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POPULAR GARDEN BOTANY:

CONTAINING

A FAMILIAR AND SCIENTIFIC DESCRIPTION

OF MOST OF THE

HARDY AND HALF-HARDY PLANTS INTRODUCED
INTO THE FLOWER GARDEN.

BY

AGNES CATLOW,

AUTHOR OF 'POPULAR FIELD BOTANY,' 'DROPS OF WATER,' ETC.

"Not a flower
But shows some touch, in freckle, streak, or stain,
Of His unrivalled pencil."—*Cowper*.

TO
LOUISA AND CATHERINE LONG,

OF
GROVE HOUSE, KNUTSFORD, CHESHIRE,

This Little Work is affectionately Dedicated

BY
THEIR SINCERE FRIEND,

THE AUTHOR.

PREFACE.

A TASTE for the cultivation of flowers having greatly increased during the last few years, a garden, whether small or great, is not only considered quite a necessary appendage to a country house, but even in the town almost every available spot is devoted to this desirable purpose. The inmates of the cottage, as well as those of the palace, cultivate flowers suitable to their means and the extent of their grounds; while the yearly increasing variety of plants introduced into this country from foreign regions makes it a much more fascinating and interesting pursuit than formerly. At the present time, the varieties in form, co-

lour, and scent of the plants we may without any considerable expense introduce into a small garden, render the pursuit one of greatly increased interest; and a well-stocked spot of ground beautiful to the eye and gratifying to the taste, is at the command of all who will take the necessary trouble to secure it by care and attention. The healthy nature of this employment is an additional and strong recommendation to the pursuit; in short, to those who prosecute gardening as an amusement,—and it is to those only that this little Volume is addressed,—many sources of interest and gratification are opened, to which it is almost superfluous even to refer. Every country has its peculiar vegetation, but in the garden we cause plants from all climates to flourish, and thus produce a miniature world of our own.

There are many valuable works on gardening, but they are mostly very expensive, or contain much more than is required by the amateur gardener to produce beautiful flowers; this little Work is therefore written with the design of enumerating only the hardy and half-hardy plants

usually introduced into the garden, with advice as to the mode of cultivation, so that young florists may find it sufficiently useful to enable them to manage their "own garden" with no great difficulty, and to succeed without the assistance of a professed gardener.

Those also who wish to study the botanical characters of their plants, will find them here arranged systematically, with the proper scientific descriptions according to their orders and genera; but to those whose taste does not incline them to the study, the Work will not be the less valuable, as the scientific part may be altogether omitted, without destroying its utility. The Author trusts however that an increased interest in the cultivation of flowers may arise from this unobtrusive application of science to the favourite plants upon which so much time and labour have been bestowed; a slight additional investigation will make known their construction and properties, as well as their botanical relations to many other interesting plants; while the pleasure enjoyed in looking at a flower, admiring its beauty and its scent, may be greatly heightened by the

additional knowledge and more intimate acquaintance thus obtained with the beautiful favourites of the border.

The arrangement and description of the Orders are derived from the standard work of Dr. Lindley, 'The Vegetable Kingdom'; and the generic descriptions are taken principally from Loudon's 'Encyclopædia of Plants.'

A. C.

Richmond, November 26th, 1855.

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POPULAR
GARDEN BOTANY.

(HARDY AND FRAME PLANTS.)

THE object of this work is to simplify the study of General Botany; and, by applying it only to those plants which may be introduced into our gardens, make it answer a double purpose,—that of teaching Botany practically, and pointing out at the same time what foreign plants can be raised in an English garden.

Humboldt says: “The carpet of flowers and of verdure spread over the naked crust of our planet is unequally woven: it is thicker where the sun rises high in the ever-cloudless heavens, and thinner towards the poles, in the less happy climes where returning frosts often destroy the opening buds of spring or the ripening fruits of autumn;

everywhere however man finds some new plants to minister to his support and enjoyment." Our island is one of these "less happy climes," yet the science of gardening enables us to have many of the plants of more favoured countries flourishing around our houses, and delighting us with their beauty and fragrance. Formerly we had Oaks and Beeches, it is true; but we had no Spruce, Larch, and Plane, nor many other fine forest-trees. We could boast of our Sweet May, or Hawthorn, but neither the Laburnum, the Lilac, the Laurel, the Rhododendron, or the Azalea were known to us. Our vegetable gardens also would be indeed unfruitful without the Potato, the Vegetable Marrow, the Cucumber, and many other valuable plants, all introduced as foreigners. The South of Europe furnishes very many of our garden plants, so long ago introduced that we almost forget they are not natives,—the mountainous parts of the Continent yielding us most of our spring favourites, as the Auricula, the Hepatica, and the Christmas Rose. From Asia too our gardens are greatly enriched by the introduction of numerous plants now able to endure the rigours of our climate; the Peach, the Lilac, the Tulip, and the Hyacinth being a few of the many gifts we owe to that continent. Africa contributes Heaths, many of our Lily-like

plants, and a great variety of curious and beautiful tribes. America showers upon us such a display of beauties that it is useless endeavouring to enumerate them;—fine trees for our plantations, as the Magnolia, the Tulip-tree, and the Robinia; lovely plants for our borders, as Calceolarias, Fuchsias, Pentstemons, and Asters; and valuable shrubs, as Kalmias and Azaleas.

The assiduity of man has brought all these plants from many different climates, and his science and perseverance have caused them to grow in this, for our delight, instruction, and benefit; and as the pleasure of a garden is considerably heightened by gaining a knowledge of the botanical construction, uses, qualities, and powers of the plants we cultivate, the object of these pages is to enable those who now first take a *botanical* interest in their gardens, to become, in some degree, familiar with the history of the numerous plants now introduced and cultivated.

One or two of the English species in each genus have been mentioned, where they occur, in order to recall to the mind of the student the general appearance of the plants named, as it is supposed that the botany of the British Isles has been previously studied. The foreign plants alluded to are those alone which can be raised in the garden and

frame. The greenhouse and stove plants are reserved for another volume, so that orders and genera containing the latter alone will not be found in these pages.

The trees we introduce into our plantations and shrubberies, and those shrubs which are not particularly ornamental, are omitted, as not belonging to the flower-garden, though they greatly add to the beauty and the effect of the whole. The plants likewise cultivated in the vegetable garden will not be found here, as they are a distinct subject, and would have extended these pages to too great a length.

A few hints on the cultivation of the different genera have been given, in order to render the amateur gardener in some degree independent of more bulky works on the subject, and to prevent the necessity of having recourse to a gardener on all trifling occasions.

The Vegetable Kingdom is divided by Lindley into seven great classes, two of which contain plants producing no flowers; the remaining five are flowering plants. The former contain:—(1) THALLOGENS, having stems and leaves undistinguishable; as confervas, seaweeds, charas, funguses, and lichens. (2) ACROGENS, having the stems and leaves distinguishable; as mosses and ferns. The five classes of

flowering plants are :—(3) RHIZOGENS, a group of parasitical plants, without leaves truly so called, but possessing flowers of a fungus-like consistency ; the best known being the *Rafflesia*. These three classes will not be further mentioned in this work, as they are never brought into cultivation, with the exception of ferns ; and these are only particularly interesting as greenhouse plants.

The other great classes are—(4) ENDOGENS, having the stem with the wood youngest in the centre, the seeds formed of one lobe, and the leaves permanent, with the veins parallel ; as grasses, lilies, orchises, and palms. (5) DICTYOGENS, having the wood also youngest in the centre and the seed-lobe single, but the leaves are net-veined and fall off ; as yams. (6) GYMNOGENS, having the wood of the stem arranged in circles, and youngest at the circumference, with a central pith ; the seed-lobes two or more, and the seeds themselves being naked ; as pines, firs, and yews. (7) EXOGENS, possessing all the distinguishing marks of the last class, with the exception of the seeds being enclosed in seed-vessels ; including very nearly all the vast tribes of plants found in our forests, plantations, gardens, and hedgerows.

These great classes are divided into Orders by the union

of those plants which possess certain leading characteristics, which, in many instances, are so striking as to be observed with very little study,—as the *Amaryllidaceæ*, containing the Narcissus, the Lily and Snowdrop; the *Brassicaceæ*, containing the Stock, the Wallflower, and the Candytuft; *Rosaceæ*, containing Roses and Potentillas; and so on. These orders are again divided into genera and species.

When it is taken into consideration that nearly a hundred thousand plants are already known and described by botanists, no surprise will be experienced by the reflecting mind that these divisions are so numerous, or that a system comprehending them all should appear complicated, and somewhat discouraging to the uninitiated; the study must be difficult which embraces so vast a number of objects. The Natural System alone is calculated to include the whole, and is therefore adopted in this work.

CLASS I.* ENDOGENS.

Increase of new wood taking place for the most part internally. Leaves straight-veined and permanent. Organs of fructification in threes. Embryo with one cotyledon, or seed-lobe.

GRAMINACEÆ.

Endogens, with flowers composed of bracts, consisting of imbricated colourless or herbaceous scales; leaves narrow, undivided, alternate, with a split sheath, and a membranous expansion at the junction of stalk and blade.—Natives of most parts of the world, and valuable as food both for man and cattle.

STIPA. (FEATHER GRASS.)

Generic Character. (*Triandria Digynia.*) Panicle almost simple, lax; spikelets solitary, one-flowered, with a long beard.

The name is derived from the Greek for a silky or feathery material. *S. pennata* is cultivated in the gardens, though a British plant, on account of the beautiful feathered

* Fourth Class of Lindley.

appearance of its panicle ; it is the only species worth introducing, and requires a light rich soil.

BRIZA. (QUAKING GRASS.)

Gen. Char. (Triandria Digynia.) Panicle compound, loose, many-flowered ; spikelets solitary, branches pendulous.

The word means *to balance*, from the flowers being balanced in the air. Every one knows the pretty quaking or shaking grass of the fields ; *B. minor* is the small, *B. media* the common. *B. maxima*, the large species, from the South of Europe, is introduced with advantage into the border ; it only requires sowing in common soil in March or April, in the spot where it is to flower ; it is a pretty addition to a group of picked flowers, and dries well for the winter.

ARUNDO. (RIBBON GRASS.)

Gen. Char. (Triandria Digynia.) Glume naked, beardless, two-valved.

The plant known by this name is a striped variety of *Arundo donax*, a reed which is a native of the South of

Europe, and occasionally planted in gardens for the sake of its pretty striped leaves, which are very ornamental; it is nearly hardy, but is occasionally killed by severe frosts; if planted in moist ground, it will grow to a large size, and look remarkably handsome.

AMARYLLIDACEÆ.

Endogens, with six-parted flowers, six or more stamens, with the anthers turned inwards. Ovary three-celled. Leaves sword-shaped, with parallel veins. Generally bulbous plants.—Natives of many parts of the world, particularly the East and West Indies and the Cape. The qualities of some are poisonous, others produce edible roots.

Bulbs, the flowers of which have no coronet.

GALANTHUS. (SNOWDROP.)

Gen. Char. (Hexandria Monogynia.) Outer divisions of flower three, concave; cup formed of three small divisions, notched at the end; stigma simple.

The name of this universal favourite arises from the milky whiteness of the flowers, from the Greek for *milk* and *flower*. *G. nivalis*, the well-known Snowdrop of our gardens, and so

welcome in our climate in the early spring, is a native of this country, and found growing naturally in meadows, producing its lovely blossoms from January to March. The flowers frequently become double by cultivation, but they are not improved in beauty by the change, losing somewhat of their simple form; the bulbs have long been used as an emetic. *G. plicatus* is a native of the South of Europe, but only differs by the leaves being plaited, whilst *nivalis* has smooth leaves. The plants are increased by offsets, and require but little care, in a light rich soil,—dividing occasionally and replanting: they will do very well under the drip of trees. No bulbous plants should have the leaves cut off or shortened till they have withered, as without them the new bulbs will not be matured.

LEUCOJUM. (SNOWFLAKE.)

Gen. Char. (*Hexandria Monogynia.*) Flowers bell-shaped, five-parted, with the ends of the outer parts thickened; stigma simple.

White violet is the meaning of the name of these plants, though the flowers more nearly resemble the last genus than

the violet. *L. æstivum* and *pulchellum* are British species, producing white flowers from March to May, each stalk bearing more than one white flower. *L. (Acis) autumnale* is a native of Portugal: its spatha contains many blush-coloured flowers. *L. (Erinosma) verna* is the Spring Snowflake, a native of Germany; and *L. (Acis) rosea* and *grandiflora* flower in September. These are all pretty European additions to our gardens; the bulbs are increased by offsets: planting in a rich light soil is the best, but they will not flourish so well under trees as the Snowdrop.

AMARYLLIS.

Gen. Char. (Hexandria Monogynia.) Flowers nodding, irregular, funnel-shaped, gaping; filaments curved downwards, unequal in proportion or direction; seeds flat, numerous.

The name of this genus is derived from the Greek word for *resplendent*, and the genus embraces so many handsome species that it is very applicable. Modern botanists have divided the many species into different genera, but those few that are hardy will here be placed together. We have no native species, all have been introduced; the following only

will bear the open air:—*A. Belladonna*, from the Cape, has many purple flowers on one stem; the corolla is nodding, and has scarcely any tube. *A. pallida* is perhaps only a variety with lighter-coloured flowers. *A. (Oporanthus) lutea* is a native of the South of Europe, and has a yellow flower: it was introduced into England in the reign of Queen Elizabeth; it is said to be found “in profusion in the countries bordering on the Levant, clothing the fields in autumn with a vivid golden brilliancy.” The Turks plant it on the graves of their friends: it has medicinal properties. *A. (Ixiolirion) montana*, a Persian plant, is also hardy in this country, having blue flowers, as well as *Tatarica*, from Tartary; *blanda* and *pudica*, from the Cape, require the frame. They are increased by offsets, which must be planted in rich loamy soil in the autumn, well watered during the growing and flowering season, and this gradually diminished till the leaves are faded, when they must be taken up and dried. Those that are planted in the autumn must of course be kept in the greenhouse, room, or frame; but if the bulbs are kept dry, in a state of perfect rest, they may in the spring be planted in a warm border, and after they have had time to renew their bulbs, may be taken up and again dried and parted, so that by attention there may always be

some in blossom. When first planted they are better forced by potting them in sandy loam and leaf soil, and putting them into a hotbed; when the leaves have appeared they should be abundantly watered.

NERINE. (GUERNSEY LILY.)

Gen. Char. (Hexandria Monogynia.) Divisions of flower six, spreading, wavy; stamens inclined downwards, unequal in direction and proportion; capsule few-seeded; seeds round, like peas.

Named after the daughter of Nereus. This genus contains the Guernsey Lily, which, though known by that name from being naturalized there, is originally from the Cape; here it often requires the frame for the first winter, but will afterwards bear the open air. *N. Sarniensis* is its specific name, and the flower is red; *curvifolia* and *corusca* are scarlet; *rosea*, *venusta*, *pulchella*, *flexuosa*, *humilis*, and *undulata* are shades of red; and *versicolor* lilac: these are also frame plants, and are from the Cape; they require a sandy soil and plenty of light. Bulbs of *C. Sarniensis* are generally brought every season from Guernsey at the time when they are ready, about July, so that they should be planted directly, in sandy

loam. They are best planted in pots, one in each, and the pots placed close together in a bed, and then the cavities filled with earth. In October the buds begin to appear, and they should be watered gently, though they require shelter from heavy rains and also from much sun; when the flowers are over they may still remain in the same situation, and only require sheltering, by dead leaves or litter, in great rains or frosts. These same bulbs will flower again with greater beauty, and only want a little fresh earth in July; after three or four years they will require parting and fresh potting. No flower exceeds the Guernsey Lily in beauty, but it yields no perfume; it is said that they became naturalized in the Channel Islands by some of the bulbs being accidentally left there by a vessel from the Cape, which was wrecked on the coast about two hundred years ago.

HÆMANTHUS. (BLOODFLOWER.)

Gen. Char. (Hexandria Monogynia.) Involucre many-leaved, many-flowered; flower six-parted; berry three-celled.

From the Greek for *blood* and *flower*, in allusion to the colour. The Cape species of this splendid bulb, of which

there are about seventeen, require the frame; most of them are scarlet or red; one white, *H. albiflos*. *H. coccineus* is a very singular flower, and they are all striking and showy. *H. carneus* is often seen in the greenhouse, but will bear the open air if placed in a warm situation; the spatha contains nearly twenty flowers in an umbel of pale pink blossoms, and is very pretty. They require sandy loam and a little peat, and no water when in a dormant state.

ZEPHYRANTHES. (ATAMASCO LILY.)

Gen. Char. (Hexandria Monogynia.) Flowers vertical, nearly regular, funnel-shaped, with an erect limb; stamens nearly regular; anthers versatile (poised at their centre); seeds flat.

The name means *wind-flower*. *Z. Atamasco* is the Atamasco Lily of North America, which has been well known in this country for more than two centuries, and is quite hardy; it has white flowers, solitary on the stalk. *Z. Aker-manniana*, white-flowered, *sessilis*, blush, *carinata* and *grandiflora*, rose, are all Mexican species, and bear the open border; also *Z. candida*, white-flowered, from Peru: they flower from May to October. One requires the frame, *Z. mesochloa*,

but the rest will survive mild winters in a warm border if kept in a dry sandy soil; and they require no other care than being taken up every third or fourth year and parted.

HABRANTHUS.

Gen. Char. (Hexandria Monogynia.) Flowers nodding, bell-shaped; stamens curved downwards, unequal, inserted into a fleshy rim at the base of the tube; stigma three-lobed.

From two Greek words meaning *delicate* and *flower*. *H. phycelloides* is the only hardy species; introduced from Chili, and produces its scarlet-yellow flowers in August. There are several species raised in the greenhouse and frame, as *robustus*, lilac; *Bagnoldianus*, *Andersoni*, yellow; *roseus*, *pumilus*, and *Kermesina*, shades of red; *hesperius*, striped. *H. miniatus* was introduced from Chili by Mr. Cuming; the flowers are red, with a green centre. These bulbs require a mixture of sandy loam and peat, and to be treated as the *Amaryllis*.

CRINUM.

Gen. Char. (Hexandria Monogynia.) Flower funnel-formed, edge divided into six, with a thread-like tube, and a spreading, recurved limb ; sepals awl-shaped, and channelled ; seeds fleshy.

A very beautiful genus, the name of which is the Greek for a *lily*. Many species require the stove in this country ; one however has become hardy, *C. Capense*, from the Cape, producing white flowers from July to November: it requires a rich soil, and is increased by suckers from the root.

Bulbs, with a coronet in the flower.

NARCISSUS. (DAFFODIL, JONQUIL.)

Gen. Char. (Hexandria Monogynia.) Divisions of calyx six, equal ; cup, or coronet, funnel-shaped, of a single leaf ; stamens inserted within the cup.

The name is from a Greek word for *stupor*, on account of the stupefying effects of the scent. The species of this genus, of which there are nearly one hundred and fifty, are hardy, handsome bulbous plants, many of them great fa-

vourites in the garden, for they flower early, and are very valuable to deck our bare borders. The English species are *N. Pseudo-narcissus*, *biflorus*, *spurius*, and *serratus*; they have naturally yellow flowers, but the varieties are some white, others double; they are considered poisonous. *N. poeticus* is the poet's Narcissus, and has been long introduced from the South of Europe; its pretty white flowers, with a yellow centre, are well known, and very ornamental; it flowers in May, and deserves a place in every garden. *N. Italicus* is a handsome species, with pale yellow blossoms. *N. Jonquilla* is the Jonquil, brought originally from Spain more than two centuries ago; the spathe has generally three yellow flowers, which form an elegant and very sweet-scented group. There are many other species, of various shades of yellow, and also many white, and a few green, all natives of different parts of the South of Europe. Barbary also produces two, *N. viridiflorus* and *integer*, both with green blossoms: they only require the common treatment of hardy bulbs, and should be taken up once in two or three years to be divided, and then be replanted immediately. *N. recurvus* continues in flower later than the other species, that is, till May; the flowers are white, the crown edged with crimson, and the centre golden; it has drooping leaves:



it requires a moist rich loam to flower well, and should be transplanted every third year. *N. angustifolius* is also white, a native of the South of Europe; from the same locality we have *N. interjectus*, the flower of which is yellow: the bulb only requires common soil and a cool situation.

ALSTRÆMERIA.

Gen. Char. (Hexandria Monogynia.) Divisions of flower six, campanulate or two-lipped, the two lower tubular at the base; stamens curved downwards or erect; stigmas three, linear; capsule three-valved, and not opening.

Named after Alstrœmer, of Sweden. Though the species of this beautiful genus are brought from Peru, Chili, and Mexico, they are sufficiently hardy for our climate. *A. (Bomarea) Salsilla* is a climbing plant, with purple-green blossoms, and is esteemed in South America for its roots, which are used as food, boiled, or made into a kind of arrow-root; the leaves are twisted, so that what seems to be the under surface is uppermost. There are a few other climbing species, but they are now generally referred to the new genus *Bomarea*; the present genus is restricted to those that are not climbing. *A. pelegrina* is called the

spotted-flowered; *Simsii* is red; *Hookeri*, rose-coloured; *aurea*, golden-coloured; *hæmantha*, crimson; *psittacina*, scarlet-green; *bicolor*, white-green; all these are hardy, and very showy in the garden from June to September, from the variety of their colours. *A. Van-Houttei* is a very hardy species, and requires a sandy but rich soil, wanting but little care: *A. aurantiaca* has flowers of an orange-colour spotted with dark, produced in numerous heads; it requires slight protection from the cold. These plants should, after flowering, be left dry for a considerable time, and well watered again at the approach of the flowering season. They are increased by parting the roots: the soil which suits them the best is a mixture of leaf-mould and sandy loam.

IRIDACEÆ.

Endogens, with flowers having calyx and corolla either separate or adhering, sometimes irregular, the three petals sometimes very short. Stamens three, the anthers turned outward. Ovary three-celled. Leaves embracing each other, and on two sides of the stem only.—Natives of Europe, America, and the Cape. Flowers beautiful; properties medicinal.

IRIS. (FLOWER-DE-LUCE.)

Gen. Char. (Triandria Monogynia.) Calyx and corolla not distinct, six-parted, every other division reflexed; stigmas shaped like petals.

The word Iris means *eye* in the Egyptian language, but it is more generally used to signify a variety of colour. This very handsome genus has many species, above eighty, and all hardy here, as they are natives principally of the northern hemisphere. Most of them are tuberous-rooted, a few only bulbous; their handsome flowers are very showy in our gardens and well known to all cultivators, as they are easily grown. The British species are *I. Pseudo-acorus*, with yellow flowers, and *fætidissima*, with brownish-blue. The first is useful in various ways: the root is powdered, and made into snuff; the yellow seeds are roasted, and used as coffee. *I. Florentina*, with white flowers, has the scent of violets, and the root is called *orrice-root* in the shops—a corruption of *Iris-root*—and is used (as well as several other species) as a stimulant in medicine, and also in perfumery and tooth-powder to impart a pleasant odour to the breath: the starch is used in hair-powder: this root is principally brought from Italy. *I. Susiana* is a very handsome species,

flowering well in a sheltered situation, and displaying its large bluish blossoms: it is a native of the Levant. *I. pallida* is paler, but equally large and handsome: it is a Turkish species. *I. ochroleuca* is sulphur-coloured; *I. Lusitanica* is yellow. The numerous other species vary in the flowers from blue to purple and violet, yellow, orange, and whitish. A few are sweet-scented, as *sambucina*, resembling elder; *desertorum* and *fragrans*, very sweet; and *Florentina*, like violets. *I. tenax* is called the tough-leaved Iris, from the fibres of the leaves making a fine cord, used by the natives of California for making fishing-nets, and snares for deer: the strength is so great, it is said, that a thread of sixteen lines will strangle the great stag of California. The plant is hardy here, and has reddish-purple solitary flowers.

They all require a mixture of sand and rich mould, and the quickly increasing roots should be divided in autumn.

TIGRIDIA. (TIGER-FLOWER.)

Gen. Char. (*Monadelphia Monogynia.*) Spatha two-leaved; calyx none; petals six, the three outer large; stamens three; filaments united into a very long tube.

The name arises from the flower being marked like a

tiger. *T. pavonia* is a Mexican plant, introduced about sixty years ago, and is a great favourite. Its fine scarlet flowers are very showy, though only lasting a few hours, and the plant thrives well in sheltered borders, particularly if covered with a hand-glass, and protected from the winter damp; the stem is simple, the leaves sword-shaped. *T. conchiflora* has yellow, and *violacea* violet-coloured flowers: they are also from Mexico. They are bulbous plants, and require good garden-mould, and to be kept dry, for damp kills them more easily than frost.

PARDANTHUS.

Gen. Char. (Triandria Monogynia.) Flower six-parted, regular and equal; stamens three; capsule many-seeded; seeds attached to a central loose receptacle.

The flower is spotted like a leopard, whence the name. *P. Chinensis* was brought from China, about a century ago, and is now hardy here: it has a showy, spotted orange flower. *P. Nepalensis* is also orange, and a native of Nepal; they both flower in June.

GLADIOLUS. (CORN-FLAG.)

Gen. Char. (Triandria Monogynia.) Spatha two-valved; flowers tubular, with a six-parted, irregular limb; stamens three, ascending; stigmas three; seeds winged.

The name is derived from *gladius*, a sword, from the shape of the leaves. A genus of great beauty, with tubular flowers in long spikes; many species are grown in our frames, a few only are hardy, as *G. communis*, from the South of Europe, with red flowers, and a variety of a paler colour; *G. Byzantinus*, from Turkey, having purple flowers: both flowering in June and July. *G. (Sphærospora) segetum* has the petals reddish-white; and *triphylla*, from Greece, is also red. *G. floribundus* and *psittacinus* have many varieties, or hybrids, raised from them, and all are very ornamental and hardy; some of them grow to four or even six feet high, and the flower-spikes are full of blossoms of a brilliant scarlet. They require a rich and well-drained ground; some are planted in autumn, others in spring; some gardeners take up the bulbs every few years, but others never molest them, and they then form beautiful masses, and flower very freely. They are the better for a little protection, which may consist of dried leaves raised over the roots in a pyramidal form, to allow the rain to run off.

The tubers of many contain starch, and are in some places eaten. Many of the genus, which amounts to above sixty species, require the frame; these are all from the Cape of Good Hope, and most of them are very beautiful; the flowers are of various colours.

TRITONIA.

Gen. Char. (Triandria Monogynia.) Spatha two-valved; flower six-parted, nearly regular, and tubular; stamens three; ovarium ovate, three-celled; stigmas three, spreading.

Named from the occurrence of the number three in the formation of the flower, or from the variableness of the stamens in the different species, *triton* being a weather-cock. *T. aurea*, from the Cape, is a beautiful bulbous plant, lately introduced into our gardens, and tolerably easy of cultivation, producing numerous rich orange-red flowers, and, when formed into a bed, has a beautiful effect. *T. pumila* and *uvaria* are also hardy, but they will all be safer for slight protection during the winter, and need not be taken up for years. There are many other frame species, all from the Cape; they are bulbs, and should have a dry soil.

CROCUS.

Gen. Char. (Triandria Monogynia.) Spatha usually two-valved; flowers funnel-shaped, regular, the outer segments largest; tube very long, partly underground; stamens three; stigma deeply three-cleft, with the edges rolled together.

A Greek name. This genus is highly prized by all lovers of flowers, for it is the harbinger of Spring, and particularly useful in our gardens, where it appears in February peeping through the snow. *C. vernus* is a native of England, found in meadows; it has many varieties, the colour being white, purplish, blue, and striped: these, mixed with the golden yellow of the Levant species, *C. luteus*, form a pleasing variety in the flower-border. The *striatus*, *versicolor*, *odorus*, *suaveolens* (sweet-scented), *Imperati*, *biflorus* (the Scotch), and *Susianus* (the cloth of gold), and many others, have been introduced from the South of Europe. *C. speciosus*, from the Caucasus, is a very showy species, with blue flowers; three varieties of it are found in America, with blue or white flowers; *C. sulphureus* is very pale yellow, or cream-coloured. *C. sativus*, a native of Asia Minor, though naturalized in England, is the *saffron* crocus, and is cultivated in immense quantities in the neighbourhood of Saffron Walden, in Essex, from which circumstance the place derives its name. The

plant is said to have been introduced originally from the Continent as early as the reign of Edward the Third, and was formerly in great request, but the use has declined, though it is still valuable in medicine, as a colouring ingredient, and also in prepared dishes. It is the stigma of the plant which is thus used; and to obtain these the flowers are gathered in September, and the stigmas being picked from them, are carefully dried in a kiln, and pressed together into cakes. The germen, the lower part of the pistil, is situated almost close to the bulb, and after the flower has been decayed for some weeks, it raises itself above the ground, and ripens its seeds; this is a very unusual mode of growth. *C. nudiflorus*, called the naked-flowered, and an autumnal species, delays sending up its germen till the following spring, when it perfects its seeds.

Crocuses should only be taken up once in three years to be divided, and then replanted without much delay; the leaves should never be cut off till quite decayed, as the plant cannot mature its new bulb without their assistance; they may be tied together in masses, in order to render the border neat.

MORÆA.

Gen. Char. (Triandria Monogynia.) Flower six-petaled; after flowering rolled inwards above, spirally twisted beneath, finally falling off; capsule many-seeded.

Named after Moore, a botanist. A genus of Cape plants principally, requiring the frame in this country: some of them are handsome. Two are found in the South of Europe, as *M. Sisyrinchium*, called Spanish nut, an edible bulb, and *M. Tenoreana*; they both have blue flowers. Of those from the Cape, *M. edulis* is used as food, the bulb being eaten; *M. odora* has a sweet scent, and seems to be the only one with white flowers; the rest are yellow, straw-colour, purple, rose, and blue. They are generally grown in pots, in sandy loam and leaf-mould; when planted in the open ground, they must be protected from frost and rain.

IXIA.

Gen. Char. (Triandria Monogynia.) Spatha two-valved; flower with a slender tube and regular limb; stigmas three, narrow, recurved; capsule globose and ovate.

The name is derived from the Greek *to fix*, from the sticky nature of the roots. Cape bulbs of great beauty, cultivated here in the frame, and producing flowers of various hues, as pink, rose, crimson, yellow, cream-colour, orange, white, and variegated. If planted under a south wall in peat soil, and covered in winter with dry litter, the frosts and heavy rains will not injure them, and they will flourish very well; the soil should be very well drained, with a substratum of dry rubbish, and if the bed slopes from a south wall it will be better; in such a situation the bulbs need not be moved for years, and only require to be covered in winter with dead leaves.

ORCHIDACEÆ.

Endogens, with irregular flowers, very variable in form. Stamens and style consolidated into a central body.

This Order, though highly interesting, and having many genera which are hardy, is so seldom introduced into the garden, on account of the difficulty of culture, that particulars will be omitted here altogether. When the experiment is tried, it is better to procure the plant at once from its

native localities with a ball of earth, and plant it in the garden in peat or heath-mould, in an open situation; it will probably flower for a season or two, and then gradually degenerate; our native species are introduced occasionally, but seldom reward the cultivator. *Orchis maculata*, *mascula*, and others require a peat soil; and *O. militaris* and *ustulata*, a dry chalky situation; even these will flourish better in pots. The genus *Ophrys* bears flowers which resemble insects, as the *muscifera*, or fly; the *aranifera*, or spider; and the *apifera*, or bee-ophrys.

This curious tribe of plants has many exquisite species, natives of the tropics; but they require in this country the heat of a stove or greenhouse, and therefore do not come into a list of hardy plants.

COMMELYNACEÆ.

Endogens, with flowers having three divisions of calyx, herbaceous; three petals; three or six stamens. Ovary three-celled. Leaves flat, narrow, usually sheathing at the base.—Herbaceous plants, natives of the East and West Indies, New Holland, and Africa, a few of America. The roots of some are edible, others have slight medicinal properties.

COMMELYNÆ.

Gen. Char. (Triandria Monogynia.) Calyx three-leaved; petals three; filaments three or four, furnished with crossing glands; capsules two or three-celled; seeds fixed to the valves.

Named after two brothers, Dutch botanists and merchants. A genus containing about thirty species, some of which are hardy, as *C. truncata*, *hirtella*, *Virginica*, *Caroliniana*, *erecta*, *undulata*, *tuberosa*, etc., with blue flowers, from Carolina and other parts of North America. Those from South America are *fasciculata*, *communis*, *mollis*, *pallida*, and others, all having blue or pale blue flowers: some are rather showy plants, and are in blossom from May to September, or later. The following require the frame:—*C. angustifolia*, *cyanea*, and *orchioides*. *C. cælestis* was a stove plant, but has become as hardy as the dahlia; it is propagated in the same way, by dividing the roots, and requires a rich soil; the flower-stem rises about a foot and a half high, the flowers of a beautiful blue, succeeding each other from May to September. This plant is well adapted to form a bed if the following plan be adopted:—in a circular bed place in the middle, in the first week in May, some old roots, which produce plants four or five feet high; round

these place others, which have been raised from seed in pots in the frame, and put them about six inches apart. Thus treated they form a bed that cannot be surpassed in beauty, the splendid blue flowers appearing in profusion from June to October. This plan is recommended by a writer in the 'Floricultural Cabinet.' The roots may be taken up as the winter approaches, in the same way as the dahlia, or be covered with ashes.

TRADESCANTIA. (SPIDERWORT.)

Gen. Char. (Hexandria Monogynia.) Calyx three-leaved; petals three; filaments with jointed hairs; capsule three-celled.

Named after John Tradescant, gardener to Charles the First, who introduced the first species into Europe: his collections are now at Oxford. This genus consists of nearly thirty species, introduced into this country principally from America; some require the stove, others, as follows, are hardy. The well-known Spiderwort of our borders, enlivening them with its bright blue flowers in May and June, is the *T. Virginica*, and was introduced more than two hundred years ago; it has now produced several varieties—*rubra*

with red, *albida* whitish, *nivea* with snowy-white flowers, and *pilosa* hairy. *T. erecta*, *crassifolia*, *subaspera*, *congesta*, *caricifolia*, and *elata* are all from the northern continent, with blue or purple, except *T. rosea*, which has rose-coloured flowers. *T. undata* and *latifolia*, violet-coloured, and *par-viflora*, small-flowered, are from South America; *T. (Cya-notis) barbata* is a Nepaulese annual, with blue flowers; *T. iridescens*, from Mexico, has purple flowers, and is a frame plant; they are useful in the border, as they flower from May to quite late in the autumn; and are of easy culture in common garden soil.

ORONTIACEÆ.

Endogens, with a simple spadix. Calyx and corolla absent, or four or five scales, and an equal number of stamens; these are enclosed in a white, green, or purple spatha.—Herbaceous plants, natives of the tropics and also of mild climates. Some useful in medicine.

CALLA. (RICHARDIA.)

Gen. Char. (Heptandria Monogynia.) Spatha ovate; spadix covered; calyx and corolla none; fruit a berry.

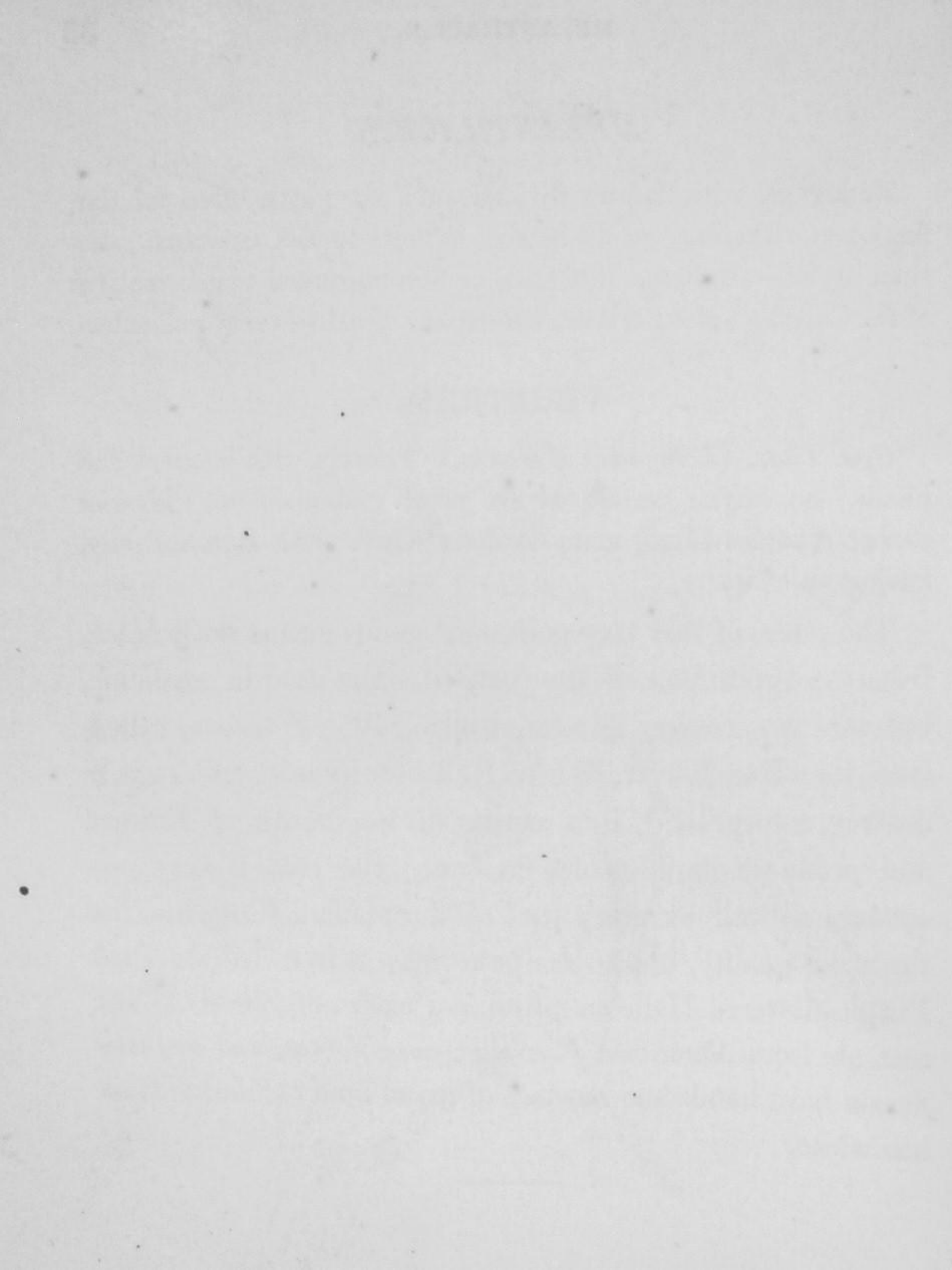
A name given by Pliny. *C. palustris* is a plant of the

North of Europe, having a very acrid root, but which after much boiling is deprived of this quality, and is baked into bread by the inhabitants of Lapland. *C. (Richardia) Æthiopica* is a beautiful Cape plant, introduced here in 1731, and is well known in the greenhouse; its noble white spatha and large handsome leaves making it valuable and ornamental; but it is not generally known that it is hardy. It may either be planted in a pot, and kept in the greenhouse or frame in the winter, and placed in the border in the summer; or it may be planted out at once, and only requires to have the roots kept dry and well covered with ashes in the winter. It takes a great deal of water, and upon this depends its vigour and life; but the noble appearance of the large leaves and striking flowers of this plant will amply repay any trouble that may be bestowed upon it. It will likewise flourish in water, if the roots be planted in the mud of a pond where the water is not above two or three feet deep; and in this situation, the plant requires no further attention during the winter. It is increased by offsets from the thick roots; these should be separated about September and planted in sandy loam and leaf-mould, and are better kept in the greenhouse until they are stout plants.



Vincent Brooks Imp.

W. Bitch del et lith. 1. Colchicum autumnale. 2. Colchicum autumnale.



MELANTHACEÆ.

Endogens, with flowers divided into six parts, often tubular, flat when withering. Stamens six; anthers turned outwards; distinct styles.—Bulbous, tuberous, or fibrous-rooted plants, natives of the Cape and also northern countries. Qualities very poisonous.

VERATRUM.

Gen. Char. (Polygamia Monœcia.) Flowers with stamens and pistils; no calyx; corolla of six petals; stamens six; ovaries three; capsules three, many-seeded; flower with stamens only, having no ovary.

The name of this very poisonous genus means *truly black*, from the appearance of the root, which is used in medicine, but care is necessary in administering it. *V. album*, called, from its white flowers, White Hellebore (gardeners use it to destroy caterpillars), is a native of the South of Europe, and produces its blossoms in June; the root is very poisonous, as well as every part of the plant. *V. nigrum* has the same quality, but is less powerful; it is called the Dark Purple-flowered Hellebore, and is a native of Siberia. The *rest* are from America: *V. viride*, *parviflorum*, and *angustiflorum* have handsome racemes of green flowers; *Lobelianum* has white.

COLCHICUM. (MEADOW SAFFRON.)

Gen. Char. (Hexandria Trigynia.) Flowers in a spatha and having six divisions, with a tube proceeding directly from the root; anthers incumbent; capsules three, connected and inflated.

Name supposed to be derived from Colchis, where these bulbs grow in abundance. The growth of the plants of this genus is very remarkable: from the old bulb a new plant springs, which has a new radical, cylindrical, and tubular spatha, which is cloven at the top on one side, and half underground; this produces from six to eight flowers, which die, but the seeds lie buried within the bulb all the winter; in spring they rise on a fresh stalk, and ripen in the summer. *C. autumnale* is a native of Britain, and is, with its varieties, cultivated in our gardens, the lilac or white flowers being very pretty. The medicinal properties have been well known for many centuries, in gout and rheumatic cases more particularly; they are however poisonous, and people have been killed by mistaking the bulbs for onions. *C. Byzantinum* is the broad-leaved species, with lilac flowers, from the Levant; *C. montanum*, *alpinum*, and *arenarium*, also lilac flowers; and *variegatum* and *tessellatum*, striped, are all from the South of Europe, and *C. Chionense*, with purple blossoms, from Chio. *C. umbrosum*, the flowers

of which are lilac, is brought from Siberia. They are all in bloom from August to October.

LILIACEÆ.

Endogens, with a naked flower, flat when withering. Calyx and corolla confounded together, regular or nearly so, occasionally adhering in a tube. Stamens six.—Herbaceous plants, with narrow, parallel-veined leaves, with bulbs, tubers, or fibrous roots; natives principally of temperate climates. The roots of some are edible; the fibres used for making cordage.

ERYTHRONIUM. (DOG'S-TOOTH VIOLET.)

Gen. Char. (*Hexandria Monogynia.*) Divisions of flower six, bell-shaped; two tubercles attached to the base of every other division.

The name is from the Greek for *red*, in allusion to the colours of the flowers and leaves. *E. dens-canis* is called the Dog's-tooth Violet, and is a native of Europe; its pretty purple nodding flowers, with the petals reflexed, is a common favourite. *E. longifolium* is a Swiss species with rose-coloured petals; a variety has whitish flowers. *E. Americanum*, *grandiflorum*, and *giganteum* have yellow flowers, and

albidum white : they are American species ; these flower better when confined at the root to pots and poor soil ; the others will grow in any common soil, and do not require to be taken up.

TULIPA. (TULIP.)

Gen. Char. (*Hexandria Monogynia.*) Divisions of flower six, bell-shaped and regular ; style none.

In Persia these plants are called *Thoulyban*, whence probably the present name. "The gaudy Tulip" is so well known, that nothing need be said in the way of description. The common species we cultivate in our gardens, and which has been so great a favourite with gardeners, is *T. Gesneriana*, from the Levant ; the original colour is red, but it has run into several varieties, as scarlet-flowered, various-coloured, double-flowered, and the "parrot." It is said to have been originally brought from Persia to Constantinople, thence to the Netherlands, where the cultivation became a fashion and a mania for a considerable time, the most extravagant prices being given for single bulbs of fine sorts, and a bed of "prince" tulips has often been valued at from £500 to £1000. We have other fine species from

various parts of the South of Europe, as *T. Celsiana*, *Turcica*, *Clusiana*, *maculata*, *cornuta*, *oculus-solis*, *præcox*, *suaveolens*, called Van Thol,—about twenty-four hardy species; indeed, all that are introduced are so, except *T. stellata*, from the East Indies, having a bluish-white flower, which is raised in the greenhouse. Tulips require a dry, open situation, hot-bed manure, and rich fresh sandy loam; they are planted in November, and taken up in the summer after the flowering is over, but not till the leaves have quite faded; fresh soil is required every year, as the exudations are poisonous to them. Florists who cultivate these favourite flowers pay them great attention, giving them a bed apart in well-selected soil, setting the plants at certain regular distances and depths, and having coverings which can be removed according to the weather, and, lastly, when they are in full flower and perfection, shading them from sun and wind by a canvas awning. They are divided into several classes, according to their colours or feathered markings; and to make them produce these varieties many expedients are resorted to, as planting in poor soil, then suddenly removing to one very rich, or they are sent to a distance for change of air.

GAGEA.

Gen. Char. (Hexandria Monogynia.) Stamens adhering to the base of the divisions of the flower; style club-shaped; capsules three-valved, three-celled, covered by the remains of the flower; seeds small, numerous, round.

Named after Sir T. Gage, a botanist; a genus of small bulbs, natives of England and Europe. *G. lutea* is the British plant, with yellow flowers, appearing in March and April. All the other introduced species are from Switzerland, Germany, and various parts of Europe, having yellow or yellow-green flowers: *G. (Orithyia) uniflora* is from Siberia. These bulbs flower in May, should be grown in sandy soil, and do not require attention in winter.

FRITILLARIA. (FRITILLARY.)

Gen. Char. (Hexandria Monogynia.) Divisions of flower six, bell-shaped, with a honey-pore above the claws.

Fritillus is a dice-box, and is said to be the origin of this name, though not particularly applicable. *F. meleagris* is called the Chequered Fritillary, from the chequered, puce-coloured marks on the petals: it is found in moist pastures

in England as early as March. *F. præcox* is the early White Fritillary, introduced from the Continent: also, *Messanensis*, purple-yellow; *Lusitanica*, violet; *nigra*, dark-flowered; *racemosa*, cluster-flowered; and *Pyrenaica*, purple. Then we have several from the Caucasus, as *tenella*, *minor*, *lutea*, *latifolia*, *Ruthenica*, *tulipifolia*; and *scandens* and *leucantha*, which are climbing species. *F. imperialis* is the Crown Imperial—the most striking species of this genus; this fine plant, with the crown of leaves above, and its large head of drooping, yellowish-red flowers, is a native of Persia, and forms a striking object in our gardens as early as March or April; it has varieties with either red or yellow flowers: the latter is a particularly graceful plant. *F. cuprea*, the Copper-coloured Fritillary, from Mexico, is raised in the frame. Those grown in the garden only require to be taken up once in three years, to have the roots divided; they flourish best in a deep loamy soil.

LILIUM. (LILY.)

Gen. Char. (*Hexandria Monogynia*.) Divisions of flower six, bell-shaped, and generally reflexed, with a longitudinal honey-line; valves of the capsule connected by a mesh of hairs.

The name arose from the Celtic word *Li*, which signifies whiteness,—and what can be more purely white and beautiful than some of the flowers of this favourite genus! There are about thirty-six hardy species, all bulbous plants. *L. candidum* is the common White Lily of our gardens; its flowers are very beautiful and sweet-scented, and are often seen in old paintings placed in the hands of the Virgin: it was introduced from the Levant more than two hundred years ago, and has several varieties with striped flowers, or striped or dotted leaves. *L. Japonicum*, also white, has rather drooping large flowers: its name denotes its native country. There are several other white-flowered species—*Nepaulense*, *lancifolium*, and *longiflorum*, from Nepaul; *Buschianum*, *bulbiferum*, *latifolium*, *pubescens*, and several others, are orange; *Canadense*, *Carolinianum*, *superbum*, and others, are yellow. *L. speciosum* is the showy purple-flowered species from Japan, which has several varieties; and *L. Martagon* is the well-known “Turk’s cap” Lily, which is supposed to have been originally brought from Germany, but has become naturalized: it has many varieties, differing principally in colour,—one is pure white, another yellow, and one has double white flowers; the scarlet grows nearly four feet high, and when it produces its brilliant flowers,

with the petals turned back, is a very handsome plant; the purple variety is spotted with brown and black. *L. superbum*, from North America, is a most beautiful plant, sending up stalks, often eight feet high, bearing numerous bright orange flowers spotted with violet; it requires a bog soil, but will stand the winter. *L. croceum* has the flowers saffron-coloured spotted with black; *L. Philadelphicum* is a fine plant, with red flowers spotted with black; *L. Kamtschatkense* is of a golden-yellow with purple spots, it is not very common here; *Canadense* is light orange; *atro-sanguineum* has blossoms of a deep blood-red colour. *L. tigrinum* often grows six feet high, and has orange flowers spotted with black, which appear in August and September; this species is from China; and we have two from Japan, *testaceum*, yellow, and *excelsum*, straw-coloured. Lindley says that the *L. Chalcedonicum* covers the plains of Syria with its scarlet flowers studded with warts, and is the lily alluded to in the Sermon on the Mount. *L. Colchicum*, from Siberia, is a desirable species, as it is quite hardy, but at present not very common: it has a drooping flower, white tinged with yellow; it grows well in common garden soil, and, like all the Lily tribe, should not be disturbed, as they are all easily injured by removal. *L. giganteum* is

quite hardy, but not yet common: it is a most splendid plant, and is sometimes "twelve feet high," with large white flowers spotted with crimson, and all this splendour is accompanied by a strong scent. *L. venustum* has bright orange blossoms and is very attractive; though a native of Japan, it is quite hardy. *L. excelsum* has drooping flowers of a pale orange, and they have a sweet smell. Lilies are of easy culture, their roots not requiring to be moved for years, and common garden-soil suits them. They all come into flower about June or July, except *L. candidum*, which is as early as May.

HEMEROCALLIS. (DAY LILY.)

Gen. Char. (*Hexandria Monogynia*.) Flower bell-shaped, with a cylindrical tube; stamens curved downwards; stigma small, simple, and shaggy.

The name is from the Greek for *day* and *beautiful*. This genus has several handsome species, which have been introduced into our gardens from Siberia, China, Jamaica, and the Levant. *H. graminea*, grass-leaved, and *flava*, have yellow flowers, and are natives of the former country. *H. fulva*, *disticha*, and *speciosa* have copper-coloured flowers;

the latter, from Jamaica, is a showy plant for the greenhouse, and the rest are all desirable flowers for the border for June and July: they are of easy culture, succeeding best in a moist soil and a shady locality, and the roots should be occasionally divided. *H.* (*Funkia*) *Japonica* has white, and *cærulea* (*Funkia ovata*) blue flowers; *Sieboldiana*, *undulata*, and *lanceolata* have lilac; and *albo-marginata* lilac edged with white. These Funkias are very ornamental and fragrant; they require a dry soil and a warm border.

YUCCA. (ADAM'S NEEDLE.)

Gen. Char. (*Hexandria Monogynia*.) Flower bell-shaped and spreading; no style; capsule from three- to six-celled, with a hole at the end.

Called *Yuca* in St. Domingo, whence the name. A beautiful genus of plants almost peculiar to America, particularly those that are hardy. In general character they greatly resemble a small palm-tree, the numerous leaves all proceeding either from the top of the stalk or from the ground; the flower rises above them in a handsome spike of greenish-white flowers, forming a very beautiful object;

the leaves of most of the species have their edges clothed with strong brown or white twisted threads, which give a peculiar appearance to the plant. *Y. superba* or *gloriosa* is a beautiful species, with a short stem, and numerous, entire, long leaves very much crowded together; from these, in August, rises a pyramid of beautiful whitish-red, bell-shaped flowers. This plant, though generally kept in the greenhouse, will bear the open air. In Edwards's 'Botanical Register' one specimen is mentioned as having flowered in the garden of the Honourable Mr. Herbert, and was the most magnificent plant there: the flower-stem rose eight or nine feet high, and the profusion of blossom was very great; the deep crimson of the stalks and stem, and the purple stripe on the outer petals of the flower, made it a magnificent sight. *Y. gloriosa* has white flowers; also *Y. filamentosa*, which is called the common thready Yucca; *glauca*, straw-coloured; *stricta*, greenish-purple; *angustifolia*, green; and there are several others. A deep sandy soil is the most suitable to these plants, and they are increased by suckers; they are often planted in vases on terraces, and in such situations produce a good effect.

SCILLA. (SQUILL.)

Gen. Char. (Hexandria Monogynia.) Divisions of flower six, spreading; filaments thread-like, attached to the base of the flower.

Name probably derived from the Arabic word for these plants (*Asqyl*). A genus containing above thirty species, principally from temperate regions, the South of Europe particularly. *S. maritima*, the officinal Squill, is a native of the South of Europe, and used in medicine—particularly as an expectorant in coughs; the plant is scarcely hardy here, so that the bulbs are brought from abroad for these purposes. Many of the species are beautiful, and introduced into the garden with advantage; the blossoms are rose, blue, lilac, purple, or white; *Peruviana*, *Italica*, *amœna*, *imperialis*, and *Sibirica* are blue and very pretty. *S. nutans* (*Hyacinthus non-scriptus*), the English Hyacinth, is now reckoned among the Squills, and some botanists give it a new generic name—*Myogalum*.

ORNITHOGALUM. (STAR OF BETHLEHEM.)

Gen. Char. (Hexandria Monogynia.) Divisions of flower six,

erect, spreading above the middle; filaments dilated at the base; capsule roundish, angular, three-celled; seeds roundish, naked.

Name of uncertain derivation or meaning, but the English name, Star of Bethlehem, arises from the star-like form of the flower. More than sixty species have been introduced, but a few only are hardy. The English species are *O. umbellatum*, *Pyrenaicum*, and *nutans*; then we have in the garden, from Europe, *O. montanum*, *collinum*, *refractum*, *tenuifolium*, *exscapum*, *comosum*, *pyramidale* (which has a blue variety), *Narbonense*, etc., with white or greenish-white flowers; *O. ixioides* is a native of California, *elatum* and *latifolium* of Egypt, also with white flowers; *O. (Barnardia) Japonicum* is a native of Japan. Very many besides these are cultivated in the frame, coming principally from the Cape and South America. These plants only require to be taken up once in two or three years, the roots divided, and replanted immediately; they prefer a tolerably dry soil.

MUSCARI. (MUSK OR GRAPE HYACINTH.)

Gen. Char. (Hexandria Monogynia.) Flowers ovate or cylin-



drical, very shortly divided; stamens inserted in the middle of the flower; cells of capsules two-celled.

So named from the smell of musk, from the Latin *muscus*. A pretty genus of hardy bulbs, principally introduced from the South of Europe, as *macrocarpum*, *comosum*, *commutatum*, *parviflorum*, *botryoides*: the first has yellow, the rest blue or purplish blossoms; the last having varieties with blue, purple, white, or blush-coloured flowers. *M. moschatum* has brownish, and *ambrosiacum* white flowers; these are the sweet-scented species from the Levant. *M. glaucum* is from Persia; *M. racemosum* is the British species. Any common garden soil suits them, and they require no other care than being taken up and divided occasionally.

HYACINTHUS. (HYACINTH.)

Gen. Char. (*Hexandria Monogynia*.) Flower erect, six-cleft, with equal segments, not divided to the base; stamens inserted in the middle of the flower; cells of capsule two-seeded.

Name derived from the fable that Hyacinthus was killed by Apollo, and changed into this flower. The well-known

Hyacinth of our gardens is the *H. orientalis*, a native of the Levant. With us it is much cultivated for its beautiful flowers, which, appearing in January and February, enliven our greenhouses and rooms during the gloomy season of winter. It grows naturally in a sandy soil, but can be forced in water, which is the usual plan in houses. In the garden it of course flowers later—about April—and a bed of these fine plants produces a striking effect, when well shaded from the rain and sun. The original has a blue flower, but cultivators have produced various colours, from the purest white to deep shades of red and blue. The plan of cultivation for the garden is, to choose an open and airy situation, but sheltered from north and east winds; it must be well drained, and the earth a light sandy soil, mixed with rich loamy turf or leaf-mould, and a layer of sandy earth at the top; in this the bulbs are to be placed, and well covered, in November. In April the early sorts will begin to show flower; and as the season advances, they will require shading from the sun and heavy rains, or the flowers will be soon spoiled: they only require water in very dry seasons. After the flowers and leaves are faded, the bulbs are taken up and dried. When grown in glasses, they may be placed in them, any time between October and

March, so as to have a succession; the water should be soft, and barely touching at first, then just reaching so as to cover the bottom of the bulb; this must be kept to the same height. They must be placed in a warm room when required to grow; these may be planted in the garden next year. The cultivation of Hyacinths was at one time as much a mania with the Dutch as that of tulips, and they produced many hundred varieties; but though still a favourite flower with us, the cultivation has somewhat declined. *H. amethystinus* is a native of the South of Europe, and has bluish flowers; *H. spicatus* pale blue.

ASPHODELUS. (ASPHODEL.)

Gen. Char. (*Hexandria Monogynia.*) Flowers six-parted, spreading; six valves covering the ovary.

The name means "a flower which cannot be surpassed." Most of the species of this genus are hardy. *A. luteus* is the common yellow species from Sicily, and *A. albus* the white from the South of Europe: they have been long introduced, and are very easy to cultivate. Loudon says that immense tracts of land in Apulia are covered with the

latter, and that they afford nourishment to the sheep. *A. ramosus* is used medicinally; *fistulosus* and *æstivus* also have white flowers. The following are from Asia:—*A. prolifer*, *Asiaticus*, *tenuior*, *Creticus*, *Liburnicus*, *Tauricus*, and *capillaris*, having either yellowish or white blossoms; *A. (Eremurus) Altaicus* has showy yellow flowers. *A. intermedius* is a native of the Canaries, and requires the frame; it has white flowers. Common soil suits them, and they increase rapidly by suckers.

POLYGONATUM. (SOLOMON'S SEAL.)

Gen. Char. (Hexandria Monogynia.) Flowers six-cleft, cylindrical; filaments inserted into the top of the tube; berry globose, three-celled, with two-seeded cells; flowers axillary.

From the Greek for *many* and *knee*, the articulations in the stem giving rise to this name. *P. verticillatum* and *P. multiflorum* are the pretty British species, called Solomon's Seal from a fancied resemblance in a cut root to the characters on the seal of Solomon; the young shoots have been used as a substitute for asparagus. The Continental species are—*bracteatum* and *latifolium*, with whitish-green and straw-coloured flowers; *pubescens*, *canali-*

culatum, *angustifolium*, and *macrophyllum*, North American; *leptophyllum* and *polyanthemum*, Asiatic,—the flowers being very similar in colour to the rest. They do well under trees, liking the shade, and thus producing finer flowers; common soil suits them.

CONVALLARIA. (LILY OF THE VALLEY.)

Gen. Char. (*Hexandria Monogynia*.) Flowers six-cleft, bell-shaped; berry spotted, three-celled.

From *convallis*, a valley, where this genus is usually found. Our favourite Lily of the Valley, *C. majalis*, is the only species of this genus, and is so well known as to require no description or praise. The scape of beautiful pendent white flowers, almost hid by the broad handsome leaves, renders it an extremely lovely plant; and it may be found wild in our woods, in flower, in May. In our gardens it is earlier, where it has produced two varieties, one with rose-coloured, and the other with double flowers; but the simple form and colour of the original is more generally admired. They are sweet-scented when fresh, but dried have a narcotic odour, and the roots are occasionally used

medicinally. It is said that a durable and beautiful green colour may be produced from the leaves of this plant, by preparing them with lime. They prefer a shady spot, and only require to be taken up to divide the roots; the soil should be light and moist.

RUSCUS. (BUTCHERS' BROOM.)

Gen. Char. (Diœcia Monadelphica.) Calyx six-leaved; corolla none; barren flower with the rudiment of the ovary ovate, and perforated at the end; fertile, style one, berry three-celled, seeds two.

Anciently called *Bruscus*; said to be derived from *bens*, box, and *kelem*, holly, the Celtic name for these plants. This is a very curious genus; the English species, *R. aculeatus*, is an interesting plant, found in woods, particularly in the South, where its bright dark-green leaves, and very handsome berries, as large as cherries, make it an attractive object, particularly to the botanist. The small whitish-green flower has the appearance of growing out of the centre of the upper side of the leaf, but this is not actually the case; for the flower-stalk is only hid beneath the outer skin of the leaf, and can be raised from it with a knife. The bright

handsome red berry, lying on the leaf after the flower has faded, has a curious effect; and, in this state, it is a great addition to a winter group of flowers; or it may be introduced into the house instead of holly, as it continues a long time without shrivelling. The Continental species are *laxus*, *Hypophyllum*, with the flowers and berries on the under side of the leaf; *R. Hypoglossum* bears its flowers and succeeding berries on the upper side, under a leaflet; and *R. racemosus* is the *Alexandrian laurel*, and is supposed to be by some the plant used to crown victors in the games; it has its flowers terminal. *R. latifolius* is a Madeira plant. Some of the more tender species have the flowers at the edge of the leaves; the roots of some have been used medicinally, and the seeds roasted and used as coffee. These plants prefer the shade of trees, and are useful in shrubberies as an evergreen: they are increased by suckers from the root.

CLASS II.* EXOGENS.

Increase of new wood taking place at the circumference, always concentric. Leaves net-veined. Seed-lobes two or more; seeds enclosed in seed-vessels.

SUBCLASS I. DICLINOUS EXOGENS.

Stamens and pistils in separate flowers.

MENISPERMACEÆ.

Exogens, with small flowers in racemes. Calyx and petals in several rows. Stamens of barren flower either joined together or separate, sometimes opposite the petals, or three or four times as many. Of the fertile flower the seed-vessels are solitary or whorled, distinct or partially united; drupe usually a berry, moon-shaped; seed the same. Leaves entire.—Shrubs, natives of the Tropics; principally narcotic qualities.

MENISPERMUM. (MOONSEED.)

Gen. Char. (Dioecia Dodecandria.) Barren flower—calyx two-leaved; petals four or six on the outside, eight inside; stamens sixteen. Fertile flower—stamens eight, sterile; ovaries two or three; berries two, one-seeded.

* Seventh Class of Lindley.

From the Greek for *moon* and *seed*, from the shape of the seed-vessel. North American plants, of which *M. Canadense*, *Carolinum*, and *Lyonii* are hardy, and are valuable plants for training over arbours, as they grow rapidly, and are very ornamental; a pole covered with them looks well. The drooping flowers, of a greenish-yellow tinge, are hidden beneath the curiously shaped leaves. They require no particular treatment.

SUBCLASS II. HYPOGYNOUS EXOGENS.

Having stamens and pistils generally in the same flowers; stamens below the ovary, and entirely free from calyx and corolla.

PASSIFLORACEÆ.

Exogens, with coroneted flowers; the petals five, imbricated, standing on the calyx; stamens five, on the stalk of the ovary; a row of filamentous processes forming the crown in the centre. Leaves often glandular.—Herbaceous plants or shrubs, usually climbing; properties rather dangerous, though some of the fruits are edible. Natives principally of America, and particularly the South.

PASSIFLORA. (PASSION FLOWER.)

Gen. Char. (*Monadelphia Pentandria.*) Calyx five-parted, co-

loured ; petals five, inserted into the calyx, or none ; crown of many filiform rays ; fruit stalked and fleshy.

Named by the zealous Catholics who discovered this genus in South America, the Passion Flower, from the supposed resemblance in the appendages of its flower to the passion of Christ. This lovely genus is very abundant in species, above eighty having been grown in this country, but only the following bear the outer air :—*P. incarnata*, called May Apple, and one of the edible species, has a flesh-coloured flower ; *P. Colvillii*, violet ; and *P. cærulea*, the common, has whitish-blue ; these are from Brazil and North America. The latter species bears our climate very well now, though originally brought from Brazil, about a hundred and fifty years ago : its palmated five-lobed leaves and beautiful flowers make it a very desirable creeper ; it derives its name of *cærulea* from the blueness of the outer part of the petals, but within they are delicately white, and the thread-like rays are purple. This plant grows in great perfection in the Isle of Wight, where it is often seen covering the cottages, and producing its flowers in profusion, but they last only a day. *P. lutea*, a pale-yellow American species, and *Mooreana*, require the frame ; the rest of the eighty-six species, the greenhouse or stove. These plants

are increased by cuttings from the young shoots, and they should be planted in good loamy soil, and have plenty of room for their roots, so that they do not always succeed in pots.

VIOLACEÆ.

Exogens, having flowers with five petals, equal or not. Stamens five, alternate with the petals; filaments dilated, lengthened beyond the anthers, two of which in the irregular flowers have a gland or appendage at the base. Leaves simple.—Herbaceous plants or shrubs, generally natives of temperate climates; properties medicinal.

VIOLA. (VIOLET.)

Gen. Char. (*Pentandria Monogynia.*) Divisions of calyx five; petals five, irregular; anthers adhering at the end by a membrane, or distinct; capsule three-valved, one-seeded.

The origin of the name of this genus is doubtful, but it has been for ages a favourite on account of the sweet scent of many of its species. Shakspeare makes many beautiful allusions to it; in the 'Twelfth Night' he likens a strain of music to "the sweet South that breathes upon a bank of violets, stealing and giving odour;" in 'Richard II.' he

speaks of "violets that strew the green lap of the new-come spring;" and again in 'King John' he alludes so beautifully to it that the whole passage must be given :—

"To gild refined gold, to paint the lily,
To throw a perfume on the *violet*,
To smooth the ice, or add another hue
Unto the rainbow, or with taper light
To seek the beauteous eye of heaven to garnish,
Is wasteful and ridiculous excess."

The species of this interesting genus are very numerous, amounting to more than a hundred, almost all of which are hardy in our gardens, the following only requiring the frame :—*V. betonicaefolia*, from New South Wales, with purple flowers; *humilis*, with white flowers, from Mexico, *palmaris*, yellow, from Nepaul; and *Palmaensis*, from Palma. The English species are well known: the *odorata*, Sweet Violet, the most cherished for its sweet scent and early appearance, is not peculiar to Britain, for the woods and hedges in all parts of the Continent abound with it: it is cultivated extensively at Stratford, for medicinal purposes. There are several varieties, having white, blue, or pale-purple petals, or double flowers. Those known as Russian violets are very valuable, as they flower during winter; and another kind, called Neapolitan, are even sweeter

than the rest. It is stated by Mr. T. Moore that he had found *V. odorata*, with mottled pale-lilac flowers, in the neighbourhood of Guildford. The white variety has always a ciliated calyx, the edges being fringed with fine hairs, while the blue sweet kind has them quite plain: he therefore proposes, from this circumstance, to form them into a new species, under the name of *ciliata*. *V. hirta* grows in woods and pastures; *V. palustris* in bogs and marshes; *V. canina* almost everywhere, but scentless; *V. lactea*, on mountains; *V. tricolor* and *lutea* are the Pansy or Heart's-ease, all the cultivated varieties of which are so well known in our gardens; and these fine large flowers, so different from the wild plant, will again degenerate when neglected, or transplanted into poor soil. The foreign species are very numerous, and found in many parts of the world, with the exception of Africa. Europe gives us several as ornaments to our gardens: *V. pinnata*, *Pyrenaica*, *hirsuta*, *mirabilis*, *biflora*, and many others. North America produces many species, among which several have white flowers, as *albiflora*, *blanda*, and *lanceolata*; others are blue, as *pedata*, *digitata*, *palmata*, *papilionacea*, and *cucullata*; several are yellow, as *V. pyrolæfolia* (or *lutea*), a Patagonian plant, which is quite hardy, and very pretty; it prefers a cool

situation and light soil. Two species of frame plants, called spurless violets, are now made into a genus called *Erpetion*. *E. hederaceum* and *reniforme* are found in Van Diemen's Land and New South Wales.

It is well known that Violets like the shade, or only the morning and evening sun: they prefer a light loamy soil, and a sloping bank is an advantage. Pansies should be planted in beds, as in this way their varied colours produce a pleasing effect; in a cool, shady, and moist situation, they flower from May through the summer. The roots may be parted, or cuttings may be taken in June, and raised under a hand-glass; seeds may be sown in spring, and brought forward in the frame; or they may be sown as soon as gathered, and the plants will be up and strong before the winter. Pansies soon degenerate, if allowed to spread and exhaust the soil; they should therefore be frequently renewed, and the soil should be well manured loam.

IONIDIUM.

Gen. Char. (*Pentandria Monogynia*.) Divisions of calyx five, produced at the base; corolla two-lipped, without a spur; anthers usually distinct; stigma simple; capsule one-celled, three-valved.

This genus greatly resembles the last; the species are found in South America, where some of them are used as a substitute for ipecacuanha: only one is hardy, *I. verbena-ceum*, with purplish-blue flowers.

CRASSULACEÆ.

Exogens, with flowers having either many petals or only one, and a calyx of from three to twenty leaves, more or less united. Stamens inserted with the petals, either equal in number and alternate with them, or twice as many, those opposite the petals being the shortest, and arriving at perfection after the others. Leaves entire or pinnated.—Succulent herbs or shrubs, natives of many parts of the world, in the driest situations; properties medicinal.

CRASSULA.

Gen. Char. (*Pentandria Pentagynia.*) Calyx five-leaved; petals five; scales five, nectariferous at the base of the ovary; capsules five; flowers inferior.

The name is derived from the Latin word *crassus*, thick, the leaves and stems of this plant being fleshy. There are more than thirty species brought from the Cape, but only two are hardy, *C. glomerata* and *glabra*, both having white

flowers; the rest, with white or rose-coloured petals, are raised in the greenhouse, and generally called *Kalosanthus*. These plants grow best when the cuttings have been laid to dry a few days before planting, or they will decay: they require light soil, and should be well drained with brick rubbish.

SEDUM. (STONECROP.)

Gen. Char. (*Decandria Pentagynia*.) Calyx five-cleft; petals five, with honey-scales at the base of the ovary; capsules five.

From *sedere*, to sit, as they are low plants, growing on bare rocks or dry places. There are several species known in England as Stonecrop, or Old-man's Pepper, with white, yellow, pink, or purple flowers, *S. Telephium*, *oblongum*, *dasyphyllum*, *album*, *acre*, etc. Many more are found in Europe, as *latifolium*, *albicans*, etc.; several in North America and Asia, and the island of Madeira, the colours of which vary from white to shades of red, blue, and yellow. *S. ochroleucum*, from Greece, and *S. Telephium* are used medicinally. There are upwards of eighty hardy species; they are useful in the garden on rockwork, and very ornamental; the only species with a blue flower is from





of this genus resembling a box; *cyst*, in Saxon, means a hollow vessel. These fine evergreen shrubs, so useful and ornamental in our gardens, are natives of the South of Europe, Teneriffe, Algiers, and the Levant. They are tolerably easy of cultivation, and many are hardy, though the severe frosts of our winters often kill them; they thrive best therefore in a sheltered situation. Their fine showy flowers only last a day, but there is a constant succession, for the buds are very numerous. Those with white petals are *ladaniferus*, *laxus*, *populifolius*, and *hirsutus*, from Spain; and *acutifolius*, *asperifolius*, *salvifolius*, *oblongifolius*, *Corbariensis*, *parviflorus*, *platysepalus*, *Florentinus*, etc. etc., from various parts of the South of Europe. We have only one purplish-flowered species, and that is considered a variety of the *ladaniferus*; these two are introduced very commonly into our gardens and shrubberies, and deservedly so, for they are beautiful shrubs; the large, white, and exquisitely beautiful, but evanescent, flowers making quite a show. Mr. Henfrey, in his valuable work, 'The Vegetation of Europe,' says, whilst discussing the plants of Southern Spain:—"The prevailing shrub over the Grauwasche, as far as Portugal, is the *C. ladaniferus*, which extends for more than two hundred and thirty miles over the Sierra Morena, and fre-

quently almost exclusively covers whole square leagues." This species, with *Ledon* and *Creticus*, produce the substance called gum ladanum, which is used in fumigations on account of its fragrant smell. It is found on the leaves and young branches, and is of a resinous nature; it is scraped off with a peculiar instrument, and when dry is of a dark hue. This gum has an agreeable odour, and when burned diffuses a pleasant perfume: the taste is bitter and aromatic. In France it is more used as a medicine than in this country, and is considered tonic and astringent, but it is still more frequently used as a perfume and in fumigations. The dwarf species, *Creticus*, *Ledon*, *platysepalus*, and some others, are very useful in the shrubbery, in front of the taller shrubs; they require a little shelter. There are many frame species, natives of Teneriffe, the Canaries, and the South of Europe, with rose, purple, lilac, pink, and white flowers.

Any common soil will suit them, or a mixture of loam and peat: they may be increased by layers or cuttings, or even by seed. Some of the species are low in growth, and useful in rockwork, but they are rather tender, and should be protected in winter.

HELIANTHEMUM. (SUN ROSE.)

Gen. Char. (Polyandria Monogynia.) Divisions of calyx often unequal, the two outer smallest; capsule one-celled, three-valved.

The name is derived from Greek words meaning *sun* and *flower*, the bright yellow petals of many of the species suggesting it. The foreign species are mostly small evergreen shrubs or trailers, a few herbaceous, and the rest annuals; among the latter are *H. vulgare*, *polifolium*, etc., natives of Britain. The hardy European species are found mostly in the southern countries; they are all easy of culture, and their pretty yellow, rose, or white flowers make them valuable. *H. canescens* has crimson flowers; *rhodanthum*, rose-coloured; *diversifolium* and others, red; *cupreum* has copper-coloured blossoms; *venustum*, scarlet; *hyssopifolium*, violet; *stramineum*, straw-coloured; and there are many others of great beauty. When our own species, *H. vulgare*, is cultivated, it spreads into varieties with orange or straw-coloured petals, or even red, and more rarely they are found double. Those requiring the frame are very numerous, principally from the South of Europe and Brazil. The cultivation is easy in a light soil, and they flourish well on rockwork; but as the foreign species are tender, they require protec-

tion in winter, or they may be planted in pots and placed amongst the rockwork in spring.

BRASSICACEÆ.

Exogens, with flowers having divisions of calyx and petals four, alternate with each other. Stamens four long and two short. Stigmas two. Fruit a little pod, one- or two-celled, one or many seeds. Leaves alternate.—Herbaceous plants, natives mostly of Europe, but found all over the world; they have stimulant properties.

MATTHIOLA. (Stock.)

Gen. Char. (Tetradynamia Siliquosa.) Pod roundish, opening, the partitions more or less wide than the seeds; stigmas approaching together, thickened at the back; calyx with two little bags at the base.

Named after Matthioli, an Italian physician. This genus is in England familiarly known by the name of Stock or Gillyflower (probably July flower). *M. incana* is the common species, and a native of this country; its purple flowers are seen occasionally on the cliffs of the sea-shore, but it is more familiar to us in the garden, where it is a handsome border flower, having several varieties, with

scarlet, white, varied, or double flowers. *M. annua* is the Ten-week Stock, which has also many varieties, either with scarlet, purple, red, rose, flesh-coloured, brown, tawny, lilac, white, or double flowers; this is an annual. *M. simplicicaulis* is the Brompton Stock, with rose-coloured flowers, and a variety with white. *M. glabrata* is the Wallflower-leaved Stock, with varied-coloured flowers, which has varieties with white, purple, scarlet, and double flowers. Besides these European species, there are *M. torulosa*, from the Cape; *livida*, from Egypt; *tricuspidata*, from Barbary; and others. A species from Portugal, *M. littorea*, is very handsome, and also hardy. *M. fenestralis*, called the Window Stock, is a native of Crete, and requires the frame. The annual species are sown early, and do best in a south border or in a hotbed, and should be transplanted in May into a rich sandy loam; the biennials should not be sown till May, when a light sandy soil suits them best. In thinning them they should be shaded and watered, and care must be taken, as their roots are long and easily injured; the following spring they may be finally transplanted to the border, into good vegetable mould, and carefully watered and shaded.

CHEIRANTHUS. (WALLFLOWER.)

Gen. Char. (*Tetradynamia Siliquosa*.) Pod round or compressed, opening, partition more or less wide than the seeds; stigma nearly two-lobed; calyx with two little bags at the base.

The name is derived from an Arabic word for a sweet-scented flower. *C. Cheiri*, the well-known Wallflower, so welcome in our gardens in the spring, is a native of the South of Europe, but naturalized here, and found growing apparently wild on rocks, old walls, and buildings, though some authors make this another species, and call it *C. fruticulosus*; they both have yellow flowers, the former with richer colours and larger petals than the latter. *C. capitatus* is from Columbia; *alpinus*, from Norway, a dwarf species; and *ochroleucus*, from Switzerland, with pale yellow petals. A few species from Madeira, etc., require the frame, as *C. mutabilis*, *tenuifolius*, *longifolius*, *scoparius*, *linearis*, *frutescens*, *semperflorens*, and *linifolius*. *C. Marshallii*, a species scarcely common yet, is of a beautiful orange-colour, and very fragrant. They grow in any garden soil, or on brick or lime rubbish: but if it is required to have particularly fine flowers of a rich dark colour or double, they must be planted in a rich soil of loam and sand mixed; the double kinds require protection in severe frost.

ERYSIMUM. (HEDGE MUSTARD.)

Gen. Char. (Tetradynamia Siliquosa.) Petals four; seed-pod four-cornered, and two-celled; calyx closed.

From the Greek for *to cure*, owing to the salutary effects of some of the plants. A few only of the species are cultivated in the flower-garden, as *E. Perofskianum*, from Cabul, with dark orange flowers, and *E. Ibericum*, with yellow. They should have a sandy peat soil.

LUNARIA. (HONESTY.)

Gen. Char. (Tetradynamia Siliculosa.) Pod slightly stalked, elliptical or lanceolate, having flat valves, with a broad, oval, membranous partition; stalks of seeds long and adhering to the partition; calyx with two little bags at the base; petals nearly entire.

The name arises from the broad, round, silvery pods of these plants. There are two species from Germany often seen in our shrubberies and borders, *L. rediviva* and *biennis*; and two varieties, as *violacea*, with purple, and *albiflora*, with white flowers. They are coarse in their foliage, but the flowers are useful from their appearing early in sum-

mer; and the round silvery seed-vessel, particularly the partition when the valves have dropped off, is sure to attract notice. They have been grown here more than a hundred and fifty years; any soil suits them, but they like a warm situation, and the seeds should be sown as soon as ripe; the plant does not flower the first year.

ALYSSUM. (MADWORT.)

Gen. Char. (Tetradynamia Siliculosa.) Pod orbicular or elliptical, with valves flat or convex in the centre, the partition broad and membranous; seeds two to four in each cell; calyx equal at the base; petals entire.

The ancients thought the *Alyssum* had the property of allaying rage; whence the name, from the Greek; in English we call it Madwort, from the same cause. *A. (Glyce) maritimum* is the English species found on the sea-coasts in May, with white flowers. *A. saxatile*, a native of Russia, is the species seen so early in flower in our borders; its yellow flowers and rather downy leaves distinguish it; *A. deltoideum* has purple flowers; *A. halimifolium* (*Kongia calycinum*), or Sweet Alyssum, has white flowers. There are

many other species from the Continent, with yellow flowers. Some of them are annuals, others perennials or biennials; they require very little care, but are often injured by great extremes of heat or cold; they thrive best in gravel or sandy soil, as they prefer dryness.

IBERIS. (CANDYTUFT.)

Gen. Char. (Tetradynamia Siliculosa.) Pod compressed, truncate, emarginate, partition narrow, cells one-seeded; the two outer petals the largest.

The generic name is derived from Iberia, as some of the species are natives of Spain; we call them Candytuft from the Candian species, *I. sempervirens*, or Evergreen Candytuft, which was first introduced here. They have either white or purple flowers, the above species and most of them being of the former colour. They are useful in rockwork, and the flowers appear early; the woody kinds are easily propagated by cuttings or divisions of the root.

MALCOLMIA.

Gen. Char. (Tetradynamia Siliquosa.) Pod roundish, opening

lengthwise, with concave or keeled valves ; seeds ovate or oblong ; stigma simple, much-pointed.

Named after Mr. Malcolm, a London nurseryman. The genus consists of pretty annuals from the South of Europe, Africa, and Siberia. *M. maritima* is often seen in our gardens, with violet flowers, and is useful, for it looks gay nearly all the year.

HELIOPHILA.

Gen. Char. (Tetradynamia Siliquosa.) Pod elongate, or rarely oblong or oval ; partitions linear or oval ; valves flat or convex ; seeds depressed ; calyx equal at the base.

The word means *sun* and *to love*, as the plants grow upon dry hot plains at the Cape. They have pretty cruciform flowers of various colours,—purple, blue, violet, and white,—and the pods in some of the species are long, narrow, and marked by the seeds. A dozen hardy annual species have been introduced. The seeds should be sown on a hotbed, and the young plants removed in May to a warm border.

SCHIZOPETALON.

Gen. Char. (*Tetradynamia Siliquosa.*) Seed-leaves four, spirally twisted; petals four, cut or jagged.

The name means *divided petal*, from the curiously cut and jagged form of these parts. *S. Walkeri*, from Chili, flowers freely in a frame, and occasionally in the open ground, but does not bear transplanting; its little white flowers are more curious than striking.

HESPERIS. (GARDEN ROCKET.)

Gen. Char. (*Tetradynamia Siliquosa.*) Seed-vessel roundish or about four-cornered; stigmas two, erect, approaching; calyx bagged at the base.

Named from the Greek for *the evening*, the flowers being more fragrant towards the evening. *H. matronalis* and its varieties are much cultivated; it is a European plant with variegated flowers. The varieties have single or double white, single or double purple, double variegated, and green flowers. *H. tristis* is the night-scented species, *fragrans* the evening-scented, *grandiflora* the large-flowered,

and several others with purple flowers. *H. speciosa* is a beautiful little plant from Siberia, only a few inches high, producing pink flowers in April and May. These perennial plants may be made very handsome by transplanting them after flowering into rich, light soil, which improves them very considerably.

CLEOME.

Gen. Char. (Tetradynamia Siliquosa.) The calyx has a honey-gland at each division, except the lowest; petals ascending; seed-leaves two.

The name of this genus is old; it contains a few hardy annuals, having purple, white, or yellow flowers; they are from the East and West Indies, America, Arabia, and the Levant, and the European species are *C. violacea* and *Iberica*, from Portugal and Spain. A few handsome ones are raised in the stove or greenhouse; they require a rich light soil.

RESEDACEÆ.

Exogens, with flowers in racemes or spikes. Calyx many-

