheldon had been very fine, and the fruit very large. We forgot to say that the Easter Beurre are among those trees which have been worked on the Vicar, for Capt. Austin does not like the pear stock, as they grow too large, require too much pruning, and will not submit to his mode of training, consequently any new sort that will not grow directly on the quince is double grafted into some inferior sort. The only tree, if we recollect rightly, that Capt. Austin has upon the pear root, out of 600 or 700 trees, is the Hovey (Dana's,) though we have now ascertained that it does well on the quince.

But as we shall have considerable to say when we describe Capt. Austin's mode of pruning, we have now only to express our thanks to Capt. Austin for his invitation, and the pleasure our visit afforded us.

---

#### FLORICULTURAL NOTICES.

URCEOLINA AUREA.—This most charming bulb has been sent to Mr. Pierce from Peru, and has lately flowered in the nursery of Messrs. Veitch. It forms two broad oval leaves, and a tapering scape a foot or so in height, on the top of which appears an umbel, composed of gracefully nodding flowers. These are of the purest yellow, with the tops only green, ovate, triangular, 3 celled, with 14 ovals, arranged into rows in each cell. The general manner of growth, when

in flower, is that of a *Phycelia*, or some such plant. If it should prove obedient to cultivation, which we do not doubt, it will be a perfect gem in the conservatory.

789. *MACLEA'NIA SPECIOSI'SSIMA* *Hooker*. **SPLENDID MACLEA'NIA.** (*Vaccineæ.*) **Columbia.**

A greenhouse plant; growing 4 feet high; with yellow and scarlet flowers; appearing in spring; increased by cuttings; grown in light peaty soil. *Bot. Mag.*, 1864, pl. 5433.

A most "lovely flowering shrub" which attracted great attention at the exhibition of the Royal Horticultural Society last April, where it was shown by Jas. Bateman, Esq. It forms a large, spreading, evergreen shrub; with pendent shoots, clothed nearly their entire length with panicles, or clusters, of pendent, tubular, scarlet and yellow flowers. It requires the heat of a warm greenhouse, and the plant ought to stand on a bracket or shelf near the glass, as in this way the branches will hang down gracefully and display their masses of showy blossoms. (*Bot. Mag.*, July.)

790. *MICRANTHE'LLA CANDO'LLI* *Naud.* **DE CANDOLLE'S MICRANTHELLA.** (*Melastomaceæ.*) **Andes.**

A greenhouse plant; growing 1 foot high; with purple flowers; appearing in spring; increased by cuttings; grown in light rich soil. *Bot. Mag.*, 1864, pl. 5455.

A very pretty plant, of erect and neat growth, and pendent foliage, the stems terminating with a spike of deep rich purple blossoms, something in size like the *Heterocentrum*. These appear in spring and are quite showy. It was found in New Granada, and on the Andes, at an elevation of 10,000 feet. It succeeds well in the greenhouse, and may form a pretty object for the summer decoration of the garden, planted out like the *Salvia*. (*Bot. Mag.*, July.)

791. *MECONO'PSIS ACULEA'TA* *Royle*. **PRICKLY MECONOPSIS.** (*Papaveraceæ.*) **Himalaya.**

A half-hardy plant; growing 2 feet; with purple flowers; appearing in June; increased by seeds; grown in good garden soil. *Bot. Mag.*, 1864, pl. 5456.

This is one of the new papaveraceous plants from Himalaya, and one which Dr. Hooker truly calls a "rare and charming species," which flowered in the open border at Kew Gardens in June last. It was raised from seed received from northern India, being a native of the high mountains of

Kumaon, at an altitude of 11,000 feet. It grows a foot or two high, having an erect stem, with hairy foliage, which is terminated by a raceme of large bright purple, slightly drooping flowers, more than two inches in diameter, with bright orange stamens, very showy and ornamental. It seems hardy in England, but it would probably require a frame in our climate, and the plants turned out into the border in spring. It will prove a valuable acquisition. (*Bot. Mag.*, July.)

792. *CORYLOPSIS SPICATA* Sieb. and Zuccarin. SPIKED  
CORYLOPSIS. (Hamamelideæ.) Japan.

A hardy (?) shrub; growing three feet high; with greenish yellow flowers; appearing in spring; increased by layers; grown in good garden soil. *Bot. Mag.*, 1864, pl. 5458.

A new Japanese shrub, with pretty drooping spikes of yellowish flowers, which have the fragrance of cowslips. It was introduced from Yokohama by Messrs. Veitch, and bloomed with them in February last. In habit it resembles the hazelnut, having similar foliage, and the flowers, which appear in long drooping racemes, appear before the leaves. If as hardy as the Forsythia and other Japan shrubs, it will form one of the most desirable early flowering plants. (*Bot. Mag.*, Aug.)

793. *KALANCHOE GRANDIFLORA* Wall. LARGE-FLOWERED  
KALANCHOE. (Crassulaceæ.) India.

A greenhouse plant; growing 2 feet high; with yellow flowers; appearing in spring; increased by cuttings; grown in light rich soil. *Bot. Mag.*, 1864, pl. 5460.

A plant allied to the Crassulas, with bluish green leaves, and large capitate heads of yellow flowers. (*Bot. Mag.*, Aug.)

794. *DELPHINIUM BRUNONIANUM* Royle. MR. BROWN'S  
MUSK LARKSPUR. (Ranunculaceæ.) Northern India.

A hardy perennial; growing 3 feet high; with blue flowers; appearing in June; increased by seeds; grown in good garden soil. *Bot. Mag.*, 1864, pl. 5461.

A handsome and distinct species of the Larkspur from northern India, where it was found on the lofty Alps at altitudes of from 14,000 to 18,000 feet, where it blooms in August and September. At Kew, however, it flowered in the open border in June; and the top had quite died down in July. It is remarkable for the very powerful odor of musk, both stem and leaves, as well as the flowers. The flowers are large pale blue, bright purple towards the margin, and black

in the centre. A distinct and very desirable species from its high musky odor. (*Bot. Mag.*, Aug.)

795. APHELANDRA LIBONIA'NA *Hook.* LIBON'S APHELANDRA. (Acanthaceæ.) Brazil. (?)

A stove plant ; growing 2 feet high ; with scarlet bracts ; appearing in spring ; increased by cuttings ; grown in light rich soil. *Bot. Mag.*, 1864. pl. 5463.

A very showy species of this showy tribe, having very long spikes, six inches in length, of deep yellow flowers, enclosed in rich scarlet bracts. Leaves large, six or eight inches long, with a white line down the centre. Introduced by Mr. Linden, and will prove a rich addition to stove plants. (*Bot. Mag.*, Aug.)

796. AQUILEGIA SPECTABILIS *Nob.* SHOWY AQUILEGIA. (Ranunculaceæ.) Siberia.

A hardy perennial ; growing 2 feet high ; with purple and yellow flowers ; appearing in spring ; increased by seeds and division of the root ; grown in good garden soil. *Ill. Hort.*, 1861, pl. 903.

A new and quite distinct species of the Aquilegia, raised from seeds brought from the River Amoor, in Siberia. The flowers are very large and spreading, with the ends of the spurs curled inwards, of a rich deep purple, the edges of the inner florets tipped with bright yellow. It is of course quite hardy. (*Ill. Hort.*, June.)

797. CAMELLIA ALBA ORNATISSIMA. Garden Hybrid.

A new Italian seedling, of great beauty. It is pure white, of fair size, with a handsome petal, and imbricated to the centre. It is called the perfection of the Perfections, a class now established and represented by all those whose flowers are imbricated and regular. The foliage is good, and it appears to be one of the best double-whites yet produced. (*Ill. Hort.*, June.)

798. CYCAS RUMINIANA *Hort. Mosc.* RUMON'S CYCAS. (Cycadeæ.) Phillippines.

A stove palm ; growing 20 feet high. *Ill. Hort.*, 1861, pl. 405.

A magnificent species of the cycas, growing several feet high ; forming a stem six or eight feet, from which springs the beautifully pinnated fronds 10 to 12 feet long. It is undoubtedly one of the finest of the tribe, and a rich acquisi-

tion. It was found by M. Post, in the Phillipine Isles, and sent to M. A. Verschaffelt of Ghent. (*Ill. Hort.*, June.)

799. LAPAGERIA ROSEA, VAR. ALBIFLORA. WHITE-FLOWERED  
LAPAGERIA. (Smilacææ.) Chili.

A greenhouse climber; growing 10 feet high; with white flowers; appearing in spring; increased by cuttings; grown in coarse sandy peat. *Ill. Hort.*, 1851, p. 406.

This a white-flowered variety of the very beautiful *L. rosea*, yet very rare in our gardens, though it has flowered in many English collections. The flowers are large, bell shaped, drooping, axillary, and clothe the slender branches in profusion. Both this and the *rosea* appear to be somewhat difficult to manage, but their great beauty will repay all the care bestowed upon the plants. (*Ill. Hort.*, Aug.)

## Horticultural Operations

FOR DECEMBER.

### FRUIT DEPARTMENT.

After an unusually cool October and the early part of November, the weather has turned up mild and fine, admitting of all out-door operations being continued up to the present time, with the probability of the same weather for one or two weeks.

**GRAPE VINES**, in very early houses, will now be well under way, and will soon show blossoms; as they advance to this stage, increase the temperature slightly, say 65° to 70° by day, and 55° to 60° at night. Damp down the house in dry sunny weather, but be more cautious during storms of snow or rain; as the laterals extend, their tops may be pinched off two eyes above the fruit. See that the border is well protected from frosts and cold rains. Vines in the greenhouse or graperies, should now be pruned and put in order. Clean and slightly scrape the old stems, so as to destroy all mealy bugs, and wash with whale oil soap or other mixtures usually made use of for such a purpose. Vines in cold graperies should be laid down and covered with a few inches of soil.

**FRUIT TREES** of all kinds will be greatly benefited by a good manuring over the surface of the ground, making a slight cone around the tree, so as to throw off heavy rains. Scrape, clean, and wash the stems when the weather is fine.

**ORCHARD HOUSE TREES** should now be protected from hard frosts. If removed to the house, keep it well aired night and day, unless very cold.

**STRAWBERRY BEDS** should be protected with a light covering, if not already done. Coarse, strawy manure will do when other materials are not at hand.

**ROOTS AND STOCKS**, intended for grafting in winter, should now be laid in, and protected with leaves, so as to be accessible when wanted.

**CURRENT AND GOOSEBERRY BUSHES** may be pruned now.

**FLOWER DEPARTMENT.**

After the early and rather severe frosts, which compelled the removal of everything to the house or to frames, now is the time to rearrange and place the plants where they will thrive best; some may yet be kept in frames, if well protected in frosty weather; but the larger part of all that are tender, will be safer and better in the house. Remove *Chrysanthemums* and other plants going out of flower, and replace them with such as will keep up the gayety of the house.

**AZALEAS AND CAMELLIAS** are the prominent ornaments of the conservatory in winter, and they should have every attention at this season. Water rather sparingly, and keep both, unless wanted for very early bloom, in the coolest part of the house. *Azaleas* may be tied into shape at all favorable opportunities; syringe occasionally to keep the plants clean.

**PELARGONIUMS** will now be well established, and re-potting may soon be commenced. Keep the plants near the glass, in a cool house; well aired; and top all strong growing shoots, the object being to get short stocky bottoms, from which the young shoots break freely as soon as the plants are shifted. Fumigate often.

**CHRYSANTHEMUMS**, going out of flower, should have their tops cut off, and the plants placed away in a cold frame.

**JAPAN LILIES**, for flowering in the house, should now be potted. Use a light sandy loam, and leaf mould.

**CINERARIAS** should now be re-potted, and kept in a cool house near the glass.

**BEGONIAS** may be re-potted and started into growth the last of the month.

**CACTUSES** should be sparingly watered at this season.

**FERNS** should be kept moderately dry, unless placed in a warm house, where they will continue to grow.

**PEUNIAS, GERANIUMS,** and other bedding plants, struck late in the season, should now be potted off.

**HEATHS** should be kept in a cool, airy place, away from the flues as far as possible.

**PANSIES**, for early blooming, should be re-potted, and placed on a shelf near the glass.

**SEEDS** of *Lilies*, *Cyclamens*, and other greenhouse plants, may now be sown in pots or boxes, in light soil.

**ROSES**, growing freely, may soon have a shift into a slightly larger pot. Head in old plants, kept in frames, and give them a good place where they will bloom abundantly.

**CALLAS** should be abundantly watered.

**PALMS**, unless kept in a warm house, should be very sparingly watered during the early part of winter.

**FUCHSIAS** should be pruned in, and started into growth, to make good specimens.

**STORE AWAY SOILS** for winter and spring use.













