Mrs Colonel Booth

1827
THE

BRITISH
FLOWER GARDEN;

CONTAINING

Coloured Figures & Descriptions

OF THE

MOST ORNAMENTAL & CURIOUS

HARDY HERBACEOUS PLANTS,

INCLUDING

ANNUALS, BIENNIALS, & PERENNIALS;

WITH THEIR

SCIENTIFIC AND ENGLISH NAMES;
BEST METHOD OF CULTIVATION AND PROPAGATION;
THE HEIGHTS THEY GENERALLY ATTAIN;
Or any other Information respecting them that may be considered useful or entertaining.

BY

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Geraniaceae, the British Warblers, &c. &c.

The Drawings by E. D. SMITH, F.L.S.

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All. pedem. Allioni (Carolus.) Flora Pedemontana, 3 vol. fol. Turin, 1785.

Barton fl. amer. Barton's Flora of North America, 4to.


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Curtis magaz. see Bot. mag.


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GONOLOBUS hirsutus.

Hairy Gonolobus.

Natural Order. **Asclepiadæ.** *Brown prodr.* 458.


*Root* perennial. *Stems* herbaceous, climbing, thickly clothed with a dense ferruginous pubescence, and longer hairs intermixed. *Leaves* opposite, cordate, hairy on both sides, reticulately veined; lower ones very large, 5 inches long and 4½ wide, roundly cordate, ending abruptly in an acute point, the sinus overlapping at the base: upper leaves narrowly cordate, gradually tapering to a sharp point, and open at the base, about 2 inches long, to scarcely 1 wide. *Petioles* hairy, on the lower leaves long, purple, and furrowed on the upper side; on the upper ones, about half an inch long, and nearly cylindrical. *Umbels* many-flowered. *Peduncles*
lateral, not so long as the pedicles, densely pubescent, as is the pedicles and calyx and the outside of the corolla. Calyx 5-parted, segments short, lanceolate, acute. Corolla of 1 petal, rotate, deeply 5-parted, of a lively brown purple colour; segments oblongly-oval, obtuse, spreading; the inside smooth and glossy, the outside pubescent. Crown in the centre 10-toothed, with smaller teeth between them. Stamens 5. Pollen masses 10, smooth. Germens and Stigmas 2. Follicles oblong, hooked at the point, muricate.

For the opportunity of giving a figure of this rare and handsome plant, we are indebted to Mr. Knight, of the Exotic Nursery, King’s Road, Little Chelsea, where our drawing was taken in September last, and the fruit was added in October, when it ripened. It is a native of North America, growing spontaneously, according to Pursh, from Pennsylvania to Carolina. Mr. Knight has it cultivated on a little slope of peat earth, with some other scarce American plants: from its appearance, we suspect it will grow to the height of ten or twelve feet, if trained up a stick or trellis, where it will flower from June to October, if the weather prove favourable. Pursh mentions it as growing in hedges near rivulets; but we should think it not adviseable to plant it in a moist situation in this country, as its tuberous roots would be apt to suffer from too much wet. The present plants were in a flourishing state in a dry situation.

We have no doubt but it might be increased by dividing the roots, as well as by seeds.

1. The ten-toothed crown of the corolla spread open, showing the smaller teeth between the others. 2. The 5 stamens with the 10 masses of yellow pollen, one on each side of the anther. 3. The 2 germens with their stigmas. 4. Stigmas. 5. The full grown ripe follicle, all magnified, except the last.
DIANTHUS latifolius.

Broad-leaved Pink.

Natural Order. CARYOPHYLLAE. Juss. gen. 299.


Root perennial. Plant herbaceous, short, tufted. Leaves sessile, oblong lanceolate, three-nerved, smooth, of a green opaque colour, margins rough; root leaves from 4 to 5 inches long, and ½ of an inch wide, bluntish, or ending abruptly in an acute point; stem leaves opposite, shorter and acute. Flower-stem obsoletely 4-sided, slightly channelled, smooth. Flowers loosely aggregate, racemosely-corymbose, sessile. Scales of the Calyx 4, leafy, widely lanceolate, taper-pointed, about the length of the calyx before the flowers expand, afterwards growing to nearly the length of the petals, margins membranaceous near the base. Calyx of 1 sepal, tubular, cylindrical, channelled with numerous furrows, 5-cleft; segments taper-pointed, longer than the unguës. Petals 5, unguiculate, with broad lamina, which are deeply crenate, of a bright dark red or purple, with a dark circle near the base. Filaments

This plant, as Mr. Milne noticed to us, is as near as possible intermediate between *D. barbatus* and *D. chinensis*. It differs from the former, in its flowers not being fascicled and double the size, in the scales of the calyx being broader, and in its more compact and shorter growth; from the latter, it differs altogether in habit, but its flowers are very similar; it is a very ornamental herbaceous perennial, and continues to flower the greater part of the summer, and till late in autumn; it scarcely attains to a foot in height, oftener being only 6 or 8 inches; but that depends chiefly on the situation where it grows. It delights in a light rich garden soil, in a dryish situation, as it would be apt to rot if the ground was too moist; it is also a very proper plant for ornamenting rock work, in which it would appear to great advantage. It may be increased by cuttings planted under a hand-glass in the open ground, in a shady situation; but they must be planted thinly, or they will damp off; when rooted, they must be hardened to the air by degrees, and may then be planted where they are to remain.

Our drawing was taken at the Nursery of Messrs. Whitley, Brames, and Milne, of Fulham, in September last.

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1. Stamens and pistils divested of the corolla and calyx. 2. The 10 stamens spread open, all joined at the base. 3. The 2 styles terminated with 2 simple incurved stigmas. 4. Germen, all natural size.
COMMELINA cœlestis.

Sky-blue Commelina.


Root perennial, composed of a fascicle of long subcylindrical tubers. Stems several from the same root, erect, smooth, slightly furrowed, not much branched. Leaves sessile, sheathing the stem, oblongly lanceolate, taper-pointed, undulate, smooth but fringed at the base, 7-nerved. Sheaths fringed. Peduncles terminal and axillary, densely pubescent, scarcely as long as the leaf. Involucre cordate, taper-pointed, pubescent, doubled inwards so as to cover the flowers before they expand. Raceme many-flowered, inclosed in the involucre. Pedicles smooth, bent forward before the flower expands, erect when expanded, afterwards bent backwards.
Flower 6-parted, of a beautiful sky-blue, 3 outer segments calyx-like, persistent; 3 inner ones petal-like, unguiculate, deciduous. Stamens 6. Anthers 3 perfect, and 3 barren; fertile ones incumbent, oblong, 2-celled; sterile ones of a different shape, divided into 4 parts, yellow. Style smooth, longer than the stamens. Stigma slightly 3-lobed.

This ornamental plant has been sometimes confused with C. tuberosa, from which it differs in several respects; this having smooth leaves and hairy peduncles, whereas C. tuberosa has hairy leaves and smooth peduncles; we are not certain whether C. tuberosa will prove to be so hardy as our present plant; we hope to ascertain that the present season. Plants raised from seeds early in spring, if brought forward with a little artificial heat, and then planted in the open ground, will flower in autumn; as soon as their tops begin to die away, the roots must be taken up, and kept in a little dry earth or sand, out of the reach of frost, till the following spring, in the same manner as Dahlias, or other tuberous roots. The latter part of April, or the beginning of May, according as the season suits, they must be planted in the ground; or they might be brought forward earlier in a hot-house, or green-house, or hot-bed frame, and from thence be planted into the flower borders, where they will continue to bloom for a considerable time, and ripen their seeds; the common garden soil will suit them very well, the lighter and more sandy the better.

Our drawing was taken in September last, at the Nursery of Mr. Colvill, King's Road, Chelsea.

1. The fascicle of tuberous roots, natural size. 2. Germen. 3. Style and 3-lobed stigma. 4. Three fertile stamens. 5. Three barren ditto, divided into 4 lobes, all slightly magnified.
RUDBECKIA serotina.
Late-flowering hispid-stalked Rudbeckia.

Natural Order. Composite. Adanson fam. 2. 103.

RUDBECKIA. Flores radiati, ligulis neutris. (Involucrum) duplici serie polyphylum subaequalis patens. Sêmima apice marginata, margine membranaceo 4-dentato. Receptaculum (paleaceum,) conicum.

Herbes alternifolias, quaedam asperas; Flores sepe terminales; discus interdum subfuscus; ligulae quarumdam luteo-croceas, in R. purpurea (et serotina) purpurascences. Juss. gen. 189.

R. serotina, caule hispido, foliis inferioribus lato-ovatis basi attenuatis remote dentatis asperrimis: caulinis lanceolato-ovatis utrinque acuminatis subintegerrimis, radiis patentibus apice tridentatis.

Rudbeckia purpurea, β serotina. Nuttal.


Root perennial. Stems several from the same root, from 2 to 5 feet high, branching, thickly clothed with short stiff hairs. Leaves very rough; root ones very large, widely ovate, tapering at both ends, distantly and unequally toothed, from 3 to 5-nerved: stem leaves much narrower, lanceolately ovate, entire or scarcely toothed. Petioles on the root leaves very long, sheathing at the base, deeply channelled on the upper side, and bluntly keeled on the lower. Peduncles longer than the leaves, furrowed, much swollen near the flower, thickly clothed with short stiff hairs. Involucre many-leaved; scales lanceolate, acute, concave, ciliate, reflexed, in three tiers one above the other, the lower ones generally the longest. Receptacle conical, chaffy. Chaff longer than the florets of the disk, very rigid, the lower part keeled and green, the point cartilaginous, bluntish, of a brownish horn colour. Rays barren, broadly ligulate, narrow at the base, point 3-toothed, strongly
nerved underneath, and furrowed on the upper side, of a light purple colour; in the floret is the rudiment of two hair-like stigmas. Florets of the disk tubular, 5-toothed, much shorter than the chaff. Stamens 5, filaments distinct. Anthers joined into a tube, exerted above the floret, scarcely the height of the chaff. Pollen bright yellow. Style green, smooth. Stigmas 2, purple, reflexed, feathered at the point. Seeds angular, crowned with a 4-toothed pappus, and between the 4 teeth are several other smaller ones.

This stately herbaceous perennial is a native of North America, and has been introduced to our gardens about six or seven years since, where it has generally passed under the name of R. speciosa; by which title we also find it recorded in Professor Link's Enumeratio, but without a description, as it is said not to have flowered in their garden; we have no doubt but it is the R. purpurea & serotina of Nuttal, though he describes the rays as bifid, which in ours is 3-toothed. Mœnch has separated R. purpurea from the other species, under the generic name of Echinacea; should it be hereafter confirmed as a distinct genus, our plant will rank with it as a second species: their rigid chaff and habit altogether is certainly very different from the others.

The present plant, in strong soil, will sometimes attain the height of 5 feet; in poorer soil, it will be considerably less. It begins flowering in July, and will continue in bloom, if the season be mild, till the middle of November. It will thrive well in any common garden soil, and increases freely by seeds, or dividing the roots.

Our drawing was taken at the Nursery of Mr. Colvill, in September last.

1. Barren floret of the ray, natural size. 2. Scale of the chaff. 3. Seed with its toothed pappus. 4. Floret of the disk. 5. The same cut open, to show its 5 distinct filaments and connected anthers. 6. Style and 2 stigmas, all magnified.
ŒNOTHERA macrocarpa.

Large-capsuled Œnothera.

Natural Order, Onagrarie. Jussieu.
ŒNOTHERA. Calyx 4-fidus, tubulosus. Corolla 5-petala; petalis integris. Stamina 8; filimentia omnia fertilia. Stigm. 4-fidum. Caps. 4-locularis, 4-valvis, infera. Sem. nuda, receptaculo centrali, 4-gono affixa.


Root perennial. Stem of a woody texture at the base, branching. Branches spreading, covered with a short silky pubescence, furrowed, thickly clothed with leaves. Leaves petiolod, elliptically lanceolate, acute, mucronate, entire, or sometimes distantly toothed with small glandular teeth; margins thicker, of a horny substance, and with the nerves clothed with a whitish silky down. Petioles downy, about three times shorter than the blade of the leaf, convex on the upper part, and rounded on the lower. Capsule below the calyx, thickly clothed with white silky hairs, 4-winged; wings growing to a great size before the capsules ripen. Calyx tubular, tube in our specimen four inches long, of a greenish white; limb spathaceous, irregularly spotted with pale purple, sericeous, split on one side for the expansion of the petals, and divided into 4 segments at the base, which are joined above the middle and end in 4 subulate points. Petals 4, the largest in
the genus, inserted in the calyx, obcordate, but ending in a point, many-nerved, margins slightly toothed, of a light yellow colour. *Stamens* 8, also inserted in the calyx. *Filaments* dilated at the base, and narrowed upwards, about half as long again as the anthers. *Anthers* linear, 2 celled, bursting in front to discharge the pollen, which is pale yellow. *Style* smooth, gradually thickening upwards. *Stigma* 4-cleft, segments cylindrical, blunt, spreading.

The present ornamental plant produces the largest flowers of any species belonging to the genus; it has been confused with *OE. missourensis* of the *Botanical Magazine*, pl. 1592, both by Pursh and Nuttall. Plants of both species are now growing in the Nursery of Mr. Colvill, by the side of each other, where they have been cultivated for several years, without varying in the slightest degree; they both produce perfect seeds, and the young plants raised from them always continue true to their species. The difference in the two when seen growing together, is very striking; the leaves of *OE. macrocarpa* being elliptical, or elliptically lanceolate, tapering at both ends; of *OE. missourensis* linearly lanceolate, the stems and branches of the latter are longer and slenderer, and the flowers much smaller; but they are both very ornamental plants; the *OE. alata* of Nuttall, belongs to the latter species, judging from his description.

This plant thrives well in a rich light soil, and will grow to the height of a foot, or 18 inches, if supported by a stick; but its more natural manner of growth is to trail on the ground; it is very well suited for ornamenting rock-work, but requires room for its branches to spread; it may be readily increased by seeds; or young cuttings, planted thinly under a hand-glass, will soon strike root.

1. Stamen. 2. Germen, and the lower part of the style. 3. Upper part of the style and 4-cleft stigma, all natural size.
CUSCUTA verrucosa.

Warted-calyxed Nepaul Cuscuta.

_Natural Order._ Convolvulaceae. Brown prodr. 481.
Sect. III. Embryo acotyledoneus.

C. verrucosa, digyna, stigmatibus lanceolatis obtusis basi dilatatis carnosis, squamis epipetalis limbriato-laceris, antheris subsessilibus, calycis 5-fidi lacinis rotundatis verrucosis.

Parasitical on various plants. _Stems_ succulent, twining, much branched. _Branches_ smooth and glossy, of a brownish green colour, or sometimes purple, irregularly marked with purple linear spots, extending to a great distance, and laying hold of every branch within their reach. _Racemes_ numerous, often 3-flowered, but sometimes 9 or 10-flowered. _Flowers_ white with short succulent pedicles, very fragrant. _Bractea_ 1, sessile, ovate, obtuse, concave, sheathing the pedicle. _Calyx_ 5-cleft, segments roundish, succulent, persistent, thickly covered with small purple warts. _Corolla_ urceolate, border 5-cleft, divisions blunt, reflexed; _scales_ 5, inserted into the base of the corolla, much fringed or lacerated. _Anthers_ 5, nearly sessile, inserted into the tube just below the divisions of the border, and extending a
little above the mouth. **Stigmas 2**, nearly sessile, lanceolate, obtuse, widened at the base, succulent. **Germen** warted.

This curious parasitical plant was raised last Spring, at the Nursery of Mr. Colvill, from seeds sent him by Mr. George Potter, from the Botanic Garden at Calcutta, where they had been received from Nepaul; soon after the plants came up, they died off at the bottom, the tops catching hold of the nearest plant within their reach, and soon growing and spreading themselves in all directions, twining round all the young shoots and footstalks of the leaves, where they thrust out a kind of teeth, by which they inserted themselves into the plant. The more juicy and succulent the plant is, the stronger they grow; the strong growing species of *Pelargonium* suits them admirably.

The plants raised in Spring began flowering in September, and soon became entirely covered with flowers of a most delightful fragrance, somewhat resembling a mixture of violets and cowslips; and a plant that had taken hold of the ivy by Mr. Colvill’s shop, soon covered a great part of it, where it continued in flower till the very severe frost, and ripened its seed. Mild Winters it would survive very well, as it stood several severe frosts without being injured. It might be treated as an hardy annual, or may be kept alive through the Winter, in a frame or greenhouse.

1. Calyx. 2. Corolla spread open, showing the 5 stamens, and 5 fringed scales. 3. One of the scales separated from the corolla. 4. Germen, terminated by 2 fleshy stigmas.
CHRYSANTHEMUM sinense, var. involutum.
Curled Lilac Chinese Chrysanthemum.

Natural Order. COMPOSITÆ. Adanson fam. 2. 103.
CHRYSANTHEMUM. Flores radiati, Involucrum hemisphericum, imbricatum; squamis marginalibus membranaceis. Recept. nudum. Pappus nullus s. marginatus. (Suffrutices aut herbæs; caulis simplex aut ramosus; folia simplicia, (lobata) aut pinnata; flores terminales, solitarii aut corymbosi. Juss. gen. 183.

C. sinense, foliis petiolatis sinuato-lobatis dentatis mucronatis subus incanis stipulatis, receptaculo conico-convexo paleaceo v. nudo.
Chrysanthemum sinense. Sabine Mss.
involutum, floribus corymbosis confertis magnis lilacinis; medio pallidoribus, radiis apice involutis, receptaculum globosum paleaceum.

Root perennial, tufted. Stems numerous, woody at the base, from 2 to 4 feet high, more or less branched, obtusely angular, thickly clothed with a dense white tomentum. Branches spreading, and terminated with a compact corymbus of flowers. Leaves flat, sinuately 5-lobed, densely tomentose, particularly on the under side, much dotted; lower ones about 4 inches long, to 2½ broad, deeply lobed, and unequally toothed; lobes and teeth rounded,
very obtuse; upper leaves much smaller, and pointed; lobes and teeth sharply acute. *Petioles* slightly winged, shorter than the leaf, deeply channelled on the upper side, and bluntly keeled on the lower; densely tomentose. *Stipules* of various forms, generally 2 or 3-forked; segments lanceolate, on the large leaves obtuse; on the smaller ones acute, sometimes toothed. *Peduncles* tomentose, gradually increasing in size upwards; the lower ones longest. *Involucre* hemispherical, composed of numerous scales over-lapping each other. *Scales* lanceolate, with brown membraneaceous margins. *Receptacle* globular, chaffy, particularly on the upper part. *Chaff* spatulate, membraneaceous, of a light brown colour, and curved inwards like the rays. *Flowers* full, composed wholly of rays, without florets in the centre. *Rays* open, not tubular, twisted or curled, the points curved inwards; outer ones of a dark lilac, inner ones much paler. *Stamens* none. *Style* slender, even with the tube of the ray. *Stigmas* 2, recurved.

One of the beautiful new varieties of Chinese Chrysanthemum, lately introduced into the Garden of the Horticultural Society, from whence it is now distributed into many other collections. We believe the Society’s collection now contains nearly thirty different varieties, many of which are very handsome; we have drawings of several, which will be published in our future numbers.

The introduction of so many beautiful varieties of the Chinese Chrysanthemums is a great acquisition to our gardens, particularly as they begin flowering in Autumn, after most other flowers are overblown; they will grow freely in any common garden soil, but should be planted in a south border, to have them flower well; they may be increased by dividing at the root, or by cuttings planted under hand-glasses.

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1. Floret of the ray. 2. Chaffy receptacle divested of the calyx. 3. Scale of the chaff flattened out.
PRIMULA Palinuri.

Unequal-bracted Primrose.

Natural Order. PRIMULACEÆ. Brown prodr. 427.
PRIMULA. Calyx tubulosus 5-dentatus persistens.
Corolla tubus cylindricus; ore patulo; limbo emarginato.
Stamina 5. Stigma 1, globosum. Capsula 1-locularis; ore 10-fido.

P. Palinuri, foliis obovatis crenatis glabris, scapo foliis altiore laterali, umbella nutante, involucro inaequali pedunculos subequare, corollae limbo margine incurvo.

Subcaulescent. Stem short and stiff, erect. Leaves sessile, obovate, slightly undulate, deeply crenate, with rounded points, and attenuate at the base, of a greasy appearance and very soft, but scarcely viscous, about 2 inches broad, and 4½ long; when rubbed, emitting a powerful fragrance resembling Chamomile or Wormwood. Scape higher than the leaves, viscid, pubescent. Umbel many-flowered, nodding. Involucrum of several unequal leafy bractes, some longer, others about the length of the peduncles. Bractes obovate, undulate, entire. Peduncles cylindrical, a little longer than the calyx, thickly covered with a white powder. Calyx 5-toothed, densely clothed inside and out with a white mealy powder. Corolla tubular, tube nearly twice the length of the calyx; limb scarcely half the length of the tube, emarginate; sides folded inwards, of a bright yellow colour, slightly farinaceous, with a golden circle at the mouth. Stamens 5, oblong,
sessile, inserted about half way up the tube of the corolla. *Germen* globular, farinaceous. *Style* smooth, even with the mouth of the corolla, but lengthening after the flower is over-blown. *Stigma* capitate, point slightly depressed.

The plant from which our drawing was taken, was received last Summer, by Mr. Colvill, from the Botanic Garden at Berlin; soon after its arrival, it flowered; but not so strong as it did the second time, which was the latter end of December, when our drawing was made. It had been protected under a frame, to preserve the flower; but the plant itself is quite hardy. It is nearly related to *P. Auricula*, but is a much stronger growing upright plant; the flowers are much smaller, not unlike the Cowslip, which it also resembles in fragrance. It may be cultivated successfully, by planting it in a dry border in a light loamy soil; or it may be grown in a pot, in a mixture of sandy loam and peat; and is readily increased by seeds, or by suckers from the root.

1. Calyx. 2. Corolla spread open, showing the insertion of the stamens. 3. Stamen. 4. Germs, Style, and Stigma, natural size.
CYCLAMEN vernet.

Vernal Cyclamen.

Natural Order. PRIMULACEAE. Brown prodr. 427.


C. vernet. subcaulescens, foliis cordatis subcrenulatis apice emarginatis; sinu subclauso, corollae laciniis oblongo-ovatis, stylo exserto.

Cyclamen vernet minus orbiculato folio inferne rubente, flore minore ruberrimo. Mor. hist. Lesser spring Sowbread with roundish leaves of a reddish colour underneath, with small deep red flowers. Miller's Gard. dict. ed. 3. Cyclamen No. 4.


Cyclamen Coum. Loddiges' Bot. cab. no. 108. nec aliorum.

Root tuberous, round and flat, not unlike a Turnep; of a reddish brown colour. Stems short, rough, branched, and clothed with numerous leaves and flowers. Leaves cordate, concave, slightly crenulate, emarginate, upper side green, marked with an unequal circle of white, underneath of a reddish purple; sinus overlapping at the base. Petioles longer than the leaves, nearly cylindrical, crooked, very slender near the base. Peduncles reaching a little above the leaves, gradually tapering upwards, 1-flowered. Flowers nodding, of a rosy red colour, darker near the mouth, where there is a white circle, inside striped with red. Calyx 5-cleft, pubescent; segments lanceolate, acute, slightly keeled. Corolla rotate, reflexed; segments ovate, or...
oblong; margins curved inwards. **Stamens 5**, inserted into the base of the tube. **Filaments** short and flat, dilated at the base. **Anthers** attached to the filaments at the base, 2-celled, sharp-pointed, fringed, included in the tube. **Germen** globular, smooth. **Style** smooth, tapering upwards, exserted a little above the mouth. **Stigma** small, flat.

The present beautiful little plant seems to have been almost entirely overlooked by Botanists, since the time of Miller. In Martyn's edition of Miller's Dictionary, it is recorded as a variety of *C. persicum*; to which it certainly is scarcely at all allied, except in the form of the leaves, and the white circle on their upper side. The flowers are nearly the same as in *C. Coum.*; but the style is exserted a little beyond the mouth; the plant is altogether more robust, and the leaves and flowers are produced on a kind of short flat stem that branches from the tuber, not directly from the crown of the tuber, as in *C. persicum*, and *C. Coum*. The leaves are also cordate, and the sinus frequently overlapping at the base; in *C. Coum.* they are reniform, and have a large opening at their base, and are entirely green on their upper surface.

It will succeed well in a warm border, in a light sandy soil; or it may be grown with advantage in small pots, in an equal mixture of loam, peat, and sand; it can then be protected under a frame in Winter, during which time it requires very little water. The only method of propagating it, is from seeds, which ripen plentifully, if care be taken to scatter some pollen on the stigma when in full bloom.

**Drawn at the Nursery of Mr. Colvill, the beginning of March last.**

1. Calyx. 2. Corolla spread open, showing the insertion of the Stamens, natural size. 3. One of the Anthers magnified, burst on each side. 4. Germen, Style, and Stigma magnified.
COREOPSIS lanceolata.

Spear-leaved Coreopsis.

Natural Order. Composite. Adanson fam. 2, 103.

COREOPSIS. (Radiata; Pappus aristatus; Receptaculum paleaceum.) Involucrum polyphyllum, foliolis a receptaculi paleis vix aut parum distinctis. Recept. planiusculum v. leviter convexum. Flos. disci hermaphroditii, fertiles; radii feminii s. neutris; ligulis disco transverso equalibus s. longioribus, steriles. Pappus 2-3-aristatus; aristis glabris s. retrorsum scabris. Gært. sem. 2, 457.

Herbae erectae; folia sæpius opposita, in quibusdam multifida; flores axillares et sæpius terminales; ligulae quarumdam albidae. Juss. gen. 188.


Stems several from the same root, erect, branching. Leaves opposite, broad lanceolate, entire, smooth, slightly fringed, bluntish, base attenuated down the petiole; fringed at the base with long spreading white hairs. Peduncle long, naked, bluntly angular, furrowed, smooth, 1-flowered. Involucre of two series, many-leaved; scales of the outer series 9, leaf-like, lanceolate, bluntish, reflexed; of the inner 9, membranaceous, oblong, pointed. Receptacle convex, warded. Chaff subulate, channelled, about the length d 2
of the florets. *Rays* very broad, barren, cuneate, toothed with 4 large unequal teeth, which are bluntly and unequally crenate, or slightly notched, strongly nerved underneath, and furrowed on the upper side, flat when first expanded, afterwards rolled back at the edges, of a bright yellow colour. *Florets of the disk* numerous, tubular, funnel-shaped, hermaphrodite, 5-toothed, nerves alternating with the teeth. *Stamens* 5; filaments distinct; anthers connected, their points exserted. *Style* smooth, slender, half as long again as the floret. *Stigmas* 2, revolute, fringed. *Seeds* oblong, slightly winged with rough edges. *Pappus* of 2 short fringed teeth.

Our drawing was taken from a fine plant, sent by Mr. Shepherd from the Botanic Garden at Liverpool; an establishment, we are informed, particularly rich in hardy perennial herbaceous plants. It is a native of North America; and, according to Pursh, is found growing in mountainous situations near Virginia, and Carolina, flowering from August to October; with us it flowers about the same time; and, if cultivated in rich light soil, will attain the height of 2 feet, or upwards. It is rather more tender than some other species of the genus, and prefers a dryish situation; it would be well to place some of them in a frame in Winter, where they can be protected from the severe frost; they can then be turned out in the open ground in Spring, and will succeed very well. They are readily increased by dividing at the root; or cuttings, planted under a hand-glass, will soon strike root.

1. Barren floret of the ray. 2. Floret of the disk. 3. The same spread open, showing the 5 connected anthers. 4. Floret spread open, showing the nerves alternating with the teeth. 5. Style terminated with 2 fringed stigmas. 6. Unripe seed, terminated with 2 fringed teeth. 7. Scale of the chaff.
SOLDANELLA montana.

Mountain Soldanella.

SOLDANELLA. Calyx 5-partitus. Corolla campanulata, 
ore lacero multifido. Stamina 5, filamentis antheras adnatas 

S. montana, foliis reniformibus crenato-repandis reticulato-
venosis; petiolis hirsutis, scapo multifloro. 
Soldanella Clusii. Botan. magaz. 2163.

Root perennial, tufted. Stem none. Leaves reni-
form, waved, slightly crenate, reticulately veined, sinus 
generally overlapping at the base. Petioles nearly 
cylindrical, gradually tapering upwards, densely 
clothed with short white hairs. Scape slightly pu-
bescent, gradually tapering upwards; from 4 to 
8-flowered. Bractes 4 to 8, 1 at the base of each 
pedicle; unequal in length, the uppermost longest, 
smooth, ligulately-linear, obtuse. Pedicles very pu-
bescent, unequal in length. Flowers nodding, of a 
pale blue colour. Calyx 5-parted, segments lanceolate, 
bluntish, slightly wrinkled. Corolla campanulate, 
mouth multifid, unequally and deeply lacerate. Sta-
mens 5, inserted in the mouth of the corolla. Filaments 
flat and reaching beyond the anthers, terminating in a 
simple subulate point. Anthers joined to the front of 
the filament, 2-celled. Pollen white, farinaceous. Ger-
men smooth, with 5 gland-like pellucid warts round
it. *Style* smooth, gradually tapering towards the point, longer than the corolla. *Stigma* a small simple point.

A beautiful little alpine plant, introduced into our Gardens about seven years back. It differs from *S. alpina*, in being altogether more robust; in bearing more flowers on each scape; the segments of which are larger, and spread more flatly open; the termination of the filament beyond the anther, is simple and subulate, and the petioles are densely hairy. In *S. alpina*, the scape is few-flowered; the flowers are more finely fringed, and bell-shaped; the filament beyond the anthers terminates in a bifid point; the leaves are narrower, more entire, and the petioles smooth.

Our drawing was taken from a plant at the Garden belonging to the Apothecaries Company, at Chelsea, in March last. When cultivated in the open ground, it should be planted in a dry border, in peat soil, which it prefers; or it may be grown in rock-work, where it must also have peat soil, or it will not thrive so well; it may also be cultivated, with advantage, in small pots, and can then be protected in a frame in severe weather. It is increased by dividing at the root, or by seeds; if by the latter method, they should be sown as soon as ripe, and planted off into other pots while in their seed leaf; they will then not miss their removal.

1. Calyx. 2. Corolla spread open, showing the insertion of the Stamens. 3. Back view of the Stamen magnified. 4. Front view of ditto. 5. Germen, Style, and Stigma magnified.
HYOSCYAMUS orientalis.

Oriental Henbane.


Root perennial. Stems several, springing from the same root, simple, erect, slightly angular, furrowed, thickly cloathed with unequal villous hairs. Leaves ovate, repandly-dentate, or entire, attenuated down the petiole, pointed, glossy; veins hairy. Petiole downy, shorter than the blade of the leaf. Flowers terminal, aggregate, trichotomously-corymbose, of a brownish lilac colour. Bractes ovate, obtuse, downy. Peduncles scarcely as long as the calyx, villous. Calyx oblong, 5-toothed, ribbed, downy. Corolla funnel-form, 5-cleft, ribbed, downy; segments obtuse. Stamens 5, inserted into the tube. Filaments villous at the base, and smooth upwards; at first, included in the tube, but, at length, growing beyond the mouth. Anthers sagittate, incumbent, 2-celled. Pollen bluish, or ash-coloured. Germs slightly hairy, or sometimes smooth. Stigma capitate, emarginate.
This pretty Spring flowering plant was raised from seed, received from Moscow, by Messrs. Whitley, Brames, and Milne, at Fulham, in the year 1818. It is nearly related to *H. physaloides*, but is of much stronger growth, and thickly covered with pubescence, and its anthers are exserted beyond the mouth of the corolla; whereas *H. physaloides* is quite smooth and shining, its flowers are of a beautiful dark purple, and its anthers are included within the mouth; they both are in flower at the same time, and are very desirable by being so early in bloom.

The present plant is a native of Iberia; it is quite hardy, and thrives well in any common garden soil, flowering the latter end of March, and beginning of April, and continuing in bloom a considerable time; in poor soil it will scarcely exceed a foot in height, but in stronger soil it will attain 18 inches, or more. It is increased by dividing at the root, or by seeds.

Drawn at the Nursery of Messrs. Whitley and Co. the beginning of last month.

1. Calyx. 2. Front view of the Corolla spread open to show the insertion of the Stamens. 3. Back view of the same in a more advanced state, in which the Anthers are exserted. 4. Stamen. 5. Germen, Style, and Stigma.
HYOSCYAMUS physaloides.

*Purple-flowered Henbane.*

_H. physaloides_, foliis ovatis acutis repandis integerrimis glabris, floribus terminalibus, calycibus inflatis angulatis glabris, staminibus corolla parum brevioribus.


Root perennial, herbaceous. Stems several from the same root; angular, smooth and glossy, of a pale purple colour, seldom attaining a foot in height. Leaves alternate, ovate, acute, entire, repand, attenuated down the petiole, smooth and glossy, purple whilst young, afterwards changing to green on the upper side, and purplish underneath. Petioles shorter than the leaves, smooth and shining. Flowers terminal, paniculately corymbose, of a bright bluish purple. Bractes of various sizes, some as long as the peduncles, others not half the length, lanceolate, acute, concave. Peduncles purplish, about half the length of the calyx, with a few hairs scattered on them here and there. Calyx 5-cleft, tubular, inflated, 10-angled, reticulately veined, smooth; segments fringed. Corolla of a bright blue purple, funnel-form; tube slender at the base, gradually widening upwards, inside thickly clothed with hairs at the base of the filaments; border 5-cleft, spreading, segments blunt and rounded.
Stamens 5, inserted in the tube; filaments hairy at the base, and smooth upwards, of a pale purple colour; anthers incumbent. Pollen white. Germin pyramidal, smooth, green at the base, and purple at the point. Style smooth, purple. Stigma white, capitate, emarginate.

One of our handsomest early Spring flowering plants; a native of Siberia, seldom to be met with in any collection, though certainly deserving of cultivation much more than a great many that are more generally cultivated; we suspect the reason of this is, from its being so little known; and have, therefore, given a fine specimen of it in our figure, that it may no longer remain in obscurity. It is a very hardy plant, thriving well in a rich light soil, and continues in flower for several weeks, beginning to blossom in March, and sometimes lasts in bloom till the beginning of May. It may be increased by dividing at the root, or by cuttings planted under a hand-glass; it also produces ripe seeds, which should be sown as soon as gathered.

Drawn at the Nursery of Mr. Colvill, in April last.

1. Calyx, showing its fringed segments. 2. Corolla. 3. The same split open, showing the insertion of the stamens, natural size. 4. Stamen. 5. Germin, Style, and Stigma, magnified.
CHRYSANTHEMUM sinense,  
var. fasciculatum.  
Superb Clustered Yellow Chrysanthemum.

Natural Order. Composite. Adanson Fam. 2. 103.  
CHRYSANTHEMUM. Supra fol. 7.

Chrysanthemum sinense. Supra fol. 7.  
fasciculatum, floribus plenis fasciculato-corymbosis; radiis tubulosis luteis apice vix expansis, receptaculum nudum conico-globosum punctatum.

Root perennial, tufted. Stems ligneous, erect; in our specimen, about 3 feet high, slightly branched, and terminated with a fasciculated corymbus of flowers; branches a little flexuose, obtusely angular, of a purplish brown colour, thickly clothed with a dense white tomentum. Leaves of various forms, punctate, sinuately-lobate, and toothed with unequal bluntish teeth, of a dull green on the upper side, and clothed with a dense white tomentum on the lower; segments wide apart, blunt, and rounded at the ends, terminated in a very short point; lower ones about 4 inches long, to 3 broad. Petioles winged, channelled on the upper side, and bluntly keeled on the lower. Stipules variable, oblong, obovate or spatulate, obtuse, sometimes toothed. Peduncles short, densely tomentose. Involution hemisphærical, composed of numerous oblong or lanceolate membranaceous scales, overlapping each other. Flowers double, bright yellow. Receptacle naked, dotted, between conical and globular. Rays
all quilled, scarcely expanded at the points, except here and there one expanded nearly half way down. *Florets of the disk* none. *Stamens* none, or barren. *Style* and *Stigmas* short and slender, imperfect.

Our figure represents another beautiful variety of the Chinese Chrysanthemum, lately introduced into the Garden of the Horticultural Society, and from thence distributed to other collections; in our opinion, the present variety is the handsomest of all the yellow ones, and differs from all others in its compact cluster of flowers; it is one of the varieties that is most proper for planting out in the open ground, as it begins flowering earlier than many of the others; like the rest, it may be readily increased by dividing at the root, or by cuttings planted under hand-glasses; when grown in pots, they are the most proper plants for ornamenting rooms, or greenhouses, in Autumn.

The present variety has, in general, a naked receptacle, or is very slightly chaffy; some of the others are thinly, others thickly clothed with chaff; our opinion is, that the chaffy ones are mules, and have been fertilized by the Chinese with the pollen of some species of Anthemis, perhaps *A. apiifolia*, or some nearly related species.

MUSCARI botryoides, \(\alpha, \beta, \gamma\).

*Grape Muscari, three varieties.*

\[\text{Natural Order. Asphodelæ. Brown prodr. 274.} \]
\[\text{MUSCARI. Perianthium coloratum, ventricoso-tubulosum;} \]
\[\text{fauce coarctata, crenis sex brevissimis marginata. Stamina 6,} \]
\[\text{tubo medio inserta. Stigma 1. Capsula loculis sæpius} \]
\[\text{2-spermis.} \]

\[\text{M. botryoides, perianthiis globosis uniformibus; inferioribus} \]
\[\text{remotioribus, foliis strictis linearibus basi angustatis canal-} \]
\[\text{iculatis,} \]
\[\text{Muscari botryoides. Willd. enum. 1. p. 378. Link enum. 1.} \]
\[\text{p. 331. Hort. sub. lond. p. 73.} \]
\[\text{Hyacinthus botryoides. Willd. sp. pl. 2. p. 170. Pers. syn.} \]
\[\text{p. 283.} \]
\[\text{a. azureum, floribus azureis. Sky-blue Grape Muscari. fig. a.} \]
\[\text{b. pallidum, floribus pallidis. Pale-blue Grape Muscari. fig. c.} \]
\[\text{γ. album, floribus albis. White Grape Muscari. fig. b.} \]

**Root** bulbous, increasing rapidly by its numerous offsets. **Leaves** several, smooth, erect, linear, channelled, bluntish, narrowest at the base. **Scapes** generally 2 from the same bulb, erect, about the length of the leaves, smooth, round on one side, and flat on the other, slightly angular. **Flowers** in a crowded cluster, globular, all of the same form, lowermost farthest apart, nodding. **Bractes** 2, at the base of the peduncle, 1 on each side, very short, succulent. **Peduncles** cylindrical, shorter than the flowers, more than double the length of the bractes. **Perianthium** globular, mouth contracted, and terminated in 6 slight margi-
nated notches. **Stamens** 6, inserted in the middle of the tube; **filaments** widest at the base, and narrowing upwards; **anthers** cordate, incumbent, 2-celled. **Germen** trigonal. **Style** about the length of the stamens.

The three varieties represented in our figure are very desirable plants for adorning the flower-borders in Spring, where they may be planted in patches in conspicuous situations, either mixed together, or separate, according to the taste of the Cultivator. The pale blue variety is the least common, and, in our opinion, is the most beautiful; they all increase readily by offsets from the bulbs, and thrive well in a rich light soil, flowering in April, some time before *M. racemosum*.

Our drawing was taken from plants at the Nursery of Mr. Colvill; we also received specimens of the darkest blue and white varieties, from Mr. Milne, of the Fulham Nursery.

1. Magnified portion of the scape, showing the bractes at the base of the flowers. 2. Perianthium spread open, showing the insertion of the stamens. 3. Stamen detached. 4. Germen, Style, and Stigma, magnified.
CLAYTONIA sibirica.

Siberian Claytonia.


Perennial. Herbaceous. Roots tufted. Branches short, numerous, much crowded together. Leaves succulent, ovate, bluntish, deeply nervèd, smooth and glossy; lower ones petiolate, and attenuated down the petiole; upper ones, or those on the scape sessile, the two lower ones opposite. Petioles smooth, channelled on the upper side, dilated at the base, and sheathing the stem. Scapes axillary, declining, smooth and glossy, generally terminated with 2 racemes of flowers, one of them beginning to flower about the time the other appears. Racemes secund, or leaning to one side, drooping till the flowers expand, then becoming erect. Pediciles intermixed with the bracte like leaves, slender, smooth and glossy. Calyx 2-valved. Sepals cordate, concave, bluntish. Petals 5, bifid, of a bright lilac, streaked, and lightest at the edges,

A handsome little perennial plant, attaining but a few inches in height, and very desirable for ornamenting rock-work, or planting at the front of flower-borders; it may also be cultivated with advantage in small pots, and will continue to flower the greater part of the Summer; it prefers a light sandy soil, and may be increased by cuttings, which soon strike root if planted in a shady situation; it also produces seeds, by which a sufficient quantity may be raised.

**Drawn at the Nursery of Mr. Colvill, from a plant raised last year from seed, sent by Dr. Fischer, from the Botanic Garden at Gorenki.**

1. The 2-valved Calyx. 2. Petals spread open, showing the insertion of the Stamens. 3. Germin, Style, and Stigma.
LINUM alpinum.

Alpine Flax.


Herbae aut suffrutices; folia plurimorum alterna, pauciorum opposita; flores solitarii axillares aut varios oppositifolii, apice corymbosi aut spicati aut sparsi, in L. radiola, (Radiola millegrana,) 4-andri 4-styli. Genus a Caryophylleis distinctum staminibus basi monadelphis, nullo nec receptaculo fructus centrali nec seminis perispermo, foliis saxe alternis. Juss. gen. 303.


Perennial. Stems several, declining, smooth at the points, and rough at the base; slightly branched, from 5 to 9 inches in length. Leaves alternate, linear, smooth and glaucous, spreading or reflexed; lower ones much the shortest, and bluntest; upper ones longer, taper-pointed. Corymbus terminal, pendulous before the flowers expand, afterwards becoming erect. Peduncles alternating with the leaves, slender, cylindrical. Sepals 5, lanceolate, concave, bluntly rounded, but ending in a small point. Petals 5, unguiculate, obovate, of a light blue, tinged with purple, and darker
veins; claws hairy. *Stamens* connected at the base, hairy; *filaments* 10, 5 bearing anthers, and 5 sterile; sterile ones alternating with the others, very slender and filiform, and scarcely half the length of the fertile ones; *anthers* sagittate, 2-celled. *Styles* 5, slender, about double the length of the stamens. *Stigmas* 5, incumbent, shield-like, granular.

Our drawing of this pretty little plant, was taken at the Nursery of Mr. Colvill, King's Road, Chelsea; where it continues to flower nearly all the Summer. It is a neat little plant, and will thrive well on rock-work, or at the edge of flower borders, in a light sandy soil, in a dryish situation, and being of small growth, it requires but little room. It might also be cultivated with advantage in small pots. Being a native of Austria, it is quite hardy, and is more liable to suffer from damp than from cold; it may be increased from cuttings, taken off in a young state, and planted under a hand-glass, where they will soon strike root; it also ripens seeds, which should be sown as soon as gathered, and they will soon make nice young plants.

1. Calyx. 2. Petal. 3. The 5 Stamens connected at the base, alternating with 5 sterile filaments, and inclosing the Germen and 5 Styles. 4. The same split open, showing the 5 barren Filaments. 5. Germen. 6. Styles. 7. Stigmas.
ASARUM virginicum.

Virginian Asarabacca.


Asarum. Perianthium coloratum, urceolatum, 3-s. 4-fidum, germini insidens. Stamina 12 brevia, germini imposita; antheræ mediis filamentis adnatae. Stylus brevis; stigma stellatum 6-partitum. Capsula 6-locularis.


Perennial. Root tufted. Branches very short, 1-leafed, 1-flowered. Leaves roundly cordate, obtuse, entire, smooth and shining, strongly veined underneath, and marked with white on the upper side, similar to Cyclamen vernum, or persicum. Petiole long and slender, furrowed on the upper side, and convex on the lower. Bractes 2, cucullate, fringed, one double the size of the other. Flowers on short footstalks. Peduncle cylindrical, 1-flowered, smooth, or slightly pubescent. Perianthium short, campanulate, trifid, smooth on the outside, of a pale brown colour, segments straight, obtuse; inside dark purple, rugged and plaited below the mouth; segments spotted with white, pubescent. Stamens 12, short, every other one longest, seated on the germen. Style scarcely any. Stigma stellately 6-parted, segments
bluntish, slightly curved inwards, each having a large pale gland, or protuberance, about half way up.

According to Pursh, the present curious species grows in shady rocky woods, near Virginia and Carolina, flowering in May; with us it blooms much earlier, as our drawing was taken at the Nursery of Mr. Knight, King's Road, the middle of April; and it had then been in flower a considerable time, although the season was very backward; but it continues in flower a long time, as some of them are still remaining, now, about the middle of June. It thrives best in a peat soil, in a shady situation; in such it was cultivated at Mr. Knight's Nursery, where there was a large clump of it entirely covered with bloom; the flowers, though not so splendid as some others, are pretty, and very curious; and as they continue a long time, the plant is well worthy a place in all curious collections. It may be grown in rock-work, if in a shady situation, and the ground should then be made with peat; it is readily increased by dividing at the root.

1. Perianthium spread open, to show the plaited inside, and the insertion of the stamens inclosing the stellately 6-parted stigma, with the large gland on the middle of each segment. 2. Stamens spread open, every other one shortest, seated on the germen. 3. Back view of a detached stamen. 4. Germen, with the short fleshy style, and stellated stigma split open, to show the glands on the inside, all magnified.
PÆONIA paradoxa β, fimbriata.

*Double fringed Pæony.*

**Natural Order. Ranunculaceæ. DC. Reg. veg. syst. nat. 1. p. 127.**

*Div. II.* Ranunculaceæ spuriæ, seu Antheris introrsis.

**PÆONIA.** Calyx 5-sepalus, sepalis subfoliaceis inaequalibus orbiculatis persistentibus. Petala 5 (interdum 6-10) orbicularia subequalia ungue destituta. Stamina plures, antheris introrsis; discus carnosus ovaria cingens; ovaria 2-5 grossa; stigmata sessilia crassa falcata bilamellata crispa; capsule (folliculive) 2-5, ovatae, apice stigmatate superæ, 1-loculares, polyspermae, sutura longitudinali superne dehiscentes. Semina subglobosa nitida; umbilicus promiinus; albumen carnosum; embryo in basi locatus.

Herbas aut rarius suffrutices; radices perennis colo crasso subhorizontali, fibris fasciculatis extus nigricantibus aut omni bus aut alis cylindricis, alteris in tubercula ovata cylindraceave incrassatis; vaginæ squamosæ ad basim caulis; gemmæ radicales squamis petiolarisibus constantes; folia alterna petiolata bis ternatim secta; flores terminales, ampli, purpurei rosei aut albi (nunquam nec caerulei nec lutei,) facile multiplices. DC. syst. 1. p. 386-7.

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P. paradoxa, foliolis multipartitis obtusis undulatis, subtus glauco-pilosis, germinibus adpressis tomentosis. **Anderson in Linn. trans. v. 12. p. 280, cum synon.**


a. simpliciflora, caule omnino glabro, floribus 8-petalis.

β. fimbriata, caule vix pilosiusculo, floribus plenis. **Anders. loc. cit.**


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Roots tuberous, slenderer than in most species, here and there knotted, spreading. Stem from a foot to 18 inches in height, simple, smooth, or slightly pubescent, furrowed. Leaves biternate; lower ones
largest, and most divided; upper ones gradually smaller; segments ovate, or oblong, often bifid, or trifid; sometimes simple, bluntish, the upper ones a little pointed, flat, or slightly undulate, upper side naked, uneven, of a bright green; under side thickly clothed with a whitish woolly pubescence. Petioles smooth, slightly decurrent, swollen at the base. Sepals 5, smooth, unequal, outer ones green, scarcely half the size of the inner ones, nearly round, pointed; inner ones nearly orbicular, retuse, green on the under side, and tinged with red on the upper. Flowers double, of a reddish purple. Petals 8 on the outside, obovate, slightly retuse, much veined; edges a little uneven, surrounding the numerous stamens that are transformed into narrow petals, with here and there a broad one intermixed. Pollen produced round the edges of some of these of a yellow colour. Germens 2, erect, close pressed, thickly clothed with a white dense tomentum. Styles 2, flesh-coloured, hooked or reflexed.

This beautiful variety of P. paradoxa had generally passed in our Nurseries for a variety of P. humilis, until its species had been determined by the late Mr. Anderson, and Mr. Sabine, in the Horticultural and Linnean Transactions, where a masterly account of the whole that were known at that time in our gardens is given, with their synonyms.

The present variety is readily distinguished from the double ones of the other species, by its humbler growth, and pubescent leaves; it thrives well in the common garden soil, and is increased by dividing at the root. Our drawing was taken at the Nursery of Messrs. Whitley, Brames, and Milne, of the Fulham Nursery.

1. Calyx showing the unequal sepals. 2. Woolly Germens, crowned with the hooked fleshy style. 3. Stamen partly changed to a petal, showing the pollen on its sides.
GLOBULARIA vulgaris.

Common Globularia, or Blue Daisy.

Natural Order. GLOBULARINÆ. Link enum. 1. p. 123.
GLOBULARIA. Calyx tubulosus 5-fidus persistens. Corolla tubulosa, 5-loba, inaequalis; laciniiis 2 superioribus minimis. Stamina 4, tubo inserto (laciniiis alterna?) Germen superum; stylos 1; stigma 1. Semen 1, calyce connivente tectum. Flores aggregati in calyce communi polyphyllo hemisphaerico supra receptaculum commune paleaceum.

Caulis herbaceus simplex, apice 1-florus; folia radicalia saepe spatulata, emarginato-acuminata; caulina parva aut subnulla. Discrepat G. Alysum calyce communi turbinato plurimum imbricato, corolla ligulata tridentata, stigmate 2-fido, caulic frutescente ramoso, habitu Proteæ; an genus diversum? Globularia a Monopetalis hypogynis et idéo à Lysimachiis distinctissima semine nudò et florum dispositione et habitu, indè Staticæ exùs similis non tamen affinis, similior forte Proteis sed corollata, unica in suo ordine nondùm cognito, huic tantùm viciniori nunc adjuncta. Juss. gen. 97.

G. vulgaris, caule herbaceo, folii radicalibus tridentatis; cauli-nis lanceolatis. Willden. sp. pl. 1. p. 540.

Root perennial. Branches numerous, short, tufted. Leaves smooth and glossy; lower ones petiolate, ovate, oblong, or spatulate, obtuse, generally terminated with 3 short bluntish teeth; stem-leaves scattered, small, sessile, lanceolate, or oblong, entire, acute. Flower-stem from 4 to 6 inches high, furrowed with numerous shallow channels. Flowers in a flattish head, about
the size of a large cherry, of a bright blue. *Receptacle* chaffy. *Scales of the chaff* fringed, about the length of the calyx. *Calyx* tubular, hairy, 5-cleft, persistent; segments taper-pointed, fringed. *Corolla* tubular, 5-parted; segments unequal; 2 upper ones very small and slender. *Stamens* 4, inserted in the tube, and alternating with the larger segments. *Style* 1, terminated with an emarginate stigma.

The present beautiful plant is an old inhabitant of our gardens, though it is now very rarely met with; and we had never before seen it growing so luxuriantly, and flowering so abundantly, as we saw it this Spring, at the Nursery of Mr. Lee, at Hammersmith; it was cultivated in a bed of peat soil, several plants of it growing together, which made a fine appearance; and from one of them our drawing was taken. Being a short tufted plant, it might be grown with advantage on rock-work, but requires a light soil; it will also thrive well in pots, and may be increased by seed, or dividing at the root.

1. The chaffy Receptacle. 2. Scale of the chaff, fringed. 3. Calyx and Corolla. 4. Calyx divested of the corolla, and showing its fringed segments. 5. Corolla split open, showing the insertion of the stamens. 6. Germen, Style, and cleft Stigma, all magnified except the receptacle.
LYSIMACHIA verticillata.

Whorled Loose-strife.


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*L. verticillata,* foliis verticillatis oblongo-lanceolatis ovatisque petiolatis molli-pubescentibus, pedunculis axillaribus unitriflorisque, petalis ovatis acutis glandulosa-ciliatis, caule pubescent.


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**Root** perennial, turfy. **Stems** numerous, springing from the same root, from 1 to 2 feet high, simple, erect, channelled, thickly clothed with unequal woolly hairs. **Leaves** in whorls, 4 or 5 in each whorl; lower ones generally ovate, a little unequal at the base; upper ones oblong, or lanceolate, slightly undulate, rugose, bluntish, many nerved underneath, and channelled above; thickly clothed on both sides with short soft hairs. **Petioles** more than 3 times shorter than the leaves, deeply channelled above, and rounded below; winged, the wings continuing from the leaf down the stalk to the next leaves. **Stipules** none. **Peduncles** from the axils of the leaves, from 1 to 3 flowered, thickly clothed with unequal spreading hairs. **Calyx** 5-parted, about half the length of the petals; segments narrowly lanceolate, concave, acute, g
Corolla rotate, of 1 petal, deeply 5-parted; segments ovate, acute, glandularly ciliate, and covered on both sides with a short glandular pubescence, of a palish yellow, with a brown circle at the base. Filaments 5, connected at the base; the upper ones rather the longest, all glandularly pubescent, and all bearing perfect anthers. Anthers slightly incumbeat, cordate, 2-celled, bursting in front to discharge the pollen. Style green, smooth and shining, scarcely as long as the filaments; about the length of the calyx. Stigma simple.

This plant is related to L. vulgaris, but differs in its root being tufted, not creeping, the stem being simple, and altogether more pubescent; its leaves shorter and blunter, its calyx 3 times the length, and the corolla glandularly ciliate, besides other slighter differences. It is a very ornamental plant, beginning to flower in June, and continuing in bloom till late in Autumn; growing in strong ground to the height of 18 inches; in poorer soil it seldom exceeds a foot. It will, also, thrive very well in rock-work; and being a native of Hungary and Tauria, it is quite hardy. It is readily increased by dividing at the root; it may also be raised from seeds, which succeed best if sown as soon as gathered. Drawn at the Nursery of Mr. Colvill, last October.

1. Calyx.  2. Corolla split open, showing the stamens connected at the base.  3. Stamens divested of the corolla, all joined at the base.  4. Germin, Style, and Stigma, all slightly magnified.
**OROBUS albus.**

*White-flowered Bitter-Vetch.*

_Natural Order._ **Leguminosæ.** _Juss. gen._ 345.


O. albus, foliis bijugis ensiformibus petiolatis, stipulis lanceolatis semisagittatis, caule simplici superne alato.


**Root** tuberous, branching. **Stems** several from the same root, simple, erect, slender, triquetrous, furrowed, smooth and glossy, from 1 to 2 feet high. **Leaves** pinnate, producing 2 pair of leaflets, or rarely 3 pair on the lower part of the stem; *leaflets* short-petioled, opposite or alternate, linear or ensiform, acute, smooth; on the upper part of the stem, about 3 inches long; on the lower part, about half the length. **Petioles** wide, deeply channelled on the upper side, and keeled on the lower. **Stipules** semisagittate, taper-pointed, joined to the base of the footstalk; on the lower part of the stem ovate, and on the upper part lanceolate. **Racemes** short, axillary, the flowers all leaning to one side. **Peduncles** very long and slender,
a little flattened, slightly furrowed. Pedicles scarcely as long as the calyx, slender, all bent to one side. Calyx smooth, tubular, blunt at the base; limb 5-toothed; teeth subulate, unequal; the upper ones shortest and deepest. Corolla papilionaceous, white, slightly tinged with rose; vexillum obovate, blunt, slightly emarginate; alae, or wings, about the length of the vexillum; spoon-shaped, eared on the inside, unguiculate; keel shorter than the wings, of a greenish white, curved upwards. Stamens 10, diadelphous, 9 connected into a tube, the other distinct. Pod flat, many-seeded, terminated with a green pointed style, and fringed stigma.

Our drawing of this handsome plant was taken at the Nursery of Messrs. Whitley, Brames, and Milne, at Fulham; we also received specimens of it from Mr. Knight, of the King's Road. It thrives well in a rich light soil; and, when grown strong, attains the height of 2 feet, flowering in May and June, and ripening its seeds in July, which should be sown as soon as ripe; they will then make flowering plants for the next season, if properly treated. They may either be sown in pots, or in the open ground; if in the latter, it should be a sheltered situation, and free from weeds; they may also be increased, but sparingly, by dividing at the root.

1. Calyx. 2. Vexillum. 3. Alae, or Wings. 4. Carina, or Keel. 5. Stamens, with the style exserted just above them. 6. The single distinct Stamen. 7. The other 9 connected into one piece about half way up. 8. The young Seed-pod, terminated with its Style.
VERONICA latifolia.

Broad-leaved Speedwell.


Sect. I. Stamina duo antherifera, Capsula bilocularis.


V. latifolia, racemis lateralibus longissimis, foliis cordato-ovatis sessilibus rugosis obtuse serratis, caule erecto, segmentis calycinis quinis.


Root perennial, tufted. Stems erect, simple, thickly clothed with a dense woolly pubescence, from 18 inches to 2 feet high. Leaves opposite, cordately ovate, sessile, clasping the stem, rugose or wrinkled, bluntish, and bluntly serrated, hairy on both sides, of a dark green colour; upper leaves narrower and more pointed. Racemes lateral, very long, many flowered, generally 4 on each stalk. Flower-stalks cylindrical, villous. Bractes subulate; lower ones about the length of the peduncle; upper ones about half the length. Calyx deeply 5-cleft, segments unequal, taper-pointed, back
ones nearly double the length of the middle ones; front one very short and small. *Corolla* 4-cleft, of a bright blue colour, segments unequal; the upper one largest, cordately ovate; middle ones rather less; lower one narrowest, and more pointed. *Stamens* 2; filaments inserted in the mouth of the corolla, scarcely as long as the segments; anthers incumbent. *Capsule* nearly orbicular, emarginate, the septum passing down through the middle. *Style* smooth, about the length, or a little longer than the stamens. *Stigma* capitate.

The present ornamental plant is a native of Austria; and succeeds well in our flower borders in the open ground, flowering from May to July; we think it one of the handsomest species of the genus; and it will thrive in any soil, or situation; but the richer the soil is, the stronger it will grow, and the flowers will be more numerous; though it will succeed very well in a small pot, if it be well supplied with water. It is readily increased by dividing at the root; or by seeds, which ripen plentifully. Our drawing was taken at the Nursery of Mr. Colvill, in June last.

1. Calyx split open, to show the 5 segments, and the bracte at the base of the footstalk. 2. Corolla split open, showing the insertion of the 2 stamens. 3. Ger-
men, Style, and capitate Stigma. 4. Capsule, all natural size.
PHLOMIS laciniata.

Jagged-leaved Phlomis.

Sect. II. Stamina 4-fertilia, antheris omnium v. duorum completis.

A. Calyx regularis 5-fidus v. 5-10-dentatus.


**Root** perennial, herbaceous. **Stem** erect, thickly clothed with a woolly pubescence, about 3 feet high. **Leaves** near the root, petiolate, alternately pinnate, downy; **leaflets** lanceolate, more or less lacinate; segments unequal, obtuse, sometimes toothed; **stem-leaves** sessile, pinnatifid or lacinate, smooth and shining on the upper side, and downy on the lower; segments obtuse, unequally toothed with blunt teeth. **Flowers** whorled in a long spike. **Bractes** subulate, clothed with long woolly hairs. **Calyx** tubular, narrowest at the base, 5-sided, angles terminated with 5 short subulate teeth, densely clothed inside and out with long shaggy wool. **Corolla** tubular, 2-lipped, woolly; **helmet** keeled, compressed, emarginate, densely fringed, of a pale sulphur colour; **lower lip** very broad, keeled, 3-lobed; upper lobe undulate, of a deep yellow, edged with brown; side-lobes flat, of a
pale yellow. *Stamens* 4, ascending, the 2 uppermost rather longest, inserted in the mouth of the corolla, and joined at the base; the 2 lower ones shorter, inserted in the tube below the mouth; *filaments* hairy; *anthers* incumbent. *Seeds* 4, smooth at the base, points bearded. *Style* smooth, about the length of the stamens. *Stigma* unequally forked.

The present rare and handsome species is a native of the Levant; and, although it has been in our gardens ever since the year 1731, it is now seldom to be met with. For the opportunity of giving this figure, we are obliged to Messrs. Whitley, Brames, and Milne, at whose Nursery, at Fulham, it flowered luxuriantly, this Summer, the plant having attained the height of 3 feet. We suspect one reason of its present scarcity to be, its suffering from too much moisture in Winter; it is, therefore, requisite to keep some plants of it in pots, that they might be protected under frames in moist or very cold weather. The best method of increasing it is from seeds, which will ripen plentifully, if some pollen be rubbed on the stigmas when in full bloom; as soon as gathered, they should be sown in pots, and preserved under a frame in Winter, and they will make flowering plants for the next Summer.

1. Calyx. 2. Corolla split open, showing the insertion of the stamens. 3. Stamen detached. 4. The 2 upper Stamens joined together, about half way their length; the upper parts distinct. 5. Style and Stigma. 6. The 4-bearded Seeds.
CORONILLA iberica.

Iberian Coronilla.

Natural Order. **Leguminosæ.** Juss. gen. 345.

**Div. VIII. (Papilionaceæ.)** Corolla irregularis papilionacea. Stamina decem diadelpha. Legumen articulatum articulis monospermis. **Juss. gen. 361.**

**CORONILLA.** Calyx 2-labiatu; suprà 2-dentatus dentibus junctis: infrà 3-dentatus. Vexillum vix alis longius. Lomentum teres, articulatum, rectum.

Herbæ aut Suffrutices; folia impari-pinnata, stipulis à petiolo distinctis, pedunculi axillares et terminales, umbellatin multiflori; legumen in pluribus 2-valve sub 1-loculare vix articulatum, in Coronilla Th. subcylindricum seminibus oblongis, in Securidaca Th. latius compresso-planum apice subulatum seminibus subquadratis, tenue subulatum seminibus cylindricis in Emero Th. cujus praterià caulis frutescens et petala unguiculata et unguis vexilli basi 2-callis. **Juss. gen. 361.**

C. iberica, herbacea procumbens, foliolis undenis cuneato-obcordatis sericeo-pubescentibus, stipulis cuneatis ciliatis, umbellis 6-8-floris.


**Root** perennial. **Stems** numerous, prostrate, spreading round in all directions, slightly angular, pubescent. **Leaves** pinnate; **leaflets** generally 11, cuneate or obcordate, covered on both sides with a silky pubescence, margins fringed. **Petioles** channelled on the upper side, and convex on the lower. **Stipules** short, cuneate, fringed. **Peduncles** cylindrical, pubescent, bearing umbels of from 6 to 8 flowers. **Involucre** of several very small pointed teeth. **Pedicles** scarcely
as long as the calyx, recurved. Calyx 2-lipped; upper lip keeled, composed of 2 flat teeth joined together, fringed at the point with numerous long white hairs; lower lip toothed with 3 sharp pointed teeth, also fringed. Corolla papilionaceous, of a bright yellow colour; vexillum about the length of the wings, unguiculate, keeled, emarginate; alæ or wings obovate, unguiculate, eared on one side; keel about the length of the wings, or scarcely as long, bifid at the base, point acute, curved inwards. Stamens 10, scarcely diadelphous, the back stamen being joined to the others more than half way up; filaments all distinct at the points; anthers incumbent. Style falcate, gradually tapering upwards. Stigma capitate.

For the opportunity of giving a figure of this beautiful plant, we are indebted to Mr. Anderson, Curator of the Garden belonging to the Apothecaries' Company, at Chelsea, where it is cultivated in the open ground, and spreads round to some distance, making a fine appearance with its numerous golden yellow flowers; it differs from the others of the genus, by its stamens being all connected at the base.

Being a native of Iberia, it is likely to succeed well in the open borders; but it will be well to keep some plants of it in pots, that they may be protected in a frame in Winter, as it may probably suffer from too much moisture. It is readily increased by seeds, which ripen freely.

1. Calyx. 2. Vexillum. 3. One of the alæ, or wings. 4. Keel. 5. The 10 stamens joined at the base, the back one parted from the others about half way down. 6. Germen, terminated with the Style, and small capitate Stigma.
SALVIA Tenorii.

Tenore's Sage.

Sect. I. Stamina 2 fertilia; v. dum 4 fertilia. Antheræ omnium dimidiatae.

S. Tenorii, foliis oblongis subsinuatis inaequaliter crenatis rugosis reticulato-venosis; summis amplexicaulibus acutis, verticillis subnuditis, corollis galea hirsuta falcata, calycibus sulcatis.

Salvia Barrelieri. Tenore. Schrank. Hort. monac. 1. t. 5.

Root perennial. Stems from 1 to 2 feet high, not much branched; branches bluntly quadrangular, thickly clothed with unequal spreading hairs. Leaves near the root petiolate, oblong, slightly jagged, unequally crenate, bluntly pointed, very rugged and uneven, reticulately veined, hairy on both sides; upper leaves clasping the stem, or sometimes with very short footstalks, cordate, acute, more deeply jagged. Petioles flat on the upper side, and convex on the lower, hairy, as are the peduncles and calyx. Flowers growing in whorls, about six in each, of a beautiful dark blue, tinged with purple. Bractes small, cordate, taper-pointed, fringed. Peduncles short and slender.
about half the length of the calyx. *Calyx* campanulate, hispid, deeply furrowed with numerous channels, 2-lipped; upper lip terminated in 3 short pointed teeth; lower lip bifid. *Corolla* ringent, hairy; helmet narrow, and very much falcate; lower lip 3-lobed, terminal lobe cucullate, crenate, side ones small and narrow. *Stamens* 2, fertile, on short stems; *filaments* ascending; *anthers* linear, incumbent; *sterile stamens* 2, gland-like, on a short footstalk. *Seeds* 4, smooth, of a dark brown colour. *Style* long and slender, terminated with an unequal bifid stigma.

This handsome plant was raised last year at the Nursery of Mr. Colvill, from seed received from Dr. Fischer, then at the Botanic Garden at Gorenki, under the name of *S. dumetorum*; but we have no doubt but it is the species for which we have given it, and it is cultivated by Mr. Anderson as such. It makes a fine show in the flower borders, being covered with beautiful blue flowers in May and June. Our plants grew nearly 2 feet high; perhaps when it gets stronger, it will attain a greater height; it thrives well in the common garden soil, and would succeed very well in rock-work. Seeds of it ripen freely, so that any quantity of them may soon be raised.

1. Calyx. 2. Corolla split open, to show the insertion of the stamens. 3. Stamens detached from the corolla. 4. Style and unequal divided Stigma.
HYOSCYAMUS agrestis.

Hungarian field Henbane.


H. agrestis, foliis amplexicaulisibus angulato-dentatis glabriusculis, floribus sub-sessilibus, corollis reticulato-venosis, calycibus angulatis, caule villos o ramoso.
Hyoscyamus agrestis. Rem. et Schult. syst. 4. 308. Link enum. 1. p. 177.

Annual. Stem erect, branching, from a foot to 18 inches in height; branches spreading, thickly clothed with long villous hairs. Leaves clasping the stem, ovate, acute, angular, or toothed with large pointed teeth, smoothish, nerves villous underneath. Flowers all leaning to one side, nearly sessile. Peduncles very short, longest on the lowermost flowers, villous. Calyx tubular, 5-toothed, inflated, angular, thickly clothed with long villous hairs; mouth spreading. Corolla tubular, mouth spreading, ringent, 5-cleft, of a brownish yellow, reticulately veined with violet-coloured veins, the lower part of a dark-brownish purple; segments unequal, obtuse. Stamens 5, inserted in the tube; filaments densely clothed at the base with rigid spreading hairs, the upper part smooth and naked; anthers incumbent. Ger men smooth and shining. Style hairy, about the length of the stamens. Stigma capitate, fimbriate.
We first observed plants of this species, about seven years back, at the Nursery of Messrs. Whitley and Co. at Fulham; where it was raised from seeds given them by a friend, who collected them on the Carpathian Mountains; it is nearly related to our British species H. niger, but differs in that being biennial; the present is annual. H. pallidas is also allied to it, but its flowers are of a pale yellow, and not netted. It only requires to be sown in the open ground; the plants when come up, must be thinned out, so as to be about 6 inches apart, or else they will be drawn up by being too close together, and the plants will not be so handsome, or flower so well. If the seeds are sown in Autumn, it will bloom early in Spring; if sown in February, they will flower later; some may be sown as late as May or June, to flower late in Autumn; like other annuals, it is a good plan to sow them at different seasons, so as to have a good succession of flowers.

Drawn at the Nursery of Mr. Colvill, where the plants grew about 18 inches high, and produced plenty of seeds.

1. Calyx. 2. Corolla split open, to show the insertion of the stamens. 3. Stamens detached, showing the hairy filament. 4. Germen, Style, and fringed capitate Stigma.
HEMEROCALLIS disticha.
Fan-like Day-Lily.

Natural Order. HEMEROCALLIDÆ. Brown prodr. 295.
HEMEROCALLIS. Perianthium campanulatum; tubo cylindrico. Stamina 6, declinata. Stigma parvulum, simplex, villosulum.

Herbae perennes; rhizoma fibris fasciculatis carnosis crassis nunc fusiformi-protuberantibus; folia radicalia plura-numerosa a plano obversa bifaria, ambientiave, lorato-attenuata, ab inferius convoluto-equitantibus canaliculato-explicantia, nunc petiolata lamina nervoso-costata; caul is teres, bractea vel spatha sterili nunc folio stipatus, simplex; racemus pauci-multiflorus, corymbi-vel thyrsiformis, vel nunc spicatim effusus; pedicelli ramiformes stricti, gracilisve flexilis; flores majusculi, speciosi.

Plurimum Lilij, multum Agapanthi habet. Ker Botan. magaz. 1433.

H. disticha, foliis linearibus carinatis distichis, perianthium lacinis lanceolatis undulatis acutis patentibus reflexis; tribus interioribus latioribus, nervisque petalorum exterioribus ramosis.

Hemerocallis fulva. Thumb. jap. 142. excl. syn. Linn.

Perennial, producing numerous suckers from the base. Leaves distichous, or fan-like, linear, bluntly keeled on the lower side, and deeply channelled on the upper, elegantly striated, smooth and glossy; when full grown, nearly a yard in length. Flower-stem proceeding from the side of the shoot, much shorter than the leaves, (in our specimen,) about 1 foot 9 inches in height, forked at the point, slightly angular upwards, a little twisted, and slightly covered with a whitish powder, which comes off as soon as touched; from the stem is produced 3 bracte like leaves or sterile
spathes, from 2 to 3 inches in length, sheathing the stem, their margins involute. Scapes forked. Racemes 2, (in our specimen,) each producing 6 flowers, 1 or 2 opening at the same time. Bracte short, at the base of each flower, cordate or ovate, pointed, membranaceous, sheathing the stem; upper ones shortest, and broadest. Peduncle very short, decurrent down the stem. Perianthium campanulate, tubular; tube about 1 inch and a half in length, cylindrical, pale yellow; segments 6, lanceolate, undulate, acute, spreading, about 3 inches and a half long, reflexed about half their length, of a light brown orange colour; inner petals broadest. Stamens 6, inserted in the mouth of the tube; filaments long, declining, irregularly bent, with here and there a protuberance on them. Anthers incumbent, slightly attached to the filament. Germin smooth, obsolesely 3-sided. Style about the length of the stamens, with some irregular protuberances towards the point. Stigma simple, slightly bearded.

Our drawing of this beautiful plant was taken at the Nursery of Messrs. Allen and Co., King's Road, where it produced 2 scapes of flowers; one, after the other was over. It is seldom to be met with in flower in our collections, and may therefore be considered a great rarity. We have been acquainted with it for several years, but never saw it flower before; perhaps the reason is, that we have, generally, seen it cultivated in the open ground; the present subject was grown in a pot, by which means it grew weaker, and, perhaps, that occasioned its flowering.

It is a native of China, but grows freely in the open ground, in the common garden soil; and propagates readily from the suckers, which it produces in abundance.

1. The Tube split open, showing the 6 stamens inserted in its mouth. 2. Germin. 3. Style, showing some protuberances towards the point. 4. The bearded Stigma.
PHLOX triflora.

Pubescent-stemmed Lychnidea.


Herbae; folia opposita simplicia, floralia interdum alterna; flores subcorymbosi terminales. Habitus Saponarieæ, sed flos 1-petalus. Juss. gen. loc. cit.


Phlox carneæ. Botan. magaz. 2155.

Root perennial. Stems branching, nearly erect, a little flexuose, from a foot to 18 inches high, thickly clothed with a dense woolly pubescence, upper part obsoletely quadrangular; branches spreading, each crowned with a corymbus of flowers. Leaves short-petioled, entire, lanceolate, acute, broad at the base, smooth, and dotted all over with innumerable minute dots; lower ones opposite, those near the flowers sometimes alternate. Flowers in a loose spreading corymbus, of a pale lilac colour; branches of the corymbus mostly 3-flowered. Peduncles smooth, seldom as long as the calyx. Calyx deeply 5-cleft, segments linear, keeled, and taper-pointed, all joined by a thin membrane at the base. Corolla tubular;
tube about twice the length of the calyx; limb 5-parted, segments roundly obcordate, slightly undulate, at last reflexed. *Stamens* 5, unequal, inserted in the tube, one just below the mouth, and projecting a little beyond it, 2 a little lower down, and the other 2 more than one third of the way down. *Filaments* very short. *Anthers* sagittate. *Pollen* yellow. *Germen* smooth, of a dark green. *Style* smooth, filiform. *Stigma* trisid, segments erect, or slightly spreading, obtuse.

Our drawing of this beautiful species was taken at the Nursery of Mr. Colvill, where it continues to flower from July to October, if the weather continues mild; like most of the species of this genus, it is a native of North America, and contributes greatly to enliven our flower borders, the latter part of Summer. It succeeds well in the open ground, in the common garden soil, growing to the height of a foot or 18 inches, according to the strength of the plant, or richness of the soil. Cuttings of it planted under hand-glasses, strike root readily; when rooted, they may either be potted, or planted in the ground; the sooner in Spring the cuttings are put in, the stronger the plants will be; and if planted early, many of them will flower the same season.

1. Calyx. 2. Corolla, with its tube split open, to show the insertion of the stamens. 3. Stamen detached. 4. Style, terminated with 3 Stigmas.
LINARIA bipartita.

Cloven-flowered Toad-flux.


Sect. II. Stamina 4 antherifera.

LINARIA. Calyx 5-partitus. Corolla basi calcarata; faux palato clausa. Capsula ventricosa, bilocularis, valvata v. dentata; dissepimentum membranaceo, medio seminifero.

Folia sæpius alterna, in quibusdam inferiora opposita aut verticillata; flores axillares, aut sæpius bracteati spicati terminales. Species quaedam palato destitutæ; quædam interdum, facultatione hybridæ, corollis onustis regularibus (Peloria L.) 5-andris, basi 5-calcaratis, limbo 5-lobis, interea non fructifera, sed taleis propagandæ. Juss. gén. 120.


Root annual. Stem erect, branching; branches erect, nearly cylindrical, smooth, and glossy. Leaves linearly lanceolate, acute, concave, slightly pubescent, glaucous; lower ones opposite; upper ones alternate. Racemes long, erect, flowers rather distant from each other. Bractes cordately lanceolate, taper-pointed, with red margins. Pedicles slender, longer than the bractes. Calyx 5-parted nearly to the base; segments lanceolate, acute, keeled; margins red and transparent. Corolla tapering into a long sharp spur at the base, mouth closed; helmet erect, 2-parted, lobes ligulate,
obtuse; lower lip 3-lobed, the middle lobe smallest, side ones rounded and spreading. _Flowers_ varying from a bright blue purple to a light purple, and variously marked with yellow. _Stamens_ 4, inserted in the base of the corolla, the 2 upper ones shortest; _filaments_ smooth; _anthers_ incumbent. _Style_ smooth, shorter than the stamens. _Stigma_ bifid, points curved inwards towards each other.

A very handsome hardy annual, which requires no particular care, as the seeds may be sown in the open ground, where they are to remain, and only require to be kept clean from weeds; it seldom exceeds a foot in height, but branches a good deal, so that the plants should not grow too close together; the colour of the flowers vary considerably on different plants, some being nearly blue, others more inclining to purple, and some are nearly yellow; if the seeds are sown the latter end of March, or beginning of April, the plants will be more forward and stronger than those that are sown later in the season; and if the weather be not too dry, they will continue to make young shoots, and flower all the Summer.

Drawn at the Nursery of Mr. Colvill. A native of Barbary, and flowers from June to October.

1. Calyx. 2. Front view of the Corolla. 3. The same spread open, to show the insertion of the stamens. 4. Stamen. 5. Germin, Style, and bifid Stigma.
VERBASCUM pyramidatum.

Pyramidal Mullein.

Natural Order. SOLANEÆ. Juss. gen. 124.
Sect. I. Pericarpium capsulare.


V. pyramidatum, foliis nudiusculis; inferioribus oblongis basi attenuatis: superioribus cordatis acuminatis subsessilibus, racemis paniculatis, floribus sparsis subsolitariis, filamentis omnibus barbatis. Willd. enum. 1. p. 224.

Biennial. Stem erect, from 5 to 3 feet high, much branched; branches forming a pyramid, lower ones very long, putting out other branches from the bottom; upper ones shorter and simple, all slightly decurrent, furrowed, very downy. Leaves reticulately veined, a little rugged, smooth and shining, scarcely pubescent; lower ones oblong, slender at the base, with a short footstalk, sometimes 18 inches in length, unequally jagged, and toothed with large bluntish teeth; gradually lessening in size up the stem; at length cordate, sessile, acuminate, more or less jagged or toothed. Racemes very long, branched. Flowers scattered, generally solitary, of a light yellow.
Bracte 1, at the base of each pedicle, lanceolate, taper-pointed, slightly fringed, lower ones a little longer than the calyx, upper ones not so long. Pedicles scarcely as long as the segments of the calyx, very downy. Calyx 5-parted, segments unequal, some ovate, others lanceolate, acute. Corolla rotate, spreading, 5-parted; laciniae unequal, the 2 upper ones smallest and narrowest; the lower one largest and broadest. Stamens 5, inserted into the base of the corolla, the upper ones shortest; filaments smooth and naked at the base, of an orange colour, upper part densely bearded with violet-coloured villous hairs; anthers reniform; pollen orange-coloured. Style smooth and glossy. Stigma capitate, villous.

A fine stately biennial, native of Mount Caucasus. Drawn at the Nursery of Mr. Colvill, where it was raised last year from seed sent by Dr. Fischer. In rich soil, it will attain the height of 7 or 8 feet, of a pyramidal form; and being of strong growth, it should be kept at the back of the flower borders. If the seeds are sown as soon as ripe, the young plants will come up and flower the next season. It appears to the greatest advantage singly, as its pyramidal shape is then better seen. Seeds ripen in abundance, by which any quantity may be raised.

1. Calyx. 2. Corolla spread open, showing the insertion of the stamens at the base, alternating with the segments of the corolla. 3. Stamen detached. 4. Germin, Style, and Stigma.
NEMOPHILA phacelioides.

Phacelia-like Nemophila.

Natural Order. HYDROPHYLLÆÆ. Brown.


Root biennial? or, perhaps, annual? Stems succulent, erect, much branched; branches forked, acutely triangular, occasioned by the decurrent leaves, having 3 flat, or rather convex sides; angles hairy, the hairs recurved. Leaves alternate, pinnatifid, slightly hairy, succulent, of a light green colour; segments oblong, oblique, some bluntish, others acute, finely ciliate; lower ones distant, more or less lobed. Petioles shorter than the leaves, decurrent down the stem, concave on the upper side, and convex on the lower, ciliate, with a fascicle of long white hairs at the base. Peduncles solitary, cylindrical, tapering upwards, 1-flowered, sometimes opposite to the leaf, more frequently on one side, sometimes axillary, or a little above it, smooth, or with here and there a hair scattered on it. Calyx inferior, persistent, 10-cleft; segments oblongly-lanceolate, acute, ciliate, every other
one several times largest; 5 larger ones erect, or spreading, their margins recurved; 5 smaller, flat, reflexed. Corolla campanulate, densely bearded at the mouth, limb 5-cleft, laciniae oblong, obtuse, slightly emarginate, veined with numerous branching veins. Nectary 10 small purple hollows, surrounding the mouth of the tube. Stamens 5, scarcely half the length of the corolla; filaments smooth, inserted in the base of the tube; anthers incumbent, sagittate and straight before bursting; afterwards burst on each side, and becoming lunular; pollen white. Germin densely hairy. Style erect, very hairy at the base, and smooth upwards. Stigma bifid, ending in two blunt simple points.

A very beautiful hardy biennial? or, perhaps, annual? native of North America, and lately introduced by John Walker, Esq. of Southgate, and kindly communicated by him to Mr. Colvill, at whose Nursery our drawing was taken. It belongs to the Natural Order Hydrophyllae of Mr. Brown, to which, also, belongs Hydrophyllum, Phacelia, and Ellisia, and a new polysperous genus, described by Mr. Brown under the name of Eutoca Franklinii; the above genera have been usually referred to Boragineae; an order in which all the true genera belonging to it, bear 4 naked seeds; those above have been referred to it merely on account of the same number of seeds, though contained in a capsule; but, as Mr. Brown observes, Eutoca being polysperous, cannot certainly belong to Boragineae, but is a true congener of Hydrophyllae; it, therefore, establishes the order, though an anomaly in it.

1. Calyx. 2. One of the laciniae of the corolla, showing the 2 nectariferous pores, and its bearded base. 3. Stamen inserted in the base of the corolla, showing its crescent shaped anther. 4. The same just as the flower opens, when the anthers are straight. 5. Germin, Style, and Stigma.
PHLOMIS pungens.

Pungent-bracted Phlomis.


Perennial. Stem about 18 inches high, branching; branches obtusely quadrangular, furrowed, thickly clothed with long villous hairs, and short down intermixed. Leaves opposite, oblong or lanceolate, pointed, entire at the base, and serrated from about the middle with blunt serratures; upper side rather wrinkled, roughish, hairy; under side tomentose, many nerved, reticulately veined. Petioles short and flat, widened at the base, villous. Flowers in whorls, 10 or 12 in each, of a dingy purple. Bractes numerous, rigid, subulate, taper-pointed, fringed, about the length of the calyx. Calyx tubular, narrowest at the base, villous, 5-angled, each angle terminated with a long subulate spreading segment, and between each angle is another smaller one; segments fringed. Corolla tubular, 2-lipped, woolly; helmet keeled, sides compressed, slightly bearded, emarginate; lower lip 3-lobed; terminal lobe broad, rounded, keeled underneath; side lobes lanceolate, taper-pointed. Stamens 4, 2 rather longer than the others, inserted in the mouth of the corolla; filaments hairy; anthers incumbent.
Seeds 4, naked, smooth and shining. Style smooth, about the length of the stamens. Stigma forked, the upper fork scarcely discernible; lower one elongated, taper-pointed.

For the opportunity of giving a figure of this rare and handsome plant, we are indebted to Mr. W. Anderson, Curator of the Apothecaries Company's Garden, at Chelsea, where our drawing was taken in August last; and we do not know that it is in any other collection. It is a native of Armenia, Persia, and Siberia, and only requires planting in the open border of the flower garden, in a light rich soil; being quite hardy and of easy culture, makes it a very valuable acquisition to our gardens; but it will be some time before it becomes common, except it produces perfect seeds, which we think it likely to do, especially if some pollen be attached to the stigma when the flowers are in perfection. If seeds are procured, we would recommend their being sown in pots as soon as ripe, and protected in a frame during Winter; as many seeds of hardy perennial plants will grow well and come up soon, if sown as soon as ripe; which, if kept till Spring, will either not grow at all, or be a long time in coming up.

1. Calyx, showing its 5 spreading subulate segments, with its pungent bractes at the base. 2. Corolla spread open, showing the insertion of the stamens with their hairy filaments. 3. The 4 seeds. 4. Style terminated with an unequal forked stigma.
GLOBULARIA cordifolia.

Wedge-leaved Globularia.

Natural Order. GLOBULARINÆ. Link enum. 1. p. 123. GLOBULARIA. Supra, fol. 20.


Root perennial. Stems numerous, prostrate, much branched, and extended to a considerable distance, smooth and shining, of a dull purple colour. Leaves numerous, crowded, smooth and shining, wedge-shaped, attenuated down the petiole, 3-toothed at the end, the middle tooth very small; margins unequal, rough, but scarcely crenulate. Petioles channelled on the upper side, and convex on the lower. Flower-stalks naked, or with here and there a small leaf on them, angular, deeply furrowed, with numerous unequal furrows; in our specimen, from 2 to 3 inches long. Flowers pale blue, tinged with white. Involucr or Common Calyx imbricate; leaflets rigid, spatulately-lanceolate, obtuse. Receptacle paleaceous. Proper Calyx tubular, very hairy below the segments, 5-cleft; 2 lower segments broadest, lanceolate, taper-pointed; upper ones subulate. Corolla tubular, 2-lipped; upper lip 2-parted, segments very narrow, obtuse; lower lip 3-parted, segments larger, bluntish. Stamens 4, inserted in the tube; filaments long and slender; anthers

K 2
incumbent; pollen whitish. Germen superior. Style smooth, scarcely as long as the stamens. Stigma 1, very small, capitate. Seed 1, enclosed in the persistent calyx.

This pretty little Alpine plant is very proper for ornamenting rock-work, or for planting on a naked bank, where its prostrate branches will grow to some distance, and by its numerous leaves and young branches, will make a pretty green tuft, which, in July and August, will be beautified by its elegant little heads of handsome blue flowers. It may also be grown with advantage in a small pot, where it will bloom very well. It is a native of mountainous and Alpine situations in various parts of Europe, and is quite hardy, thriving best in a light sandy soil, and rather a dry situation, being apt to rot and die at the root, if the ground in which it is planted be too moist. It may be increased by dividing at the root; or cuttings planted under hand-glasses in Spring, will strike root, and make nice young plants by Autumn; when rooted, they should be hardened to the air by degrees; at first, taking off the glass at night and keeping it on by day; they may then be potted, and protected in a dry situation through the Winter.

Our drawing was taken from a plant received from the Nursery of Mr. Knight, of the King's Road.

1. Involucre, showing its chaffy receptacle. 2. Scale of the chaff. 3. Calyx. 4. Corolla split open, showing the insertion of the 4 Stamens. 5. Germen, Style, and Stigma, all slightly magnified.
GLAUCIUM fulvum.

Orange-coloured Horned Poppy.


G. fulvum, caule glabro, foliis caulínis rotundato-sinuatis, sili quis scabris, floribus subsessilibus. DC. loc. cit.


Chelidonium glabrum. Mill. dict. n. 5.

Chelidonium fulvum. Poir. suppl. 5. p. 606.

Biennial, or, perhaps, Perennial. Stems erect, branching, smooth, or with here and there a hair scattered on them, glaucous, from 18 inches to 2 feet in height. Leaves glaucous, thickly clothed underneath with long rigid white hairs, and densely above with shorter ones; lower ones petiolate, pinnatifid, segments more or less lobed, lobes bluntly rounded; upper leaves clasping the stem, cordately auriculate at the
base, broadly ovate, sinuate, sinuses broadly lobed and bluntly toothed, less hairy underneath. **Flowers** shortly peduncled, nearly sessile on the upper part of the stem, of a reddish orange colour, yellow at the base. **Peduncle** opposite to the leaf, short, cylindrical, smooth and glaucous, sometimes terminating with a few white hairs. **Bud** before expansion ovately oblong, tapering to a point, thickly clothed with bristle-like hairs. **Calyx** of 2 sepals, which drop off as soon as the flower expands. **Petals** 4, undulate, the 2 outer ones much larger than the others; outer ones orbicular; inner ones obovate, with a yellow spot at the base, and on the yellow spot is a brown mark. **Stamens** above 100, the inner ones longest; **filaments** smooth, yellow, attached to the base of the anthers, which are 2-celled, and open longitudinally to discharge the pollen; **pollen** bright yellow. **Siliqua** rough, occasioned by the small tubercles with which it is covered. **Stigma** sessile, bilamellate, crested with a glandularly thickened margin.

The present handsome plant, a native of the South of Europe, is, by some, considered biennial, by others, perennial; we are inclined to believe it perennial, but very liable to perish in Winter by too much moisture at its roots; this is not so much to be lamented, as it produces plenty of perfect seeds, and the plants raised from these will flower the same Summer; and, if the Autumn prove mild, will also ripen their seeds the same year; it is therefore sold as a hardy annual at the Nurseries.

**Drawn** at the Nursery of Mr. Colvill, from a plant about 18 inches high, that flowered the first year from seed.

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1. Calyx. 2. Stamens, front view. 3. The same split open, to show the longest Stamens in the middle. 4. One detached. 5. The bilamellate Stigma. 6. The rough tubercled siliquiform Capsule.
**MAZUS rugosus.**

*China Mazus.*

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*Natural Order. Scrophularinæ. Brown prodr. 433.*

Sect. II. Stamina 4 antherifera.

**MAZUS. Calyx** campanulatus, 5-fidus, æqualis. Corolla ringens, labio superiore bilobo, lateribus reflexis; inferiore trifo- 


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**Annual.** *Stems* short, tufted, decumbent, branching in all directions, flexuose, slightly angular, and clothed with short white hairs. *Leaves* opposite, obovate, or sometimes oblong, attenuated to the base, deeply but distantly toothed, rugose, minutely punctate, glossy; nerves and margins slightly hairy. *Racemes* terminal, elongated, many flowered. *Flowers* distant, spreading. *Bractes* small, 1 on each pedicle, a little above the base, lanceolate, taper-pointed, keeled. *Pedicles* flattened, slightly pubescent, a little longer than the calyx.
Calyx campanulate, 5-angular, 5-cleft; segments acute, keeled, at first lanceolate, but continuing to grow till they become oblong or ovate, pubescent, spreading. Corolla ringent: upper lip small, ovate, 2-lobed, of a bluish purple; lower lip trifid, spreading, with 2 deep channels underneath, and 2 gibbous ridges above, white slightly tinged with blue, and on the ridges and between them are numerous brownish yellow spots, and clubbed hairs, or pedicled glands. Stamens 4, 2 longer than the others; filaments smooth, attached to the tube; anthers twin, at first distinct, but when burst, each pair are attached by the pollen. Germin smooth, dotted. Style smooth, terminated by a bilamellated stigma.

The present little plant is a native of China; the one from which our drawing was taken, was raised this Spring at the Nursery of Mr. Colvill, from seeds received from the Botanic Garden at Berlin, under the name of Hornemannia bicolor. It is a hardy annual; and the plants begin to flower when they are scarcely 2 inches high, and continue to bloom all the Summer, and ripen plenty of seeds, growing in pretty round tufts, the branches spreading prostrate on the ground in different directions. Being of small growth, and spreading flat on the ground, it should be sown at the front of the flower-borders; the proper time for sowing them, is about the middle of April; if sown earlier, they will be liable to be injured by the Spring frost. Though not so showy as some other annuals, it is still very pretty and curious, and causes a variety, which is always interesting.

1. Calyx. 2. Corolla split open, to show the insertion of the stamens. 3. The same, with its point bent back to show the pedicled glands. 4. Shows the 2 ridges in the mouth. 5. Stamen. 6. Germin, Style, and bilamellated Stigma.
TAXANTHEMA tatarica.

Tartarian Sea Lavender.

Natural Order. PLUMBAGINEÆ. Brown prodr. 425.

T. tatarica, scapo ramoso divaricato; ramis tripucris, floribus distintibus, foliis lanceolato-obovatis, mucronatis.
Statice foliis lanceolatis mucronatis radicalibus, caule ancipiti dichotomo, floribus alternis distintibus. Gmel. sibir. 2. p. 223. t. 92.

Perennial. Root large, fusiform, branching. Leaves lanceolate, or lanceolately obovate, slightly undulate, mucronate, attenuated to the base, into a kind of footstalk; much veined, of a hoary white colour, the base tinged with red, as are the young leaves; margins cartilaginous, roughish. Flower-stems several, from a foot to 18 inches in height, 3-sided, very much branched; branches 3-sided, flexuose, all leaning one way, paniculately branching, and spreading in all directions, each enclosed at the base by a lanceolate, taper-pointed, keeled bracte. Spikes secund, the flowers all leaning to one side, rather distant, alternate, solitary, or in pairs, surrounded by 2 or 3 bractes, one of which is simple, lanceolate, taper-pointed, and keeled; the others 3-forked, and acute, membranaceous at the base. Calyx funnel-form, with a scariose, 5-plaited, 5-toothed limb, of a white colour, with
6 green or brown stripes down the tube. Corolla of 5 petals, of a lively red; unguis about even with the calyx, limb spreading. Stamens 5, inserted in the unguis; filaments smooth, attached to the anthers by the back; anthers exserted above the mouth. Styles 5, thickly clothed with short gland-like hairs. Stigmas 5, green, capitate.

Our drawing of this rare and beautiful species was taken from a fine plant, at the Garden of the Apothecaries' Company, at Chelsea; where it thrives well in the open border, and flowers from July to October, some of the flowering branches attaining to the height of 18 inches; it thrives best in a light sandy soil, but is slow of increase, except by seeds, which sometimes ripen. The plants, when grown strong, will sometimes bear dividing, by being carefully cut through the middle, leaving a part of the root to each piece; the best time for doing this is in October, as the plants then make young roots by Spring; if they are divided in Spring, they are very apt to die off, particularly if the weather sets in dry and warm. The seeds should be sown as early as possible, the latter end of February, or beginning of March, if the weather prove mild; if they are sown in pots, and kept in a frame, or the greenhouse, till they come up, they will succeed best; planting them off in other pots, or in a bed of nice light soil as soon as possible, as they are very liable to die off if left too long in the seed-pots.

We have adopted the genus Taxanthema, of Necker, from Mr. Brown's Prodromus; the original genus Statice of Tournefort, which we adopt, is composed of the section Armeria; the division is also adopted by the German Botanists, but they have used Armeria for a generic name, and continued Statice to the spiked species.

1. The 3-forked Bracte. 2. Calyx. 3. Corolla spread open, showing the insertion of the Stamens at the base of the petals. 4. Petal separate, with the Stamens inserted in its base. 5. Germen terminated by the 5 Styles and capitate Stigmas.
DRACOCEPHALUM canescens.

Hoary-leaved Dragon's-head.


D. canescens, floribus verticillatis, bracteis oblongis ciliatis, foliis oblongis canescentibus: inferioribus serratis; superius integerrimis, calyce striatis pubescentibus, tubo corollae calyce longiore.


Annual. Stem nearly erect, or ascending, bluntly 4-sided, much branched; branches opposite, crossing each other, clothed with a short white pubescence. Leaves opposite, petiolate, oblong, blunt, strongly and numerousely lined underneath, covered on both sides with a short close canescent pubescence; lower ones broadest, and serrated; upper ones narrower, and entire, becoming nearly linear on the upper part of the stem. Flowers in whorls round the stem, of a bright violet blue. Bractes 4, at the base of each whorl, petiolate, oblong, or ovate, concave, and fringed with spine like bristles. Pedicles short, compressed,
pubescent. *Calyx* 5-cleft, striated, pubescent, upper segment double the width of the others, bluntish; lower ones taper-pointed, mucronate. *Corolla* tubular, inflated at the mouth, 2-lipped; upper lip emarginate, concave, doubling in so as to enclose the stamens; lower lip 3-lobed, end lobe very broad, emarginate, recurved, side ones short and blunt, rounded. *Stamens* 4, inserted in the mouth, 2 a little longer than the others, declining: *filaments* bearded at the base, and smooth from about the middle; *anthers* incumbent. *Style* smooth and glossy. *Stigma* 2-cleft, with acute points.

A beautiful hardy annual, native of the Levant, and seldom now to be met with in any collection, which is rather surprising, as it is much more showy than many others that are now generally cultivated; it only requires to be sown in the open borders in the common garden soil, and to be kept clear of weeds; the best time for sowing the seeds is the beginning of March, if the weather proves favourable; the plants will then get strong, and flower abundantly all the latter part of Summer.

A patch of these plants were grown this last Summer at the Nursery of Mr. Colvill, from whence our drawing was made. They grew to the height of from 18 inches to 2 feet, branching on every side, and were covered with flowers nearly the whole of their length at the same time, which made an elegant appearance. Our Figure cannot do justice to the original for want of room; but from it may be inferred what the plants really were.

1. The fringed Bracte. 2. Calyx. 3. Corolla spread open, to show the insertion of the Stamens. 4. Stamen detached. 5. Style, and cleft Stigma. 6. The 4 naked Seeds.
CALENDULA hybrida.
Great Cape Marygold.

Natural Order. Compositæ. Adanson fam. 2. 103.

CALENDULA. Flores radiati; flosculi centrales masculi, ambientes hermaphroditæ; ligulae fœmineæ. Involucrum simplex polyphyllum æquale. Receptaculum nudum. Pappus nullus. Semina sæpè membranacea; marginalia diversa ab interioribus, incurva sub ligulis luteis in C. Europeis, aut in C. Africanis cordato-plana sub ligulis albo-violaceis. Flores sæpè solitarii terminales. Species plurima fruticulosa.

C. hybrida, foliis oblongo-lanceolatis obtusis dentatis, caule folioso, pedunculis superne incrassatis. Willden. sp. pl. 3. p. 2342.


Root annual. Stem about a foot high, much branched; branches spreading in all directions, of a purplish colour, thickly clothed with short white spreading unequal hairs, as are the leaves, peduncles, and calyx. Leaves sessile; lower ones spatulately oblong, obtuse, rather carnose, and toothed here and there with large blunt teeth; upper ones alternate, narrower, and more acute, oblong, or lanceolate, and toothed on each side with 1 or 2 smaller pointed teeth. Peduncles terminal, gradually increasing in size upwards, much thickened just below the flower, and particularly when in fruit; 1-flowered. Involucre simple, many-leaved; scales nearly equal, linearly-lanceolate, taper-pointed, with fringed membranaceous margins. Receptacle slightly convex, naked, dotted. Ligulae, or Rays, fertile, densely fringed at the base
with long white hairs, and terminated at the point with 3 short teeth; upper side pure white; the under side of a bright purple, or violet, bearing no stamens, but a filiform style, and purple bifid stigma; florets in the centre tubular, 5-cleft, hairy at the base, barren, only producing stamens; outer ones fertile, also 5-cleft, bearing both stamens and pistils. Stamens 5; filaments distinct; anthers connected into a tube. Style extending just above the stamens. Stigmas 2, blunt, fringed. Seeds from the ray spatulate, rugose; those from the disk obcordate, with a thin membranaceous margin.

A very handsome hardy annual, only requiring to be sown in the open borders, and to be kept clear of weeds. It must not be sown too early in the Spring, being a native of the Cape, as the Spring frosts would be liable to injure it; the latter end of April, or beginning of May, according as the weather suits, is the best time for sowing the seeds; they will then flower from July to October, if the season continue mild, and will ripen plenty of seeds.

Our drawing was taken at the Nursery of Mr. Colvill, where the plants were about 15 inches in height, and very bushy; and they continued in flower this year till the end of October.

1. Involucre cut through the middle, to show the dotted receptacle. 2. Floret of the ray, showing its 2 stigmas. 3. Fertile floret of the disk. 4. The same laid open, showing its nerves alternating with the teeth. 5. The 5 Stamens spread open, to show the united anthers, and distinct filaments. 6. Style of the floret of the disk, crowned with its fringed stigmas. 7. Seed from the ray. 8. Seed from the disk.
MALCOMIA Chia.

Dwarf branching Malcomia.

Natural Order. CRUCIFERÆ. DC. Reg. veg. syst. nat. v. 2. p. 139.

Subordo II. NOTORHIZEÆ. DC. p. 150.


Tribus VII. SISYMBREE seu NOTORHIZEÆ SILIQUOSE. Siliqua bilocularis longitudinaliter dehiscens, valvis concavis carinatisve. Semina ovata aut oblonga, immarginata. Cotyledones planæ, incumbentes, septo contrariae.


M. Chia, caule erecto ramoso, foliis obovatis integris pube-bi-partitâ adpressâ, pedicellis calycis longitudine, siliquis tere-tiusculis pubescentibus, stylo brevissimo. DC. p. 440.

Malcolmia Chia. Link enum. p. 167.

Hesperis siliquis hirsutis flore parvo rubello. Dill. elt. 180. t. 147. f. 178.

Annual. Root slender, small, fibrous. Stems much branched, from 6 to 12 inches high, cylindrical, pubescent, the hairs close-pressed, and affixed by their middle. Leaves pubescent underneath, the hairs 2-parted, entire, or rarely toothed; lower ones obovate,
or spathulate, attenuated down the petiole, blunt, or emarginate at the point; stem ones narrower and more acute, tapering to the base. *Racemes* 3 to 9-flowered, lengthening after flowering. *Pedicles* cylindrical, about 3 lines long. *Calyx* of 4 sepals, gibbous on each side at the base, about the length or a little longer than the pedicles; sepals linear, acute. *Flowers* of a purplish lilac, about half the size of *M. maritima*; *petals* obovate, emarginate, their unguies about the length of the calyx. *Stamens*, 4 long, and 2 short. *Pod* straight, nearly cylindrical, pubescent when young. *Style* very short and acute.

*Malcomia* was first established as a distinct genus by Mr. Brown, in the second edition of the Hortus Kewensis, and contains a natural and distinct group of plants that had been hitherto referred to *Cheiranthus* and *Hesperis*; and M. Decandolle has described 15 species, 12 of them annual, 1 biennial, and 2 perennial. The present species is annual, and very proper for the edging of borders, or to be sown in clumps near the edges of flower borders, in the same manner as the more common *M. maritima* (generally known by the name of Virginian Stock;) the seeds may be sown any time between February and June; and by sowing them at various seasons, a succession of flowers may be kept up all the Summer; those sown the early part of the season, will produce plenty of seeds; whereas them that are sown later, will be more doubtful, and their seeding will depend on the mildness of the season.

Our drawing was taken at the Nursery of Mr. Colvill, in June last.

1. Calyx. 2. Petal. 3. The 6 Stamens with the young Siliqua in the midst of them. 4. Stamen detached. 5. The young Siliqua terminated with a short acute Style, all slightly magnified.
RHEXIA mariana. \textit{\textbeta}. rubella.

Maryland Rhexia, stained variety.

\textit{Natural Order. Melastomaceæ. Juss. gen. 328.}

\textit{RHEXIA. Calyx urceolatus, quadrifidus. Corolla 4-petala, calyci inserta. Stamina 8, antheris declinatis. Capsula setosa, 4-locularis, intra ventrem calycis.}


\textit{a. purpurea}, foliis angusto-lanceolatis vel oblongis, floribus saturate purpureis. \textit{Mich. l. c.}

\textit{b. rubella}, foliis ovali-lanceolatis vel oblongis, floribus dilute rubellis. \textit{Mich. l. c.}

\textit{\textgamma. exalbida}, foliis linearibus, caule hirsutiore, floribus pallidis. \textit{Mich. l. c.}

\textit{Root} perennial. \textit{Stems} numerous, about a foot high, much branched; \textit{branches} spreading in all directions, bluntly quadrangular, furrowed, thickly clothed with brown spreading rigid hairs, tipped with a red gland. \textit{Leaves} opposite, 3-nerved, finely but sharply serrate, hairy on both sides, bluntish; lower ones oval, or oblong, gradually narrowing upwards; upper ones lanceolate, or linear. \textit{Petioles} very short. \textit{Flowers} terminating the branches in a kind of panicle, more or less tinged with red. \textit{Peduncles} short and stiff, smooth. \textit{Calyx} urceolately tubular, 4-cleft, angular, smoothish, with a few rigid hairs scattered on it here and there; segments ovate, acute, spreading.
**Petals** 4, inserted in the calyx, spreading. **Stamens** 8, inserted in the calyx; **filaments** flat, smooth; attached to the anthers a little above their base; **anthers** linear, declining, with a sharp subulate spur at the back, just above the filament. **Style** smooth, green, terminated by a papillose capitate stigma.

This rare and handsome species is a native of North America, growing, according to Pursh, in bogs, and sandy woods, near waters, from New Jersey to Carolina, and flowering in July and August; with us it requires as warm a border as possible, and to be planted in a bed of peat earth; it will then thrive well, and flower late in Autumn; if it is not planted in a warm situation, it is a great chance if it flower at all; and, certainly not, except it be a very warm season, though the plant itself is quite hardy, enduring our most severe Winters without any protection, and attaining about a foot in height. Its time of flowering with us, if in a favourable situation, is from the latter end of August, till November, if the weather prove mild. Our drawing of the present specimen, was taken at the Nursery of Mr. Colvill, in October last.

We are inclined to think that more than one species is, at present, confused under *R. mariana*, from the disagreement of the descriptions of different Authors, and the varieties that are enumerated; we have never seen the least variation in our cultivated plants. The best method of propagating it is by dividing it at the root; or young cuttings planted under a hand-glass in peat soil, will strike root freely.

1. Calyx. 2. Petal. 3. Calyx spread open, showing the insertion of the Stamens. 4. Stamen detached. 5. Anther detached from the filament, showing the spur at the base. 6. Germin, Style, and Stigma.
NEOTTIA cernua.
Nodding-flowered Neottia.


Limodorum autumnale. Walter fl. car. p. 221.

Perennial. Roots composed of a fascicle of oblong bulbs, or tubers. Stems several, from a strong plant. Leaves lanceolate, acute, 3-nerved, attenuated at the base, sheathing the stem, smooth and glossy. Scapes in our specimen about 18 inches in height, leafy, smooth on the lower part, and densely pubescent on the upper. Spikes oblong, from 4 to 6 inches in length, densely pubescent between the flowers. Flowers white, fragrant, spirally arranged, nodding; the upper ones scarcely half the size of the lower ones. Bractes lanceolate, taper-pointed, concave, ciliated with glandular hairs, double the length of the germen, points
curved inwards. *Germen* ovate, narrowed at the base, hairy, the hairs tipped with small glands. *Perianthium* ringent, thickly clothed on the outside with pellucid glandular hairs; *three outer leaflets* lanceolate, taper-pointed; the upper one stuck to the 2 inner ones for more than half their length, points of the lateral ones bent inwards; *two inner ones* concave, connivent, and blunter. *Labellum* oblong; not divided into lobes, more or less acute, margins undulate, crenulate. *Column* green, not winged. *Anther* 1, attached to the point of the stigma, and covered with a brown taper-pointed hood.

A very rare and interesting plant, native of North America; its flowers are delightfully fragrant, and they last a long time in beauty; the present specimen having been in bloom from the beginning of August, to the middle of November. It appears to be more free of growth than the plants belonging to this family generally are, as it thrives well in a border of very sandy loam, and appears to be making offsets freely; but we expect it will yet be some time before it becomes common, except others are imported from America. We expect many more species of this interesting family from that country shortly, as Mr. Colvill has applied to a Correspondent there, to send all the species that can be collected; and he has received notice that he may soon expect them, with many other curious plants.

Drawn at the Nursery of Mr. Colvill, in September last.

1. Bracte. 2. The 3 outer leaflets of the Perianthium. 3. The 2 inner ones. 4. The Labellum, showing its crenated margin. 5. The Germen divested of the Perianthium, showing the column, with the Anther in front, covered with its brown hood. 6. The same divested of the hood, the Anther exposed to view. 7. The same divested of the Anther. 8. Inner view of the Anther. 9. The Hood with which the Anther was covered, all highly magnified.
IMPATIENS biflora.
Two-flowered Touch me not.

Natural Order. BALSAMINEÆ.

IMPATIENS. Calyx 2-sepalus. Corolla 5-petala, hypogyna, irregularia et inæqualia; superius latius fornicatum; inferius breve basi calcaratum; lateralia seu interiora 2 basi appendiculata aut interdum bipartita. Stamina 5 hypogyna, filamentis brevibus primò monadelphis, dein maturatione distinctis, antherarum persistente supernà coalitione. Germin 1; stylum 0; stigma acutum. Capsula oblonga 5-locularis polysperma 5-valvis, elasticè dissiliens valvis in spiram intortis, disseipimentis membranaceis ex receptaculo columnari centrali seminiféro enatis et valvularum margini appositis; corulum seminis rectum absque perispermo.


Annual. Stem upright, 2 to 3 feet high, rather flexuose, tumid at the joints, much branched, smooth and glossy; branches spreading in all directions, flexuose, of a glossy purple, angular. Leaves ovate, acute, sharply toothed with short teeth, longer, and sharper at the base, reticulately veined underneath, and furrowed on the upper side, soft and tender, soon
withering after being gathered. Petioles smooth, flattened and furrowed on the upper side, and convex on the lower. Peduncles axillary, very slender, generally 2-flowered, continuing to grow till the seeds ripen. Pedicles filiform, with a small subulate bracte about the middle of each. Calyx of 2 sepals, which are roundly ovate, acute, concave, of a membranaceous texture, with a strong green midrib. Flowers pendant, of a dark yellow, spotted with red on the inside. Petals unequal, irregular. Nectary cowl-shaped, terminated in a blunt spur. Stamens 5; filaments short and stout, at first connected, but after the flower is expanded, distinct; anthers 5, connected; pollen cream-coloured. Germs smooth and glossy, crowned with an acute stigma. Capsule 5-valved, when ripe opening as soon as touched, the seeds springing out, and the valves of the capsule rolling up.

This very curious annual plant is a native of North America, and is mentioned by Mr. Pursh as growing in wet shady places, from Canada to Carolina. It is quite hardy, and only requires to be sown in the open ground, about the latter end of March, or beginning of April, if the weather is mild, requiring a dampish shady situation, where it will grow to the height of 3 feet, or upwards, and will continue to flower till destroyed by the frost in Autumn; if in a dry exposed situation, it will not grow near so strong, nor last so long in flower. A peculiar property belongs to this plant, and the others belonging to this genus, in the elasticity of their capsules; when the seeds are nearly ripe, if the capsules are ever so lightly pressed, they immediately burst, the valves rolling up, and the seeds springing to a distance, so that it requires much care to procure them.

Our drawing was taken at the Apothecaries' Company's Garden, at Chelsea, in September last.

1. Calyx. 2. Corolla spread open, showing the insertion of the petals. 3. Stamens, spread open to show the connected anthers, and the insertion of the filaments. 4. Germen terminated with an acute Stigma. 5. Capsule burst open, all magnified except the last.
LIATRIS squarrosa.

Squarrose-cupped Liatris, Rattlesnake's Master.


L. squarrosa, caule simplici pubescente, foliis linearibus nervosis scabris, racemis paucifloris foliosis, involucris turbinate; squamis lanceolatis obtusis rigidis patentibus.


Cirsium tuberosum, capitulis squarrosis. Dill. elth. 83. t. 71. f. 82.

Root perennial, tuberous. Stem simple, from 18 inches to 2 feet high, pubescent. Leaves long, linear, rough, particularly at the edges, slightly pubescent, nerved underneath; stem-leaves narrower, those near the flowers shorter, broader at the base, and tapering to the point. Racemes leafy; flowers distant from each other, the lower ones on long peduncles, upper ones shorter; terminal flower expanding first, the others gradually opening downwards, of a bright purple colour. Peduncles purplish, rough, pubescent, gradually thickening upwards, and tapering to the base, leafy. Involucrre turbinate, many-leaved, imbricate; scales lanceolate, obtuse, roughish, finely ciliate, spreading; upper ones coloured at the points. Re-ceptacle naked, convex, punctate. Florets numerous, tubular, 5-cleft; tube about the length of the pappus; laciniae lanceolate, acute, about half as long as the tube. Stamens 5, inserted in the middle of the tube; filaments slender, distinct, smooth; anthers connected
by a thin membrane at the base, but distinct at the points. Style smooth, longer than the tube of the floret, terminating in two long purple ligulate stigmas, about the length of the style. Seeds furrowed, very hairy, crowned with a pencil-like pappus of purple feathered hairs.

Our drawing of this rare and beautiful plant was taken in October last, at the Nursery of Mr. Knight, in the King’s Road. It is a native of North America; Pursh mentions it as growing in sandy woods and fields, in Virginia, Kentucky, and Carolina, “where it, and L. scariosa are known among the inhabitants of those countries by the name of Rattlesnake’s Master. In case of being bit by this horrible animal, they bruise the bulbs of this plant, and apply it to the wound; while, at the same time, they make a decoction of it in milk, which is taken inwardly.”

When grown in a rich light soil, this species will attain the height of 2 feet, or upwards; but it is very liable to perish in Winter, from its roots receiving too much moisture, the only reason we can account for its present scarcity, having been known in our gardens as far back as the year 1732. Its flowering so late in the season, is also much against its increase, as it seldom perfects its seed in this country; but this might be easily remedied, if a plant be grown in a pot, and placed in a greenhouse just as its flowers are opening; and, as they expand, to attach some pollen to the stigmas, there can be no doubt but they will seed freely; as we have found it to succeed well with L. scariosa, and L. pilosa. As soon as ripe, the seeds should be sown in pots of light sandy soil; they will then come up strong in Spring, and some of them will flower the following Autumn.

1. Involucrue with its front scales taken off, to show the naked dotted receptacle. 2. Floret enclosed by the pappus of the seed. 3. The same split open, to show the nerves. 4. Stamens spread open, showing the distinct filaments, and united anthers. 5. Style and Stigmas. 6. Seed terminated by its, pencil-like pappus.
SCUTELLARIA orientalis.

Yellow-flowered Skull-cap.

Sect. II. B. Calyx bilabiatus.
SCUTELLARIA. Calyx bilabiatus, ebracteatus, labiis integris, superiore intus fornicato, extus apice gibbo; fructus clausus. Corolla ringens, galea subtridentata, labii inferioris lacinia media emarginata.


Perennial. Stems of a woody texture at the base, spreading, ascendent, much branched; branches spreading, of a purple colour, pubescent. Leaves opposite, ovate or oblong, obtuse, incised or deeply toothed, with blunt rounded teeth, underneath clothed with a dense white tomentum. Petioles shorter than the leaves, pubescent. Spikes roundly 4-sided, from 2 to 4 inches in length. Bractes sessile, ovate, concave, pointed, much veined, villous. Pedicles short, villous, close-pressed to the stem. Calyx very small, 2-lipped, very hairy; lips entire, the upper one forming a kind of cap, and enclosing the seeds. Corolla tubular, ringent, villous, of a yellow colour, the helmet tinged with red, lower lip reflexed on each side. Stamens 4, inserted in the tube, 2 rather longer than the others; filaments declining, slightly hairy at the
base, and smooth at the points; anthers hairy. Style smooth, about the length of the stamens. Stigma a small simple point.

A pretty herbaceous perennial, which produces an abundance of flowers, continuing to bloom from July to October; and only requires to be planted in the open ground, in a rich light soil; but we believe it not to be a long lived plant, and must, consequently, be frequently renewed either by seeds or cuttings; if by the latter, they will strike root readily, taking off the young shoots and planting them under a common hand-glass in the open ground; but care must be taken not to let the glass remain on them too long, or they will be apt to damp; as soon as they begin to root, a little air must be given them, encreasing it by degrees, till the plants are well rooted; they may then be planted where they are to remain. If raised from seeds, they may either be sown in pots, or in the open ground; and the sooner they are transplanted where they are to remain the better, as they do not miss their removal when young, but when grown larger, they are likely to wither and not do so well; the same observation is suitable to most herbaceous plants.

A native of the Levant; of low stature, seldom attaining a foot in height, and, therefore, proper for the front of flower borders. Our drawing was taken at the Apothecaries' Company's Garden, at Chelsea, in August last.

1. Calyx, highly magnified, the upper part turned back, to show the 4 naked seeds. 2. Corolla spread open, to show the insertion of the filaments. 3. Stamen detached. 4. Style, and simple Stigma.
MATHIOLA tricuspidata.

Three-forked Stock.

Natural Order. Cruciferae. DC. Reg. veg. syst. nat. v. 2. p. 139.

Subordo. I. Pleurorhizae. DC. p. 146.

Cotyledones plane, accumbentes. Radicula lateralia. Semina compressa.


M. tricuspidata, caule suberecto ramoso, foliis sinuato-pinnatis, siliquæ cuspidibus 3 acutis subaequalibus. DC. loc. cit.

Mathiola tricuspidata. Brown hort. kew. ed. 2. v. 4. p. 120.

Hort. sub. Lond. 147.


Root annual, slender. Stems much branched, spreading in various directions, cylindrical, attaining a foot, or 18 inches in height, thickly clothed with branching woolly hairs; branches flexuose, ascending.
Leaves oblong, obtuse, slender at the base; those near the root repandly-dentate, or slightly sinuate; stem ones more divided, sinuately pinnatifid; sinuses obtuse, tomentose. Racemes terminal, flexuose, many-flowered. Pedicles tomentose, about a line long, at first erect, afterwards spreading. Flowers of a bright lilac, light at the base. Calyx of 4 sepals, about 4 lines long, tomentose, swollen into 2 little pouches at the base. Petals 4, alternate with the sepals, limb obovate, or obcordate, at first of a pale lilac, afterwards becoming darker; claw slender, about the length of the calyx. Stamens 6, unequal; filaments 2, very short, and straight; 4 longer, with a small tooth on one side, running down in a wing to the base; anthers linear, 2-celled. Siliqua nearly round, tomentose. Stigma lengthening out into 3 points, or horns, the middle one erect, the others spreading.

The present genus was first established by Mr. Brown, in the second edition of the Hortus Kewensis, and contains all the different species of Stocks, which were before that time arranged with Cheiranthus, (or the Wall-flowers.) M. Decandolle enumerates 27 species, which he divides into 4 Sections, or Sub-genera. The present species belongs to his last Section, distinguished from the others by its horned stigma, and obovate petals; it is a very pretty annual plant, native of the sandy shores of the Mediterranean, and of the South of Europe, growing, with us, to the height of a foot, or 18 inches, and requires no other treatment but to be sown early in Spring, in the open ground, in as light a soil as possible, and to be kept free from weeds.

Drawn at the Nursery of Mr. Colvill, in September last.

1. Calyx. 2. Petal. 3. Stamens, 4 long, and 2 short. 4. One detached, to show the small tooth in the middle of the filament, running down in a wing to the base. 5. Siliqua spread open, to show the seeds, terminated by 3 points, or horns. 6. Seed.
DRACOCEPHALUM argunense.

*Fischer's Dragon's-head.*

Natural Order. **Labiatae.** Brown prodr. 499. **DRACOCEPHALUM.** Supra fol. 38.

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*Dracocephalum* argunense, floribus verticillato-spicatis subcapitatis, foliis lineari-lanceolatis obtisis integerrimis margine scabris, bracteis elliptico-lanceolatis acuminatis.


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**Perennial.** Stems several from the same root, branching a little, obtusely 4-sided, pubescent, from a foot to 18 inches in height. **Leaves** linearly lanceolate, entire, bluntish, with rough edges, attenuated into a kind of footstalk at the base, smooth and glossy on the upper, and slightly pubescent on the lower side. **Flowers** in a whorled spike, terminated in a kind of head, of a bright blue colour. **Bractes** 4, at the base of each whorl, elliptically lanceolate, taper-pointed, entire. **Pedicles** short and flat, slightly pubescent. **Calyx** 5-cleft, striated with numerous shallow furrows; segments lanceolate, acute, of a purplish colour, upper one more than double the size of the others. **Corolla** tubular, inflated at the mouth, 2-lipped, hairy within and without; upper lip, or helmet, emarginate, concave, very hairy on both sides; lower lip 3-lobed; end lobe very broad, obcordate, sides doubled in, spotted inside with numerous small purple spots; side lobes small, rounded, sides reflexed. **Stamens** 4, inserted in the mouth, 2 a little longer than the others, declining; **filaments** bearded with long white hairs,
particularly the upper ones, and terminating in a blunt point, the anthers attached below it; anthers incum-
bent, also bearded. Style smooth and glossy. Stigma
2-cleft, ending in 2 unequal points. Seeds 4, rugged.

For the opportunity of giving a figure of this new
and beautiful plant, we are obliged to Mr. William
Anderson, the worthy Curator of the Garden belong-
ing to the Apothecaries’ Company, at Chelsea; a
collection particularly rich in hardy herbaceous plants.
The present species was raised from seeds, received
by Mr. Anderson from Dr. Fischer. It is a native
of Siberia, and thrives well in the open borders,
flowering from July to October, and attaining the
height of a foot, or 18 inches, according to the strength
of the soil; scarcely any plant can be better adapted
for the borders of the flower garden; and as it spreads
but little, it needs little room. Young cuttings of it,
planted under hand-glasses in the open ground, the
same as recommended for Scutellaria orientalis, will
root readily; it may also be raised from seeds, which
will ripen occasionally.

1. Calyx.  2. Corolla spread open, to show the insertion of the stamens.
3. Stamen detached, showing the hairy filament, and anther.  4. Style and
   Stigmas.  5. The 4 naked Seeds.
AMMOBIUM alatum.

Winged-stalked Ammobium.

Natural Order. Composite. Adanson fam. 2. 103.
Sect. II. Carduaceæ. Div. 5. Vernoniaceæ.

AMMOBIUM. Receptaculum paleis distinctis. Pappus; margo dentatus. Antheræ basi bisetae. Involucrum imbricatum, coloratum radians.


Stems from 18 inches to 2 feet in height, flexuose, much branched, 4-winged; branches corymbose, erect, tomentose, each terminated with a single capitulum; wings more or less curled, or undulate. Leaves at the root stellately spreading, oblongly lanceolate, acute, tapering to the base, entire, tomentose; those on the stems short, lanceolate, taper-pointed, undulate, broad at the base, clasping the stem, and decurrent, or running down it in a leafy border, or wing. Peduncle erect, also winged. Involucre many-leaved, imbricate; scales white, scarioso, oblong, blunt, more or less wrinkled, radiate when the flower is expanded. Receptacle chaffy. Chaff membranaceous, broadly lanceolate, slightly toothed near the point, strongly keeled at the back, mucronate. Rays none. Florets tubular, 5-cleft, clothed here and there with small glandular pellucid hairs. Stamens 5; filaments distinct; anthers connected, but distinct at the points, with 2 small bristle like spurs at the base of each.
**Style** smooth, included in the tube. **Stigmas** 2, spreading, each terminated in a small truncated head. **Seeds** flat, sharp-edged, terminated by 2 very small teeth.

Our drawing of this curious and pretty perennial plant, was taken at the extensive and richly stocked Garden belonging to the Horticultural Society at Chiswick, in August last, where it was raised from seed received from New South Wales, sent by Mr. Charles Frazer, Corresponding Member of the Horticultural Society; and we are informed by Joseph Sabine, Esq. that it is hardy, and grows well in a rich border, blossoming the whole Summer, and Autumn. " It was discovered by Robert Brown, Esq. in 1804, growing plentifully near the shores of Port Hunter, in New South Wales, and named by him Ammobium, from its growing in sand." We would recommend its being planted in a south border; and, should the Winter be severe, to be occasionally covered with a little straw, or fern; but always leaving it uncovered in mild weather, that it might not rot. We believe most of the herbaceous plants from New South Wales, Van Diemen's Land, and New Zealand, would succeed well by this management; several that we have tried ourselves have succeeded very well.

We have often been surprized that the seeds of so few annual plants have, as yet, been introduced from New Holland, and also from the Cape of Good Hope, where so many pretty and interesting ones are growing wild in all directions; those would be most desirable, as they would all prove quite hardy, requiring nothing but to be sown in the open ground.

1. The Chaffy Receptacle cut through the middle. 2. Scale of the Involucre. 3. Scale of the Chaff. 4. Floret of the Disk. 5. The same split open, to show the insertion of the Stamens. 6. The same divested of the Stamens. 7. Stamens, showing the united Anthers and distinct Filaments. 8. Seed, terminated by a Style, and 2 capitate Stigmas, all magnified, except the Receptacle.
LIATRIS spicata.

Long-spiked Liatris.

Natural Order. **COMPOSITÆ.** Adanson fam. 2. 103.
Sect. II. **CARDUACEÆ.** Div. 5. Vernoniaceæ.
LIATRIS. Supra fol. 44.

Serratula spicata. *Andrews's reposit. 401.*

Root tuberous, bulbiform, fleshy; from the base and sides of which proceed numerous fibres. Stems several, springing from the same root, from 1 to 4 feet high, erect, more than half composed of pith, very leafy, channelled, owing to the wings that run down the stem from one leaf to the next, smooth, green below, and purple upwards. Leaves sessile, at the root lanceolate, stem ones linear, smooth, with a fringed base, prominently veined and dotted with numerous small transparent dots, bluntish. Flowers purple, crowded in a long close spike, sessile. Involucre many-leaved, imbricate; scales linearly oblong, obtuse, close pressed, with a thin membranaceous margin. Receptacle naked, slightly convex, punctured. Florets from 10 to 20, tubular, 5-cleft, tube about the length of the pappus; laciniae oblong, bluntish, about half the length of the tube. Anthers 5, connected into a tube, about the length of the floret. Style about as long as the anthers, where it divides into 2 long blunt stigmas of a lilac
colour, some of which are as long again as the floret. *Seeds* channelled, very hairy. *Pappus* composed of numerous feathered hairs.

This very handsome Autumn-flowering species will, in a rich light soil, sometimes attain the height of 3 or 4 feet; in poorer soil it scarcely exceeds a foot, or 18 inches. It is one of the most desirable plants with which we are acquainted, for the borders of the flower garden, as it is quite hardy, and is in bloom from August to October; the only danger of its not succeeding is, if it be planted in a damp situation, as its fleshy roots are very liable to perish with too much moisture; after flowering, the roots sometimes raise themselves considerably above the earth; in that case, they should be covered with a little dry mould. The best time for transplanting them, is late in Autumn, when they are dormant, or very early in Spring; and if in a dry situation, the roots, if very large, may be parted; they may also be raised from seeds, which should be sown in pots as soon as ripe, and soon after they are come up, may be transplanted in the open ground, where they will soon become flowering plants.

Drawn at the Nursery of Mr. Colvill, King's Road, Chelsea, in September.

1. Capitulum split through the middle, to show the naked dotted receptacle.  
2. Floret spread open, to show the nerves.  
3. Stamens spread open, showing the distinct filaments, and united anthers.  
4. Style terminated by its 2 blunt spreading Stigmas.  
5. Seed, showing its feathered pappus.
IBERIS odorata.
Sweet-scented Candy-tuft.

Natural Order. CRUCIFERÆ. DC. Reg. veg. syst. nat. v. 2. p. 139.
Subordo I. PLEURORHIZEÆ. DC. p. 146.

I. odorata, herbacea glabra, foliis linearibus dentatis basi ciliatis apice dilatatis, siliculis subrotundis; emarginaturæ lobis acutis patulis stylo brevioribus. DC. syst. p. 400.

Root annual, slender. Stem erect, bluntly angular, more or less branched, densely clothed with short white hairs; branches erect, furrowed. Leaves linear, succulent, slender, and fringed at the base, widened, o 2
and blunt at the point; lower ones pinnatifid, segments blunt, spreading; upper ones longer and narrower, thinly toothed near the point with short blunt teeth. Peduncle obsolescently 4-cornered, and furrowed with numerous channels, very hairy. Flowers corymbose, white, sweet-scented, very little lengthened when in fruit. Pedicles slender, a little flattened, thickest at the base, and gradually tapering upwards; lower ones longest. Calyx of 4 short sepals, which are obovate, concave, their points bent inwards, with brownish red membranaceous margins. Petals 4, unequal, particularly on the outer flowers; on the inner ones becoming nearly equal. Style a little longer than the stamens. Silicle nearly round, covered with small pellucid glands, and terminated in 2 spreading sharp-pointed lobes.

Our drawing of this pretty and fragrant annual plant, was taken this Summer at the Nursery of Mr. Colvill, where it was cultivated in the open ground, and continued to flower all the Summer; it is allied to I. pinnata, but differs in its stem leaves being only toothed, and its acute lobed pods; it is also related to I. amara, in its flowers, but differs considerably in its leaves and pods. A native of Crete; and only requires to be sown in the open borders, and to be kept free from weeds. Our specimens grew to the height of a foot, and ripened plenty of seeds, which should be sown in March, or April; others may be sown later in Summer, they will then continue to flower late in the season.

1. Calyx. 2. One of the large petals, and 1 of the small ones. 3. Stamens. 4. Stamen detached. 5. Germen, showing its acute lobes, and terminated with the style, and capitate stigma. 6. Silicle, or pod.
CENTAUREA suaveolens.

Yellow sweet Sultan, or Centaury.

Natural Order. COMPOSITE. Adanson fam. 2. 103.
Sect. II. CARDUACEÆ.
CENTAUREA. Receptaculum setosum. Pappus simplex.
Corolla radii infundibuliformes, longiores, irregulares.

C. suaveolens, involucris inermibus glabris, squamis subrotundo-ovatis obtusiusculis apice sphacelatis, foliis lyrato-pinnatifidis. Willden. sp. pl. 3. p. 2279.

Annual. Stem erect, much branched, from a foot to 18 inches in height; branches angular, pubescent. Leaves lyrate pinnatifid, when young pubescent, the pubescence gradually wearing off; lower ones ovate or elliptic, more or less sharply toothed; upper ones oblong, or lanceolate, more pointed; segments bluntish. Peduncles terminal, 1-flowered, many angled, pubescent. Flowers large, golden yellow. Involucre many-leaved, imbricate; scales roundly-ovate, blunt, and terminated with a brown point, the upper ones sphaeclate, smooth, or slightly pubescent. Receptacle flat, setose. Marginal florets very large, barren, tubular, terminated with from 18 to 24 sharp pointed teeth. Florets of the disk fertile, tubular, and terminated in 5 long pointed teeth, furnished both with stamens and pistil. Stamens 5; filaments distinct; anthers con-
nected; pollen bright yellow. Style smooth. Stigma terminated in a long point. Seeds densely hairy, crowned with a feathered pappus.

This very handsome and delightfully fragrant annual, is particularly well adapted for ornamenting the flower borders in Summer; it is rather more tender than the more common Sweet Sultan, or C. moschata, and thrives best in a warm dryish situation; if sown in the open ground, it should be in a border of light rich earth, and as much exposed to the sun as possible; if the Summer proves favourable, the plants will succeed very well, growing to the height of a foot, or 18 inches, and continuing to bloom nearly all the Summer. They may also be sown in pots, in a hot-house, or green-house, or on a hot-bed that is often appropriated to the raising of rather tender annuals; from thence they may be transplanted into the open ground; but this must be done before they get too large, or they will not be likely to do so well; when transplanted, they must be attended daily with water, should the weather prove dry and warm.

This plant, like many others, seldom produces seeds in any abundance; this is owing to the pollen not coming in contact with the stigmas; but is easily remedied by touching the stigmas of one flower with the pollen of another, by putting the two flowers together, and tapping the heads with the finger; this must be done when the sun is on them, as the pollen is then perfect.

Our drawing was taken at the Nursery of Mr. Colvill, last Summer.

1. Receptacle cut in two, to show the chaff. 2. Floret of the disk spread open. 3. Stamens spread open, showing the united anthers, and distinct filaments. 4. Seed crowned with a feathered pappus, and withered floret.
SCUTELLARIA Columnæ.

Columna’s Skull-cap.


S. Columnæ, foliis oblongis cordatis serratis pubescentibus, spicis elongatis secundis, bracteis petiolatis ovatis calyce brevioribus. Willden. sp. pl. 3. p. 175.

Perennial. Stems ascending, about 18 inches high, 4-sided, branching in all directions; branches bluntly quadrangular, clothed with a short dense pubescence. Leaves opposite, oblongly cordate, bluntly serrate, terminating in a bluntish point, rugose, pubescent on both sides. Petioles shorter than the leaves, channelled on the upper side, and convex on the lower, pubescent. Flower spikes long, the flowers in pairs, purple, and leaning to one side. Bractes on a very short footstalk, ovate, concave, pointed and ciliate, about the length of the calyx. Pedicles shorter than the bractes, villous. Calyx 2-lipped, entire, villous, enclosing the seeds, the upper lip forming a kind of cap. Corolla tubular, ringent, villous, helmet 3-lobed, upper lobe round, emarginate, side ones small, acute; lower lip emarginate, its sides a little reflected. Stamens 4, inserted in the tube, 2 longer than the others; filaments declining, very hairy; anthers incumbent, fringed. Style smooth, shorter than the stamens.
Stigma a small simple point. Seeds 4, naked, smooth and shining, enclosed in the calyx.

Our drawing of this beautiful species of Scutellaria was taken at the Garden belonging to the Apothecaries’ Company, at Chelsea, last Summer, where it grew to the height of about 18 inches, and continued to flower all the latter part of Summer. It is a very handsome plant, and its long spikes of purple flowers all leaning to one side, make an elegant appearance; like most of the other species of the genus, the stem is suffrutescent at the base, and from thence branches in various directions.

It succeeds well in the open ground, and prefers a rich light soil; it may be increased by dividing it at the root, or young cuttings planted under hand-glasses, in the open ground, will soon strike root, managing them, as was before directed in a former Number, under S. orientalis; it may also be increased by seeds, which sometimes ripen plentifully.

1. Calyx. 2. The same highly magnified, with the upper part turned back, to show the 4 naked seeds. 3. Corolla spread open, to show the insertion of the stamens. 4. Stamen detached. 5. The 4 naked Seeds. 6. Style.
YUCCA glaucescens.

Glaucescent Adams Needle.


**YUCCA.** Perianthium campanulatum, laeviis rectis non nectariferis. Stamina filamentis supernæ crassioribus; antheris minimis. Stylus 0; stigma sessile. Capsula oblonga, obtuse 3-gona; semina plana. Caulis subnullus aut caudice assurgente fruticosus; folia confluenta terminalia, ensiformia apice spinoso; flores spicati aut paniculati, terminales, bispaphacei. Juss. gen. 49.

**Y. glaucescens**, foliis lineari-lanceolatis integerrimis concavis glaucescentibus strictis; margine rarissime filamentosis, petalis interioribus sesquilatioribus, caule erecto ramoso.

**Yucca glaucescens.** Haworth supp. plant. succ. p. 35.

A stemless species. *Leaves* several, spreading all round, middle ones upright, from 12 to 18 inches long, and 1 broad; linearly-lanceolate, straight, rigid, tapering at both ends, concave, particularly towards the point, which terminates in a sharp horny spine, of a dull glaucous colour; margin entire, with here and there a slender white filiferous thread, from 3 lines to 2 inches in length, a little twisted. *Flower-stem* from 3 to 4 feet in height, much branched towards the point; branches short, thickly clothed with flowers, angular, channelled, densely covered with a short white down. *Flowers* generally in pairs, the terminal ones solitary, of a greenish white, tinged with yellow. *Bractes* sphacelate, membranaceous, sheathing at the base, ovately lanceolate, concave, acute, of a grey
brown, streaked with numerous darker lines. Peduncles short, cylindrical, a little bent when in flower, downy. Perianthium divided into 6 segments, nearly to the base, campanulately spreading; segments thick and succulent, the 3 inner ones half as broad again as the outer ones. Stamens 6, inserted in the base of the perianthium; filaments gradually thickening upwards, a little longer than the germen; anthers small in proportion, sagittate, attached at the base, blunt-pointed. Germen superior, bluntly 3-sided. Style none. Stigmas 3, sessile, channelled inwards, with retuse points.

This plant is a native of North America, and was introduced by the late Mr. John Lyons, from whom Mr. Colvill purchased the plants from which our drawing was taken. Mr. T. Nuttall, in his Genera of North American Plants, mentions a species of this genus, discovered by Mr. Lyons, nearly allied to Y. filamentosa, but much narrower leaved, and known by the name of Y. angustifolia by the gardeners around London, this is probably the species meant. It is a fine stately perennial plant when in flower; in rich soil attaining the height of 3 or 4 feet; several plants flowered at Mr. Colvill's Nursery, last Summer, and continued in bloom from the beginning of August till the middle of October. It is quite hardy, will succeed well in any common garden soil, and may be increased abundantly by the suckers from the roots.

1. Stamen, showing its large thickened filament, and small anther. 2. Germen, terminated by its 3 sessile retuse stigmas.
MALCOMIA littorea.

Tomentose Malcomia.

Natural Order. Cruciferae. DC. reg. veg. syst. nat. v. 2. p. 139. MALCOMIA. Supra fol. 40.

M. littorea, caule multiplici erecto, foliis lanceolato-linearibus subintegris, tomento brevi canis, pedicellis calycis longitudine, siliquis incanis. DC. loc. cit. p. 443.
Malcolmia littorea. Link enum. 2. p. 167.
Cheiranthus littoreus. Willden. sp. pl. 3. p. 521.
Hesperis littorea. Lam. dict. 3. p. 322.

Biennial. Stems several from the same root, simple, or sometimes branched, from 6 inches to a foot in height, upright, or slightly spreading, cylindrical, thickly clothed with a short white close-pressed tomentum, as are the leaves, peduncles, and calyx. Leaves lanceolately linear, blunt, attenuated to the base, entire, or distantly toothed. Racemes several-flowered, terminal, erect, without bractes. Pedicles slender, about the length of the calyx. Calyx of 4 sepals, connivent, 2-gibbous at the base; sepals linear, concave, bluntish, every other one largest. Petals 4, unguiculate, the unguis a little longer than the calyx; lamina obovate, or obcordate, emarginate, of a bright lilac, lighter at the base. Stamens 6, inserted in the receptacle, 4 long, and 2 short; filaments smooth, attached to the anthers a little above
their base; *anthers* oblique, 2-celled, opening by the sides. *Pod* cylindrical, tomentose, terminated by an acute stigma.

This pretty plant is a hardy biennial, or by sowing the seeds early in Spring it might be treated as an annual; the best method is to sow the seeds in Autumn, the plants will then get strong, and flower early in Summer, and ripen plenty of seeds; when sown in Spring, they will not flower till the Autumn; and if the Summer should prove cold or wet, they will scarcely ripen their seeds at all.

Our drawing was taken from some plants at the Nursery of Mr. Colvill, where they were raised from seeds sown in the month of March; these began flowering in September, and continued in full bloom till the end of November, but the weather being generally wet at that season, they ripened no seeds.

1. Calyx. 2. Petal, showing its long slender unguis. 3. Stamens, 4 long, and 2 short, with the silqua growing up through the middle of them. 4. Stamens detached, magnified. 5. Silqua, terminated with its acute stigma.
VERONICA neglecta.
Canescent Speedwell.


Root perennial. Stems prostrate at the base, then ascending, afterwards erect, thickly clothed with a white tomentum. Leaves canescent, serrate, but entire at the base; lower ones with long foot-stalks, oblong, bluntish; stem leaves opposite, lanceolate, pointed at both ends, upper ones alternate, those next the flowers nearly entire. Spikes several, terminal, the middle one much the longest, often a foot in length, hoary. Bractes subulate, lower ones a little longer than the flowers, upper ones about the length of the calyx, canescent, as are the pedicles and calyx. Pedicles very short. Calyx 4-parted, 2 lower segments deeply divided, subulately linear, nearly twice the length of the upper ones, which are ovate and blunt. Corolla subrotate; tube shorter than the calyx; limb 4-parted, unequal, spreading, of a bright blue colour; segments entire, some lanceolate, acute, others ovate, and blunt. Stamens 2. Filaments longer than the
petals. *Anthers* incumbent, 2-celled, bursting in front to discharge the pollen. *Germen* woolly. *Style* smooth and shining, purple, about the length of the stamens. *Stigma* a simple blunt point, darker than the style.

Our drawing of this perennial plant, was taken at the Nursery of Mr. Colvill, where it continues in bloom the greater part of the Summer, and is quite hardy, requiring only to be planted in the open flower borders. In a rich soil, it often attains to the height of 18 inches; in poorer soil, or in pots, it scarcely exceeds a foot; it is a very proper plant for the adorning of rock-work, and will also thrive in a shady situation. It is nearly related to *V. incana*, with which it has been often confounded, when in a weak state, but the leaves of that are generally entire; when growing strong, it is sometimes confounded with *V. australis*, but the leaves of that are thicker, and much deeper notched. It is readily increased by dividing it at the root; or it may be raised from seeds, which ripen in abundance.

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1. Calyx, showing its unequal laciniae. 2. Corolla spread open, to show the unequal segments. 3. The 2 stamens inserted in the base of the corolla. 4. Germin terminated by the Style and small Stigma.
GALINSOGEA trilobata.

Three-lobed Galinsoga.

Natural Order. Composite. Adanson fam. 2. 103.
GALINSOGEA. Involucrum semiglobosum, oligophyllum, laxe imbricatum. Receptaculum planum, paleaceum. Flosculi disci tubulosi, hermaphroditæ; radii bilabiati, feminei; labio exterio maximo, subtrilobo aut integro; interio abbreviato, bipartito. Akenia coronata squamulis ciliato-fimbriatis aut plumulis crebris persistentibus.
Herbae ramis foliisque oppositis, laciniatis; floribus terminatis, longe pedunculatis; radio aurantiaco. Kunth Synops. 2. p. 491.


Annual. Stems much branched, ascending, spreading round in every direction, from 1 to 2 feet in height; branches cylindrical, furrowed with numerous channels, and clothed with long spreading hairs. Leaves opposite, attenuated at the base, more or less toothed, triplinerved, slightly hairy; lower ones oblong, hastately 3-lobed, and terminating in a bluntish point; upper ones narrower, lanceolate, sharper toothed, and more pointed. Peduncles terminal, generally in pairs, the branch still lengthening out into other pairs, very hairy, hairs terminated with purple glands. Involucre imbricate, smooth and glossy; scales obovate, obtuse,
points curved inwards, membranaceous. Receptacle paleaceous. Chaff lanceolate, keeled, taper-pointed. Rays from 8 to 10, fertile, obcordate, 3-lobed, of a bright yellow, with an orange-coloured mark at the base; lobes blunt and rounded. Florets of the disk tubular, hairy at the base, furnished both with stamens and pistils, opening into 5 blunt reflexed teeth. Stamens 5; filaments distinct, smooth; anthers connected. Style smooth. Stigma bifid. Seeds black, clothed with close pressed white hairs, obconical, or with the largest part uppermost, terminated with a pappus of numerous small serrated chaff.

A very pretty hardy annual, native of South America, and only requires to be sown in the open ground, and to be kept free from weeds; the best time for sowing the seeds, is the latter end of March, or beginning of April; if sown earlier, they are liable to be injured by the Spring frost. As the plants spread considerably, they should not be allowed to remain too close together; if they are from 9 inches to a foot apart, they will make a better appearance than if they were nearer to each other, flowering from August to October, and ripening abundance of seeds.

Our drawing was taken at the Nursery of Mr. Colvill, in September last.

1. Involucre cut through the middle, to show the chaffy receptacle. 2. Scale of the involucre. 3. Scale of the chaff, showing its keel and attenuated point. 4. Floret spread open, showing its nerves. 5. Stamens, showing the united anthers and distinct filaments. 6. Seed, terminated with its style and bifid stigma. 7. Ripe Seed, terminated with a pappus of small serrated chaff.
SYMPLOCARPUS fœtidus.

_Fœtid Symplocarpus, or Scunkweed._

_Natural Order. Aroideæ._ Brown Prodr. 333.

_Sect. II._ Flores hermaphroditæ; Perianthio instructi.

**ORONTIACEÆ.**


_Draconium fœtidum._ Willden. sp. pl. 2. p. 288.


Root verticillately fibrous, truncate. Leaves large, smooth, pale green, often tinged with purple or brown, ovate-cordate, strongly veined, entire, preceded by conspicuous sheathing stipules, and protected by large glaucous, spathulate-linguiform, veinless bractes. Scapes radical, appearing before the leaves. _Spatha_ discoloured, ovoid, roundish, cucullate, obliquely acuminate, point coarctate, plaited, involutely auriculate at the base, thick and spongy, vivid purple, blotched and spotted with pale green, or greenish yellow blotched with purple. _Spadix_ pedunculate, simple, almost sphaerical, covered with hermaphrodite flowers. Bractes none. Flowers tessellately imbricate, adnate. Perianthium 4-parted, persistent, divided to the base; segments cucullate, truncate, compressed at the apex, emarginate, at length becoming very thick and spongy. Stamina 4, opposite the divisions of the perianthium; filaments subulate, flat; anthers exserted, short, oblong-oval, 2-celled. Style thick, pyramidal, quadrangular, acuminate; stigma simple, minute, pubescent, shorter than the stamens. Germen immersed in the spongy receptacle, 1-seeded. Seed naked, large, round, inclosed in the common receptacle. Corculum
small, involute, erect, umbilically attached to a large solid, carneous perisperm. Chiefly copied from Nuttall.

“Obs. The seed of the Symplocarpus does not appear to possess any thing like a proper cotyledon, the embryo formed in the exact posture of the growing plant, (with the radical downwards,) differs not from it in any particular, but that of size. In place of a cotyledon there is a sheathing stipule similar to that which is ever after produced; in fact, it is viviparous. The embryon is seated in a small umbilical or hemispherical depression, in the upper end of what may be called a vitellus rather than a perisperm, judging from its functions; this callus, or seminal tubercle, is roundish, and turbinate, nearly as large as a filbert nut, very solid, and carneous, possessing in a high degree the alliaceous fector of the grown plant; the mutual point of attachment subsisting betwixt this body and the embryon, is at first a minute and nearly central funiculus, which enlarges and becomes more distinct during the progress of germination; but what appears to be most singular in it, is the length of time which it continues attached to the growing plant, apparently inert at the base of the caudex for 12, or even 18 months.” Nuttall loc. cit.

Several plants of this curious species have been lately received from North America, by Mr. Colvill, and the greater part were in full flower when they arrived; from one of those our drawing was taken in March last. The mould in which they grew was a very black soft peat, the kind of soil in which they should be planted in this country, and in a moist situation, as Mr. Nuttall says, they are subaquatics; being so curious a plant, it is well worth cultivation in any collection, as the flowers are very curious, and its fine large light green leaves make a fine appearance after flowering; it is quite hardy, and may be increased by dividing at the root.

1. Spadix in full flower. 2. Perianthium spread open. 3. The Stamens connected at the base, inclosing the Style. 4. The same laid open. 5. Style, terminated by its small bearded Stigma.
SILENE vespertina.

Evening Catchfly.


Tribus I. SILENEAE. Sepala coalita in tubum cylindraceum apice 4-5-dentatum.


Sect. V. STACHYMORPHA. Caulescentes. Flores spicati axillares, non oppositi. Calyx 10-striatus.

§. 2. Calycibus clavatis.

S. vespertina, pubescens, caulibus ramosis, foliis spathulatis obtusis, spicis geminis secundis, calycibus vesiculato-clavatis, petalis bipartitis, lobis ovatis. DC. loc. cit. 374.

Annual. Stems erect, from a foot to 18 inches in height, much branched from the base, pubescent. Leaves on the lower part of the stem obovate, upper ones spatulate, obtuse; all fringed at the base. Spikes in pairs, terminal, secund, or the flowers leaning to one side; intermediate flower pedunculate. Calyx clavate, vesiculously pubescent, erect. Petals 2-parted, coronate, rose-coloured; lobes ovate; crown connate. Stamina 10, every other one shortest, and joined to the base of the petals; the other 5 longer, and inserted in the receptacle. Styles 3, spreading.
This pretty annual is quite hardy, and only requires to be sown in the open flower borders, and to be kept free from weeds. The seeds of our plants were received from Germany, under the name of *S. bifida*; it is without doubt the *S. vespertina* of the Botanical Magazine, and also the *S. bipartita* of Desfontaines, if we may judge from the figures, though, in many Botanical works, they are enumerated as different species. But Decandolle, in his *Prodromus*, considers them both to belong to the same, and we have thought it safest to follow his opinion. The best time for sowing the seeds is the latter end of March, or beginning of April; and should the plants come up too close together, they should be thinned out, leaving them from 4 to 6 inches apart, they will then grow stronger, and flower in greater perfection. The flowers appear to the greatest advantage of an evening, or early in the morning; for when the sun shines warm on them, the petals curl up, and do not open again till the evening.

Our drawing was taken at the Nursery of Mr. Colvill, last Summer.

1. Calyx. 2. Petal detached, to show the insertion of the Stamen. 3. Corolla spread open, showing the 5 Petals with their crowned Faux, and the insertion of the 5 shortest Stamens. 4. The other 5 longer Stamens inserted in the Receptacle. 5. Germen terminated by the 3 spreading Styles.
SAXIFRAGA ligulata.
Fringed-leaved Nepaul Saxifrage.

Natural Order. SAXIFRAGÆ. Juss. gen. 308.

S. ligulata, foliis orbiculato-cordatis obovatisve denticulatis ciliatis punctatis glabris, stipulis ciliatis, scapo dichotomo, petalis late orbiculatis.


Root horizontal, ligneous. Leaves large, leathery, denticulate, ciliate, dotted all over with small punctures, strongly veined underneath, smooth, of a glossy green on the upper side, and of a dull pale green on the lower; lower ones roundly obovate, cordate at the base, from 9 to 10 inches long, and 7 broad; upper ones nearly round, cordate, 4 inches long, and about the same in breadth. Petiole short and thick, nearly
round, furnished at the base with a large decurrent, membranaceous, fringed Stipule, which clasps the stem. Scapes 2 to 4, erect, slenderish, smooth, leafless, forked, sometimes divided again; racemes from 4 to 6-flowered, at first nodding, afterwards becoming upright. Bracte 1, below the fork, membranaceous, dilated at the base, sheathing the scape, acute. Pedicels short, roughish, striate. Calyx campanulate; laciniae 5, short, roundish, obtuse, dotted. Petals 5, white, inserted in the calyx, unguiculate; lamina broadly orbiculate. Stamens 10, inserted in the calyx, every other one longest; filaments smooth, subulate, flesh-coloured; anthers roundish; pollen cream-coloured. Capsule superior, terminating gradually into the Styles. Stigmas 2, large, nearly globular, smooth, and glossy.

This beautiful species of Saxifrage, is a native of Nepaul, and was raised at the Nursery of Mr. Colvill, in the Spring of 1822, from seeds sent him, by Mr. George Potter, from the Botanic Garden, at Calcutta; 2 of the plants flowered this Spring, from one of which our drawing was taken. It belongs to the same section or subgenus, as the common S. crassifolia, and S. cordifolia, which, with Mr. Don, we agree in considering as distinct species: indeed, we never had any other opinion concerning them.

The present plant will be a valuable addition to our collections, as it flowers so early in Spring; and we expect it will prove as hardy as its near relatives; but, at present, we would advise it to be planted in a warm border, and to be covered with a mat, or a little straw, or fern, in severe weather in Winter. It succeeds well in a rich garden soil, and may be increased, but slowly, from the suckers at the roots.

1. Calyx spread open, showing the insertion of the Stamens. 2. Petal. 3. Germens terminated with 2 capitate Stigmas.
CUPHEA viscosissima.

Viscous Cuphea.

Natural Order. **Salicariæ.** Juss. gen. 330.

**Cuphea.** Calyx tubuloso-ventricosus, 6-12-dentatus, inaequalis. Petala 6, (plerumque) inaequalia, calyci inserta. Stamina 10-12-insertione inaequalia, nempè hinc 8 coordinata et conformia, indè 4 minora gemina ordine disposita quorum 2 superiora villosa; antheræ subrotundæ. Capsula cum calyce longitudinaliter dehiscens, 1-locularis; conceptaculo triquetro. Semina lentiformia.

**C. viscosissima,** floribus axillaribus solitariis, foliis ovato-lanceolatis supra scabris, caule erecto hispido, stylo piloso. **Hort. Kew. ed. 2. vol. 3. p. 150.**


Annual, from a foot to 18 inches in height, erect, branched, of a purplish colour; branches rather flexuose, thickly clothed with short stiff purplish hairs, covered with a viscous substance, as are the petioles, peduncles, and calyx. Leaves ovate, or ovately lanceolate, oblique at the base, entire, bluntish, hairy on both sides. Petioles slender, shorter than the leaves, flattened on the upper side, and rounded on the lower. Flowers small, axillary, solitary. Peduncles very short, scarcely any. Calyx tubular, ventricose, 12-angled, and terminated with 6 very short blunt teeth; angles of a darker colour, hispid, the channels between them smooth and naked. Petals 6, unequal, the 2 upper ones largest, unguiculate, inserted in the calyx, of a light purple, or lilac. Stamens 12, unequally
inserted in the tube of the calyx; *filaments* hairy, the 2 upper ones villous; *anthers* incumbent. *Style* 1, hairy, slender towards the point, and terminated with a small capitate stigma. *Capsule* bursting longitudinally soon after the flower drops, and showing its naked seeds, which continue to increase in size, and remain firmly attached till ripe. *Seeds* several, lenticiform, facing the side that the capsule is burst, in a kind of secund spike.

Our drawing was taken at the Nursery of Mr. Colvill, from plants raised from seeds last Spring; they began flowering when they were scarcely 4 inches high, and continued to bloom the whole of the Summer, and ripened abundance of seeds; the first flowers were very small, agreeing exactly in size with those in the figure of Barton's *Flora, of North America*; but as the plants increased in strength, the flowers became larger, at length, making a handsome appearance. The bursting of the capsules is a very curious circumstance, and if the plants are not well watched, the seeds will drop out and be lost.

The present plant has been generally considered as a greenhouse biennial, but ours were certainly hardy annuals, flowering very soon after being out of the ground, and dying as soon as the seeds were ripened. The best time for sowing the seeds, is the beginning of April, if the weather prove mild; they should be sown in a rich soil, in a warm border.

1. Calyx. 2. Calyx spread open, to show the insertion of the Petals and Stamens. 3. One of the upper Stamens detached, to show the villous filament. 4. Capsules, showing the hairy Style and capitate Stigma: one of them burst, showing the situation of the seeds.
HESPERIS fragrans.
Evening-Scented Rocket.

Natural Order. Cruciferæ. DC. reg. veg. syst. nat. v. 2. p. 139.
Subordo II. Notorhizeæ. Cotyledones planæ, incum- 
bentes. Radicula dorsalis. Semina ovata, immarginata. 
DC. p. 150.
Tribus VII. Sisymbreæ seu Notorhizeæ Siliquoseæ. 
HESPERIS. Calyx clausus, bisaccatus. Petala unguiculata, limbo patente obtuso aut emarginato. Stamina libera, 
tetradynamæ. Glandulae virides, subannulatae, ad basin sta-
minum lateralium. Siliqua stricta subtetragona aut compressa, 
stigmatibus 2 erectis sessilibus conniventibus terminata. Semina 
oblonga, subtriqueta, pendula, 1 serialia. Cotyledones planæ 
incumbentes. Herbae annua, biennae perennæ; radix fibro-
sa; caule tereti erecto aut diffuso. Folia ovato-lanceolata aut 
oblonga, dentata aut lyrato-runcinata. Plantæ pleuresque pilis 
alis lymphaticis simplicibus ramosisve, alis præsertim ad apicem 
pilis glandulis instructæ et inde quasi bituminose. Racemi 
terminales, ebracteati, erecti. Pedicelli filiformes, post anthesin 
on increasati. Flores albi aut purpurascents, sepe versico-
lores, interdum odorati. DC. v. 2. p. 446.
Sect. I. HESPERIS. Petalorum limbi lineares, sordide ex 
abido flavo-purpurascents, vespere odorati. Siliqua valvis 
carinatis subanceps, septo fungoso.

H. fragrans, pedicellis villosis calyce villosissimo duplo brevio-
ribus, petalorum laminis oblongis undulatis, foliis inferioribus 
petiolatis runcinato-lanceolatis obtusiusculis: superioribus 
subsessilibus ovatis acuminate basi grosse dentatis. 
Hesperis fragrans. Fischer Mss.

Biennial. Stem erect, not much branched, thickly 
clothed with soft villous down, and longer hairs inter-
mixed. Leaves runcinate, villously hispid, roughish; 
lower ones petiolate, lanceolate, bluntish, segments or
teeth pointed, the lowermost longest; upper ones nearly sessile, or on very short footstalks, ovate, taper-pointed, sharply toothed at the base, and entire from about the middle. Racemes elongated, many-flowered, thickly clothed with long villous hairs, and smaller ones intermixed. Bractes none. Pedicles short, scarcely half the length of the calyx, villous. Calyx of 4 sepals, closed, 2-gibbous at the base, bearded at the point; sepals linearly lanceolate, slightly keeled, green, tinged with purple, villous. Petals 4, unguis about the length of the sepals; lamina oblong, undulate, terminating in a very short bluntish mucro, a little longer than the unguis, of a dull purple, reticulately veined. Stamens 6, 4 long and 2 short, enclosed in the calyx; filaments obliquely flattened at the base, and narrowing upwards; anthers sagittate. Siliqua villosely hispid, terminated by 2 connivent 2-lobed Stigmas.

Our drawing was taken from a plant communicated to us by our friend, Mr. W. Anderson, Curator of the Apothecaries' Garden, at Chelsea, where it was raised from seed sent him by Dr. Fischer, of the Royal Botanic Garden, St. Petersburgh, under the name that we have adopted; we do not find it recorded in either of the late publications of M. Decandolle, and believe it has not been before published; it is a hardy biennial, flowering the second season after being sown. It may either be sown in the open ground, or in pots; and is particularly suited for the latter, as it can then be moved into or near a room, as its agreeable fragrance is delightful of an evening, though it is quite destitute of scent during the day. It thrives well in a rich garden soil, and is only to be propagated by seeds; the young plants should be transplanted as soon as possible, or they will be likely to damp off.

1. Calyx. 2. Petal. 3. The 6 Stamens, 4 long, and 2 short. 4. The young Siliqua terminated by its 2 bilobed Stigmas.
HABENARIA bracteata.
Long-bracted Habenaria.


Orchis bractealis. Salisb. pardis. 110.

Perennial. Root palmate. Stem about a span high, leafy, furrowed, angular. Leaves channelled, clasping the stem, keeled and nerved underneath, bluntish; lower ones oblong; upper ones lanceolate, more pointed. Spikes short, in our specimen 9-flowered. Bractes linearly lanceolate, channelled, bluntish, about double the length of the flowers. Flowers green, scentless, erect, or scarcely nodding. Germe channelled, twisted. Perianthium ringent; three outer leaflets ovate, obtuse, the middle one rather the shortest and narrowest; two inner ones narrowly lanceolate, bluntish. Labellum broadly linear, point slightly 3-toothed, the teeth blunt, and the middle one shortest. Spur or
pouch at the base of the Labellum, short and inflated, 2-lobed, of a transparent flesh-colour. Anther joined to the point of the stigma; lobes diverging, and opening in front for the exclusion of the Pollen masses, which are pedicled and attached at the base.

This curious plant was imported from North America last Winter, and was procured for Mr. Colvill, with several other Orchideous plants from the same country, by Mr. George Charlwood. It thrives well with us at present in a pot of red sandy loam, and we are in hopes that it will ripen its seeds. The seeds of the different species of Orchideae have been generally supposed to be very difficult to make grow, but we have succeeded well in raising some of them, and have no doubt but the whole might be raised in the same way; we have now a pot of seedlings of Cymbidium ensifolium thriving very well, and we managed them in the following manner: in October last; we filled a pot with peat earth, within half an inch of the brim, we then planted it all over with small turfs of very short moss, on the moss we scattered our seeds, and washed them in between the blades with watering them; we then placed them in the hothouse, and managed them in the same manner as any other common seeds, watering them occasionally when dry; the moss continued to grow, and the latter end of April the young plants began to make their appearance, and others still continue to show themselves. If sown in any other way, we think them not so likely to succeed, the seed being so very small, that they will soon lose their vegetating quality.

1. Germen. 2. The 5 leaflets of the Perianthium. 3. Labellum, showing its 3 short blunt teeth. 4. Spur or Pouch. 5. Anther, showing its diverging lobes, each burst, showing the pedicled Pollen masses attached to the base, and freed from the Anther, all magnified.
SCHIZANTHUS pinnatus.

Winged-leaved Schizanthus.

Sect. I. Stamina duo antherifera. Capsula bilocularis.

S. pinnatus, foliis interrupte pinnatis: inferioribus bipinnatis, floribus paniculatis: racemis secundis.
Hooker exot. flor. 78.

Annual. Stem from 2 to 3 feet high, erect, much branched; branches slender, thickly clothed with soft villous glandular hairs, and terminated with a panicle of flowers. Leaves interruptedly pinnate, more or less hairy; lower ones bipinate with smaller leaflets intermixed; leaflets oblong, very blunt, more or less toothed with blunt rounded teeth; upper leaves pinnatifid, those near the flowers entire, oblong, obtuse, more sharply toothed, very hairy. Flowers in panicles, or compound secund racemes, terminating the stem, varying in colour on different plants. Bractes 2, at the base of the pedicle, one double the size of the other, oblong, obtuse, very hairy. Pedicles slender, nodding. Calyx 5-parted, segments unequal, oblong, obtuse, fringed. Corolla irregular; upper lip 5-cleft, side laciniæ forked, those again notched, the upper one entire, or slightly emarginate; lower lip 3-parted, outer laciniæ falcate, bending towards each other, their points truncate, middle one concave, connivent, enclosing the stamens, which are elastic, and spring
towards the stigma as soon as touched. **Stamens 4**, inserted in the mouth, 2 barren, and 2 bearing anthers; **sterile filaments** short, very villous; **fertile ones** longer, slightly hairy, and elastic, springing upwards as soon as touched; **anthers** attached to the filament, a little above their base, 2-celled, discharging their pollen by the spring of the filament. **Pollen** ash-coloured. **Germen** smooth. **Style** smooth, purple. **Stigma** a simple point.

This very beautiful annual plant is a great acquisition to our gardens, where it has been lately introduced. Seeds of it were first brought to this country by Lady Cochrane, and they have now found their way into many collections; the plant from which our drawing was made, was presented to Mr. Colvill, by the late J. Walker, Esq. of Arno's Grove, Southgate, who raised it from seed; we find it succeeds well in the open air, where it makes a grand appearance, and continues in full bloom for a considerable time; our plants grew to the height of 3 feet, branching out in an elegant manner, and ripened their seeds. Cuttings of them were taken off in September, and planted under hand-glasses in the open ground, where they soon rooted; we then planted them in small pots, and preserved them in the greenhouse through the Winter; in March they began to flower, and are now covered with flowers and seeds.

Seeds sown in pots early in Spring, and placed in a greenhouse, or frame, will flower much earlier than those sown in the open ground; a rich light soil suits them best, and a sheltered situation, as their tender shoots are apt to be broken by rough winds if they are too much exposed.

1. Calyx. 2. The lower lip of the Corolla divided from the upper, to show the insertion of the 2 fertile Stamens. 3. The upper lip, showing the 2 barren Stamens. 4. Fertile Stamen detached. 5. Barren ditto. 6. Capsule nearly ripe. 7. Style and Stigma.
RENEALMIA grandiflora.

Largest-flowered Renealmia.


Perennial. Stem short, much branched at the base. Leaves fan-like or distichous, sheathing at the base, narrowly sword-shaped, taper-pointed, roughish on the edges, many-nerved, of a lively green edged with a yellowish-brown, from 10 to 18 inches in length; sheaths membranaceous, of a brownish orange colour. Scape erect, scarcely as long as the leaves, nearly cylindrical or slightly flattened, smooth, of a purplish colour. Flowers white, panicled. Sheaths leaf-like, lower one longer than the pedicles, upper ones shorter. Pedicles cylindrical, gradually thickening upwards, of a purplish colour, with a small membranaceous bracte attached near the base. Germin bluntly trigonal, uneven. Perianthium 6-parted, seated on the germin; outer leaflets oval or oblong, bearded at the
point, white with a purple keel down the back; inner leaflets obovately-oblong, slightly emarginate, narrowed at the base, 3 or 4 times larger than the outer ones. Stamens 3; filaments slightly connected at the base, flat, tapering upwards; anthers sagittate, 2-celled. Style short, smooth. Stigmas 3, flat, tapering to a point.

The present subject is a native of New Zealand, where seeds of it were collected by Mr. John Richardson, who disposed of them and numerous other seeds of new and very rare plants from that country and New Holland, to Mr. Colvill, and plants raised from them are now in Mr. C.'s collection; many of which have flowered. There are now in flower *Boronia serrulata*, a new species of *Podolobium*, and a beautiful new plant from King George's Sound, we believe a new species of *Callistachys*. Many other interesting plants from the same collection we expect to see flower this season, which, we presume, will still vex Billy Aiton, and his staunch radical friend old Cobbett!!

Several plants of the present species were planted out in the open ground last Spring, where they have remained to the present time, and have received no injury from the Winter, but are growing as freely as those that have been protected in a greenhouse; the one from which our drawing was taken, flowered in April, but from the appearance of the plant we suspect it will bloom at various seasons. It grows freely in a rich light soil, and may be increased by dividing at the root, or by seeds.

Mr. Brown was so obliging as to favour us with a sight of a drawing from a native specimen; in this the plant was much stronger, the flowers larger, and the panicle 4 times the size of ours, so that it will become a handsome plant when of larger growth.

1. Outer leaflet of the Perianthium, showing its fringed point. 2. Inner ditto, showing its narrow base. 3. The 3 Stamens spread open, showing their slight connection at the base. 4. Style terminated by 3 flat spreading Stigmas.
ORCHIS spectabilis.

Showy American Orchis.


O. spectabilis, labello obovato indiviso crenulato retuso, foliis perianthii conniventibus rectis: lateralis longioribus, cornu clavato longitudine germinis, bracteis flore longioribus, scapo acute 5-angulo subaphyllo.


Root, in our plant, fasciculate, (palmate, according to Nuttall.) Leaves 2, large, roundly oval, reticulately veined underneath, smooth and shining above. Scape acutely 5-sided, leafless, (sometimes producing a leaf, Nuttall.) few-flowered. Bractes large, leaf-like, lanceolate, obtuse, overtopping the flowers. Flowers large, violet-scented, all facing one side. Germe angular, slightly twisted, bent towards the flower. Leaflets of the Perianthium connivent and adhering, of a light purple on the outside, and darker within; side ones rather the longest. Labellum white, or slightly tinged with blush, broadly ovate, crenulate,
slightly retuse. *Spur* compressed, blunt, or club-shaped at the point, about the length of the germen. *Stamen* attached to the point of the stigma, the 2 lobes diverging. *Pollen masses* pedicled, and covered with a hood.

Our drawing of this rare and handsome plant, was made at the Nursery of Mr. Colvill; it had been lately imported from North America, and was procured for Mr. C. by Mr. George Charlwood. The plants were potted in a very sandy red loam, where they flowered strong, and are appearing to thrive very well, and we have little doubt but the whole of the Orchideous plants might be managed as well as any others, by proper attention; many of them, we think, would succeed well in a frame, or pit, and to be covered occasionally with glass, particularly when the weather was very wet, as moisture is much more injurious to them than cold; the soil should be prepared for them according to the different species; the greater number succeeds best in light sandy loam, a few species prefer peat, and many are fond of a chalky soil, which could be imitated by pounding or grinding chalk, and mixing it with the other mould; the bed should be made a little sloping, that the wet may pass more readily off. Some of the sorts that prefer chalky hills, might be planted on a little mount made of chalk, and covered with sandy loam mixed with powdered chalk; in such a situation, we believe many of them would thrive well.

1. Part of the Flower-stem, to show the 5 angles. 2. Germen. 3. The 3 outer leaflets of the Perianthium. 4. The 2 inner leaflets. 5. Labellum. 6. Spur. 7. Anther, showing its diverging lobes covered with a hood. 8. The same divested of the hood, showing its pedicled pollen masses attached to 2 little glands at the base.
WULFENIA carinthiaca.
Carinthian Wulfenia.


Paederota Wulfenia. Lamarck encycl. t. 13. f. 2.

Perennial. Leaves radical, tufted, spreading flat on the ground, younger ones erect, obovate, obtuse, slender at the base, notched with rounded blunt crenatures, which are again slightly notched. Scape erect, smooth, leafy; the leaves small, sessile, clasping the stem, acute, margins bent backwards. Spike at first nodding, afterwards becoming erect, and growing to a considerable length. Flowers of a bright blue, leaning to one side. Pedicles short. Calyx 5-parted; laciniae unequal, lanceolate, acute. Corolla ringent; upper lip short, entire, slightly crenulate; lower lip 3-parted, densely bearded in the mouth, segments rounded, with a small point, side ones largest. Stamens 2, inserted in the tube, and included within the mouth: filaments smooth; anthers incum-
bent; pollen ash-coloured. Style smooth, exserted. Stigma capitate.

For the opportunity of giving a figure of this rare plant, we are obliged to A. B. Lambert, Esq. who sent us a fine plant of it in full bloom, that had been grown at his seat at Boyton. Large plants of it make a handsome appearance, when covered with numerous spikes of beautiful blue flowers, which last a considerable time. Our drawing was taken about the middle of April, and other spikes continued to flower till near the end of May. It succeeds well in a rich loamy soil in a sheltered situation, and may be increased by dividing at the root, or by seeds.

1. Calyx. 2. Corolla spread open, to show its bearded mouth, and the insertion of the stamens. 3. Germen, Style, and Stigma.
PEDICULARIS canadensis.

Canadian Pedicularis.

_Natural Order._ _Scrophularinæ._ _Brown prodr._ 433.
_Sect._ II. _Stamina_ 4 _antherifera._

 **PEDICULARIS.** _Calyx_ 5-fidus. _Corolla_ ringens. _Capsula_ bilocularis, mucronata, obliqua. _Semina_ tunicata. _Folia_ opposita aut alterna, simplicia aut sæpiüis pinnata; _flores_ oppositi aut alterni, bracteati, spicati terminales.

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_Perennial._ _Stems_ several from the same plant, erect, simple, of a purplish colour, thickly clothed with soft white hairs, particularly on the upper part. _Leaves_ alternate, lanceolate, pinnatifid, hairy: segments on the lower ones incised, or deeply toothed with bluntish rounded segments or teeth, which are again toothed; upper leaves more shallowerly and sharper toothed with numerous small teeth. _Petioles_ deeply channelled on the upper side, and rounded on the lower, hairy. _Flowers_ in a short spike, or head, pale yellow, tinged with purple. _Bractes_ leaf-like, toothed, villous at the base, the upper ones shortest. _Calyx_ inflated, truncate downwards, emarginate, angular, villous. _Corolla_ ringent: helmet flat, toothed
near the point with 2 sharp setiform teeth; lower lip 3-lobed, side lobes ovate-rounded, erect, the middle one reflexed. *Stamens* 4, inserted in the tube, 2 rather longer than the others; the 2 longest *filaments* are hairy, the others smooth. *Style* smooth, exserted, terminated with a small capitate stigma.

A native of North America, from whence plants of it were received last Autumn, by Mr. Colvill, from one of which our drawing was made the beginning of May. We planted them in a mixture of sandy loam and peat, principally the latter; and they are now in a flourishing state, and appear likely to increase at the root. Pursh mentions it as growing in woods and meadows, from Canada to Carolina; and it appears to us to be fond of moisture, and to prefer a shady situation.

1. Calyx. 2. Corolla spread open, to show the insertion of the stamens, and the 2 teeth on the upper part of the helmet. 3. Back view of the lower lip, showing the reflexed middle lobe. 4. Stamen detached, showing the hairy filament. 5. Germin, Style, and Stigma.
IRIS verna.

Vernal American Iris.

Natural Order. IRIDEÆ. Brown prodr. 302.

IRIS. Perianthium 6-partitum magnum: laciniiis 3 alternis rectis; 3 alternis reflexis intùs barbatis aut imberbibus basi staminiferis. Stylus brevis; stigmata 3 petaloidea, oblonga, magna, staminibus incumbentia, sulco longitudinalìi nectarifero marginato suprà exarata.

I. verna, imberbis, acaulis, uniflora, foliis lineari-ensiformibus rigidis acutis glaucescentibus, perianthii laciniiis subaequalibus, capsulis obsolete trigonis.


Roots scarcely tuberous, creeping, reddish. Leaves radical, linearly-ensiform, rigidly coriaceous, acute, margined, slightly glaucous, tinged with red at the base; in our plant, a foot in length. Scape 1-flowered, sessile, or nearly so, sheathed at the base with short leaf-like bractes. Germen attenuated, slightly triquetrous. Tube of the Perianthium slightly but bluntly triangular, about 2 inches long; laciniae jointed on the tube, inner and outer divisions nearly equal, with long slender ungues, oblong-obovate, of a beautiful bright blue, the 3 exterior marked with an oblong orange-yellow stripe, edged and spotted with black, and having a central slightly raised, scarcely villous line; inner ones of one colour, at first connivent, afterwards spreading flat like the outer ones. Stamens 3, inserted

We think there can scarcely be any doubt but the present subject is the real *I. verna*, which has been so long a desideratum in our collections; it is certainly Mr. Nuttall's plant, though he describes the roots as tuberous, which ours scarcely is, but is more of a creeping nature. *I. verna* of Pursh is probably a different plant, though his description agrees pretty well with the present, except in the capsule being subrotund, which in ours is bluntly 3-sided; the colour of the flowers is also said to be light blue, striped with purple; Mr. Colvill received plants of the present species, last Autumn, from North America, with some others, one of which is said to be the *I. tridentata* of Pursh, but it has not yet flowered.

In our opinion, the present species is by far the most beautiful of all the dwarf sorts, and appears to grow as freely as any of them, when planted in a rich light soil, flowering the beginning of May; it also possesses a considerable degree of fragrance, and may be increased by dividing at the root.

1. Peduncle. 2. Germen. 3. Tube of the Perianthium. 4. One of the outer laciniae of ditto, showing the insertion of the stamen at its base. 5. The 3 Stamens. 6. Back view of the Stigma.
to ensure that the elements are used effectively. This includes selecting the right type of content, such as text, images, or videos, to convey the message clearly. The format of the content should also be considered, as it can impact the readability and engagement of the audience. Additionally, the content should be organized in a way that is easy to follow and understand. This can be achieved through the use of headings, subheadings, and bullet points. Finally, the content should be reviewed and edited to ensure that it is accurate and free from errors. By following these guidelines, it is possible to create content that is effective and engaging for the intended audience.
VIOLA pedata.

Cut-leaved Violet.

Natural Order. Violarìæ. DC. prodr. syst. nat. 1. p. 287.

VIOLA. Calycis sepala inæqualia, omnia plus minus deorsùm in appendices auriculæformes (è dilatationibus nervorum prodeuntes) producta, post anthesen erecta. Petala inaequalia, æstivatione convolutâ, ungue trinervi; inferius deorsùm in calcar cavum plus minus productum. Stamina approximata aut coarctata (nec coalita) ad apicem dentium tori pentagoni 5-dentati inserta. Filamenta basi dilatata oblonga vel triangulæ, antheras deorsùm gerentia; lobî antherarum basi divergentes, stamina 2 anteriæ dorso appendices varias nectariferas in calcar intrantes gerentia. Ovarium nunc superum, nunc basi toro concavo cinctum et ideò semi-inferum. Valvulae capsulae elasticae post maturationem contraæa semina ejicientes; semina horizontalia manifeste carunculata, plus minus ovoidea et nitida. Embryo oblongus, radicula teretiuscula, cotyledones sæpiûs oblongo-orbiculae planiusculæ radiculæ vix longiores.—Herbae plerûque perennes, rarissimè annue, nunc caule brevissimo vel subterraneo, unde acaules dicte, nunc caulescentes vel suffrutices parvi; folia alterna marcescentia; pedunculi solitarii axillares uniflori, 2-bracteati non articulati, apice reflexi; flores cernui; folia seminalia oblonga ovatave, petiolata; primordialia opposita, sed raro coëtanea. DC. loc. cit. p. 291.


§. 1. Stigmatibus apice depressis, aut deorsùm in orbem marginatis; caulibus subnullis.

* Truncis radiciformibus (Rhizomatibus?) dentatis plus minusve carnosis, sæpius obliquis. DC. loc. cit.

V. pedata, stigmathe inerassato hinc oblique truncato; rostro brevissimo, foliis pellucido-punctatis palmatisectis, stipulis pectinatim laceris longe adhaerentibus, petalis omnibus glabris. DC. loc. cit.

Stemless. Leaves pedate, many parted: segments linearly lanceolate or slightly wedge-shaped, entire or toothed near the point, attenuated to the base, pellucidly-punctate with numerous small dots, finely ciliate. Petioles gradually tapering upwards, furrowed with 2 small channels on the upper side, and angular on the lower. Stipules ciliate or lacerate, taper-pointed, joined to the base of the footstalks. Peduncles bearing 2 subulate taper-pointed keeled bractes a little above the base, furrowed, sometimes not so long, at other times longer than the leaf. Calyx of 5 sepals, slightly unequal, lanceolately subulate, taper-pointed, eared at the base. Petals 5, alternating with the sepals, oblongly obovate, spreading, the 2 upper ones slightly recurved, the lower one broadest, slightly emarginate, all of them smooth, (not bearded,) of a light purplish blue, with scarcely darker veins; the lower one with a light mark near the base. Stamens 5, inserted in the receptacle, alternate with the petals: anthers 2-celled, joined to the filaments by their back; filaments a little dilated at the base, and terminating above the anthers in a dry blunt yellowish membrane. Germin smooth. Style smooth. Stigma large and thick, compressed at the sides, obliquely truncate, beaked, the small beak fixed in a little pit near the point.

Several strong plants of this beautiful species of Violet were received, last autumn, by Mr. Colvill, from North America; from one of those our drawing was taken last spring; it is a very variable plant, different individuals varying very much in the breadth and division of their leaves, and also in the length of their peduncles. It appears to thrive well with us in a sandy peat soil, where it makes a very handsome appearance with its divided leaves and large blue flowers. It may be increased by seeds, or separating at the root.

1. The 5 Stamens spread open, to show the insertion of the anther to the back of the filament, the filament terminating beyond it in a dry yellowish membrane. 2. Germin, Style, and Stigma.
PÆONIA lobata.
Lobed-leaved Pæony.

Natural Order. Ranunculaceæ. DC. syst. v. 1. p. 127.
Trib. V. PÆONIACEÆ. Antheræ introrsæ; an ordo pro- prius. DC. prodr. 1. p. 64.
PÆONIA. Supra fol. 19.
Sect. II. PÆON. Caulis herbaceus. Discus vix aut non expansus et carpella imà basi tantùm circumdantia.

P. lobata, herbacea, carpellis tomentosis erectiusculis, foliorum segmentis glabris decurrentibus pinnatipartitis apice trilobatis. DC. prodr. 1. p. 66.

Stem erect, from 18 inches to two feet high, smooth. Leaves ternate: leaflets pinnatifid, smooth or slightly pubescent underneath, with a few small hairs scattered here and there on the nerves, decurrent: segments ovate or oblong, bluntish, generally 3-lobed or toothed, but sometimes entire; nerves underneath much branched, prominent. Petioles smooth, channelled on the upper side, and rounded on the lower. Peduncle furrowed, gradually thickening upwards. Involucrum leaf-like, bractes 3-parted or entire, lanceolate, acute. Calyx of 5 sepals: outer ones longest and narrowest, acute: inner ones orbicular, concave, edged with red. Petals 8, bright red, inclining to scarlet, with a white mark on one of the outer ones, nearly orbicular, hollow or cupped inward, slightly notched at the edges, outer ones largest. Stamens numerous, surrounding the germens: filaments smooth, red at...
the base, and pale upwards, inserted in the base of the anthers. *Germens* 2 or 3, erect, or slightly curved inwards, thickly clothed with a shining white silky tomentum. *Stigmas* red, crested, undulate.

Our drawing of this handsome species of *Paeony* was taken at the Nursery of Messrs. Whitley, Brames, and Milne, last summer; they had imported it from France, as the *P. lobata* of M. Decandolle, which we think there is no doubt but it really is, though some people think otherwise, the leaves being slightly hairy, whereas he describes them as smooth; in the specimens that we examined, the young leaves were slightly hairy, but the older ones were quite smooth; in every other respect it agreed exactly with the description in his *Prodomus*, where he has divided from it the *P. Russi*, which, in his former work, he had given as a synonym; this is now ranked with the pubescent species, and we believe it to be the plant received from the Botanical Garden at Liverpool as a variety of *P. arietina*, with which it agrees in the character of its recurved germens.

The present plant is at present very scarce in the collections about London, and is consequently rather expensive; it is as hardy as any of the common sorts, and grows freely in the common garden soil. It may be increased by dividing at the root.

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1. Segment of one of the lower leaves, showing its lobed point. 2. Stamens detached, showing the red base of the filaments. 3. Germens, showing their dense silky down, terminated with their red crested stigmas.
CYPRIPEDIUM pubescens.

Yellow Downy Ladies' Slipper.

Sect. VI. Diandree. Stamina 2 antherifera.
CYPRIPEDIUM. Perianthium 4-phyllum, patens: foliola 2 antica saepius connata. Labellum ventricosum, inflatum (nunc saccatum.) Columna postice terminata lobo petaloideo (stamine sterili,) antheras distinguente.

C. pubescens, caule folioso, lobo styli trianguläri-oblongo obtuso, perianthii foliolis exterioribus ovato-oblongis acuminatis: interioribus linearibus contortis basi intus subbarbatis, labello nervoso foliolis breviore compresso.

Cyprípedium flavescens. Redoute liliac. 20.

Stems several from the same root, upright, striate, densely pubescent. Leaves 4 or 5, alternate, sessile, clasping the stem at the base, spreading, ovate, acute, more or less waved, point slightly twisted, longitudinally nervèd and plaited, furrowed on the upper side, densely pubescent. Flowers 1 to 3, nodding. Peduncle scarcely as long as the leaf, densely pubescent. Bracte 1, straight, leaf-like, ovate, taper-pointed, shorter than the leaflets of the perianthium. Pedicle short, enclosed in the bracte. Germin angular, curved, not twisted, densely pubescent. Leaflets of the Perianthium of a greenish yellow, more or less spotted with brown: 2 outer ones ovate, acuminate, upper one erect, a little twisted, lower one dependent, straight, longer than the labellum; inner ones longer, broadly
linear, spreading, a little deflexed, twisted, points acute, bearded inside at the base with a tuft of white hairs, but much less so than C. parviflorum; outside densely pubescent. Labellum yellow, ribbed, mouth edged with brown, inside elegantly spotted in purple circular lines, bearded at the bottom. Column lobe trianually oblong, obtuse, smooth, channelled on the upper side, and concave near the point, keeled and channelled underneath, yellow, spotted with brown. Style yellowish white: middle lobe trianually oblong, obtuse; side ones short, lanceolately cuneate, bluntish, shorter than the anthers. Anthers 2, nearly orbicular, attached to the side lobes of the style. Pollen waxy, yellow.

The plant from which our drawing was taken, at the Nursery of Mr. Colvill, was received last autumn from North America; it was planted in a pot of very sandy red loam, where it flowered very strong in the beginning of June. The plants of this genus, as well as of many other Orchideous genera, are at present supposed to be very difficult to cultivate; but we hope, before long, to be able to give directions for cultivating them, as well as any other plants; a great many of them are fond of the shade of trees, which should be imitated as much as possible in the cultivation of them. Pursh mentions the present species as growing on sunny fertile hills, among small trees and bushes, generally in rocky situations, from Pennsylvania to Carolina. Introduced into this country in the year 1790, by Sir J. Banks; but still continues scarce, as it is so liable to perish.

1. Labellum. 2. Front view of the Column lobe. 3. Back view of ditto. 4. Front view of the lower lobe of the Style. 5. Back view of ditto, showing the edges of the anthers attached to the 2 upper lobes. 6. 6. The 2 side lobes with the anthers attached to them, front view.
COREOPSIS tinctoria.

Dyeing or Arkansa Coreopsis.


Annual. Stem erect, much branched, 2 to 5 feet high. Leaves opposite, somewhat succulent, smooth, at first simple and ovate, the next pinnately parted, with ovate, obtuse leaflets, which are generally entire, but sometimes 2-cleft: upper ones also pinnate or bipinnatifid, the leaflets or segments linear, obtuse, entire or pinnatifid, the terminal one much the longest. Flowers paniculately branching, terminating the branchlets by twos or threes. Involucre of 2 series, generally 8 in each: outer leaflets very short and small, lanceolate, obtuse, of a bright green: inner ones much larger, oblongly ovate, membranaceous, bluntish, of a brownish purple. Receptacle convex, paleaceous, warted: chaff filiform, purple, longer than the florets, deciduous. Rays about 8, 3 or 4-lobed, sterile, oblongly obovate, of a bright golden yellow, with a dark purple spot near the base, which causes an elegant

"Habitat. Throughout the Arkansa territory, to the banks of the red river, chiefly in the prairies, which are subjected to temporary inundation, flowering from June to October." Nuttall loc. cit.

This beautiful annual is of recent introduction from North America, and is a valuable acquisition to our collection of hardy annuals, as it appears to be of very free growth, and thrives well in the common garden soil. The seeds may be sown in pots, in a hot-bed frame, or in the green-house, and from thence be planted into the open borders; or it may be sown in the open ground, the latter end of March, or beginning of April; but the plants raised in the latter way will not flower so early as the others. If sown in rich soil, the plants will attain the height of 4 or 5 feet; in poorer soil they will be shorter.

We received seeds of the present species from Germany this Spring, under the name of *Calliopsis bicolor*, from which we have raised a great many plants; we are also obliged to Professor Treviranus for others sent under the name that we have adopted.

Our drawing was taken from a plant in the Nursery of the late Mr. James Lee, of Hammersmith; our description from one at the Apothecaries Company's Garden at Chelsea.

1. Capitulum cut through the middle, showing the leaflets of the Involucrum. 2. Inner view of the same, showing the chaffy receptacle. 3. Floret of the disk. 4. The same split open, to show the distinct filaments, and connected anthers. 5. Germen, Style, and Stigma.
ASTRAGALUS tenuifolius.
Narrow-leaved Milk-vetch.


ASTRAGALUS. Calyx tubulosus 5 dentatus. Vexillum alis et carinâ longius. Carina obtusa. Legumen biloculare, aut subbiloculare, sutura inferiore introflexa.

Suffrutices aut sepius herbae erectâ vel prostratae; folia in Astragalo T. herbaceo impari-pinnata, in Tragacantha T. suffrutescente abruptè pinnata petiolo communi spinaeformi aceroso longo; stipulae à petiolo distinctae aut (in Tragacantha) adnatae, interdum in unam eidem oppositam coalitae; flores glomerati aut spicati, axillares et terminales. Legumen forma varium. Juss. gen. 358.


Astragalus Onobrychis, angustifolius. DC. Astrag. p. 125.

Perennial. Stems several from the same root, erect, or when grown in shady situations subdecumbent, from 18 inches to 2 feet high, sulcate, and thinly clothed with a dark brown or black pubescence. Leaves pinnate; leaflets 12 or 13 pair, and terminated by an odd one, linearly lanceolate, bluntish, keeled underneath and channelled above, and clothed with a close-pressed silky pubescence. Petioles channelled on the upper side, and rounded on the lower, clothed with
short dark hairs, as are the peduncles and calyx. *Stipules* cordate, acute, membranaceous, surrounding the stem, not adhering to the petioles. *Flower-spikes* oblong, pedunculate. *Peduncles* axillary, simple, or in pairs, longer than the leaves, furrowed. *Flowers* crowded, of a rosy lilac. *Bractes* lanceolate, taper-pointed, concave, keeled underneath, ciliate. *Calyx* tubular, 5-toothed, teeth short, erect, lanceolate, acute, the 2 upper ones shortest and deepest. *Corolla* papilionaceous; *vexillum* oblong, carinate, double the length of the wings and keel; *ala*, or *wings*, slenderly unguiculate, eared above the unguis; *carina* obtuse, also eared at the base. *Stamens* 10, diadelphous, 1 distinct, the others joined at the base with distinct points. *Germen* and *Style* smooth. *Stigma* slightly capitate.

A beautiful hardy perennial plant, a native of Siberia, and requires no other treatment than to be planted in the open border in the common garden soil, and to be kept free from weeds; in rich soil it will attain the height of 2 feet, in poorer soil it will be considerably less, flowering in July and August, and ripening its seeds, by which it is increased. Those may be sown early in Spring, either in pots, or in the open ground; and as soon as the plants are 2 or 3 inches in height, they may be planted where they are to remain, watering them occasionally if they require it, and shading them a little at first if the weather prove warm and dry.

Our drawing was taken from a fine plant in the Garden of the Apothecaries’ Company, at Chelsea, in July last.

1. Calyx. 2. Vexillum. 3. One of the alæ, or wings, showing where it is auriculate. 4. Keel, showing its blunt point, and the ears above the unguis. 5. The 9 connected Stamens. 6. The distinct Stamens. 7. Germen, Style, and small Stigma.
IRIS hungarica.

Sickle-leaved Hungarian Iris.

Natural Order. IRIDÆ. Brown prodr. 302.
IRIS. Supra fol. 68.

I. hungarica, barbata, foliis ensiformibus glabris subfalcatis subaequantibus scapum multiflorum, spathis inflatis suprema biflora. Willd. enum. 1. p. 64.

Root large, tuberous. Leaves ensiform, smooth, generally falcate, nerv'd with numerous prominent nerves, taper-pointed, about equal with the many-flowered scape. Spathes inflated; sheaths 2, opposite, acute, keeled, inclosing the peduncle, germen, and tube. Peduncle short and thick, obsoletely 3-sided. Germen bluntly 3-sided and 3-furrowed, smooth and glossy. Perianthium 6-parted, of a beautiful blue purple; tube an inch in length, bluntly 3-gonal, 3-sulcate, smooth and glossy; outer laciniae narrowest, reflexed, densely bearded from the base to above the middle, and variegated near the base; inner ones broadly obovate, erect, connivent, or closing each other at the points, also variegated near the base. Stamens 3, inserted in the base of the laciniae, about half the length of the stigmas; filaments flat, smooth; anthers linear, attached to the filament a little above the base, nearly as long as the filaments; pollen white. Style short, acutely 3-cornered. Stigmas 3, petal-like, keeled
inwards, points deeply cloven, acute and jagged by the sides.

This fine species of Iris is a native of Hungary, and is readily distinguished from most others by its falcate leaves; it is quite hardy, and thrives well in a rich light soil, flowering in May and June, and sometimes again in Autumn. It is not one of the strongest growing sorts, but is of middle stature, the leaves seldom exceeding a foot in height, and the flower stems are not so high; but the flowers are large, and very showy, and several are expanded at the same time. The best method of increasing it, is by dividing the roots, but it may be also raised from seeds, which sometimes ripen; those should be sown as soon as ripe, either in pots, or in the open ground, transplanting them while quite young, that they may not miss their removal.

Our drawing was taken from a plant at the Nursery of Mr. Colvill, in May last.

1. The 3 Stamens inserted in the base of the laciniae of the Perianthium.
2. One of the Stigmas, the 2 others cut off near the base.
LILIUM spectabile.

Showy Siberian Lily.


LILIUM. Perianthium 6-phyllum, petaloideum, campagnulatum: foliolis rectis aut revolutis, basi conniventibus et sulco longitudinali nectarisero, nudo aut ciliato, exaratis. Stamina 6 stylo breviora. Capsula valvulis pilo cancellato connexis; semina plana. Radix tuberosa, basibus foliorum imbricata; caulis foliosus simplex; foliis alternis aut verticillatis; flores spathacei, spicati aut subpaniculati, in pluribus cernui.


Lilium pensylvanicum. Ker Bot. Mag. 872. non Pursh.


Stem erect, from 1 to 2 feet in height. Leaves ternate, or scattered, linearly lanceolate, acute, faintly 3-nerved, striate; lower ones smooth and glossy, upper ones slightly tomentose, particularly the margins, which are fringed with wool. Flowers terminal, from 1 to 6, in our specimen the latter number, umbellate, of an orange colour. Peduncles unequal in length, densely tomentose, often 1-leaved. Perianthium 6-leaved; leaflets between ovate and lanceolate, gradually attenuated to the base and point, in which it differs from L. bulbiferum, L. croceum, &c. inside rough, warty, and spotted with black or dark purple. Stamens 6; filaments smooth, purple, attached to the base of the perianthium, and joined to the back of the anther. Style
purple, 3-channelled, thickened upwards. *Stigma* clubbed, 3-sulcate.

We have adopted the name of Professor Link for the present species, the other names by which it has been already published, tending only to confuse; the present is the name adopted in the continental gardens, from whence we have often received seeds of it. But this must not be confounded with the *L. spectabile* of Mr. Salisbury, which is the *L. Catesbaei* of other authors.

Our drawing was taken from a plant at the Apothecaries' Company's Garden, at Chelsea, in July last, where it was growing very strong in the open border. It is quite hardy, and thrives well in the common garden soil, flowering the latter end of June, or the beginning of July. It increases pretty freely by offsets from the bulbs; and it also ripens seeds, which should be sown as soon as gathered, as they then vegetate immediately. The *L. croceum* of Loddiges' Botanical Cabinet, is nearly allied to our plant, judging from the figure, but we think it is certainly distinct, and also from the *L. croceum* of Link.

1. One of the Stamens attached to the base of one of the leaflets of the Perianthium. 2. Germens, Style, and Stigma.
SCHIZANTHUS porrigens.

Spreading Schizanthus.


Annual. Stem a foot to 18 inches in height, much branched, spreading in all directions; branches slender, thickly clothed with villous unequal spreading hairs, each tipped with a gland. Leaves thickly clothed with short hairs on both sides; lower ones interruptedly pinnate; leaflets oblong, obtuse, deeply toothed with blunt teeth, and smaller leaflets intermixed; middle leaves pinnate; leaflets alternate, lanceolate, bluntish, generally entire; upper leaves entire, oblong-ovate, more or less cut or toothed. Flowers panicled; racemes secund, several-flowered. Bractes 2 at the base of the pedicles, oblong, obtuse, equal in size, or sometimes one larger than the other. Pedicles slender, nodding, thickly clothed with villous glandular hairs, as is the calyx. Calyx 5-parted nearly to the base, segments unequal, spatulate, obtuse, fringed, the lower one much the longest. Corolla irregular; upper lip 5-cleft, side laciniae forked, the lower ones pale rose colour, middle ones lighter, with a purple spot on each
of the upper segments; upper one oblong, entire, yellow at the base, with a purple spot on each side, and numerous smaller ones between them and the base; lower lip 3-parted, rose-coloured, outer laciniae falcate, lapping over each other at the points, which are spatulately rounded; middle one obcordate, concave, connivent, enclosing the stamens, which are elastic, and spring upwards as soon as touched. Stamens 4, inserted in the mouth, 2 barren and 2 fertile, with the rudiment of a fifth inserted in the lower lip; barren filaments densely bearded, and terminated by barren anthers; fertile ones longer, hairy at the base, and smooth upwards; anthers inserted a little above their base, 2-celled, discharging their ash-coloured pollen by the spring of the filament. Germen smooth. Style smooth, longer than the stamens. Stigma a simple point.

This beautiful annual was introduced from South America, at the same time as S. pinnata, fol. 63. We, with Dr. Hooker, believe it to be a distinct species, as it is quite different in habit, and the differences remain true from seed. The present is the most beautiful of the two, and it requires precisely the same treatment as the other; we have seen some plants cultivated in peat soil, and others in the common ground, the latter succeeded best; several of those in the peat died off while in full bloom.

Our drawing was taken at the Nursery of Messrs. Whitley, Brames, and Milne, at Fulham, where plants of both species were grown together in the borders, and the differences were seen to advantage.

1. Calyx, showing the unequal segments. 2. Upper lip of the Corolla, with the 2 barren Stamens attached to it at the base. 3. Lower lip of ditto, showing the situation of the 2 fertile Stamens. 4. Side view of the lower lip, to show the rudiment of a fifth Stamen. 5. The 2 barren Stamens detached, showing their termination with imperfect Anthers. 6. Style.
SCHIVERECKIA podolica.

Canescent Schivereckia.

Natural Order. Cruciferae. DC. Syst. nat. 2. p. 139.
Subordo I. Pleurorhizeae. Supra fol. 46.
Tribus II. Alyssineae seu Pleurorhizeae Latiseptae.
Silicula longitudinaliter dehiscens, septo lato ovali membranaceo, valvis planis aut concavis. Semina compressa, sæpè marginata. Cotyledones plane, accumbentes, septo parallelae. DC. p. 147.

SCHIVERECKIA. Calyx basi æqualis, laxiusculus. Petala obovato-oblonga. Stamina 2 breviora filiformia, 4 membranacea dente aucta. Silicula ovata, valvis convexis medio longitudinaliter depressis solidiusculus obtusi; stylo brevi; stigmatæ capitellato. Semina in quoque loculo 8-10, biseriata, subcompressa, immarginata. Cotyledones ellipticæ, accumbentes.


Perennial, tufted. Stems short, suffruticose at the base. Leaves rosulate, tufted, oval or oblong, obtuse, more or less toothed, stellately canescent; stem ones few, short, sessile, clasping the stalk. Flower-stalks densely clothed with a short white pubescence. Racemes terminal, at first in a dense corymbus, afterwards

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lengthening out. Pedicles filiform, without bractes, 2 or 3 times longer than the calyx. Calyx of 4 short sepals, equal at the base, lax, concave, blunt, stellately canescent. Petals 4, white, obovately oblong, entire, about twice the length of the calyx. Stamens 6, 2 rather shorter than the others, filiform; 4 longer ones, membranaceous, toothed. Silicle ovate, densely clothed with short soft white down. Style short, pubescent. Stigma capitiate.

This pretty little Alpine plant has been lately introduced to our collections, and we believe was first raised from seed by Mr. William Anderson, at the Apothecaries' Company's Garden, at Chelsea, about 3 years back, and from a plant received from him our drawing and description were taken. It is well adapted for the ornamenting of rock-work, or for planting on a sloping ground in a dryish situation, as it is more liable to be injured by too much moisture, than it is from cold; for being a native of Poland and Siberia, it is quite hardy. It may also be cultivated with advantage in small pots with other dwarf growing Alpine plants; but care must be taken to keep it from the slugs and snails, which are very fond of it. It succeeds best in a light sandy soil, and if grown in pots, may be planted in an equal mixture of soft loam, peat, and sand. It strikes readily from cuttings planted under hand-glasses, and may also be raised from seeds, which ripen plentifully; those may be sown as soon as ripe, the plants will then come up directly, and will flower the next Summer; if sown in Spring, the plants will seldom flower till the following season.

1. Calyx. 2. One of the petals. 3. The 6 Stamens, showing the 2 short filiform filaments, and the 4 longer membranaceous toothed ones. 4. Stamen detached. 5. Silicle, or pod, terminated by its short Style, and small capitate Stigma.
TULIPA pubescens.

Pubescent-stalked Tulip.

Natural Order. TULIPACEÆ. Kunth. Synops. 1. p. 292.

TULIPA. Perianthium 6-phylhum, petaloideum, campanulatum; foliola recta non nectarifera. Stamina 6, basi foliolorum inserta. Antherae postice. Stylus 0; stigma sessile. Capsula oblonga, obtuse trigona; semina plana.

Folia vaginantia radicalia; scapus 1-florus erectus, pene aphyllus. Juss. gen. 48.


Root bulbous, about the size of a walnut, clothed with a smooth brown scale, and terminated at the base with a dense fascicle of small white fibres. Leaves clasping the stem, a little waved, strongly veined, and densely clothed on both sides with a short close mealy pubescence; lower ones oblong, acute; upper ones lanceolate, taper-pointed. Scape densely clothed with a white mealy pubescence, shorter than the leaves when the flowers first expand, but afterwards lengthening beyond them. Perianthium of 6 leaflets, various in colour, 3 outer ones acute, inner ones obtuse, all mucronate. Stamens 6, inserted in the base of the leaflets; filaments flat, channelled on the inner side, and convex on the outer, slightly pubescent; anthers joined to the filaments at their back, about the same length, linear, acute. Germin obtusely-trigonal, about \( x 2 \)
the length of the stamens. *Stigma* 3-lobed, sessile, double crested, waved, deeply channelled, and fringed round the edges.

We agree with Willdenow in considering the broad leaved pubescent Tulip as a distinct species, both from *T. suaveolens* and *T. Gesneriana*; perhaps it is hybrid between the two, as it is as near as possible intermediate. Like the latter species it varies in colour, scarcely any two being exactly alike; and they are distinguished by different names by the Florists, as the *Clarimond, Bruids van Haarlem, Red* and *Yellow Pottebakker*, &c. It agrees with *T. suaveolens* in its pubescent stem, but its habit is more like *T. Gesneriana*; the time of flowering is between the two. At any rate they are very ornamental plants for the Flower-garden, and require the same treatment as the more common species, succeeding well in a light rich soil; they are also very proper for forcing in pots, as they come in flower early, so that they force well; as soon as they have done flowering, and the leaves are beginning to fade, the bulbs should be taken out of the ground, and kept dry till Spring.

1. One of the Stamens, with the filament joined to the back of the anther.  
2. Filament separated from the anther.  
3. Anther divested of the filament.  
4. Germin terminated by the 3-lobed Stigma.
ANTHYLLIS montana.

Mountain Kidney-vetch.

Natural Order. LEGUMINOSÆ. Juss. gen. 345.


A. montana, herbacea, foliis pinnatis æqualibus, capitulo terminali secundo, floribus obliquatis. Willden. sp. pl. 3. p. 1014.


Perennial. Stems numerous, prostrate, much branched; branches short, ascending, villous. Leaves pinnate, canescent, thickly clothed with soft white villous hairs; leaflets 16 to 30, opposite, lanceolate, acute, broad at the base, terminal one broadest, obovate. Petioles channelled on the upper side, and convex on the lower. Stipules connected to the base, and forming a part of the petioles. Peduncles cylindrical,
villous, as are the bractes and calyx. Flowers in a close secund head, pale red, veined with purple. Involucre of numerous lanceolate or oblong bluntish bractes. Pedicles very short and slender, hairy. Calyx slightly ventricose, 5-toothed, persistent; teeth unequal, subulate, bearded. Corolla papilionaceous; vexillum large, obovate, much longer than the wings and keel, eared just above the unguis. Stamens 10, all connected at the base; filaments smooth. Pollen pale yellow, granular. Germen and Style smooth. Stigma capitate.

Our drawing of this beautiful plant was taken from a fine specimen growing in the open border, at the garden belonging to the Apothecaries' Company, at Chelsea, in June last. It is quite hardy, and a proper plant for the front of flower-borders, as it seldom exceeds 6 inches in height; but its branches spread round to a considerable distance. It is also a pretty plant for ornamenting rock-work, thriving well in any light sandy soil.

A native of different parts of Europe, in the more southern districts, and chiefly found in mountainous situations. It may be cultivated with advantage in a smallish size pot, but requires a plentiful supply of water in warm weather. The best method of increase is by dividing at the root, or by seeds, which sometimes ripen plentifully. Cuttings may also be rooted under common hand-glasses; but they must be planted thinly, or they will be liable to damp.

1. Calyx. 2. Vexillum. 3. 3. The 2 alæ, or wings. 4. Carina, or Keel. 5. Stamens spread open, to show that the filaments are united in a tube at the base, and the points distinct. 6. Germen, Style, and Stigma.
CYPRIPEDIUM parviflorum.

Small-flowered Ladies' Slipper.


Stem flexuose, striated, pubescent. Leaves 5 or 6, of a thin texture, alternate, sessile, clasping the stem at the base, spreading, their points a little twisted and recurved, oblongly lanceolate, taper-pointed, longitudinally nerved and plaited, furrowed on the upper side, downy. Flower solitary, nodding. Peduncle scarcely as long as the leaf, densely pubescent. Bracte 1, a little below the germen, leaf-like, lanceolate, taper-pointed, twisted, a little longer than the leaflets of the perianthium. Pedicle very short, enclosed in the bracte. Germen angular, not twisted, densely pubescent. Leaflets of the Perianthium of a yellowish green, marked with numerous brown spots and lines: 2 outer ones ovately lanceolate, taper-pointed, the upper one erect, twisted, lower one straight, dependent, shorter than the labellum; inner ones longer, linear-attenuated, spreading, slightly deflexed, much twisted, point bluntish, densely bearded inside with long white
hairs at the base, and a considerable way up, outside pubescent. Labellum yellow, smooth outside and marked with a few purplish stripes, the mouth edged with purple; inside beautifully spotted in circular lines, bearded at the base. Column lobe broadly sagittate, entire, bluntish, smooth on both sides, channelled on the upper side and concave near the point, keeled underneath, the keel channelled, yellow, the edges spotted with brown purple. Style pale yellow; middle lobe triangular, with a hollow round point; side lobes lanceolate, scarcely acute, terminating beyond the anthers. Anthers 2, nearly orbicular, attached to the side lobes of the style. Pollen waxy, yellow.

The present plant is a native of North America, growing, according to Pursh, in shady fertile woods, from New Jersey to Carolina. The specimen from which our drawing was taken, was received by Mr. Colvill, last Autumn, from North America, and was cultivated in a pot; the soil was a light red sandy loam. Our plants flowered from the beginning to about the middle of May, earlier than C. pubescens, which we published in a former number. We have seen plants of this genus thriving very well when planted out in a pit, in a rich sandy soil, and occasionally covered with the lights, in wet weather, at the time that the plants were dormant; we have no doubt but the greater part of the family to which they belong would succeed well, managed in that way, as they generally suffer most from moisture when in a dormant state.

1. Labellum cut open, to show the spots and bearding inside. 2. Front view of the column lobe, with the upper lobes of the style attached to it. 3. Back view of ditto, showing its hollow keel. 4. The lower lobe of the Style. 5. Back view of ditto. 6. The 2 Anthers attached to the side lobes of the Style, the points terminating beyond them.
MALVA mauritiana.

Ivy-leaved Mallow.

Natural Order. MALVACEÆ. DC. prodr. 1. p. 429.
Div. I. Calyx duplex seu involucro cinctus.
Sect. I. MALVASTRUM. Carpella 1-locularis 1-sperma. DC. l. c. p. 430.
§. 5. Fasciculata, floribus purpurascenatis aut albis, foliis angulatis cordatis 5-nerviis, pedicellis axillaribus plurimis 1-floris, calyce exteriore 3-phyllo, caule herbaceo. DC. l. c. p. 432.

M. mauritiana, caule erecto, foliis 5-lobatis obtusis, pedicellis petiolisque glabriusculis aut ad latus superius tomentosis. DC. prodr. 1. p. 432.

Annual. Stem smooth, erect, 3 to 5 feet high, branched at the base. Leaves large, glossy, rugose, 5-lobed, obtuse, unequally toothed with large blunt teeth, entire at the base, underneath strongly 5-nerved.
nerves branched, slightly hairy. Petioles flattened and furrowed on the upper side, densely tomentose; nearly smooth and rounded underneath, a little widened at the base, gradually tapering upwards. Stipules ovate or lanceolate, acute, membranaceous. Flowers axillary, numerous, fasciculate. Peduncles slender, slightly hairy, many times shorter than the petiole. Calyx double; outer one or involucre 3-leaved, leaflets oblong, obtuse, many-nerved; inner one salver-shaped, 5-cleft, segments bluntly rounded, pubescent, reticulately veined. Corolla of 5 petals, spreading, obcordate, narrow and bearded at the base, 5-nerved, of a bright purple, darkest near the base, nerves dark purple. Stamens numerous, connected in a tube, and distinct at the points, tube thickly clothed with short hairs, points smooth, fasciculate, spreading; anthers reniform. Carpella many, connected in a circular capsule, rugged, each 1-seeded. Seeds smooth and shining.

A stately and very handsome hardy annual, requiring only to be sown in the open ground, in the common garden soil, where it will continue to bloom till late in Autumn, and ripen abundance of seeds; the best time for sowing them is the beginning of March, if the weather prove favourable; and as they are of large growth, the plants should be at least 9 inches or a foot apart; they will otherwise crowd each other, and will not be near so fine.

Our drawing was taken at the Nursery of Mr. Colvill, in August last.

1. The outer Calyx of 3 bracte-like Sepals. 2. The inner 5-cleft Calyx, showing part of the Capsule, or seed-vessel. 3. Petal, showing its bearded base. 4. Stamens, showing the hairy tube and spreading points, with their kidney-shaped anthers. 5. Style and Stigmas. 6. Seed-vessel. 7. Seed.
RUDBECKIA hirta.

Great Hairy Rudbeckia.

Natural Order. Composite. Adanson fam. 2. 103. RUDBECKIA. Supra fol. 4.

R. hirta, hirsutissima, caulibus subramosis; ramis unifloris, pedunculo nudo, foliis ovato-spathulatis triplinervibus serratis hirtis, involucrum foliaceum radium subaequante, disco conico, paleis lanceolatis.


Stems erect, branching from the base, thickly clothed with long spreading white hairs, as are the leaves, peduncles, and involucrum. Branches erect, purple at the base, generally 1-flowered. Leaves ovately-spatulate, attenuated at the base, sessile, slightly serrate, blunted, triplinerved, the nerves branching. Peduncles long, erect, angular, and furrowed with numerous channels, naked, or sometimes bearing a leaf, hispidly hairy. Involucre many-leaved; leaflets spreading, or reflexed, unequal in length, lanceolate, blunted, hispidly hairy, some of them nearly the length of the rays. Receptacle conical, paleaceous. Chaff lanceolate, acute, tipped with purple, scarcely as long as the florets. Rays numerous, barren, ligulate, the points 2 or 3-toothed, strongly nervèd underneath, of a deep yellow colour, at the base is the rudiments of 2 hair-like stigmas. Florets of the disk numerous, dark brown, tubular, 5-toothed. Stamens 5, filaments y 2.
smooth, distinct; **anthers** connected into a tube, exserted; **pollen** bright yellow. **Style** smooth, about the length of the stamens. **Stigmas** 2, purple, spreading.

The present handsome plant is often confounded with **R. fulgida** in our collections, but is a very distinct species, and not so easily kept in good health as that, being very apt to die off in Winter, owing, we apprehend, to the variableness of our climate, as it thrives exceedingly well in Summer, and produces abundance of flowers, though it seldom ripens its seeds; we have succeeded very well in raising it from cuttings, by taking off the young shoots and planting them under a common hand-glass, where they rooted in a very short time, and made strong plants the same season. Pursh marks it as a biennial, and mentions it as growing on the mountains, from Virginia to Florida, flowering from July to September. We have no doubt of its being strictly perennial, but very liable to rot off in Winter if grown in too moist a situation; we therefore recommend its being planted in a dry border of rich light earth; and it is also well to have some plants of it in pots, which can be protected in frames in Winter, if the weather be very severe or very wet, they can then be turned into the borders in Spring. It seldom exceeds a foot in height, and is, therefore, an ornamental plant for the front borders of the flower garden.

**Drawn at the Nursery of Mr. Colvill, in August last.**

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1. Capitulum cut through the middle, to show the conical chaffy receptacle. 
2. Scale of the chaff. 3. One of the Rays. 4. Floret of the disk. 5. The same spread open, to show the nerves. 6. Stamens, showing the distinct filaments and united anthers. 7. Seed, terminated by the Style and 2 spreading Stigmas.
DATURA Tatula.
Pale Blue Thorn-Apple.


(1) Corolla limbo quinquedentato; dentibus acuminato-elongatis; staminibus inclusis.


Annual, smooth. Stem erect, from a foot to 18 inches in height, purple, spotted with small light spots, branching; branches spreading, purple, also spotted. Leaves ovate, acute, lower ones cordate, sinuate, or deeply and sharply toothed; upper ones oblique at the base, nerves purple. Petioles purple, flattened and furrowed on the upper side, and convex on the lower, shorter than the leaves. Peduncles short. Calyx tubular, ventricose at the base; limb 5-toothed, teeth
unequal. *Corolla* funnel-form, limb plaited, 5-toothed, of a pale blue; teeth long, taper-pointed. *Stamens* 5, inserted in the tube, and included within the mouth; *filaments* slender, joined to the base of the anthers. *Style* smooth, about the length of the stamens. *Stigma* slightly 2-lobed. *Capsule* erect, spiny, or muricate, the spines unequal in length, pungent. *Seeds* numerous, kidney-shaped, black and rugged.

The plant from which our drawing was made, was raised from seed received by A. B. Lambert, Esq. from the mountains of the Caracas, where it is mentioned, by the noted travellers, Humboldt and Bonpland, as growing abundantly. It is also found in great quantities in many other countries; or, perhaps, more than one species is confused. Our plant agreed exactly with the description of Kunth, but not so well with that by other authors. It is a pretty annual plant, and flowers best in the open air, attaining the height of a foot, or 18 inches. The seeds may be sown in Spring, either under hand-glasses, or on a slight hot-bed; and as soon as the plants are a few inches high, they should be planted into the flower borders where they are to remain; a warm border of rich light earth will suit them best, where they will continue to bloom till late in Autumn, if the weather continue mild, and will ripen plenty of seeds.

1. Calyx. 2. Tube of the Corolla laid open, to show the insertion of the stamens. 3. Germen, Style, and 2-lobed Stigma. 4. Seed.
OXYBAPHUS Cervantesii.  
Cervantes’ Umbrella-Wort.


**OXYBAPHUS.** _Involucrum monophyllum, campanulatum, quinquefïdatum, 1-, rarius 2-4-florum. Perianthium corollaceum, infundibuliforme; limbo quinquelo._ _Stamina 3 aut 4. Akenium basi calycis demum indurata apice clausa tectum, involucro explanato grandisfacto circumdatum._


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O. _Cervantesii_, caule geniculato ramoso diffuso, foliis cordatis obtusis pubescentibus margine ciliatis, floribus paniculatis, involucris viloso-viscosissimis trifloris, lobis perianthii emarginatis, staminibus perianthio brevioribus.

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**Perennial. Roots** tuberous. **Stem** herbaceous, much branched, knotted at the joints, spreading in all directions; _branches_ of a shining purple, bearded at the joints, and a villous line running from one joint to the next, alternate with the leaves. **Leaves** opposite, long-petioled, cordate, obtuse, entire, slightly pubescent, the margins ciliated with short hairs. **Petioles** slender, flattened on the upper side, and convex on the lower, pubescent. **Flowers** panicled, the upper part of the stem, peduncles and involucres villosely viscous, sticking to everything that touches them. **Peduncles** slender, erect when in flower, afterwards drooping. **Involucre** of one leaf, peltate, campanulate, 5-cleft, 3-flowered; segments unequal, imbricate, ovate, acute, concave, keeled. **Perianthium** funnel-form, plaited,
5-lobed, of a bright pink colour, lobes deeply emarginate, plicately spreading. Stamens 3, inserted in the base of the tube, shorter than the perianthium; filaments smooth, purple, attached to the back of the anthers, which are 2-celled, and burst before the flower expands; pollen bright yellow, composed of little round grains. Style smooth, purple. Stigma capitate, fimbriate. Seed angular, rugose.

Our drawing of this plant was taken at the Nursery of Mr. Colvill, where it was raised from seed received from Germany, under the name that we have adopted. It is a native of South America, and the seeds should be sown on a hot-bed in Spring, and from thence be planted either in the open ground, or in pots, in the same manner as Mirabilis, or Marvel of Peru, to which it is nearly related; and like it, the roots require to be taken up in Autumn, and to be kept in dry earth, out of the reach of frost, till Spring, when they may again be planted in the flower borders; a dry warm border of rich light earth suits them best, where they will grow to the height of 18 inches, and will continue to flower till late in Autumn, and ripen plenty of seeds.

1. Involucr spread open, to show the insertion of the 3 flowers, or seeds, the middle one being a ripe seed. 2. Perianthium. 3. The same spread open, showing its emarginate segments. 4. The 3 Stamens inserted in the base of the tube. 5. Gemen, Style, and fimbriate Stigma. 6. Seed cut open, to show its large albumen and the small radicle in the centre.
SARACHA umbellata.

Umbel-flowered Saracha.

Sect. II. Fructus baccatus.

S. umbellata, caule erecto herbaceo ramosissimo hirto, foliis ovatis rugosis nitidis acutis: floralibus geminis, umbellis axillaribus pedunculatis cernuis, floribus plicatis, filamentis basi barbatis.

Bellinia umbellata. Raem. et Schult. syst. 4. p. 684.

Perennial. Root large, tuberous. Stem erect, hollow, much branched; branches spreading, bluntly 4-sided, green and glossy, or slightly tinged with purple, slightly hairy, the hairs pellucid and recurved. Leaves ovate, acute, rugose, glossy, margins rough, generally in pairs. Petioles winged, channelled on the upper side, and rounded on the lower. Umbels 3 to 5-flowered, nodding. Peduncle short, a little above the leaves, generally betwixt the two, angular, sulcate, very hairy. Pedicles nodding, angular, sulcate, very hairy, scarcely as long as the peduncles. Calyx rotate, 5-cleft, hairy, purple at the base; segments ovately-lanceolate, concave, bluntish, keeled.
at the back, fringed. **Corolla** rotately-campanulate, plaited, 5-cleft, of a greenish white colour, segments cordately ovate, taper-pointed, spreading. **Stamens 5**, inserted in the base of the corolla; **filaments** subulate, gibbous and bearded at the base, and smooth upwards; **anthers** incumbent. **Germen** globular, smooth and glossy. **Style** smooth, about the length of the stamens. **Stigma** capitiate. **Berry** globular, green when unripe, lighter at the point, where it is crossed by 2 white lines; when ripe, of a glossy jet black.

Our drawing of this curious plant was made at the Nursery of Mr. Colvill, where it was raised, last year, from seed received from the Botanic Garden at Berlin; some of the plants flowered the same season, but not till late in Autumn; some were planted in the open border, where the roots, this year, grew to a large size, and produced numerous branches, which attained the height of 18 inches to 2 feet, and produced abundance of flowers and fruit. It is a native of Peru, but appears to be quite hardy; as some of the roots were exposed to all last Winter's frost, in small pots, without receiving the least injury. Its season of flowering is from the beginning of July till the end of September, or later, if the weather prove favourable. It succeeds well in the common garden soil, and is increased by dividing the root, or by seeds, which ripen in abundance.

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1. Calyx spread open, showing the Germen, Style, and Stigma. 2. Corolla spread open, showing the insertion of the Stamens at the base. 3. Stamen detached, showing the gibbous bearded base. 4. Ripe Berry.
IPOMŒA barbigera.

Bearded calyxed Ipomoea.

Natural Order. **Convolvulaceae.** Brown prodr. 481.

Sect. I. Ovarium unicum.


I. barbigera, caule volubili retrorsum pubescente, foliis late cordatis acuminatis integris postice rotundatis utrinque hirsutis, pedunculis unifloris petiolo brevioribus juxta calycem bibracteatis, lacinis calycinis acuminatis patentibus apice reflexis basi dense barbatis.

Annual. Stem climbing, more or less branched, thickly clothed with long white reflexed hairs, and shorter ones intermixed. Leaves broadly cordate, taper-pointed, entire, rounded, and nearly closed at the base, hairy on both sides, reticulately veined underneath. Petioles deeply channelled on the upper side, and rounded on the lower, thickly clothed with unequal reflexed hairs. Peduncles 1-flowered, shorter than the petioles, slender, and smooth at the base, of a dark purple, the upper part green, thickened and hairy. Bractes 2, at the base of the calyx, linear, taper-pointed, spreading, very hairy. Calyx 5-parted; segments nearly equal in length, keeled at the back, densely bearded at the base, with long spreading white hairs, each seated on a gland; points long and taper, spreading, slightly reflexed; inner segments rather
narrower than the outer ones. **Corolla** between campanulate and funnel-form, 5-lobed, slightly crenulate, limb of a bright azure blue; tube pale, or nearly white. **Stamens** 5, unequal in length, inserted in the tube a little above the base; **filaments** densely bearded near the base, and smooth at the points; **anthers** sagittate, joined by their base to the filaments, 2-celled, bursting in front to discharge the pollen, which is composed of small globular white grains. **Style** quite smooth, about the length of the stamens. **Stigma** capitate, scarcely lobed, papillose. **Capsule** smooth, 3-locular, with 2 seeds in each cell. **Seed** black, roughish, pubescent.

Several plants of this beautiful annual were raised this year, at the Nursery of Mr. Colvill, from seeds received from North America; we believe it to be a new species, as we do not find it any where described; it is nearer related to **I. hederacea** than to any other with which we are acquainted; but the leaves of that are deeply 3-lobed, while those of our plant are always quite entire, more like **I. purpurea**, but broader, and more taper-pointed.

Plants that were raised from seeds sown in April, began to flower in June, and continued to bloom till the end of September; some of the seeds were ripe the beginning of July, and, for an experiment, we sowed some of them immediately, as soon as gathered; they were up in 3 days, and began to flower in a fortnight, growing very strong, and continuing to bloom till near the middle of October, and also ripened their seeds. The flowers are in the greatest perfection early in the morning, before the heat of the sun becomes too powerful. It will attain the height of 6 or 8 feet, if trained up a stick, or wire, and thrives best in a warm border of rich light earth.

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1. Calyx, enclosing the Capsule, and showing the 2 bractes at the base.
2. Tube of the Corolla spread open, to show the insertion of the 5 Stamens.
LIATRIS sphæroidea.
Globular-cupped Liatris.

Natural Order. COMPOSITÆ. Adanson fam. 2. 103.
Sect. II. CARDUACEÆ. Div. 5. Vernoniaceæ.
LIATRIS. Supra fol. 44.

L. sphæroidea, caule simplici pubescente, foliis laevibus subfalcatis obtusiusculis: inferioribus petiolatis lato-lanceolatis; superioribus lanceolato-linearibus, floribus racemosis solitariis alternis subglobosis, involucri foliolis rotundato-obovatis concavis margine membranaceis ciliatis.

Root tuberous. Stems simple, erect, pubescent, 2 to 3 feet high. Leaves quite smooth, numerous and punctate, of a dark green, more or less falcate, bluntish; lower ones petiolate, broadly lanceolate; upper ones lanceolately-linear, sessile, slender at the base, more or less twisted. Racemes long, many-flowered. Flowers solitary, alternate, rather crowded, upper ones opening first. Peduncles short and thick, pubescent. Involucrum nearly globular; leaflets loose and spreading, roundly obovate, concave, ciliate, margins white and transparent, sometimes tinged with red, scariose; inner ones narrower, spatulate. Receptacle slightly convex, naked, punctate. Florets large, from 25 to 30, tubular, 5-cleft, of a bright pink, or lilac; tube scarcely as long as the pappus, villous inside; laciniae lanceolate, acute, spreading, more than half the length of the tube. Stamens 5, inserted in the tube; filaments slender, distinct, glandularly pubescent; anthers connected
into a tube, but distinct at the points, of a dark purple. *Style* smooth, about the length of the stamens. *Stigmas* 2, long and spreading, sometimes twisted, or curled, slightly flattened, scarcely papillose, bluntish, of a bright lilac. *Seeds* striate, densely hairy, and crowned with a pappus of long white feathered hairs.

This very handsome plant is a native of North America. Pursh mentions it as growing on the high mountains of Virginia and Carolina, and flowering from August to October; our plant did not agree so well with his description of the leaflets of the involucrem as could be wished, yet we think there can be no doubt but it is the same species; in our plant, these were generally bluntly rounded; he describes them as more pointed: every other part of his description perfectly agrees with our plant.

The plant from which our drawing was taken, was imported last Autumn, from North America, by Mr. Colvill; it began flowering, this year, the beginning of September, but did not ripen seeds, owing, we believe, to the dampness of the atmosphere, as plants of this genus in general seed freely; it requires to be planted in a warm border of rich light earth, and it will also be well to protect some plants of it in frames in Winter, as they are sometimes destroyed by very hard frost, except covered with straw, or glass. It may be propagated, but slowly, by dividing the root.

1. Involucr. 2. Capitulum split through the centre, to show the naked dotted Receptacle. 3. Leaflet of the Involucrum. 4. Floret, showing the pappus on the seed surrounding the tube. 5. Floret laid open, to show its villous inside, and the nerves. 6. Stamens, showing the distinct filaments and connected anthers. 7. Seed, terminated by the Style and Stigmas.
IBERIS Tenoreana.

_Tenore's Candy-tuft._

_Natural Order._ Cruciferæ. _DC._ syst. nat. 2. p. 139.
Subordo I. Pleurorhizeæ. Supra fol. 46.
IBERIS. Supra fol. 50.
Sect. I. Iberidiarium. Radicula descendens. Semen im-
§ 1. Pedicellis fructiferis corymbosis, caulibus suffrutescen-
tibus perennibus.

I. Tenoreana, basi suffrutescens puberula, foliis subcarnosis
crenatis: inferioribus obovatis basi attenuatis; superioribus
oblongo-linearibus, siliculis subcorymbosis emarginatis. _DC._
Iberis cepeæfolia. _Tenor._ prod. _fl._ _nap._ p. _xxxvii._ non. _Lin._

Root perennial. Stems short, suffruticose at the
base, branching; branches 2 to 4 inches in length,
slightly pubescent; side ones prostrate, ascending,
middle ones erect. Leaves fleshy, slightly toothed, or
crenate, slightly ciliate at the base; lower ones attenu-
ated at the base into a kind of footstalk, obovate,
blunt; upper ones oblong, or inclining to linear, obtuse.
Flowers umbellate, white, (sometimes purple, accord-
ing to Decandolle.) Pedicles close together, densely
pubescent. _Calyx_ of 4 sepals, which are short, oblong,
concave, obtuse, tipped with red, or purple. _Petals_ 4,
unequal, oblongly obovate, the outer ones 2 or 3 times
larger than the inner. _Stamens_ 6, 2 shorter than the
others; _filaments_ slender, smooth, attached to the
back of the _anthers._ _Silicles_ rounded at the base,
emarginate at the apex; lobes and sinus acute. *Style* elongated beyond the lobes. *Stigma* slightly capitate.

The present little plant is well adapted for the ornamenting of rock-work, or for planting at the front of flower-borders. It was raised at the Nursery of Mr. Colvill, in 1822, from seeds received from the Continent; and several plants flowered the following May, but not so fine as they did this Summer, when they had acquired more strength; some of them bloomed again in Autumn, but not so strong as the Spring flowers; they appear to the greatest advantage before they are all expanded, as the red calyx of the unopened flowers, mixed with the white blossoms, gives it a pretty variegated appearance.

When grown in small pots, and protected in a frame, in severe weather, it will bloom much earlier in Spring, but it will not bear much artificial forcing, as it draws up very weak if kept too warm; it succeeds well in any rich light earth, or if planted in pots, a mixture of sandy loam and peat will suit it very well. Cuttings taken off in the young wood in Spring, and planted under hand-glasses, will strike root readily; it may also be raised from seeds, which are sometimes produced.

1. Calyx. 2. One of the large Petals. 3. One of the smaller ditto. 4. The 6 Stamens, 2 shorter than the others. 5. Silicle, or Pod, in a young state. 6. The same in a more advanced state, terminated by the Style and Stigma.
AGERATUM mexicanum.

Mexican Ageratum.

Natural Order. COMPOSITÆ. Adanson Fam. 2. 103.
Sect. III. EUPATOREÆ. Kunth Synops. 2. p. 408.

A. mexicanum, caule herbaceo ramoso diffuso; ramis ascendentibus hispidis, foliis rugosis crenatis piloso-pubescentibus obtusiusculis: inferioribus cordatis reticulato-venosis; superrioribus ovatis basi rotundatis triplinerviis, paleis pappi lanceolatis basi membranaceis apice aristatis subdenticulatis.

Annual, about a foot in height, much branched. Branches spreading; upper ones erect, the others ascending, hispidly pubescent. Leaves rugose, bluntish, crenate, or toothed with blunt rounded teeth, slightly hairy on the upper side, hairy and pubescent on the lower; lower ones as broad as long, petiolate, cordate at the base, reticulately veined underneath; upper ones ovate, triply-nerved, less toothed, or rarely entire, nearly sessile. Petioles deeply channelled on the upper side and rounded on the lower, glandularly hairy. Flowers paniculately corymbose, of a light blue, inclining to violet. Bractæ several, some at the base of, others on the pedicles, the lower ones largest,
lanceolate, acute; the others linear, or subulate. **Pedicles** slightly angular, hispid. **Involucre** hemispherical, many-leaved, imbricate; **leaflets** equal, lanceolate, taper-pointed, hairy and ciliate. **Receptacle** convex, naked. **Florets** numerous, crowded, all hermaphrodite, tubular, 4 or 5 toothed, teeth reflexed. **Anthers** included in the tube. **Stigmas** exserted, long and spreading, thickest at the points. **Seeds** black, 5-angular, slender at the base, crowned with a pappus of 4 or 5 unequal lanceolate paleæ, which are flat and membranaceous at the base, and terminated by a long bristle like awn, or sometimes by 2 or 3 short teeth.

This handsome annual plant is of late introduction to our flower-gardens, the seeds having been lately brought from Mexico, by Mr. Bullock, and raised at the Nursery of Mr. Tate, Sloane Street, with many other rare and choice plants. The best method of raising it is to sow the seed early in Spring, in a hot-house, or green-house, or on a hot-bed, and to plant out the young plants in the open borders, where they will continue to flower all the Summer, and ripen their seeds. If the seeds are sown in the open ground, the plants will be later coming into flower, and there will not be so good a chance of procuring plenty of ripe seeds; to have the plants strong and healthy, they should be as much as 6 or 9 inches apart, as the branches spread considerably; they will thrive best in a rich light soil, and a sheltered situation.

Our drawing was made at the Nursery of Mr. Tate, last Summer.

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1. **Involucre**, with the leaflets cleared from one side, to show the convex naked Receptacle. 2. **Floret** spread open, to show the insertion of the Sta-mens. 3. **Seed**, terminated by the floret. 4. The same divested of the floret, showing the awned pappus, and terminated by the Style and Stigmas. 5. **Leaflet** of the Involucre.
SCUTELLARIA alpina.

Alpine Skull-cap.


Perennial. Stems spreading, quadrangular, thickly clothed with long villous hairs, branching in all directions. Leaves opposite, cordate, lower ones deeply serrate, upper ones crenate, bluntish, strongly and numerous nerved underneath, and furrowed above, hairy on both sides. Petioles short and flat, longest on the lower leaves, scarcely any on the upper, covered with long hairs. Spikes of flowers terminating the branches, 3 or 4 inches long, imbricate, roundly 4-sided. Bractes sessile, ovate, acute, cucullate, many-nerved underneath, thin and membranaceous, covered with villous hairs, about half the length of the flowers. Calyx 2-lipped, entire, villous, at first very small, but increasing in size before the fruit ripens, and in which it is enclosed. Corolla tubular, ringent, villous; helmet purple; lower lip emarginate, white, with 3 violet coloured stripes on the upper side. Stamens 4, inserted in the tube, 2 longer than the others; filaments declining, smooth; anthers incum-

This pretty herbaceous plant is a native of Hungary; it is quite hardy, and flowers from June to August, and sometimes continues in bloom till October; it seldom exceeds 6 or 9 inches in height; but the branches spread round to a considerable distance, so that it is requisite to cut it back in Winter, to keep it within bounds. It succeeds well in the common garden soil, and will grow in rather a shady situation, where many plants that are more tender will not thrive. It is readily increased by dividing at the root, or by seeds, which ripen plentifully.

Our drawing was taken from a plant at the Garden belonging to the Apothecaries' Company, at Chelsea, last Summer.

1. Calyx, opened at the mouth, to show the 4 Seeds. 2. Corolla spread open, to show the 4 Stamens. 3. Style and Stigma.
RICHARDSONIA scabra.

Rough-leaved Richardsonia.


R. scabra, caule hispido brachiato, foliis ellipticis nervosis scabris, involucris 2-phyllis.

Annual. Stems spreading, brachiate, thickly clothed with spreading unequal white hairs; branches ascending. Leaves opposite, elliptical or oval, gradually attenuated at both ends, narrowing at the base down the petioles, very rough to the touch, occasioned by numerous minute tubercles, on which grow short rigid decumbent hairs, margins ciliate, underneath strongly nerved, the nerves branching from the midrib at regular distances. Petioles, or base of the leaf, deeply channelled on the upper side, and convex on the lower, fringed. Stipules joined to the base of the petioles, connate, sheathing the stem, membranaceous, and toothed with several sharp subulate teeth that are
bearded at the points. Flowers terminal, white, in a close crowded head. Involucre of 2 broadly ovate sessile leaves, which are strongly and numerously nerved underneath. Calyx superior, 6 to 8 parted, segments radiately spreading, broadly lanceolate, acute, fringed. Corolla funnel-form, limb 6-parted, the segments equal, radiately spreading. Stamens 6, inserted in the tube, and exserted beyond the mouth; filaments stout, smooth; anthers incumbent; pollen white, granular. Style about the length of the stamens, smooth, 3-cleft at the point. Stigmas 3, oblongly capitate, rough. Capsule 3-coccus, or 3 joined together, each producing one seed, and crowned with the persistent calyx.

This curious annual plant is a native of South America, and was raised last Summer at the Nursery of Mr. Colvill, from seeds received from Germany. It succeeds well in a warm border of rich light earth, where it should be sown about the middle of April, if the weather prove favourable; the plants will then have time to flower, and ripen their seeds; if sown later, there will not be so good a chance of the seed ripening. It seldom exceeds 6 inches in height, but spreads its branches to a considerable distance; so that the young plants should not be allowed to grow too close together, as they will injure each other, and will not thrive so well.

Our drawing was made at the Nursery of Mr. Colvill, in August last.

1. Capsule, crowned with the persistent Calyx. 2. Corolla spread open, to show the insertion of the Stamens. 3. Style cleft in three at the point, and terminated by 3 oblongly capitate Stigmas.
SILENE picta.
Painted flowered Catchfly.

SILENE. Supra fol. 58.
§ 2. Floribus erectis, calycibus elongatis clavatis.

Silene anastomosans. Lag. gen. et spec. 15.
Silene Reinwardtii. Roth.

Annual. Stems erect, from 2 to 3 feet high, much branched; branches erect, dichotomously panicked, very slender, knotted at the joints, smooth and glossy, slightly glaucous. Leaves opposite, linear, acute, channelled. Flowers elegantly painted with purple stripes, proceeding from the upper forks of the branches, which lengthen out and produce other flowers. Pedi-cuncles short, some longer than others, nearly cylindrical. Calyx tubular, slender at the base, clavate, 5-toothed, and striped with 10 purple lines; teeth purple. Petals 5, unguiculate, the unguis longer than the calyx; limb bifid, elegantly striped with purple, darkest underneath, all joined together at the mouth
by the crown; crown on each petal bifid, decurrent
down the unguis, each segment 4-toothed. *Stamens* 10,
every other one attached to the base of the petal, the
others inserted in the receptacle; *filaments* smooth,
gradually tapering upwards; *anthers* attached by the
back, a little above the base, 2-celled. *Germen* smooth.
*Styles* 3, roughened inwards.

Our drawing of this elegant annual plant was taken
in September last, at the Nursery of Mr. Colvill, where
it was grown in the open air with other hardy annuals.
It may be considered an Autumn flowering plant, as it
continues to bloom till the frost destroys it. The seeds
should be sown early in Spring, otherwise there will
be no chance of obtaining ripe seeds; the beginning or
middle of April, if the weather permits, is the best
time for sowing them; they will succeed well in any
common garden soil, and they require to be a good
distance apart, as they grow to the height of from 2 to
3 feet, and branch round to a considerable distance,
each plant should be as much as 9 inches apart, other-
wise they will crowd each other, and will not thrive
near as well. It is not at present ascertained of what
country the present subject is a native, but from its
habit we suspect it to be either Barbary, or the South
of Europe.

1. Calyx. 2. The 5 Petals spread open, showing the 5 *Stamens*, each
attached to the base. 3. The other 5 *Stamens* inserted in the receptacle.
4. Petal, showing the toothed *Crown*. 5. *Germen*, terminated by the 3 *Styles*
and *Stigmas*, the latter a little roughish on the inward side.
DRACOCEPHALUM speciosum.

Beautiful Dragon's-head.


DRACOCEPHALUM. Supra fol. 38.


Perennial. Stems several from the same root, 3 to 4 feet high, erect, much branched, bluntly 4-sided, smooth and glossy. Leaves sessile, broadly lanceolate, acute, deeply and sharply serrated, particularly near the point, entire at the base, rather succulent, smooth and glossy, many-nerved, the nerves branching, but rather inconspicuous. Spikes more or less paniced, erect, regularly 4-sided, elongated, the flowers rather crowded. Bractes lanceolate, taper-pointed, broad at the base, scarcely as long as the calyx. Pedicles very short, pubescent. Calyx tubular, 5-cleft, slightly pubescent: segments acute, the upper one rather the broadest and shortest. Corolla bilabiata, inflated near the mouth, slender at the base, of a bright reddish lilac, strongly veined at the back, from which branch several pale lines: upper lip entire, arched: lower lip 3-lobed, lobes spreading, truncate, the middle one largest, reflexed. Stamens 4, inserted in the tube,

This fine species of *Dracocephalum* is a native of North America, and has been introduced to our gardens within these few years, where it has always been cultivated under the name that we have adopted, but we do not find it any where recorded. It belongs to the same section of the genus as *D. denticulatum*, and *D. virginianum*, but is readily distinguished from both by its panicked habit.

The spikes of flowers in this species are regularly 4-sided, although, when growing in the garden, the flowers are often seen to be all facing one way; this is owing to the short and weak pedicles, and the weight of the flower, keeping it so firm on the bracte, that whatever way the wind blows it, there it remains; so that when the wind blows strong from any quarter, the flowers are always facing the opposite direction. If a branch is cut off and held in the hand, the flowers may be moved by the other hand in the same manner, either all to one side, or some to one side, and some to the other, and wherever they are placed, there they will remain.

Our drawing was taken from a fine plant, in September last, at the Nursery of Messrs. Whitley, Brames, and Milne, at Fulham. It succeeds well in the open ground in a rich light soil, where it will attain the height of 3 or 4 feet; and it may be readily increased by dividing at the root.

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1. Calyx. 2. Corolla spread open, to show the insertion of the Stamens. 3. One of the Stamens detached. 4. The 4 Seeds with the Style between them, terminated by a cleft Stigma.
RANUNCULUS monspeliacus.  
var. β. cuneatus.  
Wedge-lobed Montpelier Crowfoot.

Natural Order. RANUNCULACEÆ. DC. syst. v. 1. p. 127.  
RANUNCULUS. Calyx 5-sepalus, sepalis basi non solutis decidis. Petala 5 rarius 10 intus basi squamulæ foveolâve nectariferâ instructa. Stamina ovariaeque numerosa; Cariop-sides ovatae subcompressæ, in mucronem aut cornu semine vix longius desinentes, læves striatae aut tuberculatae, in capitulum globosum cylindræceumve dispositæ. Herbae annuae aut sepiûs perennes. Radices fibrosæ, fasciculatæ aut grumosæ; caules teretes, erecti procumbentes aut interdum radicantes; folia integra dentata aut multifida, plerique radicalia, caulina ad originem ramorum pedunculorumque sita. Pedunculi terminalis axillares aut oppositifolii; flores albi aut lutei, rarissimè purpurei, fère omnes inodorí. DC. p. 231.  
Sect. II. RANUNCULASTRUM. Carpella laevia compressa, in spicam digesta. Radix grumosa. DC. prodr. 1. p. 27.  

α angustilobus, lobis foliorum angustis elongatis. R. illyricus.  
β cuneatus, lobis foliorum cuneiformibus apicé triñ-do-dentatis. R. monspeliacus. DC. ic. gall. rar. t. 50. R. apiifolius. Desf. in pict. hort. par. 37. t. 73. non Pers.  
γ rotundifolius, foliis rotundatis trîfidos, lobis dentatis obtusis. R. monspeliacus. Gou. fl. monsp. 279. Poir. dict. 6. p. 111. 2 2
Roots clustered, tuberous, with fibres intermixed. Leaves at first nearly round, 3-lobed, lobes 2 or 3-toothed; the next are deeply 3-lobed, or 3-parted; the lobes or segments cuneate, trifid or dentate; upper ones 3-parted, segments linear, entire, or 3-toothed, all thickly covered with villous canescent down. Petioles a little flattened, and furrowed on the upper side, and rounded on the lower; the upper ones sheathing the peduncles, villous. Stem erect, from 6 inches to a foot in height, from 3 to 9-flowered. Peduncles cylindrical, downy. Calyx of 5 sepals, deciduous; sepals ovate, obtuse, concave, villous, reflexed. Petals 5, very large, broadly obovate, of a light yellow. Stamens numerous; filaments slender, smooth, attached to the base of the anthers, which are about the length of the filaments. Spike of seeds ovate. Seeds flat, smooth, obliquely taper-pointed.

A native of Montpelier, and, according to M. Decandolle, a very variable species; but that seems to be chiefly owing to the situation in which it grows. It is generally known in our gardens by the name of R. philadelphicus, but how it came by that appellation we have not ascertained. In a rich light soil, it will attain a foot in height, and produce about 9 flowers on a stalk; in poorer soil, it will be considerably less; the flowers are very large, of a bright yellow, and very ornamental, and the roots are very similar to the common garden Ranunculus, R. asiaticus. It thrives well in the open air, in the common garden soil, and readily increases by dividing at the root.

Drawn at the Nursery of Mr. Colvill, the beginning of last June.

ASARUM canadense.

Canadian Asarabacca.

Natural Order. ARISTOLOCHIÆ. Brown prodr. 349.
ASARUM. Supra fol. 18.

A. canadense, foliis lato-reniformibus geminatis, perianthium lanatum profunde tripartitum: lacinii sublanceolatiis reflexis.
Asarum carolinianum. Walt. flor. car. 143.
Asarum latifolium. Salisb. prodr. 344.

Roots tufted, fibrous, of a spicy scent. Branches short, simple, spreading, terminated by 2 leaves, and a flower between them. Leaves broadly reniform; while young, acute, but becoming bluntly rounded by age, very soft to the touch, pubescent on both sides; sinus generally overlapping at the base. Petioles stout at the base, and tapering upwards, flattened on the upper side, and rounded on the lower, densely clothed with villous down. Flowers on short footstalks. Peduncles cylindrical, villous, nodding. Perianthium campanulate, villous, deeply 3-parted, of a pale brown colour; laciniae lanceolate, taper-pointed, more or less reflexed, sides rolled back. Stamens 12, every other one longest, seated on the capsule. Style short, fleshy. Stigma stellately 6-parted, blunt, and fleshy. Capsule inferior, 6-celled, with several seeds in each cell.
A native of North America, growing, according to Pursh, in shady rocky situations, from Canada to Carolina; "the root is highly aromatic, and known by the inhabitants of those countries by the name of Wild Ginger." With us it is quite hardy, producing its curious flowers in May, and thriving well in a light sandy soil, in a shady situation; this makes it the more desirable, as it will thrive where many other plants will not; its branches are short, but have an inclination to spread; the leaves are large, and the footstalks densely clothed with long villous hairs; this is not represented in Mr. Loddiges' figure.

Our drawing was taken from a plant that we received from the Nursery of Messrs. Whitley, Brames, and Milne, in May last. It is readily increased by dividing at the root.

1. One of the segments of the Perianthium. 2. The 12 Stamens spread open, to show their insertion, every other one longest. 3. The large 6 cleft Stigma.
IRIS dichotoma.

Forked-petaled Iris.

Natural Order. Irideae. Brown prodr. 302. IRIS. Supra fol. 68.

I. dichotoma, foliis ensiformibus falcatis, scapis teretibus paniculato-ramosis, spathis terminalibus diphyllis multifloris, perianthii tubo fere nullo: lacinii exterioribus subbarbatis; interioribus apice bifidis.


Iris pomeridiana. Fischer Mss.

Root tuberous. Stem from a foot to 18 inches in height. Leaves ensiform, more or less falcate, of a white glaucous colour. Scape cylindrical, panically branching, leafy, smooth. Sheaths terminal, 2-leaved, many-flowered: leaflets ovate, concave, points scariose. Peduncles long and slender, flattened on the inside, and keeled on the outer, about twice the length of the sheath. Germin oblong, bluntly 3-cornered. Perianthium divided nearly to the base into 6 segments; outer ones linearly oblong, obtuse, with crenulate points, reflexed from about the middle, of a light purple tinged with brown, and variegated near the base, with a large white patch in the centre, slightly bearded, and more or less spotted with purple; inner segments obovate, attenuated to the base, the points bifid, or forked, and sometimes toothed, of a light purple. Stamens 3, inserted in the base of the laciniae, about
half the length of the stigmas: *filaments* flat, smooth: *anthers* linear, 2-celled: *pollen* pale yellow. *Style* short. *Stigmas* 3, petal-like, channelled at the back, and keeled inwards, deeply bifid, the segments taper-pointed and twisted.

This beautiful and very distinct species of Iris, in habit, approaches the genus Pardanthus, and appears to be the connecting link between the two genera. It also differs from all the other known species, in the expansion of its flowers, those never opening till the afternoon, which occasioned Dr. Fischer to give it the appropriate name of *I. pomeridiana*. It is a native of Dahuria, but is rather more tender than some other species, suffering much from an over abundance of moisture, so that it should be planted in a dry open situation, and in a light soil, where the wet will pass off readily; it is also well to preserve some plants of it in pots, to be placed in frames in very wet or very cold weather; they can then be planted in the borders in Spring. It may be increased by seeds, or by dividing at the root.

Our drawing was taken from a very strong plant, at the Chelsea Botanic Garden, last Summer, where it was raised from seed that Mr. Anderson received from Dr. Fischer.

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1. Reduced figure of the Plant, showing how the scape terminates the Branch.  
2. One of the outer leaflets of the Perianthium. 3. One of the inner ditto, showing its forked point. 4. Stigma, showing its bifid point, and the twisted tips. 5. The 3 Stamens.
BAPTISIA exaltata.

Tall upright Baptisia.

**Natural Order. Leguminosae.** Juss. gen. 345.  


B. exaltata, caule erecto ramoso, foliis ternatis petiolatis; foliolis lanceolato-obovatis petiolo quintuplo longioribus, stipulis lanceolatis acuminitis petiolo triplo longioribus, racemis multifloris elongatis ramis duplo longioribus, floribus sparsi distantibus, calyce 4-fido: lacinii inferioribus acutis.*

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Perennial. Stems several from the same root, erect, branching, when in flower from 3 to 4 feet high; branches erect, smooth, furrowed. Leaves ternate, petiolate, smooth, glaucous: leaflets lanceolately-obo- 
vate, bluntish, about 3 inches long, and scarcely 1 broad. Petiole about half an inch long, channelled on the upper side, and rounded on the lower. Stipules lanceolate, taper-pointed, 3 times longer than the pe- 
tiole. Raceme very long, many-flowered, above 2 feet in length when in flower, double the length of the

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*B. australis, caule ramoso diffuso, foliis ternatis brevissime petiolatis: foliolis oblongo-cuneatis obtusis petiolo quadruplo longioribus, stipulis lanceolatis acutis petiolo duplo longioribus, racemis paucifloris ramis brevioribus, calyce quadrifido: lacinii inferioribus obtusis.
branches. *Flowers* scattered, solitary, or in pairs, distant, of a dark blue colour. *Pedicles* about the length of the calyx. *Calyx* 4-cleft, segments scarcely as long as the tube; upper one longest, emarginate; lower ones acute. *Corolla* papilionaceous: *petals* 4, nearly equal, connivent, unguiculate, eared above the unguis, the inner ones of a lighter colour: *vexillum* shorter than the petals, unguiculate, emarginate, channelled inside, and keeled at the back, sides scarcely reflexed. *Stamens* 10: *filaments* distinct, smooth, nearly as long as the petals, included between them, attached to the back of the anthers: *anthers* 2-celled: *pollen* yellow. *Style* smooth. *Stigma* a simple point.

The present stately perennial plant is a native of North America, and was introduced from thence in the year 1812, by the late Mr. John Lyons, at the sale of whose plants it was sold by the name of *Podalyria exaltata*; we were afraid that it was again lost to our collections, until we were agreeably surprised, the year before last, in seeing it growing very strong, and flowering luxuriantly, in the Apothecaries' Garden, at Chelsea, where our drawing was taken. It is readily distinguished from *B. australis*, by its much stronger and upright growth; the latter species was growing beside it in the same collection, so that the difference was readily perceptible; we do not know that the present species exists in any other collection. It succeeds well in the open air, in the common garden soil; and we have no doubt but it might be increased by dividing at the root, in the same manner as *B. australis*; we also believe it would produce perfect seeds, if pains were taken to fertilize the stigmas with the pollen, when in bloom.

1. Calyx. 2. The 2 alae, or wings, of the Corolla. 3. The Keel spread open. 4. Vexillum. 5. The 10 Stamens. 6. The same spread open. 7. The young Pod terminated by a smooth Style, and simple Stigma.
MONARDA media.

Bright Purple Monarda.

Sect. I. Stamina 2 fertilia; v. dum 4 fertilia. Antherae omnium dimidiatae.
MONARDA. Calyx cylindricus striatus 5-dentatus. Corolla cylindrica longior bilabiata: superius recta angusta integra, filamenta simplicia involvente; inferius reflexa latior 3-loba lobo medio longiore. Flores axillares verticillati, aut capitati terminales.


Stems erect, bluntly quadrangular, from 18 inches to 2 feet in height, branched, slightly pubescent, of a dark purple colour. Leaves opposite, cordate, ovate, taper-pointed, sharply serrate, rugose; upper side of a glossy green, underneath pubescent, particularly on the nerves, points a little reflected. Petioles short, deeply channelled on the upper side, and convex on the lower, very hairy. Flowers in a close compact head, of a bright purple, the upper ones expanding first. Involucre of several purple-coloured bractes; the outer ones ovate, acuminate, sharply serrate, pubescent; inner ones much narrower, lanceolate, or linear, entire, and terminated in a long taper point.
Calyx cylindrical, 5-toothed, striate, bearded between the teeth, the teeth erect, rigid, of a dark purple. Corolla tubular, very slender at the base, gradually widening upwards, 2-lipped, pubescent: upper lip straight, narrow, the point slightly reflexed, bent in at the sides so as to enclose the stamens: lower lip broader, 3-lobed, side lobes short, obtuse, middle one long, cleft at the point. Stamens 2, fertile, and the rudiments of 2 barren ones, which are very small and gland-like, all inserted in the tube: filaments very slender, smooth, longer than the corolla: anthers joined by their back to the filaments, connected. Style smooth, longer than the stamens. Stigma bifid, the divisions unequal, slightly reflexed.

A beautiful hardy perennial plant, native of North America, but when first introduced to this country we have not ascertained, but believe it was first brought home by Mr. Lyons; it is not described by Mr. Pursh, or Nuttall, in their Floras of North America, nor is it amongst Mr. Pursh's specimens now preserved in Mr. Lambert's Herbarium, which, by the kindness and liberality of the owner, we were permitted to examine; the first account of the plant we find published, is in Willdenow's enumeration of the plants cultivated in the Botanic Garden at Berlin, where it had probably been received from the English Gardens. It is a very desirable plant for the flower garden, both from the beauty of its flowers, and its agreeable fragrance. It thrives well in the open air, in the common garden soil, and is readily increased by dividing at the root.

Drawn at the Nursery of Mr. Colvill, last Summer.

1. Calyx. 2. Upper lip of the Corolla. 3. Lower lip of ditto, showing the 2 fertile Stamens bent back, and the 2 barren ones between them. 4. Germen, Style, and Stigma.
LOBELIA inflata.

Bladder-podded Lobelia.

Natural Order. LOBELIACEÆ. Jussieu.

LOBELIA. Corolla tubo hinc fisso (rarò integro;) limbo 5-partito. Antheræ connatæ. Stigma bilobum (nunc indivi-
sum.) Capsula bilocularis (rarò 3-locularis,) apice supero bi-
valvi.—Herbæ (v. Suffrutices) pleræque lactescentes. Folia alterna, integra v. laciniata, rarò fistulosa. Flores racemosi


Annual. Stem erect, branching, very hairy, purple at the base, from 1 to 2 feet high; branches slender, spreading, hairy at the base, and smooth upwards. Leaves ovate, sessile, running down the stem in a wing on each side, concave, acute, the margins folded inwards, undulately serrate, the serratures tipped with a kind of white glands, more or less hairy on both sides, strongly nervèd underneath, rugged. Flowers in terminal leafy racemes. Peduncles slender, shorter than the leaves, without bractes. Calyx 5-cleft, seated on the inferior germen, segments linear, taper-pointed, spreading, smooth, or scarcely pubescent. Corolla pale blue; tube longitudinally cleft on the upper side,
hairy within, and bearded at the mouth; limb 5-parted, upper laciniae erect, or slightly reflexed, linear, acute; lower ones ovate, bluntish, spreading. *Stamens* 5; *filaments* distinct, hairy at the base; *anthers* connected. *Germen* ribbed. *Style* smooth. *Stigma* 2-lobed, fringed. *Capsule* inflated, nearly globular, crowned with the calyx.

Our drawing of this pretty annual plant was taken at the Nursery of Mr. Colvill, last Autumn, where it was raised from seeds received from North America. It is quite hardy, and may be sown in the open borders the latter end of March, or beginning of April; it prefers a rich light soil, and an open situation, as much exposed to the sun as possible; for if it grow in too shady an aspect, the seed will scarcely come to perfection, as its time of flowering is late in the season. It might also be sown in pots early in Spring, and brought forward in a greenhouse, or frame, and afterwards planted into the borders; by that means the plants will flower earlier, and the seeds will be more likely to come to maturity.

1. Calyx. 2. Corolla spread open. 3. Stamens, showing the distinct Filaments and united Anthers. 4. Germsen, terminated by the Style and Stigma. 5. Ripe Capsule.
STACHYS sibirica.
Siberian Hedge-nettle.


STACHYS. Calyx angulatus 5-dentatus acuminatus. Corolla labium superius fornicatum; labium inferius lateribus reflexum; intermedia majore emarginata. Stamina deflorata versus latera reflexa.—Flores axillares aut verticillato-spicati verticillis bracteatis, proximis aut distantibus.

S. sibirica, verticillis multifloris, calycibus subpungentibus, foliis ovato-oblongis acuminatis serratis supra hirtis subitus mollissime tomentosis, caule erecto lanato.

Perennial. Stems erect, from 1 to 2 feet high, bluntly 4-sided, channelled, thickly clothed with long villous down. Leaves opposite, oblong, or ovate, tapering to a point, sharply serrate, very hairy on the upper side, and densely clothed with soft wool on the lower: lower ones cordate at the base. Petioles short, much flattened and furrowed on the upper side, and keeled on the lower, widened at the base and clasping the stem, densely villous. Flowers in whorls round the stem, of a bright lilac: whorls many-flowered. Bractes numerous, unequal, linear, taper-pointed, villous. Pedicles short. Calyx ringent, angular, ventricose, 5-toothed, villous, teeth taper-pointed, fringed. Corolla bilabiate, hairy outside; upper lip entire, ovate, arched; lower one large, 3-lobed, rugose, sides
reflexed; side lobes short and blunt; terminal one broad, truncate, margins uneven. Stamens 4, inserted in the mouth, the 2 lower ones rather the shortest: filaments hairy: anthers incumbent. Style smooth, filiform. Stigma bifid, points spreading.

The present subject is a hardy perennial plant, thriving well in the open borders, in the common garden soil, where its abundance of lively blossoms make a handsome appearance; those are produced, in succession, from June to August. It is readily increased by dividing at the root, or by seeds, which ripen plentifully.

Our drawing was taken at the Nursery of Mr. Colvill, last July.

1. Calyx. 2. Upper lip of the Corolla. 3. Lower lip of ditto, showing the insertion of the 4 Stamens. 4. Two Stamens detached, showing the Anthers stuck to each other. 5. The 4 naked Seeds, with the Style, and divided Stigma.
### SYSTEMATICAL INDEX

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ERRATA.

No. 6, over leaf, line 6 from the bottom, for "an hardy annual," read "a hardy annual."

No. 28, line 12 from the bottom, for "Thumb." read "Thumb."

No. 85, line 14 from the top, for "mosnp." read "monsp." line 17, for "Jacq. schoebr." read "Jacq. schonbr."

No. 94, line 6 from the bottom, for "Best. syst." read "Best. eyst."