

# ANNUALS

*Hardy and Half-Hardy*



GARDEN FLOWERS IN COLOR



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*GARDEN FLOWERS*  
*IN COLOR*

EDITED BY . . . . .  
R. HOOPER PEARSON  
MANAGING EDITOR  
OF THE *GARDENERS'*  
*CHRONICLE*, . . . . .







*Therese H. Montgomery*



PLATE I (*Frontispiece*)  
DRUMMOND'S PHLOX  
(*Phlox Drummondii*)

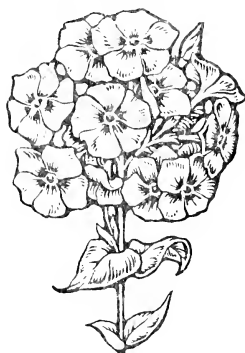


# *Annuals*

*HARDY  
AND HALF-HARDY*

By  
*Charles H. Curtis*

*With Eight Coloured  
Plates*



NEW YORK  
FREDERICK A. STOKES CO.



## PREFACE

THE life of a true Annual does not extend longer than one season. Itself the produce of a seed, the plant produces flowers, ripens its seed, and perishes in the same year.

Annuals are not the weedy, short-lived things they appear to many; on the contrary, under proper treatment they prove to be amongst the most floriferous and the brightest plants in the whole flower garden. But often the beds are planted as thickly as a clover field, and huddled together thus the plants grow so weakly, that they lean on each other for support, and are incapable of developing strong flower spikes. When the proper principles of culture become better known, the Mustard-and-cress-like groups will be abandoned for ever, and Godetias, Clarkias, Mignonette, Marigolds, Salpiglossis, Convolvuluses, Cornflowers, Larkspurs, Drummond's Phlox, Ten-week Stocks and others that used to be the delight of many an old garden will become popular features in the modern parterre. Annuals have many qualities to recommend them. Seeds can be purchased cheaply and any one can raise the hardy sorts out-of-doors, whilst the tender kinds may be purchased for next to nothing in the month of May, or late sowings of most of them can be made out-of-doors in the last fortnight of April and the first fortnight in May. Those who have pits or heated frames can raise them in pots or boxes and thus get an earlier start. Annuals can be used to fill up gaps in the mixed border, and when the flowering period is past their immediate removal leaves the border with

every appearance of neatness. Many Annuals are valuable as pot plants for the conservatory, as, for instance, *Rhodanthe maculata*, *Celosia plumosa*, *Campanula pyramidalis*, *C. medium*, and *Schizanthus retusus*. There are no more brilliantly coloured flowers than the American Eschscholzias and the gaudily painted varieties of *Chrysanthemum tricolor*.

It is hoped that the present volume contains such practical information as will help to popularise Annuals and induce cultivators to expend more care upon them, for I am convinced that they do not occupy the prominent position in our schemes of "Present-Day Gardening" that their merits deserve.

For the present purpose the "Kew Hand List of Herbaceous Plants" has been taken as the authority in the matter of nomenclature. The genera are arranged alphabetically in each division of the book, and the popular names are given in cases where these are generally known. Thanks are tendered to Mr. Walter Irving and Mr. S. Arnott for kindly assistance in the text, and to Messrs. Sutton & Sons and to Messrs. Dobbie & Co. for the specimens illustrated in the plates.

C. H. C.

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# ANNUALS

## HARDY AND HALF-HARDY

### CHAPTER I

#### THE VALUE OF ANNUALS

It may be stated that Annual Flowers are of immense value in the Garden, Greenhouse, or Conservatory without conveying anything like an adequate idea of the great importance of this large group of plants. Those who have visited the Horticultural exhibitions of recent years must have been struck by the increased number of classes provided for Annuals, and also by the splendid competitions these classes succeed in exciting. But even more striking are the advances our seedsmen and cultivators have made in developing and improving the flowers belonging to this group, not only in colour and freedom of flowering, but also in the habit of growth.

A perusal of the seedsmen's catalogues that garden lovers receive at the commencement of each year will prove the importance of Annuals, for it may be taken for granted that seedsmen would not list them so freely nor illustrate them so beautifully, if there was anything but a large demand for seeds.

The wide areas devoted entirely to the cultivation of Annuals for seed-production would surprise those who have

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not visited the great seed-growing districts of our own country, not to mention those of France, Germany and the United States, or who have not had opportunities of inspecting a seed warehouse at the busiest time of the seedsmen's year. The cultivation of Annual Flowers for seed purposes is a great and increasing business, and if it were possible to obtain figures showing the capital invested, the area under cultivation, and the amount of labour employed, these informative details would be very interesting.

Ever since the publication of the first seed catalogue, the cleverest horticulturists have devoted their attention to the improvement of Annuals, and in modern times, with the whole world laid under tribute, and with rapid communication between all parts, the advance is systematic and striking. Selection and cross-fertilisation have improved some species well-nigh out of knowledge, whilst hybridisation has given us new races of great beauty. Sweet Peas alone afford a remarkable instance of what can be done by selection and cross-fertilisation even in a quarter of a century.

Patient work has not only given us Annuals very distinct from the type species, but it has secured a high percentage of fixity in the colour of the flowers and habit of growth. These qualities are great boons, as they enable the owner of a garden to produce the colour effects he or she desires, and to avoid colours that are undesirable for the scheme in view. It is usual to place great confidence in the seedsmen in these matters, and the trust is but rarely misplaced. We may choose tall, intermediate, or dwarf strains of many of the popular Hardy and Half-hardy Annuals, and be quite certain that when we plant out our seedlings it will not be the fault of the seedsman if, where we wished for a strain suitable for either edging or carpeting a bed or border, we have plants of tall or intermediate habit. The fault will be most likely due to our own carelessness.

A little consideration will show that the sphere of usefulness of Annuals is much wider than at first sight appears. So far as the Flower garden is concerned, and the term Flower garden is here used in its widest sense, their value is more recognised every year. The plants exhibit such different heights, habits, and colours that they afford ample scope for providing bold effects and permit the planting of whole borders or large beds. In some of the larger gardens I have seen Annuals used exclusively for decorating a special portion of the Flower garden, and with good effect. In other instances they are used in conjunction with Perennials to complete certain colour effects, and right well do they play their part, for whether it is a red, a blue, a yellow, a purple, or a white border that is desired, it can scarcely be produced over any considerable period without their aid.

The Herbaceous Border is a great feature in present-day gardening; of various sizes, it is found in practically every establishment. But in the maintenance of such a border the Annual flowers often play a by no means unimportant part. When the early flowers are over, especially those of bulbous plants, there are gaps not easily filled with anything save Annuals, therefore as fill-ups and stop-gaps they serve a very useful purpose.

To the fragrance of the garden they contribute their full share, and one has only to think of the sweetness of the Stocks, Mignonette, Candytuft, Sweet Peas, and Nycteria to appreciate this fact.

Without the help of Annuals it would be a very difficult matter indeed to beautify a quite new and bare garden, supposing the garden to be one attached to a suburban villa that becomes ready for occupation at the end of March. Summer bedding plants could be used but they would prove costly, and, for the most part, uninteresting, whereas Annuals can be purchased for a comparatively small sum, and they

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can be depended upon to give the finest colour displays obtainable.

Climbing Annuals are fairly plentiful, and the tall *Tropaeolums*, *Ipomaeas*, Sweet Peas, and others, with Giant Sunflowers and Mallows, will hide the fences, and form screens and backgrounds for the intermediate and dwarf subjects. In the foreground we may place such plants as *Phlox Drummondii*, *Alyssum maritimum*, *Brachycome iberidifolia*, dwarf *Tropaeolums* of the Tom Thumb strain, dwarf *Convolvuluses*, *Mignonette*, *Nemesias*, *Phacelia campanularia*, *Diascia Barberae*, and others.

Not a few Hardy and Half-hardy Annuals are capital subjects for pot culture for the decoration of the Greenhouse or Conservatory, and a few that readily come to mind in this connection are the double *Clarkias*, *Nemesias*, the fine varieties of *Chrysanthemum*—these are grown extensively in pots for market sale,—*Salpiglossis* in many colours and exquisitely veined, *Rhodanthe Manglesii*, *Mignonette*, *Phlox Drummondii*, *Linums*, *Kochia trichophila*, *Collinsia bicolor*, and China Asters, though it is not often the Asters are grown in pots from seed sowing to flowering, the practice being to raise them in a little warmth, plant them out-of-doors, and then lift and pot them directly the flowers show their colour.

Annuals appeal irresistibly to many people because the flowers are exquisite for cutting. Flowers fill so large a place in the amenities of the household, that if suitable kinds can be grown in quantity, and cheaply, it is a great advantage. It must be said, however, that the usefulness of Annuals in this direction is not fully appreciated, and it is a fortunate circumstance that Mr. Felton, in his "British Floral Decorations," refers to this matter. He specially recommends Asters, *Clarkia elegans*, *Cosmos*, *Godetias*, especially *G. Schaminii fl. pl.*, *Gypsophila elegans*, *Lavatera* and *Malope* (used at home only), *Nemesias*, *Nigella Miss Jekyll*, *Salpiglossis*, *Scabious*, *Stocks*, the *Stella* group of *Sunflowers*, *Sweet*

Sultans, Shirley Poppies, Sweet Peas, and Cornflowers. To these may be added, for home use, not for travelling, *Alonsoa Warscewiczii*, various *Tropaeolums*, *Coreopsis*, *Cacalia coccinea*, Marigolds, Larkspurs, Annual Gaillardias, Candytuft, *Linaria maroccana* and *Linums*.

In view of the fact that rock-gardening is so popular it is well to bear in mind that some Annuals are very suitable for association with Alpine and other dwarf plants in the Rock Garden. *Campanula drabaefolia*, *Mesembryanthemum crystallinum*, *M. pomeridanum*, and *M. pyropaeum*, *Layia elegans*, *Gilia androsacca* and *G. rosea*, *Limnanthes Douglasii*, Portulacas, *Ionopsidium acaule*, *Grammanthes gentianoides*, Eucharidiums, *Dimorphotheca aurantiaca*, and *Brachycome ibiridifolia* are but a few of those that may be usefully employed for filling bare spaces in the Rock Garden, or for cultivation on those parts where spring-flowering bulbous plants make an early display and then die down.

When we come to consider Climbing Annuals it is obvious that the fullest possible use is not made of the wealth of material at disposal. Every one knows how beautiful is *Tropaeolum peregrinum*, the ever popular Canary Creeper, which grows so quickly and covers a large space with its elegant, light green leafage and myriads of little, golden, bird-like blossoms. The climbing *Tropaeolum majus* and the showy *T. Lobbianum* are also well known, and no one dare plead ignorance of Sweet Peas. But there are other climbing Annuals, and they include *Thunbergia alata*, *Loasa aurantiaca*—this has stinging leaves, and may be used with advantage at a spot where it becomes necessary to keep other people's "hands from picking and stealing"; the Japanese Hop (*Humulus japonicus*), a particularly useful climber; the various Ipomaeas or climbing Convolvuluses; ornamental gourds in great variety, chiefly members of the *Cucumis* and *Cucurbita* families, though *Trichosanthes anguina*

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may, without any severe stretch of imagination, be regarded as a Half-hardy Annual; and *Lathyrus grandiflorus*, which bears large rose-coloured blooms, are all well worthy of cultivation. Of lesser value, but interesting and useful, are *Amphicarpaea monoica*, the violet-flowered Hog-pea Nut; and *Grammatocarpus volubilis*, a Half-hardy Chilean species with yellow flowers.

Even within the range of Bog-loving and Aquatic plants there are a few Annuals of garden value, notably *Malcomia maritima*, *Samolus Valerandii*, *Saxifraga Cymbalaria*, *Trafalotans*, *T. verbanensis*, and *Valisneria spiralis*.

The occupants of the Vegetable Garden do not come within the scope of the present work, but in concluding this brief tribute to the usefulness of Hardy and Half-hardy Annuals it will not be out of place to remember the indebtedness of gardens to Peas, Dwarf Beans, Broad Beans, Lettuces, Spinach, Melons, Tomatoes, Mustard, Maize, and Vegetable Marrows, for food of the highest value, whilst the indebtedness would be further increased if Hardy Biennial plants were included.

## CHAPTER II

### CULTIVATION OF ANNUALS

It has been frequently stated that the great secret of gardening lies in "doing the right thing at the right time." But although no one with gardening experience will raise any objection to that statement, it is a fact that the capacity to carry out the instructions implies a vast amount of knowledge. We need to *know* the *right* thing to do and we must *learn* the *right* time to do it, and it is scarcely less important to know what to avoid. First, then, we must not buy cheap seeds merely because they are cheap.



This is an age of cheapness, and most people endeavour to obtain as much as possible for the money they spend. This is all very well if quality rather than bulk or number is considered. But low-priced seeds are often the dearest. Just as much time and labour are necessary for cultivating plants of a poor, weedy strain of Annuals as those of a fine one that are the result of years of skilful selection or breeding; consequently, a strain will give the best possible return for the care we bestow upon the seedlings. Happily, nowadays it is possible to purchase a small packet of a good strain of seeds for the same price as a large packet of inferior strain.

Avoid thick sowing. How many times, I wonder, has the advice "Do not sow too thickly," been given? Beyond all computation. Such advice is excellent, but "too thickly," like "too wet" and "too dry," are terms that convey little to the novice, although they are fairly well understood when used by experienced cultivators. Mustard and Cress, for salad purposes, are usually sown as thickly as the seeds can be placed in one layer, but the end in view is not to obtain sturdy plants to branch freely, flower profusely, and last in beauty the Summer through. Even the cleverest growers find it difficult to sow seeds of Annuals as thinly as they should be sown. The germinating power of purchased seeds is higher now than ever it was, therefore there is no need to allow any considerable margin for failure. The allowance should be larger for outdoor than for indoor sowings, because unpropitious weather and such enemies as slugs have to be taken into account. If, when sowing seeds, we always remembered that every seedling should have room to fully open out its seed-leaves without let or hindrance from its neighbours, there would be far fewer mistakes made. Even more space than this should be allowed unless time and conveniences can be provided for promptly pricking off the

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seedlings, or for thinning them severely before they crowd one another in the slightest degree. Some Annuals will not bear transplantation and must be sown out-of-doors where they are to flower; in such cases thick sowing renders success impossible, and the neglect of proper thinning is a distinct proof of bad cultivation.

Excess of moisture should be prevented as a plague. The seeds should be sown in light, sandy soil, and the receptacles must be provided with ample drainage. This applies equally to seeds sown in pots and boxes or in the open ground. Lack of sufficient moisture is as injurious as the other extreme. It is a fact that irregularities in watering, coupled with thick sowing, are responsible for most of the failures that arise in the earlier stages of the culture of Annuals.

Very large quantities of Hardy and Half-hardy Annuals are now raised each Spring under glass for the purpose of securing stocks of strong, sturdy, well-rooted plants ready for planting out-of-doors in April or early in May. Where a greenhouse, frame or pit, from which frost can be excluded, can be requisitioned, either or all of these structures will afford suitable shelter for early batches. Excess of heat must be avoided. When the plants are raised in this fashion, there is a great temptation to take full advantage of these shelters and so secure big plants when planting time arrives. In this connexion it is worth while to remember that large plants are by no means the best for planting out, because growth produced under favourable conditions under glass is apt to suffer badly should cold or windy weather follow immediately after planting in the open bed or border. Further, the larger the plants the more room will they need, and space is usually limited for the accommodation of such subjects. Again, the larger the plants the more root room will they require and

the more attention will they need in the matter of watering, and there is the greater likelihood of trouble from drought and insufficient nourishment.

When Annuals are raised under glass the aim should be to provide an atmosphere and temperature for them such as prevail in April, the month when some of the earliest Annuals should be appearing above ground in the outdoor seed beds. The date of sowing must be arranged so that the seedlings, after due growth and careful hardening off, are just needing more root room when planting time arrives. No definite date or dates can be given that will be certain to bring about this ideal condition of things, because many and varied circumstances come into play, even beyond the differences of climate that prevail in different districts.

In districts where the soil and climate are both favourable Autumn sowing is well worth while, because it enables the plants to produce a good root system, and the result is sturdy plants that come into flower early. A sheltered spot where the soil is well drained and contains a fair proportion of grit and leaf-mould is suitable for this method; but here again thin sowing and early thinning must be insisted upon. If pleasant Autumn weather follows sowing, especially if considerable moisture accompanies the warmth, then the seedlings will certainly become "soft" or sappy unless thinned severely as soon as they can be handled safely. If they do become sappy or spindly, then the losses during the winter are likely to be severe notwithstanding the hardiness of the subject. However, despite the risks of weather and the losses through pests, Autumn sowing gives gratifying results nine times out of ten, whether the seedlings are planted out the same year or left in the bed to be transplanted at the first favourable opportunity in the Spring. I have had annual Chrysanthemums a yard high and almost as much through from Autumn sown seeds.

Most Annuals succeed best in deep rich soil, and it is a mistake to imagine because they are only of annual duration therefore their needs are few and they can take care of themselves. They will certainly take care of themselves in the sense that they will rapidly fulfil their mission so far as this is taught them by Nature. The end they have in view is to produce the largest possible amount of seeds in the shortest possible time. But that is hardly the purpose of the cultivator. Comparatively few people—and this applies particularly to the owners of small gardens—have a knowledge of the capacity of Annuals when the plants are given every possible chance. If people would give, say, a Larkspur, an annual Chrysanthemum, an Ostrich Plume Aster, a Ten-week Stock, a Clarkia, or a Coreopsis, ample room to develop freely in rich soil, with no hard-feeding and hard-drinking competitors to fight against, the revelation of beauty and grace, freedom and brilliance they would give would be worth more than many pages of advice, and would I think tend to exalt Annuals in the general estimation of the public.

Firm planting, a good watering to settle the soil about the roots, and a free use of the Dutch hoe are cultural items to be practised, not avoided. Close planting is as illogical as thick sowing; it destroys the beauty of the plants, reduces their effectiveness, and shortens their season of flowering. The necessary supports for all tall-growing subjects must be provided early in the Summer, and the stakes used should be slender and strong, and sufficiently tall to serve all the season through.

Annuals used for garden decoration must not be allowed to ripen seeds. Nothing reduces the vitality of a plant more than the effort to bring a crop of seeds to perfection. An Annual is quite willing to give up its life quickly to do so; indeed, under natural conditions its motto seems to be "A Short Life and a Merry One." The prompt removal of faded

## THE MOST USEFUL ANNUALS 11

flowers will do much to lengthen the life and usefulness of the plants. Leave seeding to the seedsman, it is his business, and he will probably do the work far better than you. If you are a raiser or are working for the improvement of any section of Annuals, the case is different, because the assumption is that you possess the knowledge generally believed to be the exclusive possession of specialists.

### CHAPTER III

#### THE MOST USEFUL ANNUALS

##### ADONIS

###### *"Adonis Flower" or "Pheasant's Eye"*

SO popular are the beautiful Spring-flowering perennials, *Adonis vernalis* and the newer *A. amurensis*, that the annual species of this little family of the Buttercup tribe (*Ranunculaceæ*) are apt to be overlooked. But they are very pretty, perfectly hardy, and quite easily raised from a March sowing in the open ground. Their height varies from 1 foot to 18 inches, according to soil and position. Both the following species are suitable alike for the front of the mixed border and for the Rock Garden.

*A. æstivalis* is from Southern Europe and has crimson-scarlet flowers, while *A. autumnalis* has blood-red blooms with a dark centre. Both plants commence to flower in June, earlier if sown in the Autumn, and each produces elegant foliage as well as bright and attractive flowers. *A. autumnalis* is a native plant, and one familiar in some districts as Corn Adonis, Pheasant's Eye, or Red Chamomile.

## AGERATUM

“*Floss-Flower*”

While for practical purposes it is possible to treat not a few perennial plants as Annuals, it is also possible to so treat some Annuals that to all intents they become Perennials. Such is the “art that doth mend Nature, change it rather.” The Ageratums are mostly Half-hardy Annuals, natives of Central and South America, but if they are not allowed to ripen seeds (and this they rarely do in our climate), they may be propagated from cuttings year after year, the stock plants being lifted and potted in the Autumn and kept in a Greenhouse during the Winter. Early in the year these plants begin to grow freely and provide a quantity of cuttings that may be rooted easily in sandy soil in a temperature of from 60° to 70°. It is by this means that the specially dwarf strains are frequently cultivated for Summer bedding, but so well are many of the best forms fixed, that seed-raised stocks show little variation in height and even less in the colour of their flower clusters.

Sowing under glass should take place in February or March, the usual processes of pricking off and hardening off being followed so that sturdy plants are available for planting early in June. A sowing on a warm border early in April will provide excellent material, especially if there is no special need for plants to flower at the earliest possible moment.

The parent of the garden race of Ageratums is *A. mexicana*, a species that grows about 18 inches high, and produces small *Composite* heads of lilac-blue flowers, borne in dense clusters and in the greatest profusion. Numerous varieties are catalogued,

PLATE II

GARDEN VARIETIES OF COREOPSIS DRUMMONDII  
AND C. TINCTORIA







*T. ...*



and some of the best are Blue Star, 6 inches, light blue; Imperial Dwarf, 8 inches, deep lavender-blue; Little Dorrit, 6 inches, lavender; Snowflake, 9 inches, white; Swanley Blue, 9 inches, deep blue; Victoria Louise, 6 inches, light blue with whitish centre; and Lavender Band, 5 inches, soft lavender.

## ALONSOA

## "Mask Flower"

Delightful alike for beds, borders, or for pot culture, the Alonsoas (*Scrophulariaceæ*) fully deserve a larger measure of popularity than they enjoy. Charmingly elegant, growing from 9 inches to 1½ foot high, and making dense little bushes that are smothered with brilliant, large-lipped flowers all the Summer through, the Alonsoas possess an unique beauty. Most of the species may be treated as Annuals, but a few of the best are true Half-hardy Annuals. The seeds are small, and must be only just covered with fine, sandy soil; March is a good time to sow, and a temperature of 60° will be high enough. A sowing out-of-doors in April will give good results. Prick out the seedlings early and plant them, in May or early June, where they have to flower. Six inches apart is sufficient space for the dwarf compact growers, but the taller sorts need more room.

The chief species are *A. linifolia*, 1 foot to 1½ foot high, scarlet; *A. miniata*, 1 foot, bright scarlet; *A. m.* Scarlet Gem, 1 foot, a fine and brilliant scarlet variety; *A. Mutisii*, 1 foot, pink with crimson centre; and *A. Warscewiczii*, 1½ foot, vermilion-scarlet, with golden stamens. There are some good selected strains of Alonsoas on the market, probably obtained from *A. Warscewiczii*, and both scarlet and creamy-pink varieties that grow about 9 inches high and are very distinct and beautiful.

## ALYSSUM

“*Sweet Alyssum*”

There must be few flower lovers who are unacquainted with the Sweet Alyssum, the white-flowered honey-scented plant that has been a favourite for long years past. The type, *Alyssum maritimum*, or *Koenigia maritima* (*Cruciferae*), is not a native plant, but is a garden escape in some parts of the country and grows freely in a wild fashion where it has established itself. This is quite hardy and grows about 6 inches high. Latterly, however, a very dwarf race has been fixed, rising not more than 3 or 4 inches high, and forming a dense carpet of vegetation that quickly becomes smothered with white, sweetly-scented flowers, and therefore is a great favourite with gardeners who need a subject that will cover the ground under tall and tender plants. There are several forms of this dwarf strain, or at least a very similar form is listed under the names *compactum*, *minimum*, *Little Dorrit*, and *Rock Alyssum*.

The dwarf forms may be raised from cuttings, or propagated from seeds sown in light soil during March or April. Though so small, the plants spread freely, and should not be planted nearer together than 6 inches.

## AMARANTHUS

“*Amaranth*”

Although one or two species of *Amaranthus* (*Amarantaceae*) are sometimes described as Hardy Annuals, it is a much better plan to consider them all as Half-hardy. Most of the species are found in India, but others come from the

Bahamas, Japan, the Philippines, and the East Indies. Individually the flowers are quite small, but they are produced in enormous quantities in velvety, tassel-like spikes or clusters, these often being much branched and semi-pendulous or even quite so. They are striking and interesting plants, though not showy, and their vigorous growth makes them serviceable for large beds and borders. The flowers are purple, red, or crimson. But it is as foliage plants that Amaranthuses are most valuable, the colour of the leafage being very effective in many of the varieties.

March is quite early enough for seed-sowing, and if a temperature of about 65° can be provided germination soon takes place and the seedlings make rapid progress. Very early sowing is not desirable unless there is an abundance of room for the plants to remain under glass until the middle of May, when they may be placed out-of-doors in a sheltered place preparatory to planting at the end of the month or early in June. Choose a sunny spot and plant in groups.

The best sorts are *A. bicolor*, 2 feet, green and yellow leaves; and the variety *ruber*, 1½ foot, crimson, green, and purple leaves; *A. caudatus*, the well-known Love-lies-Bleeding, 2 feet to 3 feet, large, drooping spikes of purplish flowers; *A. Henderi*, 3 feet, leaves carmine-red, orange, and olive-green; *A. hypochondriacus*, 2 feet to 4 feet, flowers deep crimson, leaves purple underneath; *A. melancholicus*, 1½ foot, crimson leaves and flowers; *A. salicifolius*, 3 feet, leaves long and wavy, orange and bronze; *A. s. Princess of Wales*, 3 feet, leaves orange, green, and yellow; *A. sanguineus*, 3 feet, flowers purple and leaves blood red; *A. speciosus* (syn. *A. paniculatus*), crimson-purple flowers and red-shaded leaves; *A. tricolor*, 1½ foot, leaves purple-red, yellow, and green; *A. t. splendens*, 2 feet, a very beautiful plant, and as its leaves are

coloured crimson, scarlet, orange-yellow, and green, the name of Joseph's Coat has been given it.

All the taller-growing and bright-leaved *Amaranthuses* are valuable for sub-tropical effects in the garden.

### ANDROSACE

*"Rock Jasmine"*

Some difference of opinion exists as to whether *Androsace coronopifolia* (*Primulacæ*) is an Annual or a Biennial, but it is usually listed as an Annual, and it lends itself to "Annual" treatment. The correct name of this plant, by the way, is *A. lactiflora*. It is an Alpine gem, about 6 inches high, producing beautiful, elegant little heads of small, pure white flowers early in Summer. The Rock garden is the proper place for *Androsace lactiflora*, and a little group of plants makes a charming picture. Seeds may be sown either in Autumn or Spring, but no artificial heat should be used. Autumn-raised plants must receive cold frame protection through the Winter, as they are liable to suffer from wet and damp weather. A liberal addition of peat, leaf-mould, sand and broken limestone, should be made to the staple soil for these lovely plants. When they are suited as to soil and position they seed freely, and the self-sown plants that arise are the hardiest; beyond placing a sheet of glass over them to throw off rain and snow, they may be left to take care of themselves.

### ARNEBIA

*"Prophet Flower"*

The Hardy Annual *Arnebias* (*Boraginacæ*) are by no means well known, but here, as in the case of so many beautiful

Annuals, it only needs some enterprising seedsman to grow and show them well to ensure their popularity. The following species are hardy, but *A. cornuta* does best when raised under glass from seeds sown in March, though both *A. cornuta* and *A. Griffithii* may be raised out-of-doors from an April sowing. Each is a delightful subject, and the first is a capital plant for the border, whilst *A. Griffithii* is useful alike for the border and the Rock garden.

Only the two annual species are in cultivation. *A. cornuta*, 1½ foot, becomes a dense mass of yellow through the Summer and Autumn, and each flower has five black spots that fade to maroon in a day or so; *A. Griffithii*, 9 inches, has rich yellow flowers, and is a native of North-west India.

## BRACHYCOME

### “Swan River Daisy”

The Swan River Daisies are elegant, Half-hardy Annuals from 6 inches to 12 inches high. They are very useful for edging beds occupied with larger subjects, and they make a good show if grown in a patch filling a space of a square yard. The best-known species is *B. iberidifolia* (*Compositæ*), introduced from the Swan River in 1843. Though fairly popular it has not yet gained the favour it merits, but now that seedsman are working hard and successfully to secure greater freedom of flowering, a better habit of growth, larger flowers, and some variety of colouring, there is little doubt that before long it will deserve a place in most gardens. The flowers closely resemble those of the Star Cinerarias, and they are of a deep blue colour; Blue Star has brighter blue flowers, while there are white and rose coloured varieties listed in the best catalogues.

A sunny position and light, rich soil suits these pretty

Daisies, and it is an easy matter to raise a good stock of plants by making a sowing out-of-doors in April, or, where the soil is cold or the district a late one, an alternative plan is to sow in gentle heat in March or April, and prick off the seedlings quite early, giving them ample room to develop. Crowded seedlings result in slender plants that will need the support of low twigs at, or soon after, planting time, at the end of May.

## CALANDRINIA

### "Rock Purslane"

The showy *Calandrinia grandiflora* (*Portulacææ*) is a useful hardy subject and also a handsome one, flowering finely in the Rock garden or in a sunny border where the soil is fairly dry. On dry walls it is quite at home, and if it does not here attain its full height it blooms with prodigal freedom and is a gem for such a position. In favourable conditions this Rock Purslane grows  $1\frac{1}{2}$  foot high, and the bright rose-coloured flowers with their golden anthers show up finely above the grey-green, succulent foliage. *C. Menziesii* (or *C. speciosa*) rarely exceeds 9 inches, and it has purplish-crimson flowers that shine brightly in the Spring and Summer sunshine. Both species may be sown out-of-doors in the Autumn to flower early the following season, or sown in April for later flowering. Sometimes seeds are sown in a greenhouse in March and the seedlings are planted out in May or June; this is a good method, but is not necessary except in cold districts and on heavy soils. As the Calandrinias are all flowers of the sun it is a waste of time to attempt their culture in shady places and cold, wet positions.



## CALENDULA

## "Pot Marigold"

Old-fashioned flowers though they be, the Pot Marigolds occupy a very important position among Hardy Annuals because there are few flowers so easily managed, so cheaply purchased, or so brilliantly effective when grown in large groups, in beds or borders. In the garden of the cottager or the artisan they bloom as freely as in the garden of the merchant and the prince, and no matter what kind of a season it may be, the Marigolds do their full share in the adornment of the garden.

The common Pot Marigold is *Calendula officinalis* (*Compositæ*), a native of Southern Europe, and one that grows about  $1\frac{1}{2}$  foot to 2 feet high, forming a bushy plant that yields a long supply of flowers 2 to 3 inches across, and these may be single, semi-double, or double. The very double sorts are neither common nor beautiful, but the varieties with several rows of ray florets are the most useful and attractive. The florists have rounded the flowers and broadened the ray florets, as well as produced a number of distinct shades of colour. A few fixed varieties of great merit are Meteor, orange-yellow, striped lemon-yellow; Orange King, brilliant orange, and more double than most; Yellow Queen, golden-yellow; Prince of Orange, orange, with pale yellow stripes; and Lemon Queen, soft lemon-yellow, double. Of lesser value but still worthy of cultivation are *C. arvensis*, 2 feet, yellow; *C. maderensis*, 2 feet, orange; and *C. ægyptica*, 1 foot, yellow.

All the Calendulas are hardy, and in the case of *C. officinalis* self-sown seedlings come up with the persistence of weeds. Sow both in Spring and Autumn where the plants are to flower and thin the seedlings to a foot apart at least. The

two sowings will provide for a long season of bloom, and early and severe thinning will result in sturdy, branching plants that will give fine flowers in abundance.

## CALLISTEPHUS

### "China Aster"

Botanists will tell us that the true Asters are perennial plants familiarly known as Michaelmas Daisies, and the Annuals popularly known by the general title of Asters (*Compositæ*) are really garden-raised varieties of the Chinese species *Callistephus hortensis* (syn. *C. chinensis*, *C. sinensis*, and *Callistemma hortensis*). Because the wild plant is a native of China, the whole family of garden varieties comes under the general title of China Asters, and so, because the French and German florists have developed the flower and produced a considerable number of races, alternative titles are German Asters and French Asters.

Almost all colours except bright scarlet, vermilion, and yellow are represented in these showy and exceedingly useful flowers, but there are bright red shades that pass as scarlet, and a deep cream shade also passes for yellow in catalogue descriptions. Asters vary in height from about 8 inches in the Dwarf Bouquet section, up to 3 feet in the French Giant, Mammoth, and American Branching strains.

In the matter of form there is a wide and pleasing variation: Paeony-flowered varieties have incurving florets. Comet Asters have broad florets but are of elegant form and fine habit. Victoria Asters have very double, solid blooms, the florets imbricating regularly in the best strains. Ostrich Plume varieties are exquisitely beautiful, and their large, elegant blooms vie with the Japanese Chrysanthemums for size and usefulness. Quilled Asters have tubular florets

and find most favour with exhibitors, especially in the North of England and in the South of Scotland. In the Ray Asters the florets stand out stiffly, but not inelegantly, and the flowers are long lived and stand bad weather well. Chrysanthemum-flowered Asters are very free flowering, of dwarf habit, less formal than the Victoria strain, and fine for bedding. Single Asters are a modern race that have won general esteem owing to the demand for light, long-stemmed flowers suitable for cutting as well as for garden effect; they show a vast improvement upon the wild type and grow to a height of from 18 inches to 2½ feet, the flowers being borne on stems from 12 inches to 20 inches long. Few flowers are so useful in the late Summer and early Autumn as Asters, and the most beautiful Asters are the Ostrich Plume and Single varieties.

Asters are easily grown. So common is the practice of raising plants in a warm greenhouse, on a half-spent hot-bed or in a cold frame, that comparatively few people know that Asters may be raised easily in the open garden. A sheltered spot, where the soil is fairly light and rich, should be selected, and during the process of levelling the surface and making it fine, a liberal dressing of ashes from burnt garden rubbish should be worked into the soil. If the soil is heavy, three-inch-deep drills filled with old sifted potting mould will provide a capital seed bed. Thin and regular sowing, in lines from 8 to 15 inches apart, will ensure strong seedlings, but the seeds must not be sown deeply, the merest covering with soil, and some shade until germination takes place, will suffice. Early April is a good time for sowing out-of-doors.

Steady growth from the earliest seedling stage right up to the time of flowering must be the aim in Aster culture; half the failures experienced are the result of checks due to excess of water at the roots, or semi-starvation following thick sowing and absence of early thinning and transplanting. It is usual to sow Asters in gentle heat early in March, transplant the

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seedlings into pans or boxes, or into a bed of soil in a warm frame, and then proceed to harden them off as soon as they become re-established. This is a splendid method, and one that will produce large plants by the end of May if followed with reasonable care.

In this connexion, however, two difficulties are likely to present themselves. The first is the difficulty of regulating the temperature nicely in the early stages of development: Asters dislike rapid and frequent fluctuations of temperature, and show that dislike by turning yellow or dying off in an apparently unaccountable manner; no greater range than from  $55^{\circ}$  to  $65^{\circ}$  should be permitted while the seedlings remain under glass. The other difficulty arises from the great pressure of work experienced in most gardens at the end of May and in early June. Where Pelargoniums and other tender Summer bedding subjects are freely used they usually get first consideration, and the Annuals wait on their convenience, with the result that they suffer in many ways. If Asters are thoroughly hardened off they might with advantage be planted out in their flowering quarters before the tender plants, as then they would keep growing steadily. A goodly measure of leaf-mould added to the compost into which Asters are first transplanted as seedlings will prove beneficial, because the roots grip the particles of decaying leaves, and it is then possible to remove the plants with a full complement of roots and soil when the time to plant out arrives. It is a good plan to sterilise the leaf soil before use, as it often contains grubs or larvæ injurious to the roots.

Whether planted in beds or in groups in the border Asters need rich soil for their full development, but the use of fresh or rank manures must be avoided.

The "collar" of an Aster plant, *i.e.* the junction of the root and stem systems, is the weakest point, and any damage

PLATE III  
COSMOS BIPINNATUS









to it, brought about by careless handling, careless hoeing or planting so that they stand higher in the soil than previously, will result in losses. The application of small quantities of water to Asters in hot weather cannot be too strongly condemned, as it causes the roots to come to the surface, where the sun soon scorches them.

## CAMPANULA

### "Bell-Flower"

Very few of the Bell-Flowers (*Campanulaceæ*) are Annuals ; indeed most members of the genus are perennial, although the splendid Canterbury Bells are biennial. The Annual species, however, deserve more attention than they receive, especially at the hands of those who have large Rock gardens under their care. Three species are worthy of consideration : these are *C. drabaefolia* (syn. *C. attica*), *C. Loreyi*, and *C. macrostyla*.

*Campanula drabaefolia*, the *C. attica* of the seed catalogues, is a charming little plant about 4 inches high, and if it is planted so that the individuals meet, the result is a low, dense mass or carpet of rich purple-blue or white when flowering time comes. Both purple and white forms come true, and the seeds may be sown either in Autumn or Spring. It is a good plan to sow the seeds where the display is needed and thin the plants to 2 or 3 inches apart. *C. Loreyi* (syn. *C. ramosissima*) is about 1½ foot high, and makes a capital border plant, good alike in small groups or in masses ; it has violet-blue flowers of great beauty. *C. macrostyla* is a striking plant, of rigid habit, bristly, and has a large and prominent stigma in each rounded flower. The flowers are blue, but some variation in shade will be found in a number of plants. This species will not succeed if sown in Autumn, unless

housed in a frame all the Winter, and it is best sown under cover in the Spring and duly planted out in a sunny position.

## CENTAUREA

### *"Corn Flower" and "Sweet Sultan"*

The somewhat large family of *Centaureas* (*Compositæ*) contains a number of good garden subjects, and a few of these are popular Hardy Annuals. I suppose every one knows the Cornflower of the grain-fields, and most people with an interest in gardening know the elegant Sweet Sultans. For their value as cut flowers these two kinds of Annuals are worthy of wide popularity.

*Centaurea Cyanus*, the Common Cornflower, Bluet, or Blue-bottle, is a native plant, about 3 feet high, with pretty, bright blue flowers. This has been taken in hand by the seedsmen and improved in habit and size of flower, and altered in colour. Pure white, deep blue, light blue, rose, and also double varieties are now offered and come quite true, consequently they are dependable for certain colour effects. *C. Cyanus minor* is a low-growing type, about a foot high, and there are blue and rose coloured varieties of it known respectively as Victoria Blue and Victoria Rose.

The Cornflowers are largely grown for market, and for this purpose are usually sown in Autumn in drills, and lightly thinned in due course. The flowers are picked early the following Summer, with long stems, and sold in close bunches, and few flowers are sold so cheaply. For garden purposes two or more sowings may be necessary, and in any good, well-worked garden soil they may be sown in September, and thinned out a foot or so apart when the seedlings are of fair size. Another sowing in March or

April, where the plants are to flower, will give a succession to the Autumn raised plants. If a sowing is made in Spring under glass, some care must be taken at the time of transplanting, as the Cornflowers do not take kindly to root disturbance.

The Sweet Sultans are very beautiful, and they have been improved greatly during recent years by Messrs. Jarman and Co. of Chard and other cultivators. The older type gives flowers a couple of inches across, and these may be rose, yellow, or white, and in each case they are sweetly scented. The height is about  $1\frac{1}{2}$  foot. The newer forms are sometimes stated to have been raised from *Centaurea suaveolens*, but this is a doubtful species, and the probability is that they have all been evolved from *C. moschata*. These newer forms, with flowers 3 inches broad, are listed as Bridesmaid, pale lemon-yellow; Honeymoon, bright yellow with golden centre; The Bride, pure white; and The Bridegroom, rosy-pink with whitish centre. All these grow 3 feet high under suitable conditions.

For several years I could not grow a Sweet Sultan worth looking at, but after raising seedlings in a frame and transferring them singly to small pots as soon as possible, and planting them out in May in soil well limed some time previously, I was very successful. Certainly these Giant Sweet Sultans are splendid garden flowers, and they may be successfully managed from an autumn sowing in light soil where lime or chalk are present in some quantity; such a sowing should be made where the plants are to flower, and beyond thinning, weeding, and the use of a few twiggy sticks to support them and prevent damage by wind, they will need little attention. Where cut flowers are greatly in demand an autumn sowing ought to be made in the reserve garden.

*Centaurea depressa* is very like *C. Cyanus*, but of lower

growth, and it has rich Gentician-blue flowers: The Queen is a fine selection. *C. americana* is a strong growing Hardy Annual from North America; it reaches a height of 3 feet, and has reddish flower-heads.

## CHRYSANTHEMUM

### "Crown Daisy" and "Corn Marigold"

It is hardly possible to over appreciate the group of hardy Annual Chrysanthemums (*Compositæ*), as they possess statelyness, beauty, usefulness, and a brilliant effectiveness not easily surpassed. Three species have been pressed into service to provide us with these splendid flowers, and they are *C. carinatum* (syn. *C. tricolor*), *C. coronarium*, and *C. segetum*—the last named a wild plant especially common in the Eastern counties, and well known as the Corn Marigold. The garden varieties of *C. carinatum* grow from 1½ foot to 2½ feet high, and may be 3 feet high if the conditions are favourable. The double varieties of *C. coronarium* and *C. Dunnettii* are of lowlier growth, and may be had in white, yellow, and crimson. *C. segetum*, 2½ feet high, and its variety *C. s. grandiflorum*, are bright yellow, while Little Gem is about 8 inches high, and makes a pretty, yellow-flowered bush.

Messrs. Sutton & Sons have introduced some exquisitely beautiful varieties of *C. carinatum*, namely, Morning Star, soft primrose yellow; Eastern Star, yellow, with brown centre; Evening Star, deep golden-yellow; and Northern Star, white with yellow centre and maroon disk. Other good varieties are Burridgeanum, crimson, white, and yellow; W. E. Gladstone, crimson; and Silver Queen, white, with yellow zone and silvery disk.

In most gardens these annual Chrysanthemums might

be advantageously sown out-of-doors late in August, and if the seedlings are placed, as soon as large enough to transplant, where they are to flower, the result will be large specimens to bloom early the following season. In April seeds may be sown in groups in the border, and the seedlings eventually thinned to 18 inches apart; it is advisable to provide each plant with a slender bamboo stick as a support against wind and heavy rains. Another method of procedure is to sow in March in a warm greenhouse, prick out the seedlings into boxes, harden off, and plant them out at the end of May.

### CLARKIA

Clarkias (*Onagraceæ*) have been much improved in recent years, and now the double sorts are extremely beautiful, and valuable alike for beds, borders, and for pot culture. Visitors to the Spring and early Summer exhibitions cannot fail to have seen the delightful plants of these improved double varieties exhibited in pots by the nurserymen. Such plants are easily produced if seeds are sown in August and the plants are treated hardily, frame shelter being given them during the Winter and greenhouse protection in the very early Spring. For the decoration of the Conservatory in May and June they never fail to give pleasure.

Clarkias are Hardy Annuals, and may be sown out-of-doors in September, to flower early the following season; or on light soil in March or April for flowering later; or in gentle heat in March to provide large plants to flower in the fulness of Summer time. Strong plants put out in May, not less than a foot apart, will grow  $2\frac{1}{2}$  feet high, and produce an abundance of dainty blooms on spike-like branches.

Two species give us the majority of the varieties so

largely grown. These are *C. elegans* and *C. pulchella*. The former species comes from California and the latter from Oregon. In *C. elegans* the lobes of the flower are entire, while in *C. pulchella* these are more or less lobed. The varieties of *C. elegans* are the most beautiful, and the leading sorts are Double Pink, Double Salmon, Snowball, double white; Firefly, double scarlet-crimson; Scarlet Beauty, scarlet; and Purple King, purplish-carmine. Of *C. pulchella* there are white, rose, and carmine shades, both double and single.

It must not be forgotten that Clarkias are particularly valuable for cutting, their elegance and beauty when arranged on a dining or sitting-room table being always appreciated.

## COLLINSIA

### "Collins' Flower"

These Hardy Annuals (*Scrophulariaceæ*) have the merit of being good town plants. They grow about a foot high, and produce their double-lipped flowers in whorls along the greater part of their growth. The most popular species is *C. bicolor*, white and lilac-purple; and *C. b. candidissima*, wholly white, and a little dwarfer than the type. Other species worthy of trial are *C. bartsiaefolia*, of which there is a white and a purple variety; *C. corymbosa*, white and blue; *C. grandiflora*, purplish-blue; *C. parviflora*, a trailer, with purple and blue flowers; *C. sparsiflora*, violet; *C. tinctoria*, pink; *C. verna*, purple and blue, very pretty; and *C. violacea* violet and white.

It is a good plan to make both an Autumn and a Spring sowing of Collinsias, so as to prolong the flowering season. *C. verna* flowers in Spring and should be sown in Autumn.

## CONVOLVULUS

## " Bindweed "

Although the varieties of *Convolvulus tricolor* (syn. *C. minor*) are useful and popular Hardy Annuals (*Convolvulaceæ*) they are not so extensively grown in large gardens as formerly, but in town and suburban gardens and in the gardens of the children they are as popular as ever. Rarely exceeding a foot in height, they make rounded mounds of neat foliage and bright flowers, and if the latter are not long lived, there is a quick succession of them right through the Summer. Sunshine they delight in, and poor soil suits them better than rich mould. The varieties are numerous; they may be white, blue and white with yellow bands, white and violet with yellow stripes, dark blue, sky blue, or pink.

Sow in Autumn and again in the Spring out-of-doors, and thin to 6 or 8 inches apart; or sow the seeds in boxes, in Spring, in gentle heat, placing them 2 inches apart. Harden off the seedlings and plant out in April or May. The climbing Annual we generally call *Convolvulus major* is an Ipomæa.

## COREOPSIS

## " Tick Seed "

The Coreopsis are first-rate border plants, and their flowers possess great value for filling the vases indoors. They mostly come from the Northern or Central part of America, and they possess grace and brilliance scarcely surpassed by any other subjects dealt with in this work, whilst their freedom of flowering is unexcelled.

Two species, with their numerous colour variations, give us most of the Annual Coreopsis (*Compositæ*) used in gardens, and these are *C. Drummondii* and *C. tinctoria*. *C. Drummondii*

is about  $1\frac{1}{2}$  foot high, and its flowers are yellow, with a ring of crimson round the disk. *C. tinctoria* (syn. *C. bicolor*) grows from 2 feet to 3 feet high, and its bright brown and yellow colouring makes it very attractive. In the hands of the seedsmen this has given both rounded and stellate flowers, and a range of colour from pale yellow to deep chestnut-red or maroon. A fine dwarf strain has also been secured and is first rate for bedding, as the plants grow only from 7 to 12 inches high and form compact, bushy specimens; Golden Ray, gold and brown; Beauty, yellow and crimson; and Crimson King, dark crimson, are all good varieties in this dwarf or "Tom Thumb" section. Some of the newer dwarf *Coreopsis* have the margins of their ray florets recurved, and so they have gained the descriptive title of "Cactus-flowered."

Other species of some note are *C. aristosa*, 3 feet, orange-yellow; *C. Atkinsoniana*, 3 feet, deep yellow with brown centre; *C. cardaminifolia*, 2 feet, yellow and brown-purple; *C. Burridgei*, 3 feet, crimson and yellow; and *C. coronata*,  $1\frac{1}{2}$  foot, orange and crimson.

*Coreopsis* is easily managed by sowing seeds thinly in shallow drills in March, and transferring the plants to their flowering positions when about 3 inches high. They also do well when sown in September, in light soil, and transplanted to rich soil in the early Spring; so treated they come into flower earlier than those sown in Spring. They also lend themselves to treatment as Half-hardy Annuals, and do very well raised in gentle heat in March and pricked off as early as they become fit to be handled.

## COSMOS

"Mexican Aster"—"Feathery *Cosmea*"

Each year the graceful Mexican Aster, *Cosmos bipinnatus* (*Compositæ*), becomes increasingly popular. The newer strains



have elegant foliage as well as fine Dahlia-like flowers to recommend them (see Plate III). They must be raised in March, in a temperature of about 65°, potted singly as soon as large enough, and planted out at the end of May or early in June, after being properly hardened off. Unless so treated they do not flower sufficiently early to be effective. For borders or for large beds they are capital subjects, and they are charming as cut flowers.

The older forms grow 3½ feet high, but the newer varieties are 3 feet to 6 feet high. Crimson King, Rose Queen, and White Queen are descriptive names; Early Dawn is white and pink. *C. sulphureus*, 1½ foot to 2 feet, light yellow; and *C. tenuifolius*, 2 feet, purple, are other species.

## CUPHEA

### “Mexican Cigar Flower”

Chiefly natives of Mexico, there are a few species of Cuphea (*Lythraceæ*) useful in beds and borders, but they all need a sunny position and rather poor soil. They should be treated as Half-hardy Annuals, though a few are doubtfully hardy. They make pleasing, bushy plants with pendulous flowers. The best annual kinds are *C. æquipetala* (syn. *C. ocimoides*), 2 feet, purple; *C. lanceolata* (syn. *C. silenoides*), 1½ foot, purplish-blue; and *C. Zimapanii*, 2 feet, dark purple.

## DATURA

### “Thorn Apple”

Of bold, strong growth, and carrying large trumpet-shaped flowers, the annual Daturas (*Solanaceæ*) are fine for sub-tropical gardening, for border groups, or for pot culture.

They are half-hardy, and the seeds should be sown in moderate heat in March, and the seedlings potted off singly as soon as large enough, gradually hardening them ready for planting in a sunny place in early June. They vary a little in height, but are generally about 3 feet.

Annual species, or species that may be treated as Annuals, are *D. ceratocaula*, 3 feet, white, shaded with purple, sweetly scented; *D. chlorantha fl. pl.*, yellow, double, fragrant (Golden Queen is probably a selected form of this species); *D. fastuosa*, 2½ feet, white interior, violet exterior; *D. Metel*, 2½ feet, white, fragrant, a fine plant; *D. muricata*, 2½ feet, white; *D. quercifolia*, 2 feet, violet shaded; *D. Stramonium*, 2 feet, white, a native plant, but of little garden value; *D. Tatula*, 2½ feet, violet; and *D. T. gigantea*, a giant form of the latter. A strain offered under the name of *D. Huberiana* produces beautiful duplex flowers in several shades of colour.

## DELPHINIUM

### "Larkspur"

The Larkspurs (*Ranunculaceæ*) are old time favourites, and the annual species or their garden varieties are among the most popular of flowers. They are hardy, free flowering, stately and elegant, and the flowers exhibit a considerable range of colours. Practically every colour produced is represented by double and single forms, and by tall and dwarf strains, these latter being respectively about 3 feet and 1 foot high. The florists have altered the form of the flower somewhat, as well as of the spike, so that we have now what are called Stock-flowered, Hyacinth-flowered, and Emperor strains: the Emperor strain is of sturdy growth and erect bushy habit, and flowers a little later than the Stock-flowered sorts. Emperor Larkspurs probably come from

*D. consolida* and not from *D. Ajacis*. All are fine for beds or borders and look splendid in large groups, the several strains being associated so as to secure a long flowering season. The colour range is from white to intense purple, some of the rosy and carmine shades being especially attractive.

The species of most value are *D. Ajacis*, 1½ foot, blue, a native plant, and the progenitor of most of our garden Larkspurs; *D. cardiopetalum*, 1 foot, violet-blue; and *D. consolida*, 1½ foot, flowers blue, produced in a lax spike.

Autumn sowing is in most cases the best means of raising a fine stock of plants that will flower vigorously the following Summer, but all the Larkspurs are easily raised from a March or April sowing, made either in the open, or in boxes in gentle heat. Blue Butterfly is not, strictly, an Annual, but it is a very useful plant, and will flower well the same season if raised in heat in March. This Larkspur was brought into prominence a few years ago by Messrs. J. Carter and Co., of Raynes Park; it is about 1½ foot high, and has spikes of large, light-blue flowers.

## DIANTHUS

### “Chinese,” “Japanese” and “Indian” Pinks

Although *Dianthus chinensis* (*Caryophyllaceæ*) is a Biennial, the varietal or hybrid form so well known as *D. Heddewigii* (see Plate IV) is to all intents and purposes an Annual, and is so listed in some seed catalogues. This species is illustrated in this work because of the rich beauty of its flowers, and also because it serves to indicate the difficulty that exists in some cases in determining what is an Annual and what a Biennial. For many years the seedsmen have selected and re-selected *D. Heddewigii* for the purpose of

inducing it to flower early from seeds, and also for the purpose of increasing its floriferousness, the size of its flowers, and the colour variation. The result is that we have a race of plants which produce beautiful flowers and more nearly of Annual than Biennial duration. An effort has been made in this work to keep pure Annuals together and not confuse them with Biennials that readily submit to cultivation as Annuals, but the effort fails in the case of *Dianthus chinensis* var. *Hedderwigii*.

In Dianthus we have a charming group of garden flowers, which rarely exceed 1 foot in height, and range in colour from white to blood-red crimson. They are variously known as Japanese or Indian Pinks, and the taller sorts as Royal Pinks. Of the single varieties with shapely, broad-petalled flowers, Crimson Bell, blood-red; Empress, crimson and rose; and Eastern Queen, red, rose, and pink, are good. Among single, fringed varieties, a few of outstanding merit are Salmon Queen, salmon-rose; Vesuvius, orange-salmon; Scarlet Queen, scarlet; and The Bride, white. Double or Diadem varieties include such delightful sorts as The Mikado, finely fringed, colours various; Aurora, salmon-scarlet; Mourning Cloak, dark crimson; Purity, white; and Snowdrift, fringed white.

By far the best way to manage Indian Pinks is to raise them in gentle heat in March, prick the seedlings into boxes early, and transplant them to beds or borders, or the Rock garden, at the end of May or early in June. Thus treated they will flower splendidly in Summer and Autumn. They may be sown in Autumn, wintered in a cold frame, and planted out in May, while under favourable conditions a sowing out-of-doors in April produces plants that will flower the same year. Spring-sown plants will sometimes survive the Winter and flower the following year, but I have never had one do so. The Indian or Japanese Pinks love a

sunny position and lime or chalk in the soil, and the lack of lime is sometimes the cause of poor growth and few flowers.

The Grenadin, Margarita, Riviera Market, and other strains of early and quick flowering carnations are often referred to as annual Carnations, but they are perennial, though they usually fail after a couple of years. These flower well the same year, from seeds sown in heat in February or March, the resulting plants being hardened and finally planted out, or potted, in May. It is generally agreed that these strains are the result of crossing *D. chinensis* with *D. Caryophyllus*—the parent of present-day Carnations.

*Dianthus Armeria*, the Deptford Pink, is a native, red-flowered Annual, rarely grown, but very pretty.

## DIASCIA

A South African, Half-hardy Annual that enjoys a fair share of popularity is *Diascia Barberæ* (*Scrophulariaceæ*), a pretty plant growing 1 foot high and producing spurred, large-lipped flowers of a pleasing and effective shade of chamois-pink. This is said to have survived a Winter and flowered the second year in some places, and one authority states that "in warm localities it is a perennial." The late George Nicholson classed it as an Annual, and most people will be satisfied with that classification, a few exceptions notwithstanding. *Diascia Barberæ* should be raised in heat in March or April, or be sown out-of-doors in the latter month in warm, rich soil. A warm, sunny position suits it well; it is also adapted for culture in pots.

## DIMORPHOTHECA

"Cape Daisy"

Among the newer Annuals, the Dimorphothecas (*Compositæ*) take a very prominent position; they are of easy culture, and

suitable either for borders of rich soil or the Rock garden. We are indebted to Messrs. Barr & Sons for introducing the handsome *D. aurantiaca* to public notice. It is the Namaqualand Daisy, grows about 9 inches high, and produces its bright, orange-coloured flowers freely, these opening fully in bright sunshine and showing the black ring around the disc. It is a Half-hardy Annual, and never looks better than when placed in a sunny spot in the Rock garden. Raised in a little heat in March or April, it is easily managed if the seedlings are put singly into small pots at an early date. Some Continental raisers have endeavoured to raise a hybrid race of *Dimorphothecas*, and the Messrs. Barr have now offered hybrids raised by crossing *D. aurantiaca* with the older, white-flowered *D. pluviialis*. In these hybrids the good qualities of the first-named parent have been preserved, and possibly improved upon slightly, but what is of chief importance is that the new race gives a range of colouring from white to deepest orange, the apricot, pink, and yellowish shades being very pretty. These varieties cannot fail to further increase the popularity of *Dimorphothecas*.

*D. pluviialis* is a useful plant, nearly 2 feet high, and though it is usually best managed as a Half-hardy Annual, it is hardy, and proves very effective when well cared for and planted in groups in the border. Early thinning and transplanting are of importance with this plant. The flowers are over 2 inches across, white, with golden centre, and with purplish-maroon colouring on the back of the ray florets.

## EMILIA

“*Tassel Flower*”

*Emilia flammea* is better known by the name of *Cacalia coccinea*, and as such it is generally catalogued by seedsmen. It is a *Composite*, growing 1½ foot high, and flowering freely

PLATE IV  
DIANTHUS CHINENSIS, VAR. HEDDEWIGII







F. G. S. P. H. 1913



in the Summer and Autumn. The flowers are not very effective individually, but they are bright orange-scarlet and borne in clusters like a bunch of tassels, this style of inflorescence giving rise to the popular name of Tassel Flower. *Emilia flammea* is quite hardy, and may be sown out-of-doors in early September to stand through the Winter and flower early in the following Summer. It is usual, however, to sow seeds in April and transplant the seedlings to their flowering quarters as soon as they are large enough to be easily handled. Another method is to sow in gentle heat in April, harden off the seedlings in the usual way, and plant them out in May or early June. It must be remembered that this useful plant—useful especially for association with other flowers in various kinds of floral decorations—does not take kindly to root disturbance, consequently leaf soil should be freely used in the seed bed.

## ERYSIMUM

### “Hedge Mustard”

Very useful little plants are the Hardy Annual Erysimums (*Cruciferae*). There are two species that interest us in this connexion, and they are *E. arkansanum* and *E. Perofskianum*. The former is 1 foot high and has yellow flowers, while the second has orange-coloured flowers and is from 1 foot to 1½ foot high. Both plants are suitable for bedding, and *E. Perofskianum* is particularly good for Spring displays or for the Rock garden. Seeds may be sown in Autumn and again in Spring to secure a long flowering season, but in most gardens they seed freely, and self-sown plants are abundant. It would appear, however, that in the colder northern districts *E. arkansanum* is practically a biennial. The Erysimums, or Hedge Mustards, are very like the Wallflowers in leafage, habit, and flowers, but the latter are smaller and produced in shorter spikes.

## ESCHSCHOLZIA

“*Californian Poppy*”

Most of us have tripped sometime or other over the spelling of *Eschscholzia*, but the mistake has served to keep the plant in mind. The garden forms of *E. californica* (*Papaveraceæ*) have the most brilliant orange-coloured flowers the mind can picture, and in full sunshine a bed of *Eschscholzias* is a ravishing sight indeed. The plants grow about 1 foot high and are perfectly hardy. It is an excellent plan to make a sowing in the Autumn and thin the seedlings to 9 inches apart, and then the plants will come into bloom early the following Summer. In addition to large and bright flowers the *Eschscholzias* have finely divided and very elegant foliage.

*E. californica* and its varieties have produced some beautiful shades of colour in garden varieties. A few of the best are *Alba*, creamy-white; *Diana*, primrose and rose; *Golden West*, yellow, with orange blotch; *Frilled Pink*, pink; *Orange Queen*, orange and yellow; *Mandarin*, orange-scarlet and gold, a grand variety; *Mikado*, orange-crimson; *Rose Cardinal*, deep rose; and *Ruby King*, deep ruby-red. *E. californica* itself has yellow, orange-centred flowers.

While Autumn sowing is desirable whenever it can be managed, *Eschscholzias* can be sown successfully in the open in March or April, to flower the same year; but a warm sunny position should always be selected, as only in the sunshine do they do themselves full justice.

It may be added that the genus is often listed as *Eschscholtzia*, but there is no authority for the addition of the letter “t” in the title.

## GAILLARDIA

“Blanket Flower”

In localities where some difficulty is experienced in keeping the perennial Gaillardias (*Compositæ*) safely through our damp winters the annual species have the greater value, for their large and brilliant flowers are peculiarly useful for cutting, and the plants are first-rate subjects either for beds or borders. The flowering season is a long one, the long-stemmed flowers following each other in rapid succession. Although the Annual Gaillardias may be raised out-of-doors from a sowing made in July, there is a great risk of losing the plants during Winter, even though they are planted out in September. The protection afforded by the tops of dead stems of Michaelmas Daisies will assist the plants to withstand wet and cold, but even then there are sure to be losses. The better plan is to sow seeds in a warm greenhouse in February or early March, prick off the seedlings into boxes of rich soil as soon as possible, duly harden them in a cold frame, and plant out at the end of May or early in June, according to climate and season.

The annual species of Gaillardia are *G. amblyodon*, 2 feet, vivid crimson; and *G. pulchella* (syn. *G. bicolor*), 2 feet to 3 feet, crimson and yellow. Of the latter there are several natural and many garden varieties. *G. p. picta* is crimson with gold tips, and is often catalogued as *G. Drummondii*; *G. p. coccinea* is dark crimson and gold; and *Lorenziana* is a form with quilled florets and rounded, double heads, in various shades of deep red and yellow.

## GILIA

The prominence given at recent exhibitions to the biennial *Gilia cononopifolia* (*Polemoniaceæ*) will probably have the effect of bringing the annual species into notice. These latter are hardy, but sometimes the Autumn-raised seedlings are severely thinned by our damp and cold winters unless protected, though on light warm soils the losses are few. Where the Gilias are appreciated, and especially where bees are kept, a sowing should be made under glass in March, and another one in the open in April; by this means a succession is secured. The plants resulting from a September sowing will, of course, be the earliest to flower.

The best are *G. achilleefolia*, 1½ foot, purple-blue; *G. androsacca* (syn. *Leptosiphon androsaccus*), 9 inches, lilac or pink with yellowish throat (there are several garden forms); *G. capitata*, 1 foot, blue; *G. densiflora* (syn. *Leptosiphon densiflorus*) and *G. d. albus*, 1 foot, respectively rosy-lilac and white, possess an exquisite beauty, and are generally known as Leptosiphons; *G. dianthoides*, 6 inches, lilac; *G. laciniata*, 9 inches, purple; *G. micrantha*, 9 inches, rose; and *G. tricolor*, 1 foot, in various colours, but chiefly blue, violet, or white, with yellowish centre. Snow Queen appears to be a white, yellow-centred variety, and Nivalis is probably also a white form, while minima is a dwarfer and later flowering form with blue flowers, and a capital subject for the Rock garden or for an edging. Those who have not grown the Gilias should certainly give them a trial.

## GYMNOLOMIA

*Gymnolomia multiflora* (*Compositæ*) may be aptly described as a miniature Sunflower. It is hardy, though probably best

treated as a Half-hardy Annual in all but favoured places. It grows about  $1\frac{1}{2}$  foot to 2 feet high, and in late Summer and Autumn it keeps up a good supply of golden-yellow, dark-centred flowers that are first rate for cutting. For the border, too, the plant is an effective one, and should be made a note of by all who wish to have their gardens as bright as possible in Autumn. A few years ago I saw this Annual grown in some quantity in a garden near Bristol, where it proved a very valuable subject.

## GYPSOPHILA

“Chalk Plant” or “Gypsy Flower”

The popular Gypsy Flower so largely used by the florists in floral designs is the perennial *Gypsophila paniculata* (*Caryophyllaceæ*), but the hardy annual species, *G. elegans*, is equally as popular and extensively grown for the great flower markets. For this latter purpose it is sown somewhat thickly in drills, two or three sowings being made in the Spring and one in the Autumn. This method allows of easy bunching. In the garden some amount of thinning is advisable, and a few twiggy sticks from an old birch broom should be placed among the plants to support their slender growth against wind and rain.

*G. elegans* is about  $1\frac{1}{2}$  foot high, and its pinkish variety, *G. e. rosea*, is of similar stature, while a grandiflora strain, also known as White Pearl, is of about the same height, but has larger flowers, and is the better plant if effectiveness in the border is the first consideration. *G. muralis* grows 6 inches high, and has pink flowers; it is a suitable plant for the Rock garden, but is not of high merit. I have never seen *G. elegans* prove to be a perennial, though it is described as a perennial in several well-known gardening dictionaries.

## HELIANTHUS

"Sunflower"

Superior people affect to despise Sunflowers, because they are so commonly found in gardens, and though they grow the perennial species they will not have the Annual. One does not wish to quarrel with personal likes and dislikes; but it does seem strange that the smaller-growing Sunflowers of the Stella or *H. cucumerifolius* group are not far more widely cultivated.

*Helianthus annuus* (*Compositæ*) is the parent of our garden varieties of annual Sunflowers, and though it is usually 6 feet to 8 feet high, it sometimes ascends to 10 feet or even 12 feet, as the daily papers do not forget to tell us. Every one knows the great golden-rayed flower heads, with the huge disk that presently becomes studded with seeds arranged in a wonderfully regular pattern. The monster double sorts with the disk florets developed so as to form a rounded head are also fairly common, and they are fine for planting in big borders, or near the margin of shrub and tree plantations, or near water. Both the giant single and double forms are offered in several shades of yellow. For the garden proper the varieties of *H. annuus cucumerifolius* are best, as they grow from 2½ feet to 4 feet high, and have a branching habit. Their flowers are from 4 to 6 inches across, golden yellow, with dark brown centre; Apollo is golden, with maroon centre, and is very dwarf; Orion has revolute margins to its golden florets, and thus it has the form of a Cactus Dahlia; Primrose Stella has soft primrose-yellow flowers; Mars is golden yellow with purplish centre; Princess Ida is soft white, with pale yellow band round the dark centre; and Venus is cream-coloured with yellow shading round the purplish centre. Perkeo is a



distinct new form, only about a foot high, but making a neat bush that carries plenty of golden flowers. I have grown many of these dwarf or miniature Sunflowers for a number of years, and am thoroughly satisfied that as yet their beauty and usefulness are not generally recognised. Seeds may be sown singly in small pots under glass, in April, for planting out in May; or sown in March where the plants are to flower.

*Helianthus argophyllus*, 6 feet, yellow, is a Texan plant very like *H. annuus*, but not so good. By some authorities *H. cucumerifolius* is regarded as a species, and others consider it a form of *H. debilis*, but here it is regarded as a form of *H. annuus*.

## HELICHRYSUM

### “Everlasting Flower”

Some of the very best of the “Everlasting” flowers are to be found in the genus *Helichrysum* (*Compositæ*). Although the family is a large one, very few species merit cultivation, but those grown have numerous garden varieties and make good border plants, besides being useful when the flowers are cut and hung downwards to dry, ready for Winter decorations. They are Half-hardy Annuals. The species most in cultivation is *H. bracteatum*, 3 feet, variously coloured; *H. b. aureum* and *H. b. chrysanthum* are yellow; *H. b. compositum* is double; *H. b. macranthum* is large, white and rose; and *H. b. niveum*, white. With these to work with the seedsmen have raised Golden Globe, Silver Queen, Pink Beauty, Fireball, and other good varieties of fine colour.

## HELIPTERUM

### “Immortelle”

This is a family of South African or Australian plants (*Compositæ*) that also belongs to the “Everlastings.” The

plants resemble the *Helichrysums* and need exactly the same kind of treatment, with the exception of *H. Manglesii*, which, under the name of *Rhodanthe Manglesii*, is a very popular pot plant with the market growers, and is a graceful and pretty subject for conservatory decoration. This species, raised in heat in March, is grown five plants in a 48-sized pot, in light, rich soil. If grown out-of-doors it is best sown where it is to flower, about April, and thinned to two or three inches apart. *H. roseum* is better known as *Acroclinium roseum*. *H. Cotula*, 1½ foot, yellow and white; and *H. Humboldtianum* (syn. *H. Sandfordianum*), 1½ foot, yellow, are other species in cultivation.

## HUMULUS

### "Japanese Hop"

A very pretty climbing Annual, and one that will attain a height of 18 feet in a favourable season, is *Humulus japonicus* (*Urticacæ*). For screens, pergolas, porches, and verandahs, or for covering an outhouse with graceful greenery, it is a fine subject. There is a variegated variety of great merit. From seeds sown out-of-doors in April or May good results will follow, but to give the plants the best possible chance the seeds ought to be sown in gentle heat in March or April, and the seedlings potted as necessary, until by the end of May they will be large and fit to grow away speedily when planted out.

## IBERIS

### "Candytuft"

The Hardy Annual Candytufts (*Cruciferae*) are rarely seen at their best, because it is difficult to persuade folks to sow thinly and thin severely. The seedsmen have done their

best and given us the Spiral, Hyacinth-flowered, and Rocket strains, as well as distinct colours, such as purest white, lilac, rose, carmine, and crimson. Then there is a particular dwarf form named Little Prince, only 6 inches high, and a mass of whiteness for a long period; it is a charming plant for edging or for the Rock garden. The other sorts grow about a foot high and will be as much across if given room. These fragrant and useful flowers should be largely grown, and sowings made in late August or September will provide early flowers that will be followed by plants raised from a Spring sowing. Almost any soil and situation will suit Candytufts, and there is no need to raise plants under glass, though they may be so raised in March or April, and planted out early, but they do not love transplantation, and always succeed best in a sunny, open position. In the not very kind year of 1910 I had a fine display of the carmine Candytuft on a narrow border that is well filled with Daffodils, and which would never look beautiful in Summer but for the help of Annuals.

*Iberis amara* is the native Candytuft, white-flowered, and probably from its variety *spiralis* the Spiral Candytufts have been developed. The Common or garden Candytuft has been derived from *I. umbellata*, a native of Southern Europe, while a form of the species, known as *I. coronaria*, has given rise to the handsome Rocket Candytufts.

## IMPATIENS

### "Balsam"

The old florists had a great love for Balsams, and the flowers were very popular many years ago. Much time and care were spent on their cultivation, and unless a flower was as perfectly double as a finely-formed Camellia it did not

come up to the highest standard of excellence. Though Balsams (*Geraniaceæ*) are still grown largely for Greenhouse and Conservatory decoration, the culture of these handsome but tender plants is by no means so extensive as a quarter of a century ago. The Balsams are Half-hardy Annuals, and they have a distinct value for beds and borders as well as for pot culture; indeed their use might be greatly extended with advantage in connexion with Summer gardening, especially where there are conveniences for raising a batch of seedlings, growing them into good-sized plants, and protecting them until all fear of frost is over.

Seeds of the very best strains of Balsams are expensive as compared with the price paid for many Annuals, and this is so because the finer the strain, and the more double the flowers, the more difficult it is to obtain seeds. Where Balsams are grown for Conservatory decoration it is a good plan to make two or three sowings, these ranging from early in February to the end of March, but where an outdoor effect is the end in view, then a mid-March sowing will be suitable in most cases, as the plants grow freely when once past their seedling stage and would require a great deal of house room over a long period if raised earlier; the early raised batch would also necessitate a good deal of extra labour in the matter of potting and watering.

A gentle heat of about 60°, with a slightly higher bottom heat, will ensure quick and fairly regular germination. Loam, leaf-soil, and sand make a good seed-bed, and if the surface is pressed level and firm the seeds can easily be sown thinly and regularly upon it; they should be pressed into the soil and just covered with a little fine, sandy compost, and carefully watered through the medium of a fine rose. As soon as the seedlings have formed the second leaf, *i.e.* the first leaf after the cotyledons have developed, each one should be potted into a 3-inch pot, in a mixture of loam,

old and dried cow-manure, and leaf-soil, using these materials in the proportions of three, two, and one respectively, adding sand according to the texture of the loam, and sufficient to render the compost porous. Balsams are free feeders, and as they are of a succulent nature they need a great deal of moisture, hence the need of a porous compost and perfect drainage.

At the first potting the little plants must be placed low in the soil, so that the cotyledons, or seed-leaves, rest on the surface when potting is finished. This serves a double purpose; the plants are kept from becoming "leggy" at the start and roots speedily form on the part of the stem that is covered. A genial temperature and a position near the glass are necessary until the plants are well established. After a time a further potting will be needed, and as the weather improves less artificial heat will suffice. In May a frame will provide sufficient protection in most seasons, every care being taken to guard against frost and low temperatures. Ventilation must be given in steadily increasing measure, so that by the second week in June the plants will be hardy enough for transplanting in the Flower garden. July is the usual time of flowering, but this depends upon the time of sowing and the method of cultivation adopted.

The further consideration of Balsams for pot culture is hardly in accord with the scope of the present work.

In the foregoing remarks the recommendations are for varieties of *Impatiens Balsamina* (*Geraniaceæ*), a species introduced from Tropical Asia as long ago as 1596. The hardy annual species may be sown where they are to flower, or be raised in a seed-bed in a warm position and transplanted in due course; but in most seasons the trouble lies not in raising a stock, but in keeping the self-sown seedlings from becoming a nuisance and over-running neighbouring

plants. The generic title, *Impatiens*, was given because the seed pods are impatient of the slightest touch when the seeds are nearly ripe, the valves discharging the seeds at the least provocation and to a little distance.

Of *Impatiens Balsamina*, there are several florists' strains: the chief of these are those known as Camellia-flowered and Rose-flowered. A dwarf strain grows only about 6 inches high. The Rose Balsam may be obtained in a number of colours, and these come true. The Camellia-flowered Balsams are the finest for general purposes, and are sold in distinct colours, notably salmon-pink, white, rose, violet, scarlet, and cream. Both these strains reach a height of  $1\frac{1}{2}$  foot to 2 feet.

*I. amphorata*, 4 feet to 6 feet, is a Hardy Annual that produces pale purple flowers at the end of the Summer, and is fine for large borders or for the semi-wild garden; *I. biflora*, 3 feet, orange, is of less merit, but quite hardy, and looks well by the water side; *I. discolor*,  $1\frac{1}{2}$  foot, yellowish, is also hardy. *I. Roylei*, 4 feet to 6 feet, is a noble plant, and has purplish or white flowers; this is a variable species, the variety *macrochila* growing a couple of feet higher than the type, and bearing light purple flowers, while the variety *pallidiflora* is of similar character but has paler blooms. *I. Roylei* and its varieties are of considerable value in the larger gardens, but in many places the plant is so rampant that it is regarded as a coarse weed rather than a flower to encourage.

## IONOPSISIDIUM

“ *Violet Cress* ”

One of the gems among Hardy Annuals is the dainty *Ionopsisidium acaule* (*Cruciferae*), which grows about 2 inches high,

and is especially adapted for a semi-shady place in the Rock garden. Its little four-petalled flowers are lilac-blue, and very bright and cheerful looking. Once it is sown in the Spring where it is to flower it is little trouble, as it usually sheds seeds freely, and little colonies follow each other, and only need thinning or occasional transplanting to a new site. Both *I. acaule* and the white variety album require fairly moist soil. The Violet Cress, to give it its popular name, is also known as *Cochlearia acaulis*.

## IPOMOEA

### “Morning Glory”

The Annual climber so well-known as *Convolvulus major* is correctly *Ipomoea purpurea* (*Convolvulaceæ*), and has also been named *Pharbitis hispida*. Though not perfectly hardy, seeds may be sown out-of-doors early in May with every prospect of success, but stronger plants can be obtained for planting at the end of May or in early June if seeds are sown in gentle heat in March or April. For window boxes, balconies and arches this Ipomoea is specially fitted, and there are enough colour variations to please every one. The seedsmen offer pale and dark blue, crimson, purple, rose, red-striped, blue-striped, and white varieties, and these come wonderfully true. There are double-flowered, as well as the more popular single varieties.

## KOCHIA

### “Belvedere” or “Summer Cypress”

The rapidity with which *Kochia trichophila* (*Chenopodiaceæ*) gained popular appreciation after Messrs. H. Cannell and

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Sons first brought it into general notice was wonderful. The species is not valuable for its flowers, but for the shapeliness of the plants and the elegance of the abundant foliage, which turns a rich blood-red colour in autumn. It is used to good effect for furnishing "dot" plants for the Flower garden and for grouping in borders. Quite hardy plants may be raised from an early Spring sowing, but the finest results are obtained when seeds are sown in pans in a warm greenhouse in March, each seedling being potted in its own pot and gradually hardened off ready to plant out at bedding-out time. The popular names of Belvedere and Summer Cypress have been given to *Kochia trichophila*. *K. scoparia* is an inferior species, but it was the name under which *K. trichophila* first became popular.

### LATHYRUS

#### *Sweet Pea*

The Sweet Pea—*Lathyrus odoratus* (*Leguminosæ*)—in many varieties is prominently before the public nowadays; but this is not the place to discuss such a popular subject, because a special book in the "Present-Day Gardening" series is devoted to Sweet Peas and their cultivation. There are, however, several Hardy Annual species besides *L. odoratus* (*Leguminosæ*), and though they are not of great garden value they may be mentioned. These are *L. cirrhosus*, rose-pink; *L. Nissolia*, crimson; and *L. tingitanus*, purple-red, and about 3 feet high. All are raised from seeds sown either in Spring or Autumn.



PLATE V

AFRICAN MARIGOLD (*Tagetes erecta*) AND FRENCH  
MARIGOLD (*Tagetes patula*)





T. Chiriac / Paris



## LAVATERA

“Mallow”

Where there is room for a free-branching Hardy Annual, 3 feet high, the Lavateras (*Malvaceæ*) should be a first selection, because they last long in perfection and produce their large, beautiful flowers with great freedom. *L. trimestris* is the species, and it will do well sown in the Autumn and thinned to 2 feet apart. It may be raised in gentle heat in Spring, but it has a very bad habit of damping off when transferred from the seed-bed to pots or boxes. Failing an Autumn sowing, sow where the plants are to flower, in March or April. The type has pale, silvery-rose flowers, and there is a lovely white variety, but each of these has been improved upon, and the best are those catalogued as *L. splendens alba* and *L. splendens rosea*. In these the flowers are larger and the habit of growth more compact than in the true species.

## LEPTOSYNE

Closely allied to the Coreopsis, and very like Coreopsis in general appearance, the Leptosynes (*Compositæ*) bear their flower heads on long stems and are fine for cutting. *L. Douglasii*, 1 foot, yellow, must be raised in gentle heat in Spring and planted out in May; *E. calliopsidea*, 1½ foot, yellow, flowers in Autumn. *L. Stillmannii* is of recent introduction; it grows 1½ foot high, and has golden-yellow flower heads, 1½ inch across, and comes into bloom five or six weeks from the time of sowing in April in a sunny position, in good garden soil.

## LIMNANTHES

For very many years *Limnanthes Douglasii* (*Geraniaceæ*) has been a favourite Hardy Annual and one grown largely for edging, for beds, and borders, and considered quite the thing to grow in quantity where bees are kept. It is only 6 inches high, but its yellow, white-edged, fragrant flowers are charming: so much so that when the plant is once grown in a garden it holds its position. Sowings should be made both in Spring and Autumn.

## LINARIA

"Toadflax"

In some parts of the country the Hardy Annual Linarias (*Scrophulariaceæ*) are immensely popular, while in other parts they are seldom seen. They have the popular title of Toadflax, and the two-lipped flowers have a close resemblance to those of the Antirrhinum. Where they are appreciated an Autumn and a Spring sowing should always be made. Suitable alike for beds and borders, the Linarias supply elegant flowers for cutting. The best species are *L. bipartita*, 1 foot, purple, and its variety *splendens* and *L. maroccana*, 1½ foot, purple—of this last there are numerous garden forms, such as Excelsior, a strain with colours ranging from pink and yellow to blue and violet; Queen of Roses, rosy-carmine; White Pearl and Snow White, white; and Golden Gem, 9 inches, yellow. Other species are *L. reticulata*, 2 feet, purple and yellow; *L. spartea*, 1 foot, yellow; and *L. tristis*, 6 inches, yellow and purple or crimson, a pretty plant for edging or for the Rock garden.

## LINUM

“*Flax*”

An extremely popular garden plant is *Linum grandiflorum* (*Lineæ*), 6 to 12 inches high, rose-coloured, but its varieties are even better for general use. These are *L. g. coccineum*, deep rosy-crimson; and *L. g. kermesinum*, blue. *Linum usitatissimum*, the Common Flax of commerce, and the plant from which we get Linseed, is also beautiful, its round bright blue flowers on slender graceful stems being altogether charming. All the foregoing are hardy, and should be sown out-of-doors in April where they are to flower, but as they make pretty pot plants it may be desirable to make a small sowing under glass during the Spring.

## LUPINUS

“*Lupine*”

While there is a very great deal to be said in favour of the handsome, perennial Lupines (*Leguminosæ*), there is also much to recommend the annual species. These latter are useful for furnishing an immediate effect, and they are particularly serviceable for filling vacancies in herbaceous borders and shrubberies and in the Flower garden proper. When grown in groups of one colour in association with other Hardy Annuals of less height, they are at once stately, graceful and effective. Quite hardy, varying from 1 foot to 3 feet high, they have many claims to consideration, not the least of which is that the long spikes are useful for filling large vases. In the semi-wild garden, and for positions on the outskirts of tree and shrubbery plantations the annual Lupines are of great value.

They are as useful in a small garden as in a large one, and the only failing—if failing it is—is that the seedlings do

not transplant well. Therefore the seeds should be sown where the plants are to flower, in the early Autumn or in March. If seedlings are raised in a frame or greenhouse in the Spring, then the pricking off process must take place at the earliest possible date and each plant be placed in a small pot from which it can be planted out in due course without suffering serious harm; under this method it may be desirable to shift each plant into a larger pot some time before planting, otherwise the best possible results may not be obtained.

The meritorious species are *L. Cruickshanksii*, 4 feet, blue, purple and yellow, not entirely hardy everywhere; *L. densiflorus* (syn. *L. Menziesii*), 1½ foot, yellow; *L. luteus*, 2 feet, yellow, fragrant; *L. mutabilis*, 3 to 5 feet, white and blue; *L. m. versicolor*, purple, blue and rose, and *L. nanus*, 1 foot, lilac and blue; of this latter species there is a fine white variety; and *L. subcarnosus*, 1 foot, blue and yellow. Besides these there is *L. hybridus atrococcineus*, a garden-raised plant with tall spikes of scarlet flowers, the blossoms tipped with white. *L. Hartwegii* is not really an Annual, but the blue and white forms of it offered by seedsmen are seldom of more than annual duration, and so are almost always listed as Hardy Annual.

It should be remembered that Lupines love the sunshine, and seem to do best in soils containing a good deal of lime. They are first-class plants in every respect. From 1 foot to 1½ foot apart is not too far to thin them; it is a good plan to sow the seeds 6 inches apart, an inch or so deep, and thin the seedlings to the desired distance.

## LYCHNIS

“*Rose of Heaven*”

Although not much grown at present, a good deal might be written on behalf of the varieties of *Lychnis Cali-rosea*



(*Caryophyllaceæ*), a Hardy Annual formerly somewhat popular as *Agrostemma Cæla-rosea*, and also known as *Viscaria oculata*. It is usually best managed if sown in March or April where it is to flower, the seedlings being thinned to 6 or 8 inches apart as soon as large enough to be easily handled. A native of the Levant, with the popular title of Rose of Heaven, this Annual has no special likes or dislikes in the matter of soil, but prefers a sunny site to a shaded one. The magenta flowers are not beloved by all.

### MALCOMIA

#### “*Virginian Stock*”

There are at least half-a-dozen Hardy Annual species of *Malcomia* in cultivation, but the species best known in gardens is *M. maritima* (*Cruciferæ*), the *Virginian Stock*. This plant grows from 6 to 9 inches high, and is obtainable in several colours; it is a very elegant little plant, particularly showy for its size and suitable for beds or for breadths in the flower border. Several sowings must be made from March to June if a succession of bright flowers is to be maintained, and a September sowing will give an early spring display. The seeds are small and need only be just covered with soil, but sow thinly and thin out to 3 or 4 inches apart. Any good garden soil will suffice, but one of light medium character appears to suit the plant best. Good selections are *Crimson King*, crimson and purple; and *Fairy Queen*, rich crimson; there are also crimson, mauve and white mixtures. *M. bicolor* is pink and yellow; while *M. Chia* is purple, and *M. littorea* pink and purple. The generic title is sometimes erroneously spelt *Malcolmia*.

**MALOPE**

“*Mallow-wort*”

Closely allied to the Lavateras and Mallows, *Malope trifida* (*Malvaceæ*) is a capital garden plant, making bushy specimens 2 feet high, and bearing glossy or satiny flowers of good size and great beauty. The type is now rarely seen, as an improved or grandiflora strain is always offered by the seedsmen. Red, white, and rose coloured varieties come very true. For massing in considerable groups the Malopes are useful plants, and they look well against a background of shrubs or tall herbaceous plants. Sow in a greenhouse in March or in the open in April, planting or thinning the plants to 1½ foot apart. The Malopes are good plants for town gardens.

**MALVA**

“*Mallow*”

The annual species of Mallow are not of much value in the garden, but *M. crispa*, 5 feet, white, has some merit as a foliage plant for subtropical effects, because of its large, crimped leafage. Seeds should be raised under glass in March, potted singly, and planted out in May or June.

**MARTYNIA**

“*Elephant's Trunk*”

*Martynia fragrans* (*Pedalineæ*) is a striking Half-hardy Annual, 2 feet high, with woolly foliage and large Gloxinia-like flowers of mauve or purple colour and sweetly scented. The flowers are followed by double-horned seeds that are sometimes picked while young and pickled. *M. proboscidea* (syn. *M. annua*) is of shorter growth, and has blue and white flowers that are also sweetly scented. Both are worthy

of culture, but *M. fragrans* is the better plant. Sow in heat in March, placing each seed in a small pot, harden off and plant out in June about 1 foot apart; a moist yet sunny position gives the best results.

## MATRICARIA

### "May Weed"

*Matricaria inodora* (*Compositæ*) is a native weed, but cultivation has so altered it that its double forms are of considerable usefulness in the garden. Two fine varieties are in cultivation, and both deserve wide culture, as they are excellent subjects for bedding or for grouping in herbaceous or shrubby borders. These are Bridal Robe and Snowball. Both have pure white, double blooms; the former variety is about 1¼ foot high and the latter 2 feet to 2½ feet high. Bridal Robe I have seen growing in quantity in not a few large gardens, but the most remarkable display that has come under my notice was at Messrs. Watkins & Simpson's trial grounds at Feltham a year or two ago, where a large breadth in full bloom could be likened to nothing better than a mass of freshly fallen snow, the whole being wonderfully even and of dazzling whiteness. In my own garden I have to be content with a few small groups, raised from seeds sown in gentle heat in April. Six or eight inches apart is a good distance to plant the seedlings in May after they have been fully hardened.

## MATTHIOLA

### "Stock"

A garden of any pretension without its summer-flowering Stocks is almost unthinkable. Stocks are splendid plants, and a vast amount of time and care have been expended upon their selection and improvement. Many continental firms

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have done good work in this direction, and at home Messrs. Webb & Sons, J. Carter & Co., and Sutton & Sons have raised some first-rate varieties. Few plants equal Stocks for bedding purposes, and no Annuals excel them for the production of bold effects in a border. To the purity and brilliance of their colouring must be added the attributes of stateliness, good habit, double and lasting flowers, and sweet fragrance.

Two species have provided us with the wide range of Stocks now available for garden decoration, and these are *Matthiola incana* (*Cruciferae*), with its variety *annua*, and *M. sinuata*. It is specially interesting to notice that from *M. incana* have come such different groups as the quick-flowering Ten-week and the Brompton Stocks. These latter, as well as the East Lothian or Intermediate Stocks obtained from *M. sinuata*, are Half-hardy Annuals; sometimes they are classed as biennials and are grown as such, but they can be grown to flower the same year from seeds, even though they may prove finer when given the longer season of growth.

### *Culture*

Taking the popular Ten-week section first, the best method of raising plants is to sow seeds thinly in well-drained sandy soil in March in a temperature of about 60°; a declining hot-bed is often a capital place for raising the plants. Only just cover the seeds, and as soon after germination as the seedlings can be successfully handled prick them off into boxes or pans of soil which contain a fair amount of leaf-mould, sand, and a little decayed, dried cow manure. Another method is to place the seedlings in a frame very soon after they have formed rough leaves, and as soon as they have become used to the frame, plant them 4 inches apart in a bed of soil made up in the frame. Here they can receive ventilation according to the weather, and the lights can be entirely removed when the plants are established and the temperature

permits. The process of hardening off is easily managed under these conditions, the plants grow sturdily and are excellent material for planting out at the end of May or in early June. When Annuals are grown in this fashion it is a good plan to cut through the soil in the beds between the rows of plants, with an edging iron or a large knife, a week or so before planting time, as this reduces the check of removal to a minimum.

In the small seedling stage Stocks are very liable to damp off with surprising suddenness. To prevent this trouble thin sowing must be practised, and the seed bed must be composed of light and well drained soil. Further, when the seedlings are pricked off they must not be placed too low in the new soil or there will be trouble. Seedlings crowded in the seed bed become attenuated and weakly, and so there is a tendency to place them low in the soil when first transferring them so as to counteract this spindliness; the result is failure. The thinly sown, sturdy seedlings should be transplanted so that after being watered the ground line of the settled soil is just below the seed-leaves. If the seed-leaves are wholly or partly buried damping is sure to be troublesome.

In general terms this advice applies also to the other kinds of Stocks. The Intermediate and East Lothian Stocks may receive similar treatment and they will flower well in the Autumn, but if they are required to flower in the spring time then they must be sown in June or July, in a frame, given open-air treatment until September, when the plants must be potted into 60-sized pots and wintered in a cold frame. Frost must be excluded, but every advantage taken of fine weather to ventilate freely. Plunging the pots in ashes is good practice. Plant out immediately all danger from frost is over in the Spring. The Brompton Stocks need similar management to that here detailed for the East Lothians when the latter are needed for early flowering the succeeding year.

*Varieties*

Ten-week Stocks may be obtained ranging in height from 8 inches to 2 feet, and in such colours as white, buff, blush, rose, pink, salmon, carmine, mauve, blue, purple, and deep red. What are listed as Bedding Stocks grow from 10 to 12 inches high; they are sturdy, vigorous, and free-flowering. The Miniature varieties are about 8 inches high and the Bouquet varieties about 1 foot high. Dwarf German and Wallflower-leaved sorts are 1 foot high, and the latter have distinct foliage. There are some named sorts that come into this group, and some of the best of these fine selections are Snowdrift, Princess Alice, Bismarck, Snowdon, and Mont Blanc, white; Princess May, primrose; Celestial, blue; Fireball, scarlet; Salmon Beauty, salmon. Beauty of Nice is the name of a fine strain that may be sown in late Spring for winter flowering under glass, but it is also good for summer flowering. Stocks for flowering under glass during the Winter and early Spring hardly come under our purview in this work.

Intermediate varieties and also the East Lothians are offered in various colours, but specially good among the former are Covent Garden Scarlet, very bright; May Queen, various; Crystal White, white; and Queen Alexandra, lilac.

*Matthiola tristis*, the Night-scented Stock, should be treated much in the same way as Mignonette, several sowings being made in Spring in various parts of the garden.

**MECONOPSIS***“Poppy-wort”*

Several of the Meconopsis (*Papaveraceæ*) are biennials, but at least one is of annual duration, namely, *M. heterophylla*. This is a Californian species which grows about 1 foot high, and has coppery, orange-red flowers of great beauty. It is

half-hardy, free flowering, and takes fairly well to cultivation in pots, as well as to culture in light moist soil in the Rock garden. Sow the seeds in pans in a warm greenhouse in March, prick out the plants, and harden them off for planting in May or June. When better known, this species should become one of the most popular of the Poppy-worts.

### MENTZELIA LINDLEYI

“*Barton's Golden Flower*”

The golden-flowered Californian Annual so commonly listed as *Bartonia aurea* is, correctly, *Mentzelia Lindleyi* (*Loasaceæ*). Whatever name it is grown under it is a capital plant, and makes an especially good display in a sunny season like that of 1911. It loves the sun, and whether grown in a border or in a Rock garden this point should not be forgotten. Though hardy, it is best raised in a frame or in gentle heat in April and planted out as soon as the plants are strong and hardy enough. An outdoor sowing in April will usually prove successful, but if the season should be a late one the plants so raised have but a short flowering period. *Mentzelia Lindleyi* grows  $1\frac{1}{2}$  foot high, and freely produces its five-petalled flowers, which, individually, are about  $1\frac{1}{2}$  inch across, and of a rich golden-yellow shade.

### NEMESIA

The Nemesias have jumped into popularity chiefly because Messrs. Sutton & Sons saw the possibilities of *N. strumosa* and set out to select the most attractive shades of colour and improve the size of the flowers and the habit of growth. They succeeded beyond expectations, and now the colour range is a large one, and seeds are offered that give a very high percentage true to the special colour named. The colours have been separated into white, pink, yellow, orange,

scarlet, crimson, and blue. There are dwarf strains about 8 inches high, the large flowered sorts being about 1 foot high. *Nemesias* flower with great freedom and form elegant little bushes. For bedding, or for edging large beds, the *Nemesias* are splendid, and a mass of one colour or of similar colours in the border is a delight.

The garden forms of *Nemesia strumosa* (*Scrophulariaceæ*) are not always the easiest plants to raise from seeds, that is, they germinate freely on one occasion and almost fail on another. An early sowing under glass may not give good results, while a sowing in a shaded border at the end of April may result in a big crop of seedlings. A temperature of about 60° seems to be a most suitable one for germination, provided the seeds are gently pressed into the soil and only just covered with the fine sandy compost. A very important point is to sow thinly and to transplant the tiny seedlings into pans or boxes as early as possible. Harden off and plant out in May. The end of March is usually quite early enough for the first sowing; this may be followed by a sowing in a frame and another out-of-doors. When planting out set the plants 6 or 8 inches apart, as at this distance the taller strain will meet and form a mass of bright blossom.

*N. bicornis*, 2 feet, purple; *N. floribunda*, 1 foot, white; and *N. versicolor*, 1 foot, lilac and white, are other Half-hardy Annual species.

## NEMOPHILA

“*Californian Bluebell*”

A very old and popular favourite is *Nemophila insignis* (*Hydrophyllaceæ*), a plant which was rarely absent from any garden, large or small, in olden days. It is now mostly seen in the gardens of the artisan and the cottager and in the smaller villa gardens, where it gives a bright and plentiful



return for the little expense and time given it. Though of Californian origin *Nemophila insignis* is a Hardy Annual, and the earliest flowers are produced from an Autumn sowing, though this should always be followed by at least one Spring sowing. Seeds are nearly always sown far too thickly, with the result that the plants are rarely allowed to do themselves full justice. I suppose few people ever thin *Nemophilas* to 1 foot apart; but if they so treated them a pleasant surprise would follow and the display be finer and more lasting than that obtained from overcrowded plants.

The grandiflora strain of *N. insignis* has larger flowers than the type; blue, with white centre, is the commonest colour, but there are white, rosy, and white margined varieties. *N. maculata*, 6 inches, white and purple, is good; and *N. Menziesii*, 6 inches (the *N. Atomaria* of catalogues), may be white with black spots, or blue with black spots and a white centre, while the variety *discoidalis* is dark purple with a white edge to each petal.

## NICOTIANA

### “Tobacco”

In the genus *Nicotiana* (*Solanaceæ*) there are several plants of rather doubtful Annual duration, notwithstanding that they are catalogued as Half-hardy Annuals and grown as such. All those mentioned below must be raised in heat in February or March to prove successful, and a temperature of 65° is a good one in which to secure germination. The seeds are small, and there is consequently a need for care in sowing; sow thinly on the level surface of fine, sandy soil, just pressing the seeds in and dusting them over with a little sand. Prick off early, harden in due course, and plant out at the end of May. Tobacco plants appreciate good soil, and they are of little use if grown in the shade.

One of the best known is *Nicotiana alata* (syn. *N. affinis*),

1 to 2 feet, white, long-tubed flowers, sweetly scented in the evening and early morning. This is a beautiful and highly desirable plant for bedding or massing. *N. colossea* and *N. colossea variegata* are fine as foliage plants for sub-tropical effect, as they have big leaves and grow 6 feet high. *N. noctiflora*, 3 feet, white and purple, fragrant at night, and its white variety, are worth attention. *N. Sanderæ* is a hybrid, 3 feet, with rosy flowers, but the shade varies considerably; it is a free flowering and useful garden or greenhouse plant, and was raised by crossing *N. rubra* with *N. alata*. *N. sylvestris* is a bold plant, rising to 5 feet high, and bearing large, deep green leaves and tall spikes of pendent white flowers. *N. Tabacum*, 4 feet, has rosy flowers and large leaves; it is the plant from which commercial Tobacco is obtained, and it has some value in the garden as a foliage plant.

## NIGELLA

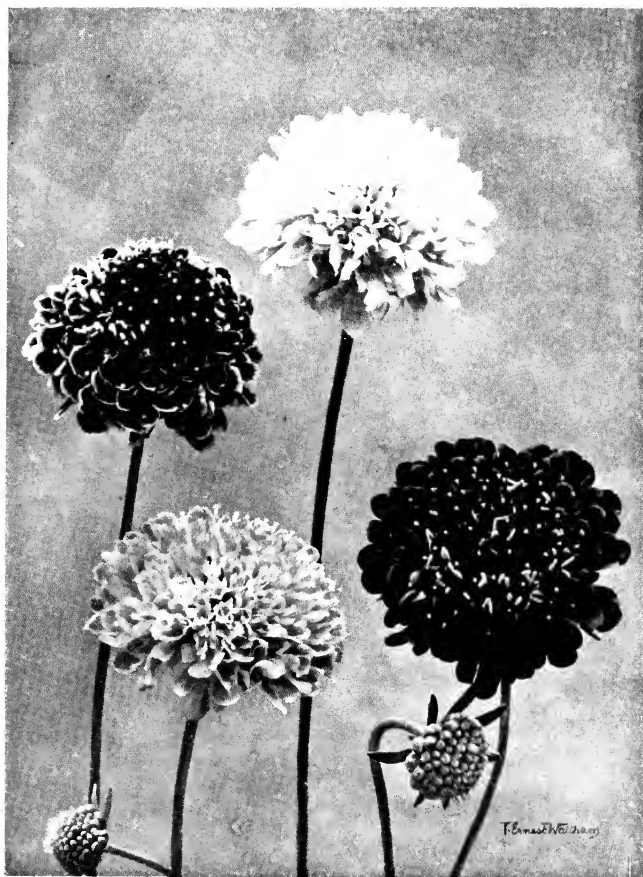
### "Love-in-a-Mist"

The old *Nigella damascena* (*Ranunculaceæ*), with its finely divided, Fennel-like foliage veiling the blue flowers, has been in cultivation for over three hundred years, and the double form has long been a favourite plant. The way in which the involucre leaves lightly veil the flowers has given rise to such curious and popular names as Devil-in-the-Bush, Love-in-a-Mist, and Jack-in-Prison. The greatly improved and comparatively new variety named Miss Jekyll is of better habit than the old form, and its double flowers are of a deep blue shade. There is also a white form of *N. damascena*.

The Nigellas are hardy, and the finest plants are usually produced from an Autumn sowing, these often reaching 2 feet high, and forming perfect bushes. Good results follow a Spring sowing under glass, or in the open in April. None of the species likes transplanting, therefore from a sowing

PLATE VI  
SWEET SCABIOUS  
(*Scabiosa atropurpurea*)







under glass the seedlings should be transferred to pots at an early stage.

Besides *N. damascena*, there are *N. hispanica*, 1½ foot, purplish-blue; *N. h. alba*, with white flowers and brown anthers; *N. orientalis*, 1½ foot, yellow and red, but of little worth; and *N. sativus*, 1½ foot, blue, also of little value in the garden.

ŒNOTHERA

“*Godetia*”

Not many garden plants are so well known as the Hardy Annual Œnotheras, which, under their better-known name of Godetias (*Onagraceæ*), are to be found in most gardens, whether of the rich or the poor. The many beautiful varieties are delightful subjects for giving fine colour effects, and their value for massing in beds or borders can hardly be overestimated. Not only are the Godetias beautiful, but they are raised with the greatest of ease either from a September sowing out-of-doors, a Spring sowing out-of-doors, or a sowing under glass in March. Two or three sowings should be made wherever space permits, so as to secure a lengthened flower season. Those who have not seen Autumn-raised seedlings duly thinned and planted 9 inches or 1 foot apart in rich, light soil do not fully appreciate the capabilities of Godetias, for, alas, all too often the Spring-sown plants are allowed to choke each other, and short-lived beauty is the result. It is a rare sight to see large breadths of Godetias grown for seed purposes in July or August, and a long border filled with them in blocks of one colour or in lines of a colour is a revelation, provided ample room is given for each plant to develop properly, and the seed vessels are removed regularly.

*Œnothera amœna* is the species from which the garden varieties have been raised; it is 1 foot to 2 feet high, and

the flowers are rose-coloured with crimson spots; *Æ. a. rubicunda* is purplish with red blotch. The best named forms are Bridesmaid, 15 inches, blue and rose; Crimson Gem or Crimson King, 18 inches, crimson; Crimson Glow, 15 inches, rosy-crimson; Duchess of Albany, 1 foot, glistening white; Duke of York, 1 foot, blood red with white centre; General Gordon, 1 foot, rich carmine; Marchioness of Salisbury, 1 foot, crimson with white margin; Ladybird, 1 foot, white with crimson spots; Lady Satin Rose, 1 foot, rose-pink; Scarlet Queen, 1 foot, bright crimson-scarlet. There are dwarf forms of many of the foregoing varieties, and these are from 6 to 9 inches high, useful both for edging or for association with the taller sorts. The double flowered *Schaminii* is a grand Godetia of sturdy growth, and makes a compact and yet elegant bush, 18 inches high, smothered with shining, delicate rose-pink flowers. It should not be omitted from any collection, as it lasts so well and is first rate for cutting, for beds, for borders, and also for pot culture. There are now double or semi-double forms with mauve and crimson flowers. *Æ. Whitneyi* is a hardy Californian Annual, 1½ foot high, rose-red and crimson; of this there are white, crimson, and crimson-scarlet varieties, and one named Lord Roberts is carmine, shading to deep crimson.

## OMPHALODES

### “*Venus's Navel-wort*”

*Omphalodes linifolia* (*Boraginaceæ*) is a charming little Hardy Annual, and one that lends itself to cultivation in a shady and rather moist spot. In most Rock gardens a place can be found for it, and here it will reproduce itself readily from self-sown seeds. From 6 to 12 inches high, with narrow grey-green foliage and white flowers, it is a pretty subject, and one that merits wider consideration.



## PAPAVER

## "Poppy"

Notwithstanding the wonderful range of form and colour found in annual Poppies (*Papaveraceæ*), there are really very few annual species. The two from which the garden varieties have descended are *P. somniferum*, the bold, glaucous-leaved Opium Poppy, with whitish flowers; and *P. Rheas*, our wild red Poppy. Other annual species, all hardy, are *P. glaucum*, 2 feet, vivid scarlet—The Tulip Poppy; *P. pavonium*, 1½ foot, scarlet and black; *P. levigatum*, 2 feet, scarlet, white, and black; and *P. umbrosum*, 2 feet, deep red and black.

The Poppies are among the easiest plants to grow, but in most cases the fine seeds are sown 90 per cent. too thickly, the thinning is done half-heartedly, and the results are poor as compared with what they ought to be. The Shirley Poppies, raised originally by the Rev. W. Wilks from a wild form of *P. Rheas*, are too often spoiled because the plants are crowded, and so flower poorly and last only a short time when the weather is bright. The seeds need but the merest covering of soil, and as Poppies do not transplant satisfactorily, the sowing must be made where the plants are to flower. The seedlings should be thinned as early as possible to not less than 1 foot apart for the Shirley and similar varieties, allowing a greater space for the big double and single varieties of *P. somniferum*.

Shirley Poppies range from pure white to deepest crimson, and they are extremely graceful and beautiful. If the flowers are cut just as the buds begin to open they are very valuable for home decoration, as they speedily expand in water, but if they are not so treated they fall to pieces quickly.

Danebrog or Victoria Cross, White Swan, Mikado, Mephisto, Cardinal, and Mauve Queen are names given to remarkably fine varieties of *P. somniferum*; these grow 2 feet

high, and range from white to intense crimson, and some are double and exquisitely fringed.

### PERILLA

One member of this family is fairly well known in gardens because it has for a long time been a favourite with those seeking striking effects by means of foliage. *Perilla ocimoides crispata* (*Labiatae*) is best known as *P. nankinensis*. The flowers are of no service, but the dark blackish-purple leaves serve to throw into sharp relief the lighter and brighter flowers in the formal Flower garden. Raised in heat in February or March it rapidly reaches a good size, and when hardened off in the usual way it is ready for planting in early June.

### PHACELIA

The most popular Phacelia (*Hydrophyllaceae*) is *P. campanularia*, a neat little Annual from California, about 8 inches high, bearing a profusion of broadly bell-shaped flowers of the richest shade of blue. This is an effective plant, and suitable for edging beds or borders. There is an early flowering form with rosy flowers known as *P. c. caesia*. *P. divaricata*, 1 foot, violet; *P. Menziesii*, 1 foot, purple; *P. Parryi*, 8 inches, violet; *P. tanacetifolia*, 2 feet, rose; *P. Whittlavia* (syn. *Whittlavia grandiflora*), 1 foot, violet, very free blooming; and *P. viscida* (syn. *Eutoca viscida*), 6 to 15 inches, violet and blue, are other species, and the last two are of considerable merit.

Sow seeds in April where the plants are to flower, and thin the seedlings to 6 inches apart.

### PHLOX

The large genus Phlox (*Polemoniaceae*) contains but one annual species of note, and this is *P. Drummondii* (see Plate 1), a general favourite and an easily-grown plant. Drummond's

Phlox was introduced from Texas in 1835, and, being a Half-hardy Annual, it lent itself readily to the process of selection. The red-flowered type was soon made to yield other colours, until now there are white, salmon, crimson, scarlet, purple, rose, and buff strains that come wonderfully true. In some strains the flowers are extra large, in others the plants are dwarf, and in others the flowers are stellate. It will thus be seen that *P. Drummondii* is now a host in itself, providing a wide range of form and colour.

Sown in gentle heat in March or April, the seeds soon germinate, and the seedlings must be placed in boxes as soon as possible and given sufficient room to make sturdy plants. Hardening off is an easy matter, and should be carried out so that the plants are ready for planting in early June. It is a good plan to pinch out the central point when the plants are quite young to ensure a bushier growth, and it is also desirable that the growths be pegged down at intervals after the plants are growing freely out-of-doors. *Phlox Drummondii* to a large extent takes the place once occupied by Verbenas, though the latter are again coming into favour. As pot plants, and for window boxes, these Phloxes are well adapted, while for bedding and edging they have few rivals.

## POLYGONUM

### “Knot Grass”

One member only of this large family is an Annual, and a hardy one at that. This is *Polygonum orientale* (*Polygonaceæ*), of branching, bushy habit, about 4 feet high, but capable of reaching much higher if planted in rich soil and given a sunny position. It does very well when sown in the open in April, but if large plants are needed for sub-tropical effects then the seeds are best sown in heat in March and the plants potted, hardened off and planted out in early June. If plenty of room is afforded for development and

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water is given freely in dry weather, the plants grow very large and produce quantities of their semi-pendulous spikelets of rosy-purple or white flowers.

### PORTULACA

#### "*Purslane*"

Needing and loving the sunshine, the Portulacas are not a success in a wet or dull season, and, as we cannot expect all our summers to be hot and bright, it is necessary to grow this family of brilliant Annuals on the hottest site in the garden, and in sandy soil. Such a position will suit them at all times, though it is only in the warmest and driest seasons that the Portulacas (*Portulacaceæ*) do themselves full justice; at their best hardly any plants are more gay than they. *P. grandiflora*, 6 inches, purple and yellow, is the species which seedsmen have worked upon, and now yellow, white, and scarlet strains are offered; but mixed colours are so good and offer no offensive combinations, that it is hardly worth while to keep the colours distinct unless there is a special end in view. Sow in the open in April and thin to 6 inches apart, or sow in heat in March and plant 6 inches apart in May or June.

### RESEDA

#### "*Mignonette*"

Fragrant and popular as is the Mignonette it is not sufficiently well known that there are a considerable number of distinct varieties of *Reseda odorata* (*Resedaceæ*) differing in colour, in habit, and in height. In most gardens Mignonette will grow fairly well, in a few it grows remarkably well, while in others it is with difficulty persuaded to grow at all. Where it is more or less a failure a good application of lime, or finely crushed mortar rubble, should be

mixed with the soil before sowing, and more than likely this sweetly scented Hardy Annual will show its appreciation of the addition by thriving.

There are few places in a garden where Mignonette would be out of place, and it ought to be sown freely in patches in flower and shrubbery borders, on banks or old walls, as well as in beds and in the small amount of soil that finds a place at the foot of a wall between it and the flagstones. The several varieties should be sown separately, otherwise the stronger growers will crowd out the smaller sorts. As a pot plant Mignonette is deservedly popular, the Machet variety being largely used in this way for Winter or early Spring flowering, but all the varieties make capital specimens if one plant is grown in a 48 or 32-sized pot and the growths are pinched at an early stage to induce a bushy habit.

Machet, deep red ; Bismarck, large, and deep red ; Cloth of Gold, yellow ; Pearl, creamy-white ; Mile's Spiral, buff ; Tom Thumb, reddish-buff ; Red King or Red Giant, dark red ; Nineteen Hundred, small, free, bright yellow ; and Perfection, deep red, are all excellent varieties.

*Reseda alba*, 2 feet, white ; and *R. luteola*, 1 foot, yellow, are other species, but they do not compare favourably with the garden varieties of *R. odorata* for garden decoration.

## SALPIGLOSSIS

A rare Orchid bloom can scarcely exceed the wonderful beauty of colouring and the exquisite veining of a Salpiglossis (*Solanaceæ*), though the latter loses points when lasting properties are considered. For my own part I love brilliant colouring in the garden, and so the many golden Composite flowers, the Salpiglossis and the Zinnias, appeal strongly to me. *Salpiglossis sinuata* is an elegant plant, the flowers are large and varied in colour, and they never fail to excite admiration. Unquestionably the Salpiglossis, as now im-

proved by our seedsmen, must stand in the front rank of choice Annuals. I have tried repeatedly, but without success, to cross the *Salpiglossis* with the garden strains of *Petunias*, these latter being closely allied and of little more than annual duration.

The colours found in *Salpiglossis* are pale yellow, deep gold, red, crimson, scarlet, rose, carmine, blue, purple, and violet. In some catalogues certain colours are offered separately, and in others named varieties are listed, but a first-rate mixed strain is quite good for bedding purposes, though the separate colours are perhaps the best for pot culture. Sow the seeds thinly in moderate heat, about 65°, and cover them lightly. Early transference of the seedlings to pots or boxes is essential to the best results. Use rich, light soil, harden off the plants, and plant out early in June, selecting an open and sunny site. A good bed of *Salpiglossis* is a thing of beauty and a joy for a long time in a fairly good summer.

A few light, twiggy sticks set among the plants will serve to prevent damage from winds and heavy rains, and if they are not more than 15 or 18 inches high they will not be noticeable at flowering time.

## SAPONARIA

### "*Soapwort*"

Two species of *Saponaria* (*Caryophyllaceæ*) are Hardy Annuals, and the closely-tufted habit of *S. calabrica* renders it a useful subject for the Rock garden or for edging. Sown in Autumn, the white and rosy-carmine varieties are fine for Spring flowering, while Spring sowings flower later. *S. Vaccaria* is 2 feet high, and has rose-pink flowers, but there is also a white variety. Varieties of *S. Vaccaria* have a graceful habit and are useful for cutting, hence a September and an April sowing should be made. Thin *S. calabrica* to 4 inches apart, and *S. Vaccaria* to 1 foot apart.

## SCABIOUS

“*Sweet Scabious*”

The double-flowered Scabious (see Plate VI) are among the most useful of plants for borders or for cutting. They are not so double as to be heavy, the colours are good and the stems wiry, consequently the blooms are highly serviceable for indoor decoration. Messrs. Dobbie and Co. have developed a particularly fine-flowered and robust strain that is far in advance of the older forms, and it lacks nothing in variety of colour. The latter ranges from white through yellow shades, pink, salmon, lilac, blue, and rose, to scarlet, purple, and the darkest crimson. These Sweet Scabious have been evolved from the South European *Scabiosa atropurpurea* (*Dipsacæ*). Other annual species are: *S. brachiata*, 2 feet, various (syn. *S. palestina*); *S. stellata*, 1 $\frac{3}{4}$  foot, pink or white.

An outdoor sowing in April will produce plants for late flowering, but the best method is to raise a stock in gentle heat in early March and plant out in May. The Scabious like a deep rich soil, and if placed a foot or more apart they will branch freely and continue to flower all the season. One slender stake to each plant will provide ample support against winds and heavy rains.

## SCHIZANTHUS

“*Butterfly Flower*”

Although the Schizanthuses (*Solanacæ*) are either Hardy or Half-hardy Annuals they are not often a great success in the open garden. As conservatory or greenhouse plants they occupy a high position, and the fine selections brought forward in recent years have done much to make the plants popular. This is not the place to consider their merits as

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indoor plants, and so attention must be confined to those which may be of service in the Flower garden. In the Southern counties the garden-raised strains of both *S. pinatus* and *S. retusus* do very well in a warm position, and when they carry an abundance of dainty, butterfly-like blossoms, bright with white, purple, blue, red and yellow colouring, they are very attractive. *S. Grahamii* is a sturdy grower, with carmine and orange flowers, and *S. Wisetonensis* is a shapely grower that is immensely popular as a pot plant, and is said to be useful for the garden if raised from seeds sown in a temperature of about 60° in February or March. The other kinds mentioned must all be raised in moderate heat in March if they are to be a success in the garden during the Summer.

### SCHIZOPETALON

A plant that vies with the Mignonette for sweet fragrance is *Schizopetalon Walkeri* (*Cruciferae*). This little Chilean plant is about 1 foot high, and has white, four-petalled flowers that give forth their fragrance mostly in the evening, in the morning, or after a shower of rain. As with Mignonette, this Annual should be sown wherever there is a spare space, and several sowings during the Spring and early Summer will keep up a supply of flowers and fragrance.

### SENECIO

#### *Groundsel—Jacobaea*

A South African member of the Groundsel family, and one that is used freely for the decoration of some parks and gardens in Summer, is *Senecio elegans* (*Compositae*). This is a capital bedding plant about 1 foot high, and is specially useful because it produces its heads of double flowers continuously



all through the season. In a moist season the plants may reach  $1\frac{1}{2}$  foot high, but the dwarf strain offered will rarely exceed 8 inches. The colours available are white, pink, salmon, purple, carmine, and crimson, and these are sometimes offered separately, though a popular method is to obtain a packet of mixed colours, and bed out the seedlings in May, putting them 6 inches apart. Seeds sown in the open in April or May flower rather late, therefore it is better to make a sowing in a warm greenhouse in March. These double Senecios are first rate for cutting, as they are pretty and long lasting.

### SILENE

#### “*Catchfly*”—“*Campion*”

Some eighteen species of *Silene* (*Caryophyllaceæ*) are Hardy Annuals, but only *S. pendula* and its many varieties need be seriously considered for garden decoration. All are splendid for Spring displays, and their usefulness is fully understood by lovers of Rock gardens and by those who desire a carpeting plant for bulbs. Most of the varieties have double flowers, and the colour may be white, rose, pink, or red. The compact strain is the best for bedding arrangements, and such named sorts as Empress of India, rosy-crimson; Peach Blossom, pink; and Snow Queen, white, are all of the greatest beauty. Another excellent form is Bonnetti, deep rose, with dark stems and foliage, while Bijou is a lovely shade of pink, with glaucous leafage. Outdoor sowings are by far the best, and for Spring flowering August or September is the time to sow, while an April sowing will give a late Summer display. As the *Silenes* continue to blossom for a considerable period and provide much variety of colour, they form an exceedingly useful and beautiful group of flowers. About 6 inches apart is a good distance to plant. Autumn-raised seedlings should not be put into rich soil, or

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they may suffer harm during the Winter, or make growth at the expense of flowers.

*S. gallica*, 1½ foot, pink, is another annual species of some merit.

### SPECULARIA

#### "Corn Violet"

Closely allied to the Campanulas are the low-growing Specularias (*Campanulaceæ*). They are of spreading habit, rarely exceeding a foot in height, and yield bell-shaped flowers. All are hardy, and best raised by sowing in September where the plants are to flower. The Rock garden provides a pleasant home for them, and they are then seen to advantage. The chief species are *S. falcata*, 1 foot, blue; *S. hybrida*, 6 to 12 inches, lilac or blue; *S. pentagonia*, 1 foot, deep blue; *S. perfoliata*, 1 foot, purplish-blue; and the pretty *S. Speculum*, 1 foot, of which there are white and rich purple varieties.

### STATICE

#### "Sea Lavender"

Not only are the Half-hardy Sea Lavenders (*Plumbagineæ*) good for garden decoration when planted in masses, but the flower spikes are elegant for filling vases, and if cut and suspended head downwards until dry they are available for Winter use when flowers are none too plentiful. In some districts these annual Statice are grown in large quantities for the cut flower markets. They all delight in a fairly light soil containing plenty of grit, and leaf-mould or peat. The best way to manage them is to sow the seeds in fine, sandy soil, merely covering them, in February or March, placing them in a temperature of about 60° to germinate. Prick off into other boxes, harden gradually, and plant them in the flowering quarters in May. The distinct appearance of the Statice always attracts attention.

The best species are *S. Bonduellii*, 15 inches, yellow; *S. Suworowii*, 15 inches, pink or lilac; and *S. sinuata*, 2 feet, lavender; this latter species has a white variety named *candidissima*, and mixed colours are listed as mixed hybrids.

## TAGETES

## "African Marigold"—"French Marigold"

The African and French Marigolds (*Compositæ*) are glorious plants, though they are not agreeable to handle owing to the unpleasant odour of the leaves and stems when rubbed; they are so showy and easily grown that they are absent from few gardens. In the North of England and in most parts of Scotland they are especial favourites, and almost every exhibition in the North makes provision for both kinds, and keen competitions follow. In the Tyneside district extraordinary pains are taken to bring the flowers to perfection for exhibition purposes, the operations of shading, protection, and thinning being as carefully considered as they are in the case of exhibition Dahlias.

For garden decoration the brilliance of the flowers compels admiration. The French strains derived from the Mexican species *Tagetes patula* are first rate for edging large beds or borders, or for a groundwork under a thin planting of taller plants. Legion of Honour is one of the very best varieties; it is about 1 foot high, bushy and compact, the florets broad and regular, and the colour golden-yellow with a large mark of velvety maroon on each. The other single varieties have some merit, but are a long way behind Legion of Honour for effect and lasting beauty. The double varieties are now very popular, and the self-coloured flowers, or those with a maroon stripe down each golden floret, or with golden margins to maroon florets, are attractive.

African Marigolds have descended from *Tagetes erecta*. They are bold plants with big, massive, double flowers.

Some strains are about  $1\frac{1}{2}$  foot high, but the majority of the finer forms grow 3 feet high, and a good specimen will be 2 feet through; these figures will serve as a guide for planting. The best of the African varieties are Prince of Orange, deep orange-yellow; and Lemon Queen, lemon-yellow; both brought to great perfection by Messrs. Dobbie and Co.

Both African and French Marigolds must be sown in a temperature of  $60^{\circ}$ – $65^{\circ}$  in March or early April to be a success. The young plants need a fair amount of heat until making good progress, when the work of gradually hardening them off should begin, so that by the beginning of June they are sturdy examples, ready to plant out. While the African Marigolds delight in a rich soil, the French sorts are best placed in rather poor soil, but both are garden forms of Mexican plants, and therefore are of small value unless planted in a warm and sunny position.

Other *Tagetes* of some value for garden decoration are *T. lucida*, 1 foot, yellow, known as the Mexican Marigold, and *T. signata*,  $1\frac{1}{2}$  foot, yellow. A dwarf variety of *T. signata* is known as *pumila*.

## TROPAEOLUM

### "*Nasturtium*"

Common as the *Tropaeolums* undoubtedly are, in the sense that they are known to every one and found in the child's garden in a backyard as well as in the largest public and private gardens in the land, they are not to be despised. Whether the tall or the dwarf sorts are considered there is great variety in the colouring and markings of the flowers, as well as in the colour of the foliage, this latter variation being most marked in the dwarf varieties. Nothing is more easily grown, and few plants give such a bright display for such a small outlay of time, care, and expense. In 1910 I distributed

PLATE VII  
DWARF SUNFLOWERS  
(Stella variety of *Helianthus annuus*)









seeds of a dozen or fifteen varieties along a rather dry border containing bulbs; the seeds were placed about 10 inches apart, and each variety occupied a run of about three yards. My son, aetat. ten, amused himself by pushing each seed from one to two inches deep in the soil, and this method of sowing was followed by a rough raking over. The result was excellent, and the display was a brilliant one right up to the first frost, for the outlay of a few pence. Germination is so certain that there is no need to sow thickly, indeed such a proceeding is a waste of time and money.

*Tropaeolum minus* (*Geraniaceæ*) is the parent of the dwarf Nasturtiums—and it is as Nasturtiums that the plants are best known. Listed as Tom Thumb varieties, the following are all meritorious: Aurora, buff, pink, and carmine; Crystal Palace Gem, yellow and maroon; Cloth of Gold, yellow, with golden-green foliage; Coeruleum Roseum, rose with bluish shade; Empress of India, crimson-scarlet, dark foliage; Chameleon, yellow, to soft crimson; King Theodore, dark crimson; Ladybird, scarlet and yellow; Pearl, creamy-white; Scarlet King, vivid scarlet; Fire King, orange-scarlet; Ruby King, ruby-red; and Vesuvius, orange and crimson. The Lilliput race forms dainty little bushes, and gives flowers of various colours. Messrs. Stark & Son, Great Ryburgh, have brought a variegated-leaved race of dwarfs to perfection, and these have flowers of several bright shades; the variegation is distinct and attractive.

The tall or climbing varieties have descended from *Tropaeolum majus*, and they are valuable for quickly covering fences, screens, arches and similar structures, and look well when several are planted together to form a clump, pea sticks being used for their support. Some of the leading varieties are: Black Prince, deep crimson, dark foliage; Crimson and Gold, pale yellow and gold, with spots of crimson; Fairy Queen, pink and yellow; Salmon Queen, salmon-pink; Pearl, cream-white; Ruby King, ruby-red; and Sunlight, yellow.

*T. Lobbianum* has also given a number of attractive climbing varieties, of more refined appearance than the *T. majus* varieties, and most of these have Ivy-like leafage. Some of the best are: Brilliant, deep scarlet; Crown Prince of Prussia, blood-red and maroon; Defiance, scarlet; Lucifer, scarlet; Regina, salmon and crimson; Golden Gem, yellow; Rosy Queen, rose; and Spitfire, vermilion.

The ever popular Canary Creeper, with its elegant leafage and hosts of little Canary-like blooms, is a beautiful climber, and it is doubtful whether any annual climber can compare with it for usefulness and beauty. It is *Tropaeolum aduncum* (syn. *T. peregrinum*), or the *T. canariense* of gardens.

Tropaeolums grow rampantly in rich, moist soil, but in such conditions leaf and stem are produced at the expense of flowers, or the leaf stems are so long and the leaf blades so broad that they quite overshadow the blooms. It therefore becomes necessary to grow Tropaeolums in rather poorer soil and to give them a bright position and a fairly dry one if the most brilliant results are desired. All the foregoing are Half-hardy in the sense that they cannot stand frost, but in another sense they are Hardy, for every one knows that self-sown seeds will survive the Winter and produce plants the following Spring, rarely appearing until danger from frost is over.

## ZINNIA

### “*Youth and Age*”

At the end of this list of Annuals come the Zinnias; but though last they are by no means least in order of merit, for they possess a brilliance and beauty that places them in the front rank for garden ornamentation. Either for beds or for groups in the mixed border the Zinnias (*Compositæ*) are first class. The flower heads of the fine strains of double Zinnias (see Plate VIII) are a trifle formal, it must be confessed, but they are none the less handsome. Well-grown

Zinnias are a credit to any one, and if the season is a fairly bright one they will succeed under reasonable care, if a sunny position is assigned them, and they are raised in February or March in a temperature of 60° and quickly transplanted into boxes or a bed in a frame, there to grow and harden ready for planting out in early June.

The species from which the garden race of Zinnias has come is *Z. elegans*. The colours available are white, cream, yellow, salmon, rose, scarlet, vermilion, purplish-red, and crimson. All the shades associate so well in a bed that it is not necessary to keep the colours separate unless there is a colour scheme in view. In the "grandiflora" strain the flowers measure 3 inches across, and the plants bearing them grow about 2 feet to 2½ feet high. *Z. Haageana*, 1½ foot, orange-yellow; and *Z. tenuifolia*, 2 feet, red, are also worthy of cultivation.

Zinnias love rich soil and a bright, warm position. It frequently happens that they fail because they are starved as seedlings, and planted out too early. Eight inches to a foot apart is a good distance at which to plant. Planted in rich soil, on a slightly sloping bank facing to the south, Zinnias can be grown with gratifying success.

## CHAPTER IV

### ANNUALS OF LESS GARDEN VALUE

#### AMMOBIUM

##### "*Everlasting Sandflower*"

*Ammobium alatum* is a Half-hardy Annual from Australia; it belongs to the Order *Compositæ*, and is one of the "Everlasting" flowers. The yellow blooms are borne on stems from 1 foot to 2 feet high, and are of papery texture; *A. a.*

*grandiflorum* is a finer form than the type, the flowers being larger and of a purer white; *A. plantaginicum* is not so tall as the foregoing species, but its flowers are also white. Seeds should be sown in sandy soil in a temperature of from 60° to 65° during March, and after the seedlings have been pricked off into boxes and duly hardened, a sunny position should be found for them out-of-doors.

## ANAGALLIS

“Pimpernel”

Several of the Pimpernels have brightly coloured flowers, and the plants are of the easiest culture. They may be raised in a warm spot out-of-doors if sown in March or April, or under glass, as though Half-hardy, from a sowing made in March in a temperature of 60°.

Of the native *A. arvensis* there are several varieties; the type has small, red flowers, while *A. a. coerulea* has blue flowers; *A. latifolia* (syn. *A. indica*) is larger than *A. arvensis*, of trailing habit, and bearing very attractive bright blue flowers. The Pimpernel so frequently listed as *A. grandiflora*, and represented by several showy, low-growing varieties, is really a form of *A. linifolia*, a perennial Portuguese member of this little genus of the Order *Primulaceæ*.

## ARGEMONE

“Mexican Poppy”—“Devil’s Fig”

Exceedingly ornamental are the handsome Hardy Annual species of Argemone (*Papaveraceæ*), as they rise to a height of 2 feet or more, and have fairly large leaves which are usually bristly or spiny, and are often blotched with white. The large Poppy-like flowers are very effective, and therefore the plants are especially suitable for large borders or for use in sub-tropical gardening. It is usual to treat the Argemones as Half-hardy, and sow the seeds in gentle heat in March or April, but there is no need to take this amount of trouble if a

warm spot is chosen, and well-drained soil is finely worked down ready to receive the seeds at the end of March. As all the species are strong growers, the seedlings must be thinned out or transplanted whilst still very small.

The best are *A. albiflora*, 1½ foot, a species that produces white flowers at the end of the Summer; *A. hispida*, 2½ feet, a fine Californian plant that blooms in the early Autumn, and has pure white flowers, often as much as 5 inches across; *A. mexicana*, 2 feet, a yellow-flowered species from Mexico; and *A. ochroleuca*, 2 feet, another Mexican plant with pale yellow flowers. All these Argemones are lovers of sunshine, consequently they must be planted in a bright, sunny position or their full beauty will not be realised.

## ASPERULA

### “Woodruff”

All the members of the Woodruff family (*Rubiaceæ*) are hardy, and one of them is an Annual that has achieved some measure of popularity. This is *A. azurea* (syn. *A. azurea-setosa* and *A. orientalis*), a plant prized for its profusion of small, light blue flowers which are very suitable for use in making up bouquets and other floral designs. It grows about 1 foot high, and the little green leaves are placed eight together in whorls. The flowers are fragrant and last well when cut. Any good garden soil will suit *A. azurea*, and if seeds are sown in March or April a good supply of plants can be raised; avoid thick sowing, remembering that when seeds are small and cheap there is a great temptation to sow thickly.

## ATRIPLEX

### “Orache”

The Orache, *Atriplex hortensis*, is best known in the Kitchen garden because it is a fair substitute for Spinach;

but there is a variety named *A. h. atrosanguinea*—the Giant Crimson Orache—which has some claim to notice here. This is a striking plant, rising to a height of 6 feet, and when its leaves, stems, and seed vessels have all turned a deep crimson-red colour the effect is rich indeed. For sub-tropical effects, for the Wild garden and the Bog garden this is a useful subject. The Orache is quite hardy, and seeds may be sown either in the Spring or late Summer, but if the red-leaved form is grown for decorative purposes the plants must be given ample room to develop.

### BLUMENBACHIA

At least one species of Blumenbachia (*Loasaceæ*) claims attention as a Hardy Annual, and it is *B. insignis*, a trailing plant with whitish flowers, each an inch across. The elegant leaves are deeply lobed. *Loasa palmata* is another name for this Chilean plant, which was introduced as long ago as 1826. Sown under glass in March, *B. insignis* will germinate readily, and after being properly hardened the plants will be ready for planting out in early June. *B. multifida*, with green, red, and yellow flowers; and *B. contorta*, with orange-red flowers, are Half-hardy Annuals, but of less merit. All are interesting, but they are not at all common in gardens.

### BORAGO

“*Borage*”

Although the common Borage, *Borago officinalis* (*Boraginaceæ*), is best known as an inhabitant of the Kitchen garden, it is frequently found in the Herb garden, and sometimes also in the Flower garden. Its bright blue flowers are effective, and bees are very fond of them. This is an annual species rising to a height of 2 feet, and it is easily raised from a Spring sowing in well-worked soil, the seedlings

being subsequently thinned out to  $1\frac{1}{2}$  foot apart. There is a white flowering variety of this native herb, and it needs similar care. Formerly the Borage was in great demand for its flavouring, and even now it is sometimes requisitioned for the preparation of Claret Cup.

### BROWALLIA

There is a wonderful diversity of opinion as to the duration of Browallias (*Scrophularineæ*), and at least two gardening dictionaries give the greenhouse Perennial *B. Jamesonii* (correctly *Streptosolen Jamesonii*) as a Half-hardy Annual. The species are variously catalogued as Annuals, Biennials, and Perennials. *B. demissa* (syn. *B. elata*) is a Half-hardy Annual that is good out-of-doors in favoured districts and in warm, sunny seasons, but it is most successfully managed as a greenhouse plant. However, where suitable conditions prevail, seeds may be sown in a temperature of  $60^{\circ}$  in March, the seedlings being potted singly into small pots as soon as possible, and kept growing steadily in a greenhouse until they can be safely placed in a frame and hardened off preparatory to planting them in groups of a dozen or so in June. The usual height of the plants is 9 inches or 1 foot, sometimes it is 18 inches, and the rich violet-blue flowers are carried in Verbena-like clusters.

### CHARIEIS

#### "Cape Aster"

*Amellus annuus* and *Kaulfussia amelloides* are names by which *Charieis heterophylla* (*Compositæ*) has been known. It is a dwarf plant about 6 inches high, and bears azure-blue, Daisy-like flowers on slender stems. Grown in a mass or forming a carpeting for a bed of taller subjects, it is very effective. Besides the type there are now white, violet, and crimson varieties, hence it is possible to produce some

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charming combinations. Sow in March in gentle heat and plant out 8 inches apart in May, or sow out-of-doors in April and thin the seedlings to the required distance.

### COLLOMIA

The Collomias (*Polemoniaceæ*) are not very popular, but they are interesting; about 1½ foot high, they carry large heads of bright flowers, and are easily managed either from a Spring or an Autumn sowing. Like the Collinsias, they flower best in rather poor soil and they like a sunny position. The best species are *C. coccinea* (syn. *C. lateritia*), rich red; *C. grandiflora*, reddish-yellow; *C. heterophylla*, purple; and *C. linearis*, yellowish-brown.

### CYNOGLOSSUM

"Hound's Tongue"

At least one species of Cynoglossum (*Boraginaceæ*) is of Annual duration, and it is one of the prettiest members of the Hound's Tongue family. This is *C. Wallichii*, a Himalayan plant that is valuable for the Rock garden and useful for edging or carpeting. It is not much grown, but it only needs to be taken in hand by some prominent grower to become popular. Of lowly habit, rising 9 inches high, and perfectly hardy, it produces rich, deep-blue flowers of Forget-me-Not type in profusion. The seeds should be sown in poor soil in September, or at the end of March where the plants are to flower. It is an altogether charming little plant.

### DOLICHOS

"Hyacinth Bean"

*Dolichos Lablab* (*Leguminosæ*) is a Half-hardy Annual, but not a popular or very important one, as it is rarely a success unless given a specially warm, sunny place and the



protection of a wall. It grows much after the style of a Runner Bean, and bears clusters of rosy-violet flowers which are followed by rich ruby-coloured pods that are very interesting and attractive. If each seed is sown in a 3-inch pot and placed in a temperature of about 65° in March, and the seedlings are subsequently potted and duly hardened so as to be ready for planting out early in June, good results may be expected, especially if the season is a warm one, like that of 1911.

### DOWNINGIA

Two charming little Hardy Annuals that have not yet received the attention they merit are *Downingia elegans* and *D. pulchella* (*Campanulaceæ*). They are Californian subjects and love the sunshine; they grow about 6 inches high, and give bright blue flowers, with white or yellow centre. There is much to commend them for bedding purposes, and they have the merit of being easily raised from seeds sown either in gentle heat or on a warm border in the early Spring. They should be planted about 6 inches apart. *D. pulchella* makes a good plant for small, hanging baskets. Other names for the Downingias are *Clintonia elegans* and *C. pulchella*.

### EUCHARIDIUM

California is the home of a large number of Annuals, and no doubt many more Californian plants would be popular here if long bright summers were usual. The Eucharidiums (*Onagraceæ*) do not come prominently before the public, but they are none the less beautiful and useful. Two species are Hardy Annuals, and these are *E. Breweri*, 6 inches, pale rose, fragrant; and *E. concinnum*, 8 inches, from blush to lilac-purple. There is a grandiflorum variety of the latter species which is sometimes given the dignity of specific rank, but it is merely a variety with larger flowers than the type.

Autumn-raised seedlings give by far the best results, there-

fore sowing should take place in August, the seedlings being thinned to 4 inches apart. From a March sowing a batch may be raised to bloom at the end of the Summer. The Eucharidiums are not over particular as to soil and position, but, as in the case of other Annuals from California, they do best in a sunny position.

### ERYTHRAEA

"Centaury"

The Common Centaury, *Erythraea Centaurium* (*Gentianaceæ*), is a lowly Hardy Annual suitable for the Rock garden; it is from 8 inches to 12 inches high, and bears its neat, rosy flowers in June and July. *E. spicata* and *E. venusta* have pink flowers; the former is Half-hardy.

### GNAPHALIUM

"Cud-weed"

The Gnaphaliums (*Compositæ*) are of little garden value, and deserve mention only because of the "Everlasting" character of their small flowers. The latter are carried in closely-packed clusters produced terminally and laterally. The best Hardy Annuals are *G. foetidum*, 1½ foot, yellow; and *G. obtusifolium*, 1 foot, yellow.

### GRASSES

The value of the ornamental grasses (*Gramineæ*) lies more in the usefulness of their spikes for association with cut flowers than in their effectiveness in the garden. If carefully picked just before the spikelets open, these grasses may be dried, and will then be found to serve for Winter decorations indoors. A good selection is as follows: *Agrostis nebulosa*, 1¼ foot; *A. pulchella*, 6 inches; *Briza maxima*, 1 foot; *B. minor*, 1 foot; *Chrysurus aureus*, 1¼ foot; *Coix lachryma*, 1½ foot; *Eragrostis*

*elegans*, 1½ foot; *Hordium jubatum*, 1½ foot; *Lagurus ovatus*, 1½ foot; *Panicum capillare*, 1½ foot; *P. oryzinum*, 2 feet; *Paspalum elegans*, 3 feet; *Pennisetum longistylum*, 2 feet; *Stipa pennata*, 2 feet; and *Tricholaena rosea*, 2 feet. These are Hardy Annuals, and in most cases do well either sown in Spring or Autumn, but they are often treated as Half-hardy and raised under glass or in a frame in the early Spring, the seedlings being planted out in a warm situation in May.

### GRAMMANTHES

A little plant growing not more than 3 or 4 inches high, and with succulent leafage and inch-broad, yellow flowers that turn reddish when fully opened, is *Grammanthes gentianoides* (*Crassulaceæ*). For a warm place in the Rock garden it is charming, and as it is easily raised in gentle heat in Spring it deserves attention. It is a South African Half-hardy plant of considerable merit.

### HEBENSTREITIA

Although *Hebenstreitia comosa* (*Selaginaceæ*) was brought into prominent notice by Messrs. Sutton & Sons about 1902, the species was fairly well known in botanic gardens many years previously. It is an interesting plant with erect, Mignonette-like spikes of whitish, red-marked flowers, the chief merit of which lies in the fragrance they emit in the evenings. *H. comosa* is a Half-hardy Annual from the Cape; it grows 1½ foot high, and is best raised in gentle heat in Spring and planted out in May or June.

### HELIOPHILA

“Cape Stock”

The Heliophilas (*Cruciferæ*) form a fairly large family of South African plants, several of which are Half-hardy Annuals that can be raised under glass in Spring, or out-of-doors in

March or April. They are distinct and pretty plants, but rather short lived, and therefore not of first-class garden value. The chief species are: *H. crithmifolia*, 6 inches, violet; and *H. pilosa*, 6 inches to 12 inches, blue, and its variety *H. p. incisa*, with trifid leaves. *H. pilosa* is also known as *H. stricta*, and its variety as *H. araboides*.

## HIBISCUS

“Rose Mallow

The Hibiscus family (*Malvaceæ*) has a very wide range, and includes plants from tropical, sub-tropical, and temperate regions, but most of the species are Perennial, some of them growing to considerable size, and becoming small trees. There is one Hardy Annual species, *H. Trionium* (syn. *H. africanum*), 2 feet high, with yellow flowers that have a purple centre. A variety of *H. Trionium* known as “Black Eyed Susan” has deep cream-coloured flowers with red-brown centre. Sow the seeds where the plants are to flower in April, and thin out to 8 to 12 inches apart. Light and somewhat dry soil and a sunny position are desirable, as the flowers do not properly open except in sunshine.

## JASIONE

“Sheep's-Bit Scabious”

*Jasione montana* (*Campanulaceæ*), a native plant of undoubted hardiness, makes a pretty plant for the Rock garden. From 6 to 8 inches high, it carries its pale blue flowers in roundish heads. Sow seeds in March where the plants are to flower, and thin to 6 inches apart.

## LASTHENIA

An easily grown plant is the Californian *Lasthenia glabrata* (syn. *L. californica* and *Hologyne glabrata*). It is a pretty

PLATE VIII  
DOUBLE ZINNIAS  
(*Zinnia elegans*)





J. G. ...





*Composite*, about 2½ feet high, with yellow Inula-like flowers. Sown in April in any good garden soil and duly thinned it is satisfactory, but earlier and larger plants are produced if seeds are sown in gentle heat in March, or in a frame in October and the plants given frame protection during Winter. In some favoured situations it may be sown out-of-doors in September, and where it thus succeeds it makes a rare display of golden blossoms in the early Spring.

### LAYIA

#### “Tidy Tips”

Three species of *Layia* (*Compositæ*) are in cultivation, and these are lowly Hardy Annuals of some beauty and worth. They are seldom seen in private gardens, but they merit and pay for attention. *L. calliglossa* grows 1 foot high, and bears a profusion of yellow, white-bordered, golden-centred flowers over a goodly period; *L. elegans* rarely exceeds 8 inches, it spreads or sprawls somewhat, and carries its yellow flowers above grey-green foliage; *L. glandulosa*, 1 foot, has snowy-white flowers and is a good plant. Sow out-of-doors in April and again in September to secure a succession of flowers. Any good garden soil will suit the *Layias*.

### LOTUS

#### “Bird’s-foot Trefoil” or “Winged Pea”

Several species of *Lotus* are Hardy, but only one need be mentioned here, and that is *L. Tetragonolobus* (*Leguminosæ*), the Winged Pea. This is 6 inches to 12 inches high, and produces its purple flowers through the Summer. For the Rock garden or for a sunny place in light soil it would be suitable. Another name for this plant is *Tetragonolobus purpureus*.

## LONAS

*Lonas inodora* is a North African and Sicilian *Composite* that has some claim to notice because of the "Everlasting" character of its yellow flowers, which are produced in terminal clusters in Summer and Autumn. Sow in gentle heat in March, or out-of-doors in April, thinning or planting the seedlings 6 inches apart. The height is usually 1 foot. Another name for this plant is *Athanasia annua*.

## MADIA

"*Madia-Oil Plant*"

This little genus of *Compositæ* includes two Hardy Annuals, and one of them, *M. elegans*, 2 feet, yellow and red, might improve under a system of selection. It has Daisy-like flowers, the central or terminal one always opening first on both the leading or lateral stems. *M. sativus*, 1 foot, yellow, the Madia-Oil plant, is of less garden value. Sow in April and thin to 6 inches or 8 inches apart. *Madaria* is another title for this genus.

## MEDICAGO

"*Calvary Clover*"—"Medick"

The Medicagos (*Leguminosæ*) constitute a large family, and form a very useful one considered as fodder plants, but few of them are of much garden value. They are hardy and easily raised from seeds sown in Spring or Autumn where the plants are to flower. The best of the Annuals are *M. Echinus*, the Calvary Clover, 8 inches, yellow; and *M. scutellata*, 6 inches, yellow.

## MESEMBRYANTHEMUM

"*Fig Marigold*"—"Ice Plant"

For warm and moderately dry places, and especially for sunny spots in the Rock garden, several of the Mesembryan-

themums (*Ficoideæ*) are deserving of attention, as they are very bright and beautiful when their flowers open in the sunshine. If sown under glass in gentle heat in March it is an easy matter to obtain good plants ready to put out where they are to flower, at the end of May or early in June, according to the locality. The seeds need be only just covered with fine sandy soil.

The best of these Half-hardy Annuals are *M. crystallinum*, commonly known as the Ice Plant, a trailer, with white or pink flowers; *M. pomeridianum*, 1 foot, yellow; and *M. pyropeum* (syn. *M. tricolor*), 6 inches, rose, white, and crimson, or white and purple. The latter is the Fig Marigold, and is an attractive plant, flowering with great freedom in bright weather. Some lime rubble in the soil suits all the Mesembryanthemums.

## MOLUCCELLA

“*Molucca Balm*”—“*Shell Flower*”

More curious than beautiful, at least one species of Moluccella, namely, *M. Laevis* (*Labiatae*), merits culture because of its striking appearance, the growths being furnished for the greater part of their length with whorls of small, whitish, labiate flowers, and each flower has a large membranaceous and finely veined calyx, that lasts some time after the flowers have faded. The stems are  $1\frac{1}{2}$  to 2 feet high. This is a Hardy Annual, but is best managed if sown in gentle heat in the early Spring, and planted out in May. A few plants are worth growing for their novel and interesting appearance.

## NOLANA

“*Chilian Bell-Flower*”

A small and neglected family are the Nolas (*Convolvulaceæ*). Perhaps they will become more popular in

connexion with Rock-gardening, as they are of lowly trailing habit and have large, bright, bell-shaped flowers. Sow in March, out-of-doors, in light gritty soil containing leaf-mould, and thin out to 6 inches apart. The best are *N. atriplicifolia*, 4 inches, blue, with white and yellow throat; *N. lanceolata*, blue, white, and green; *N. paradoxa*, 1 foot, blue; and *N. prostrata*, 3 inches, blue. The latter is an old garden plant and a charming one.

### PLATYSTEMON

“*Californian Poppy*”

*Platystemon californicum* (*Papaveraceæ*) has considerable merit as a Hardy Annual because of its spreading habit, light glaucous green leaves, and pale, creamy-yellow flowers. Being only about 9 inches high it is suitable for the Rock garden, but it is also useful for massing in a border, especially in light soil and a sunny position. Sow where it is to flower, and thin out to 4 or 5 inches apart. In many gardens this Poppywort sows itself regularly from seeds; it used to do so in the old Chiswick gardens of the Royal Horticultural Society.

### PODOLEPIS

Possibilities of improvement seem latent in the small genus of Australian *Compositæ* named *Podolepis*. Two species are Hardy Annuals, about 1 foot high, with yellow flower heads, borne on graceful stems. *P. acuminata* is slightly taller than *P. aristata*, but the latter species is very graceful and is worth growing in pots. Sow under glass in April, or out-of-doors in May, and thin out to 1 foot apart.

### SANVITALIA

*Sanvitalia procumbens* (*Compositæ*) is a very pretty, trailing, Hardy Annual from Mexico. The small, yellow, dark-centred flowers are like those of a *Rudbeckia* in miniature, and as

they are produced with freedom the plant is worthy of a place for edging, bedding, or for the Rock garden. There is a double as well as a single variety, each about 6 inches high, and a dwarf strain called Little Gem is of very compact habit and rarely reaches 6 inches.

### THELESPERMA

This is a small genus of *Compositæ*, and the one Hardy Annual species is *F. filifolia*, 1½ foot, yellow, with purple disk. This needs the same treatment as *Coreopsis*, to which it is allied. A hybrid between this species and *Coreopsis tinctoria* is sometimes known as *C. Burridgei*, or *Cosmidium Burridgeanum*.

### TRACHYMENE

*Trachymene coerulca* (*Umbelliferae*), known also as *Didiscus coeruleus*, is a rather rough Half-hardy Annual from Australia. It is about 1¼ foot high, and has blue flowers. Sow in heat in Spring, and plant out after hardening the plants.

### THUNBERGIA

Most of the Thunbergias (*Acanthaceæ*) are stove or greenhouse climbers, but one species, *T. alata*, is a Half-hardy Annual suitable alike for greenhouse or conservatory, or for a warm place in a sheltered garden. This has yellow, tubular flowers with purplish throat. In the variety *aurantiaca* the flowers are orange-yellow with maroon centre, while in *alba* they are white. The seeds must be sown in heat in March, and each plant be given a pot to itself at an early stage, with a stick to twine round. After due hardening, planting out should take place in June. *Thunbergia alata* makes a good basket plant if the points of growth are occasionally pinched out to induce a free branching habit.

## URSINIA

Under the name of *Sphenogyne anthemoides*, or *Arctotis anthemoides*, the little yellow *Composite* named *Ursinia anthemoides* is occasionally grown in gardens. It grows about 8 inches high, and has purplish colouring on the underside of the white ray florets. *U. pulchra* is also known as *Sphenogyne speciosa*, and seeds of it are so offered in catalogues; it is 8 inches high, and has orange-yellow flowers. These plants resemble the *Coreopsis*, and they should be raised in gentle heat in March, or sown in the open in April. Plant 6 inches apart.

## VERONICA

## "Speedwell"

One or two species of Speedwell (*Scrophulariaceæ*) are Hardy Annuals of merit, and those of most importance are *V. glauca*, 6 inches, blue; and *V. syriaca*, 6 inches, bright blue. Both are best sown in Autumn, where they are to flower, and thinned to 4 inches apart.

## WAITZIA

The Waitzias (*Compositæ*) form a small genus of Australian plants, all Half-hardy Annuals, with flowers of "Everlasting" character. They grow about 18 inches high, and flower at the end of the Summer. The best species is *W. aurea*, bright golden-yellow. It must be sown in heat in March and planted in a sunny spot in June.

## XANTHISMA

*Xanthisma texana* is a yellow-flowered *Composite* of some merit for grouping in the borders; it is Summer flowering, and grows about 2 feet high. Sow in April where the plants are to flower.

## XERANTHEMUM

“*Immortelle*”

Every one knows the Immortelles so largely used for funeral wreaths, especially in France, because of their lasting properties. These are Xeranthemums (*Compositæ*), the species grown being *X. annuum* and *X. inapertum*, the former with purple flower heads and the latter with white heads. These plants belong to the group of “Everlastings,” and need similar treatment to those of this nature already described.

## ZALUZIANSKYA

Under this tiresome name the identity of a little plant better known as *Nycterinia capensis* is almost lost. *Z. capensis* (*Scrophularinæ*) comes to us from South Africa, as its name suggests; it grows 8 inches high, and forms compact little bushes bearing white flowers. *Z. selaginoides*, 4 inches, white, with orange-coloured centre, is like *Z. capensis*, sweetly scented at night, and therefore both deserve to be grown. They are Half-hardy, and may be raised under glass in March or in the open at the end of April. The seeds are small and must be merely covered with soil. Thin out or plant 6 inches apart.

## CHAPTER V

## SELECTIONS OF ANNUALS

As so much depends upon personal taste, the conveniences at disposal, and the circumstances of the case, it becomes a very arbitrary proceeding to make a selection from the plants described in this work and call them “the best.” However, the task is worth attempting for the guidance of those unacquainted with Annuals. In the following selections due consideration is given to the general usefulness of

the subjects, and not alone to their value either for effect or for cutting. The ever popular Sweet Peas are omitted, because they are dealt with in a separate volume of the Present-Day Gardening series.

Below are given four dozen genera, and they are placed in dozens according to merit:—

Asters (*Callistephus*), Chrysanthemums, Sunflowers (*Helianthus*), Stocks (*Matthiola*), Tropaeolums or Nasturtiums, Candytuft (*Iberis*), Godetias (*Enothera*), Sweet Scabious (*Scabiosa*), Marigolds (*Calendula* and *Tagetes*), Clarkias, *Phlox Drummondii*, and Poppies (*Papaver*).

Coreopsis, Mignonette (*Reseda*), Lupins (*Lupinus*), Indian Pinks (*Dianthus*), Sweet Sultans and Cornflowers (*Centaurea*), Larkspurs (*Delphinium*), Zinnias, Gaillardias, Nigella, Nemophila, Nemesia, and Gypsophila.

Sweet Alyssum (*Alyssum*), Balsams (*Impatiens*), Dimorphothecas, Eschscholzias, Cosmeas, Nicotianas, Linums, Ipomaeas, Salpiglossis, Lavateras or Mallows, Convolvuluses, and Portulacas.

Swan River Daisies (*Brachycome*), Erysimum, Helichrysums, Silene, Senecio, Saponaria, Matricaria, Statice, Mentzelia, Linaria, Collinsia and Lychnis.

**Good Climbing Annuals:**—Tropaeolums, Ipomaeas, Japanese Hop, Sweet Peas, and Thunbergia.

**Annuals for the Rock Garden:**—Adonis, Alyssum, Calandrinia, Campanulas, Candytuft, Indian Pinks, Erysimum, Gypsophila, Ionopsidium, Linaria, Lychnis, Nemophila, Omphalodes, Phacelia, *Phlox Drummondii*, Portulaca, Saponaria, Silene and Malcomia.

**Annuals for Edging or Carpeting:**—Alyssum, Candytuft, Erysimum, Mesembryanthemum, Nemophila, Phacelia, *Phlox Drummondii*, Portulaca, Saponaria, Silene, Brachycome, Mignonette, Dwarf Tropaeolums, Convolvuluses, Lychnis, and Dwarf French Marigolds.



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