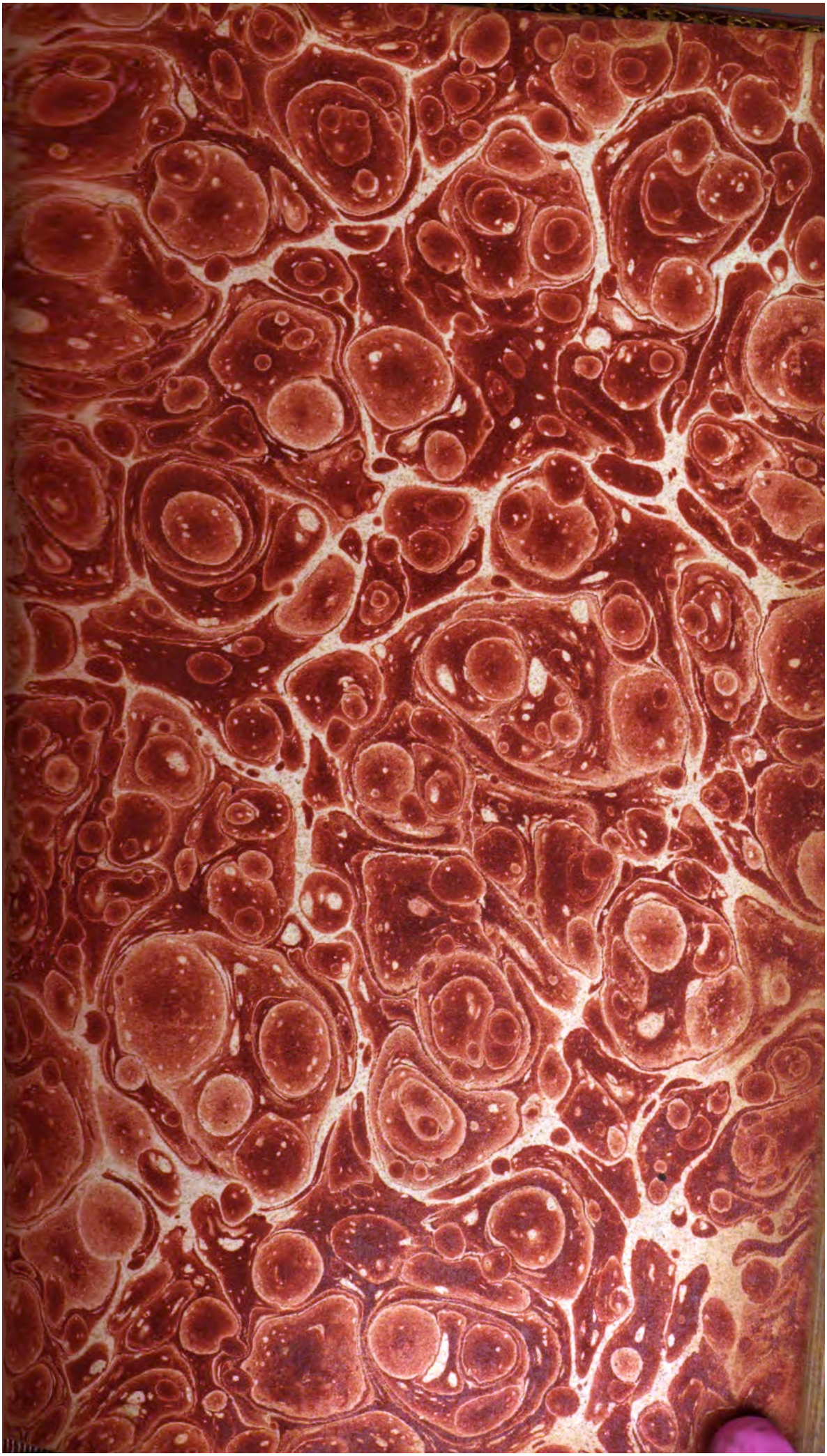

ENGLISH BOTANY;

OR,

COLOURED FIGURES

OF

BRITISH PLANTS,

WITH THEIR

ESSENTIAL CHARACTERS, SYNONYMS,
AND PLACES OF GROWTH.

TO WHICH WILL BE ADDED,

OCCASIONAL REMARKS.

BY

JAMES SOWERBY, F.L.S.

VOL. III.

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MDCCXCIV.

DIPSACUS fullonum.

Manured, or Fuller's Teasel.

TETRANDRIA Monogynia.

GEN. CHAR. *General calyx* of many leaves; *partial* superior, of one leaf. *Receptacle* chaffy. *Seed-crown* cup-shaped.

SPEC. CHAR. Leaves connected at the base, serrated. Scales of the receptacle hooked. General calyx reflexed.

SYN. Dipsacus fullonum. *Linn. Syst. Veg. ed.* 14. 143. *Sm. Fl. Brit.* 168. *Huds. ed.* 1. 49. *With.* 182. *Hull.* 33. *ed.* 2. 42. *Linn. Sp. Pl.* 140, *β*. *Huds. ed.* 2. 61, *β*.

D. sativus. *Ger. em.* 1167. *Raii Syn.* 192.

HUDSON mentions this plant as growing about hedges. It may in the clothing counties, where it is cultivated for use in carding woollen cloth, escape from the fields, but we have never seen it in such a station as to appear really wild. Our specimen was taken from Mr. Forster's garden at Clapton. It flowers in July, and is biennial.

Concerning its specific difference from *D. sylvestris, t.* 1032, we think there is much doubt. The leaves are occasionally united or separate at the base in both. The scales which stand between the flowers in this, are constantly hooked at the point. The involucral leaves, or general calyx, spread more. The whole plant has a paler hue. How far repeated cultivation in rich ground may be capable of producing these differences, we are not competent to decide. We are however much persuaded that *D. laciniatus* of Linnæus is only a variety of the plant before us.

New Series published by J. Sowerby London.

DIPSACUS ſylveſtris.

Wild Teaſel.

TETRANDRIA Monogynia.

GEN. CHAR. *General calyx* of many leaves; *partial* ſuperior, of one leaf. *Receptacle* chaffy. *Seed-crown* cup-ſhaped.

SPEC. CHAR. Leaves oppoſite, ſerrated. Scales of the receptacle ſtraight. General calyx inflexed, longer than the head of flowers.

SYN. Dipſacus ſylveſtris. *Linn. Syſt. Veg. ed.* 14. 143. *Sm. Fl. Brit.* 168. *Hudſ. ed.* 1. 49. *With.* 182. *Hull.* 33. *Relh.* 58. *Sibth.* 54. *Abbot.* 29. *Curt. Lond. faſc.* 3. *t.* 9. *Raii Syn.* 192.
D. fullonum α. *Linn. Sp. Pl.* 140. *Hudſ.* 61.

FREQUENT by road-ſides, and on the banks of ditches, flowering in July.

Root biennial. Stem about 4 feet high, ſtraight, branched, hollow, angular and prickly. Leaves oppoſite, often joined at the baſe, oblong, ſerrated, bright green, veiny, prickly but not hairy; the radical ones blunter, crenate, depreſſed. Heads of flowers terminal, ſolitary, ovate, erect, encompaſſed with a many-leaved linear prickly inflexed involucrum, or outer calyx, riſing generally above the uppermoſt flowers, ſometimes dilated at the ends. Flowers very numerous, denſe, paliſh purple, downy, tubular, 4-cleft, each accompanied by a long, prominent, ſtraight, pungent, linear-lanceolate ſcale of the receptacle. Seeds angular, crowned with the inner calyx.

We know of no uſe to which this plant can be applied. Its heads are ſometimes mixed by accident or fraud among parcels of the manured Teaſel, but, for want of the hooked ſcales which characterize that ſpecies, are entirely uſeleſs for dreſſing cloth.

Jan.y 1st 1802. Published by Jas. Sowerby. London.

DIPSACUS pilosus.

Small Teasel.

TETRANDRIA Monogynia.

GEN. CHAR. *General calyx* of many leaves; *partial* superior, of one leaf. *Receptacle* chaffy. *Seed-crown* cup-shaped.

SPEC. CHAR. Leaves on footstalks, with an appendage at each side. General calyx reflexed, equal in length to the head of flowers.

SYN. Dipsacus pilosus. *Linn. Sp. Pl.* 141. *Sm. Fl. Brit.* 169. *Hudf.* 61. *With.* 182. *Hull.* 33. *Relh.* 59. *Sibth.* 54. *Abbot.* 29. *Curt. Lond. fasc.* 1. *t.* 10.

D. minor, seu Virga pastoris. *Raii Syn.* 192.

IN moist shady waste ground on a calcareous soil the Small Teasel or Shepherd's Staff sometimes occurs, but is far from being a general plant. It flowers in August and September.

Root spindle-shaped, biennial. Stem 3 or 4 feet high, erect, branched, spreading, angular, very rough with ascending hooked prickles. Leaves opposite, spreading, on foot-stalks, ovate, pointed, serrated, accompanied by a pair of small leaflets at their base. Flowers white, in round, terminal, long-stalked heads. Common calyx of several equal, reflexed, lanceolate, pointed leaves, fringed with hairs, as are also the white straight scales that separate the flowers. Corolla funnel-shaped, irregularly five-lobed, hairy. Stamina twice as long as the corolla, with purple antheræ. Crown of the seeds fringed.

This is too rare a plant to incommode the farmer; neither has it been, on the contrary, applied to any useful purpose. As an ornamental flower it has little claim to a place in the garden.


877

4

SCABIOSA succisa.

Devil's-bit Scabious.

TETRANDRIA Monogynia.

GEN. CHAR. *General calyx* of many leaves; partial double, superior. *Receptacle* chaffy or naked.

SPEC. CHAR. Corollas four-cleft, regular. Stem-leaves toothed. Heads of flowers nearly globular.

SYN. Scabiosa succisa. *Linn. Sp. Pl.* 142. *Sm. Fl. Brit.* 170. *Hudf.* 62. *With.* 183. *Hull.* 33. *Relh.* 59. *Sibth.* 55. *Abbot.* 29. *Curt. Lond. fasc.* 3. *t.* 10.

S. radice succisâ, flore globoso. *Raii Syn.* 191.

THE species of Scabious represented in the annexed plate occurs very frequently and abundantly in grassy pastures that are somewhat moist, both on low commons and even on hilly spots, flowering from August to October inclusive.

Root perennial, oblong, abruptly bitten off at the lower end. Stem erect, round, leafy, bearing for the most part 3 or more flowers. Leaves dark-green, rather coriaceous, harsh and hairy; the radical ones ovate, bluntish and entire; a pair or two on the stem often remotely toothed; the uppermost smaller and entire. Flowers dark purplish blue (frequently milk-white), in roundish heads, standing on long terminal flower-stalks, the central one being the most considerable. The hairs on these stalks, even below the floral leaves, point upwards, while all those on the main stem are reflexed downwards. Calyx hairy. Florets nearly equally four-cleft. Seeds crowned with bristles.

The origin of the name Devil's-bit is curious; for the old writers tell us, the superstitious vulgar supposed the root had been bitten off by the devil, for envy of the benefit its medicinal virtues might render to mankind. Hence alone it seems those virtues were presumed; and in proportion as the devil and his operations are little thought of, they have fallen into oblivion in our unbelieving days.

May 1. 1801. Published by Jas Sowerby. London.

5.

SCABIOSA arvenſis.

Field Scabious.

TETRANDRIA Monogynia.

GEN. CHAR. *General calyx* of many leaves; *partial* double, ſuperior. *Receptacle* chaffy or naked.

SPEC. CHAR. Corollas 4-cleft, radiating. Leaves pinnatifid, cut. Stem briſtly.

SYN. Scabioſa arvenſis. *Linn. Sp. Pl.* 143. *Sm. Fl. Brit.* 170. *Hudſ.* 62. *With.* 183. *Hull.* 33. *Relh.* 60. *Sibth.* 55. *Curt. Lond. faſc.* 4. *t.* 13. *Dickſ. H. Sicc. faſc.* 12. 6.

S. major communior, folio laciniato. *Raii Syn.* 191.

COMMON in paſtures, but more eſpecially in corn-fields, where it flowers in July, mixed with the Cockle and the Great Ox-eye, contributing more to the ornament of the country than to the profit or honour of the farmer.

Root perennial, long, ſpindle-ſhaped, moſtly branched. Stem about a yard high, branched, rough with briſtles which rather point downward. Leaves for the moſt part hairy; the radical ones numerous, lanceolate, more or leſs ſerrated, as are alſo the pinnatifid (and frequently cut) upper leaves. Branches ſpreading, each terminated by a ſolitary flower, compoſed of very numerous tubular four-cleft pale-purple florets, of which the outermoſt are larger, labiate, and give the whole a radiated figure. Stamina capillary, with fleſh-coloured antheræ, abortive in the outermoſt florets. Seed one to each floret, quadrangular, crowned by the permanent partial calyx.

Theſe flowers, held over the ſmoke of a pipe of tobacco, in a few minutes become of a moſt beautiful green, from the alkaline nature of the ſmoke, to which their delicate purple is peculiarly ſenſible.

Nov. 1 1797 Published by R. Phillips Bow Lane

6.

SCABIOSA columbaria.

Small Scabious.

TETRANDRIA Monogynia.

GEN. CHAR. *General Calyx* of many leaves; *partial* double, superior. *Receptacle* chaffy or naked.

SPEC. CHAR. Corollas five-cleft, irregular. Radical leaves ovate or lyrate, crenate; the rest pinnatifid, with linear segments.

SYN. Scabiosa columbaria. *Linn. Sp. Pl.* 143. *Sm. Fl. Brit.* 171. *Huds.* 62. *With.* 184. *Hull.* 33. *Relh.* 53. *Sibth.* 55. *Abbot.* 30. *Fl. Dan. t.* 314.

S. minor vulgaris. *Raii Syn.* 191.

PECULIAR to chalk, limestone or gravelly countries, but there not uncommon, flowering from June to August. It grows about the walls of Norwich, and we have received it from Yorkshire and Devonshire.

Root perennial, woody, tufted. Plant smaller and more slender than the *S. arvensis*. Stem 12 or 18 inches high, erect, round, leafy, hairy, a little branched in the upper part. Leaves hairy; the lowermost ovate or lyrate, crenate and cut, on longish footstalks; the rest sessile, simply or doubly pinnatifid, their segments linear, sharp and entire. Flowers terminal on long naked stalks, light purple. The marginal florets particularly large and radiant, and all the florets five-cleft, by which it is clearly distinguished from our other species. The stamina however, as far as we have been able to discover, are never more than four, though five are represented in the *Flora Danica*. The outer partial calyx becomes a small ribbed crenate membranous ruffle; the inner consists of 5 brown bristles, as long as the corolla.

May 1. 1804 Published by Jas Sowerby, London.

7.

SHERARDIA arvenſis.

Blue Sherardia.

TETRANDRIA Monogynia.

GEN. CHAR. *Cor.* of 1 petal, funnel-ſhaped, ſuperior. *Seeds* 2, each crowned with 3 teeth.

SPEC. CHAR. All the leaves whorled. Flowers terminal.

SYN. Sherardia arvenſis. *Linn. Sp. Pl.* 149. *Sm. Fl. Brit.* 171. *Hudſ.* 66. *With.* 185. *Hull.* 37. *Relh.* 63. *Sibth.* 57. *Abbot.* 32. *Curt. Lond. faſc.* 5. *t.* 13. *Dickſ. H. Sicc. faſc.* 15. 1.

Rubeola arvenſis repens cærulea. *Raii Syn.* 225.

THE *Sherardia*, or Little Field Madder, as it has been commonly called, though it has neither the character nor properties of Madder, is frequent in fallow fields, and indeed even among growing corn, more particularly on a light or gravelly ſoil, flowering throughout the ſummer.

The root is fibrous and annual. Herb generally hairy. Stems ſeveral, branched, leafy, angular, ſpreading in every direction. Leaves about 6 in each whorl, elliptical or obovate, pointed, entire, roughest on the edges and keel, ſpreading. Flowers in a ſmall terminal umbel enveloped with the uppermoſt whorl, which generally confiſts of 7 or 8 leaves. Calyx ſuperior, of 2 trifid permanent leaves, at length forming a crown to the fruit. Corolla purpliſh-blue, with a ſlender tube gently tapering to the baſe, and a regular four-cleft limb. Stamina ſlender, ſhorter than the lobes of the corolla. Fruit of 2 dry ſeeds, moſtly roughiſh.

Dillenius certainly ſhowed his judgment in making this a diſtinct genus from all the other ſtellate plants, and it is well characteriſed by the 2 trifid leaves of the calyx, a mark which M. De Juſſieu (poſſibly from an error of the preſs) ſeems to have overlooked.

8.

ASPERULA odorata.

Sweet Woodruff or Woodroof.

TETRANDRIA Monogynia.

GEN. CHAR. *Cor.* of one funnel-ſhaped petal, ſuperior. *Seeds* 2, globoſe.

SPEC. CHAR. Leaves eight in a whorl, lanceolate. Tufts of flowers on ſtalks. Fruit briſtly.

SYN. Aſperula odorata. *Linn. Sp. Pl.* 150. *Sm. Fl. Brit.* 172. *Hudſ.* 66. *With.* 185. *Hull.* 37. *Relh.* 64. *Sibth.* 57. *Abbot.* 32. *Curt. Lond. faſc.* 4. *t.* 15. *Dickſ. H. Sicc. faſc.* 8. 7.

Aſperula. *Raii Syn.* 224.

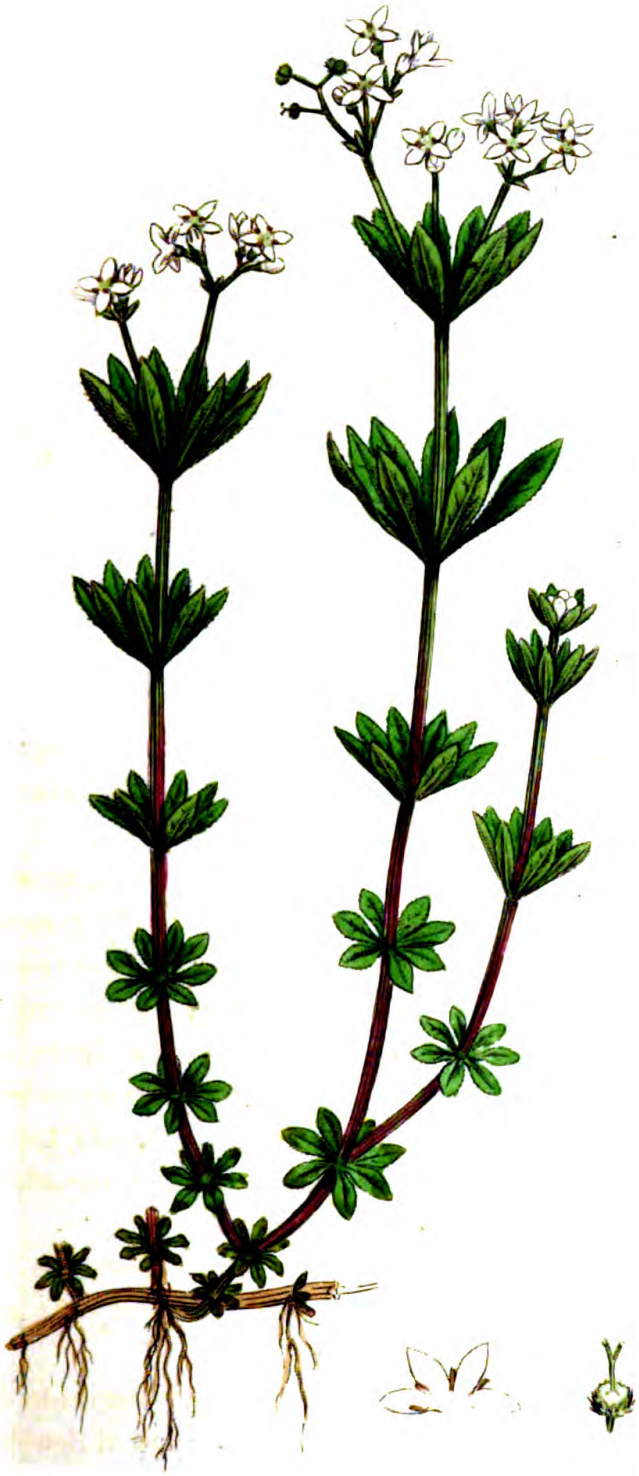
ALMOST every dry mountainous wood abounds with the Woodruff, nor is it unfrequent in the more level counties on a calcareous ſoil. It flowers in May.

Roots perennial, creeping among dead leaves and the more light and friable vegetable mould, and throwing up numerous, upright, ſimple, annual, ſmooth, angular, leafy ſtems, about a ſpan high. Leaves 8 in a whorl, occaſionally 7 or 9, bright-green, rough at the margin only. Panicles forked, denſe, terminal, on longiſh ſtalks, generally 3 together. Flowers white, occaſionally fragrant, particularly at night. Corolla ſhorter than in ſome other ſpecies, but ſufficiently tubular to mark the genus. Fruit rough with aſcending briſtles.

We preſume the Engliſh name Woodruff alludes to the whorled poſition of the leaves, like an old-faſhioned ruff; and that Woodroof is a corruption of it.

The freſh herb has no ſmell; but as ſoon as it begins to dry it exhales a pleaſant and laſting fragrance like that of new hay verging towards the flavour of bitter almonds, to the great ſurpriſe of thoſe who gather it and keep it about them unawares.

The only Britiſh ſpecies of this genus, beſides that here deſcribed, may be found in our 1ſt vol., *t.* 33.



9.

ASPERULA cynanchica.

Squinancy-wort.

TETRANDRIA Monogynia.

GEN. CHAR. *Corolla* of one funnel-ſhaped petal. *Seeds* two, globoſe.

SPEC. CHAR. Leaves linear, in fours, except the upper ones, which are oppoſite. Stem ſomewhat erect. Flowers four-cleft.

SYN. Aſperula cynanchica. *Linn. Sp. Pl.* 151. *Hudſ. Fl. An.* 66. *With. Bot. Arr.* 159. *Relh. Cant.* 64.

Rubeola vulgaris quadrifolia lævis, floribus purpurantibus. *Raii Syn.* 225.

FOUND on dry, chalky, ſunny banks, in moſt parts of England, flowering in the middle of ſummer. Our ſpecimens came from Dartford. The root is perennial, but does not thrive well in a garden, requiring, probably, like many other plants, its natural ſhelter of herbage. The ſtems are moſtly procumbent, erect at their extremities only. The leaves very unequal in length, generally in fours, rarely five; blunt, but tipped with a ſharp point. The flowers have a great degree of beauty, being white or bluſh-coloured, elegantly marked with red lines. They have a ſweet ſmell, which, however, like that of Woodroof flowers, is rarely to be perceived. As they dry they become rugged, in which ſtate Linnæus appears to have deſcribed them in his Species Plantarum.

Dalechampius ſeems to be the chief authority for the reputation this plant has acquired in the cure of quinſies, from which its name is taken. He ſays it ſhould be applied externally as well as taken inwardly. It is out of uſe, as we are now furniſhed with remedies of more undoubted efficacy in the putrid as well as inflammatory ſore throat.

J. Sowerby del. Oct. 1 1791

GALIUM cruciatum.

Crofs-wort.

TETRANDRIA Monogynia.

GEN. CHAR. *Cor.* of one petal, flat. *Seeds* two, roundiſh.

SPEC. CHAR. Leaves in fours, ovate, hairy. Stem ſimple above, hairy. Bunches of flowers lateral, with two leaves. Flowers polygamous. Fruit ſmooth.

SYN. Galium Cruciata. *Scop. Carn.* 100. *With. Bot. Arr.* 149.

Valantia Cruciata. *Linn. Sp. Pl.* 1491. *Hudſ. Fl. An.* 441. *Relh. Cant.* 377.

Cruciata. *Raii Syn.* 223.

THIS grows every where about hedges and thickets, flowering early in ſummer. The root is perennial, creeping and ſlender. Stems branched at their baſe, but perfectly ſimple in the upper part, weak, and reſting againſt buſhes, quadrangular, very hairy, jointed, and bearing at every joint four ovate, entire, ſoft, hairy leaves, from whoſe boſoms all the way up the ſtem ariſe ſeveral ſlender, forked, many-flowered peduncles, each furniſhed with two ſmall leaves at its firſt divarication. The flowers are formed exactly like thoſe of other ſpecies of Galium, except that ſome are only male, wanting a germen, and of the complete or hermaphrodite ones, ſome are five-cleft. The ſtyle is deeply cloven, and the rudiments of ſeeds two, though one generally proves abortive, and the fruit becomes globoſe, ſmooth, and is ſheltered by the reflexed leaves.

That this plant belongs to the natural genus of Galium there can be no doubt: ſee the queſtion well diſcuſſed in *Bot. Arr.* 149 and 1139, &c. but it does not follow that all the Valantiæ of Linnæus are of the ſame genus. V. glabra, articulata, and Aparine may be ſo, but ſurely V. muralis ought from its fruit to form a genus. It is to be wiſhed that and other foreign ſpecies ſhould be well examined as to their fructification, which appears in ſome reſpects to be very curious.

As the old name Cruciata is in fact an adjective, we have ventured to conſider it as ſuch, to avoid jarring terminations. See Remarks on Lathyrus Niſſolia, t. 112.


J. Sowerby del. Nov. 1, 1793

GALIUM palustre.

White Water Bed-straw.

TETRANDRIA Monogynia.

GEN. CHAR. *Cor.* of one petal, flat, superior. *Seeds* 2, roundish.

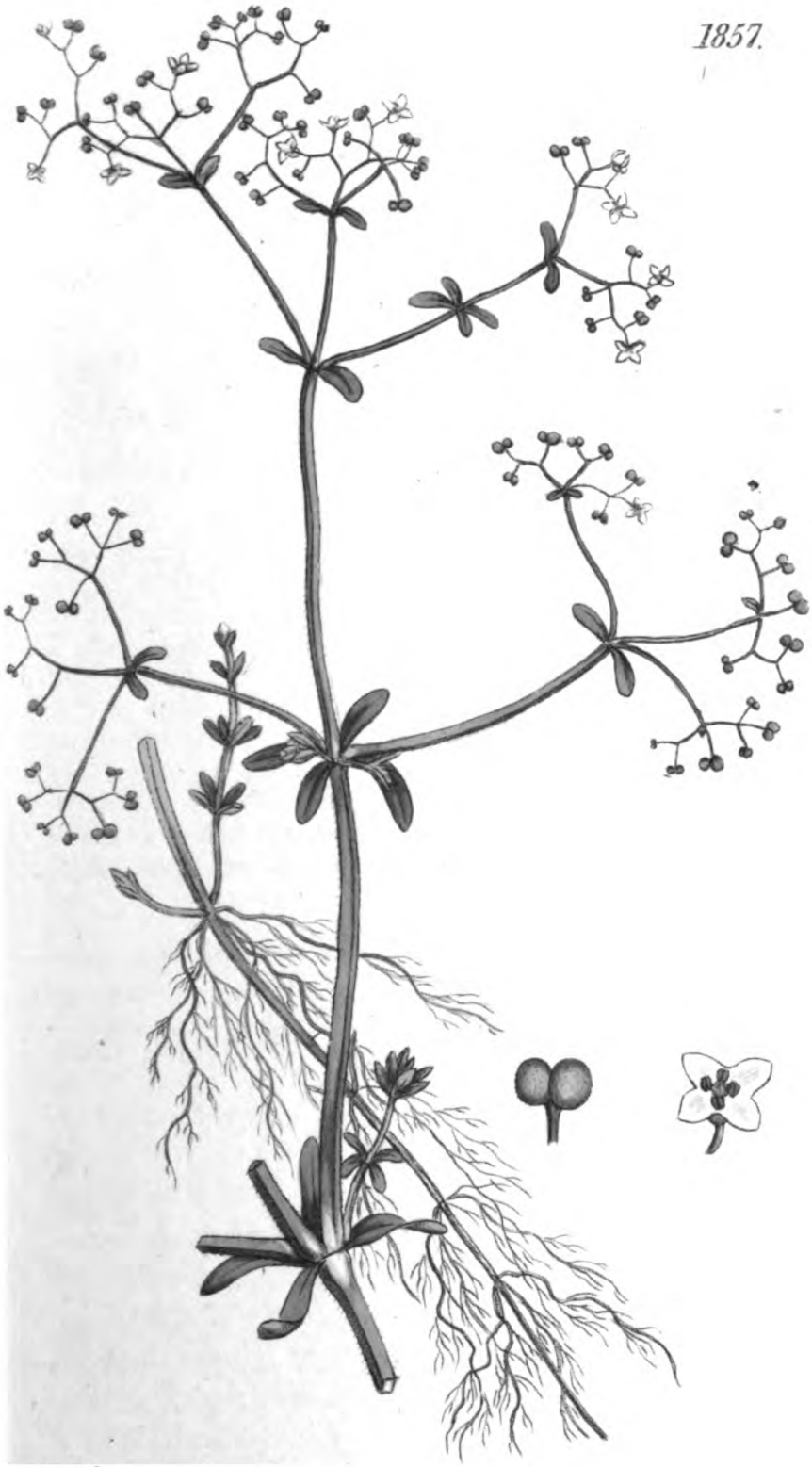
SPEC. CHAR. Leaves four in a whorl, obovate, obtuse, unequal in size. Stems weak and spreading, branched in their upper part.

SYN. Galium palustre. *Linn. Sp. Pl.* 153. *Sm. Fl. Brit.* 174. *Huds.* 67. *With.* 187. *Hull.* 35. *Relh.* 55. *Sibth.* 58. *Abbot.* 33.

Molluginis vulgatioris varietas minor. *Raii Syn.* 224.

VERY generally found in ditches among reeds, and umbelliferous, or other, tall water plants, on which its weak stems lean for support, and so rise to the height of 3 or 4 feet. Otherwise they are diffuse and of less extent. They are much branched, quadrangular, generally smooth, sometimes rough-edged. Leaves four in a whorl, spreading, linear inclining to obovate, obtuse, smooth, except the edges of the upper ones, which are rough, but not toothed nor serrated. It is peculiar to this species to have two opposite leaves smaller and two larger in the uppermost whorls. Flowers white, in large, loose, three-cleft and somewhat umbellate panicles, with two leaves only at their base, and merely a small solitary one occasionally higher up. Stalks smooth. Calyx scarcely any. Segments of the corolla broad, acute, but not pointed nor awned. Fruit small, dotted, not rough, rarely perfected.

The roots are perennial and somewhat creeping. The flowers last throughout July and August.



Published March 1, 1808 by James Sowerby London.

V

GALIUM Witheringii.

Rough Heath Bed-straw.

TETRANDRIA Monogynia.

GEN. CHAR. *Cor.* of one petal, flat, superior. *Seeds* 2, roundish.

SPEC. CHAR. Leaves about five in a whorl, widely spreading, lanceolate, slightly awned, fringed with bristles. Stem upright, slightly branched, rough.

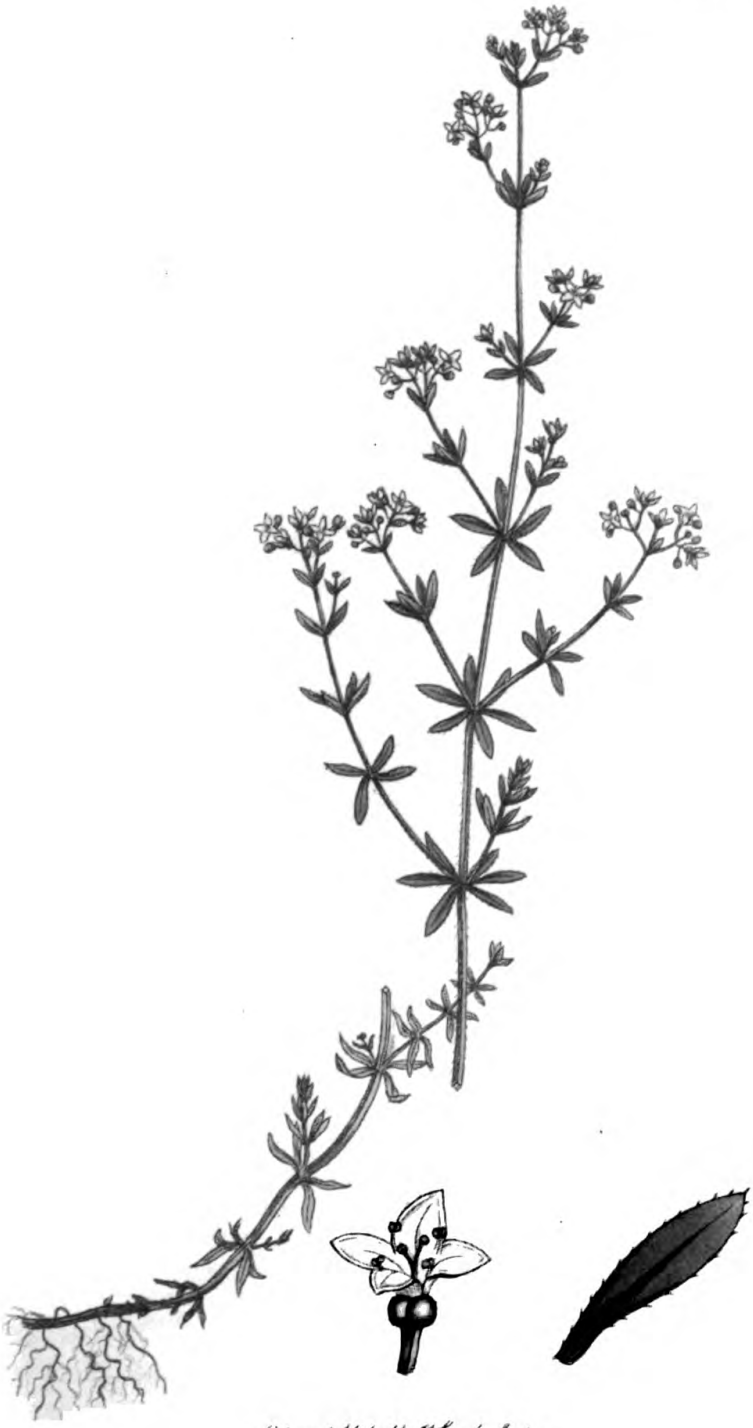
SYN. Galium Witheringii. *Sm. Fl. Brit.* 174. *Hull. ed.* 2. 44.

G. montanum. *With.* 187. *t.* 28; not of Linnæus.

DR. WITHERING found this *Galium* on high but boggy parts of Handsworth heath near Birmingham, and took it for the Linnæan *montanum*, which being a very different plant, it was thought right to commemorate the discoverer of the new one in its specific name. We have indeed the same in Mr. Rose's herbarium, mistaken for *uliginosum*, but have never gathered any ourselves. The Bishop of Carlisle favoured us with specimens gathered last July in Bank Meadow, close to his Lordship's fine seat of Rose Castle, Cumberland. It grows in a moist but rather barren spot, not smothered with high grass, near *Linum catharticum*, small *Agrostis vulgaris*, and some *Potentilla anserina*.

The stem, though upright, is weak, about a foot high, either quite simple, or bearing a few lateral branches; its edges rough with deflexed hooks. Leaves about 5 in a whorl, sometimes 6, on the weak parts 4, widely spreading or deflexed, small, elliptic-lanceolate, often tipped with a minute bristly point, their edges fringed with short bristles or hooks pointing towards the apex. Panicles small, terminal, 3-forked, their stalks smooth except the main one. Buds purplish. Corolla cream-coloured when expanded. Anthers at first of a pale yellow green, but they directly turn red, reddish, or red brown. Style short, cloven. Stigmas globular, green. Germen and fruit smooth.

This completes our descriptions of the genus *Galium*, as far as hitherto discovered in Britain; but Switzerland and France afford several kinds which might be expected to grow with us, and which perhaps have been overlooked, they being often very similar to each other; and there are few genera whose synonymy is more difficult.



Curtis's Published by J. Sowerby London

✓

GALIUM ſaxatile.

Smooth Heath Bed-ſtraw.

TETRANDRIA Monogynia.

GEN. CHAR. *Cor.* of one petal, flat, ſuperior. *Seeds* 2, roundiſh.

SPEC. CHAR. Leaves ſix in a whorl, obovate, obtuſe, tipped with a ſmall point. Stem much branched, proſtrate, ſmooth. Fruit granulated.

SYN. Galium ſaxatile. *Linn. Sp. Pl.* 154. *Sm. Fl. Brit.* 175.

G. montanum. *Hudſ* 67. *Relh.* 66.

G. procumbens. *With.* 187. *Hull.* 36. *Sibth.* 59. *Abbot.* 34.

Mollugo montana minor, Galio albo ſimilis. *Raii Syn.* 224.

MR. HUDSON publiſhed this plant by the name of *G. montanum* in 1762, and the ſame year Linnæus deſcribed a very different ſpecies under the ſame name. It becoming therefore neceſſary to give ours a new denomination, Dr. Withering and his followers have called it *procumbens*, none of them having been aware of its being the real *ſaxatile* of both editions of *Sp. Plantarum*.

It is very abundant in heathy buſhy places, flowering plentifully from June to the end of ſummer. The roots are perennial and creeping. Stems much branched, procumbent or ſtraggling, ſmooth, bearing numerous whorls of ſpreading obovate leaves, 6 in a whorl, each tipped with a ſhort briſtly point, and for the moſt part rough at the edge. The panicles are terminal, three-forked, ſmooth. Flowers milk-white, ſmall, but conſpicuous from their number. Fruit ſmall, neither briſtly nor ſmooth, but ſtudded all over with minute prominent granulations, by which circumſtance alone this may be known from every other Britiſh *Galium*, except the *tricorne*, which is widely different from it in other reſpects.

14.

GALIUM uliginosum.

Rough Marsh Bed-straw.

TETRANDRIA Monogynia.

GEN. CHAR. *Cor.* of one petal, flat, superior. *Seeds* 2, roundish.

SPEC. CHAR. Leaves six in a whorl, lanceolate, pointed, rigid, their edges rough with reflexed prickles. Fruit smooth, smaller than the corolla.

SYN. Galium uliginosum. *Linn. Sp. Pl.* 153. *Sm. Fl. Brit.* 175. *Huds.* 68. *With.* 188. *Hull.* 36. *ed.* 2. 44. *Relh.* 56. *Sibth.* 58. *Abbot.* 33.

Aparine palustris minor parisiensis, flore albo. *Dill. in Raii Syn.* 225.

OF this little *Galium* there is scarcely a certain figure extant, for those cited in Willdenow's *Sp. Pl.* are equally distinct from it and from each other. J. Bauhin's *Rubia quædam minor, v.* 3. 716, is too imperfect to be at all relied on.

Our plant is not uncommon in Norfolk, growing in wet ditches and boggy places among reeds, water-mints, &c., and flowering in July and August. The roots are small, creeping, perennial. Stems a foot or more in height, branched, rough, so very weak and brittle, that as the leaves stick to every thing around them and to each other, good specimens are with difficulty extricated. The leaves are 6 in a whorl, variously spreading, light green, lanceolate inclining to obovate, tipped with a small bristle, their edges and keel rough with minute prickles pointing backwards, while a simple row of similar prickles often occurs on the upper side near the margin, and these always point forwards. Flowers small, white, on terminal, cloven stalks, which are smooth and usually 3 together. Fruit small, dotted, but scarcely rough, and never, as far as we have observed, hairy.

Jan 1 1809 Publish'd by Ja.t Sowerby, London

15.

GALIUM erectum.

Upright Bed-straw.

TETRANDRIA Monogynia.

GEN. CHAR. *Cor.* of one petal, flat, superior. *Seeds* 2, roundish.

SPEC. CHAR. Leaves about eight in a whorl, lanceolate, pointed, their edges rough with prickles pointing forward. Stem smoothish, weak. Fruit smooth.

SYN. Galium erectum. *Huds.* 68. *Sm. Fl. Brit.* 176. *With.* 189. *Hull.* 36. *ed.* 2. 44. *Relh.* 56. *Abbot.* 34. *Dicks. H. Sicc. fasc.* 17. 2.

GATHERED by Mr. W. Borrer in dry hedges at Portslade, Sussex, flowering the middle of June. Mr. Dickson says it grows in dry pastures. The late Mr. Crowe noticed it on a bushy part of Heydon common, Norfolk, which is rather moist, and this accords with Mr. Relhan's account. We find no mention of this plant in the Botanist's Guide, which we presume is owing to its having escaped the notice of most observers, and not to its being supposed too frequent for admission into that useful book.

The roots are perennial, small and slender. Stems upright when they meet with support, but weak and flaccid, much branched, leafy, panicled, many-flowered, often quite smooth, sometimes more or less clothed with soft hairs. Leaves 6, 7 or 8 in a whorl, lanceolate, bristle-pointed, edged with prickly serratures all directed forward. Panicles terminal and lateral, compound, three-forked, leafy, with slender smooth stalks, bearing numerous white flowers, the segments of whose corolla are sharply pointed. Stamens short, erect. Fruit small, smooth.

Hudson mistook this for *G. austriacum* of Jacquin, which, according to specimens sent by himself, is very different, having linear and much longer leaves, with smooth edges.

Oct 1809 published by Jas Sowerby London

16.

GALIUM verrucosum.

Warty-fruited Bedstraw.

TETRANDRIA Monogynia.

GEN. CHAR. *Cor.* of one petal, flat, superior. *Seeds* 2, roundish.

SPEC. CHAR. Leaves six in a whorl, lanceolate, with marginal prickles pointing forward. Flower-stalks axillary, three-flowered. Fruit warty, drooping.

SYN. Galium verrucosum. *Sm. Prod. Fl. Græc. Sibth.* *v.* 1. 93.

G. tricorne. *Don Herb. Brit. fasc.* 5. 103.

Valantia Aparine. *Linn. Sp. Pl.* 1491.

Aparine semine coriandri saccharati. *Tourn. Inst.* 114. *Vaill. Paris. t.* 4. *f.* 3, *b.*

WHETHER this species of *Galium*, confounded by almost all botanists with our *tricorne*, *t.* 1641, has ever been gathered in Britain before Mr. G. Don observed it in corn-fields in the Carse of Gowrie, Scotland, we have no sure means of knowing, but we are certain of the above synonyms. It has been observed near Malton, Yorkshire, by Mr. R. Miller, and is annual, flowering from June to August.

Root slender, turning reddish when dried, and retaining the cotyledons long at its summit. Stems several, somewhat branched, their angles rough with reflexed prickles. Leaves six in each whorl, their marginal prickles pointing all forward, not backward; by which invariable character, and the large pyramidal tubercles that cover the fruit, and give it the appearance of a coriander comfit, this species is clearly distinguished from *tricorne*. Linnæus referred it to *Valantia* because some flowers have no pistil, but the generic characters in the fruit of real *Valantiæ* are strikingly peculiar, and quite unlike those of *Galium*.

. 1810 published by Jno. Sowerby London

17.

GALIUM tricorne.

Corn Bedstraw.

TETRANDRIA Monogynia.

GEN. CHAR. *Cor.* of one petal, flat, superior. *Seeds* 2, roundish.

SPEC. CHAR. Leaves about eight in a whorl, their margin, as well as the stem, rough with reflexed prickles. Flower-stalks axillary, three-flowered. Fruit granulated, drooping.

SYN. Galium tricorne. *With. ed.* 2, 153. *Sm. Fl. Brit.* 176. *Relh.* 56.

G. spurium. *Huds.* 68. *With.* 190. *Sibth.* 59. *Abbot.* 33.

Valantia Aparine. *Mart. Rust. t.* 122.

Aparine semine læviore. *Raii Syn.* 225.

GATHERED in June 1806, by Mr. D. Turner and Mr. W. Borrer, in fields near Carisbrook, Isle of Wight. It has been found occasionally in various parts of England, in dry chalky fields, and generally taken for *G. spurium* of Linnæus, a species distinct from this, which we have received from Mr. G. Donn, who found it near Forfar, since the publication of *Fl. Brit.* We hope to obtain living specimens, in order to publish a figure at some future opportunity.

G. tricorne has a small annual root, producing several weak simple leafy stems, whose angles are rough with prickles pointing downwards. The leaves grow commonly 8 in a whorl, and their edges, sometimes their keels, are rough with similar prickles. Flowerstalks axillary, solitary, alternate, scarcely so long as the leaves, prickly in the same manner, three-cleft, bearing mostly 3 flowers and a pair of bracteas. The flowers are cream-coloured, rarely all fertile. Stalks curved downward after flowering. Fruit rather large, granulated with little points, and looking as if it had been shaved with a razor.

Sept. 1. 1806. Published by J. J. Sowerby, London.

18.

GALIUM spurium.

Smooth-seeded Corn Bedstraw.

TETRANDRIA Monogynia.

GEN. CHAR. *Cor.* of one petal, flat, superior. *Seeds* 2, roundish.

SPEC. CHAR. Leaves about eight in a whorl, their margin, as well as the stem, rough with reflexed prickles. Flower-stalks axillary, many-flowered, cymose. Fruit smooth, erect.

SYN. Galium spurium. *Linn. Sp. Pl.* 154.
G. n. 724. *Hall. Hist. v.* 1. 318. *Nomencl.* 66.
Aparine vulgaris, semine minori. *Vaill. Paris.* 14. *t.* 4. *f.* 4?

MR. GEORGE DON discovered this plant in cornfields about Forfar, North Britain, but sparingly, as mentioned at *t.* 1641. We have been favoured by Mr. Turner with a garden specimen, which precisely accords with Mr. Don's wild ones, whence our seeds were taken, as well as with those in the Linnæan herbarium. Yet the *G. spurium* of Willdenow, Roth, and most of the authors they cite, is no other than our *tricorne, t.* 1641. Haller indeed well knew the present plant, and he is perhaps right in quoting Vaillant as above; but if so the fruit is liable to be occasionally hairy, a variation which we have indeed observed in other species of the genus.

G. spurium is annual, flowering in June and July. Its habit much resembles *G. Aparine, t.* 816, but the leaves are sometimes shorter. They are from 6 to 8 or 9 in a whorl, their edges and keel rough with recurved prickles. The stem is rough with similar prickles, and quadrangular. Flower-stalks axillary, opposite, rough, corymbose, each bearing 6 or 7 green flowers, all more or less fertile, accompanied with 1 or 2 floral leaves. Germen quite smooth. Ripe fruit of 2 brown kidney-shaped lobes or seeds, with a central cavity between them; their surface smooth and even, except a slight ruggedness which seems to be caused by drying only. The fruitstalks are upright or spreading, not curved downward.—*Valantia Aparine* of Linnæus, *Galium verrucosum* of *Prod. Fl. Græc.* 93, has the prickles of its leaves directed forwards, the fruit coarsely tuberculated, and recurved.

Apr 1. 1808. Published by Jas: Sowerby London.

√

19.

GALIUM pusillum.

Least Ladies-bedstraw.

TETRANDRIA Monogynia.

GEN. CHAR. *Cor.* of one petal, flat. *Seeds* two, roundish.

SPEC. CHAR. Leaves about eight in a whorl, rough, linear, pointed. Flower-stalks forked. Fruit smooth.

SYN. Galium pusillum. *Linn. Sp. Pl.* 154. *Hudf. Fl. An.* 69. *With. Bot. Arr.* 154. *Villars Dauph. v.* 2. 324. *t.* 8.

NEITHER Ray nor Dillenius seems to have noticed this species of Galium, unless it be what the latter intended by *Gallium album supinum multicaule*, Rupp. Fl. Jen. 4. Raii Syn. 224. It does not well agree with Ruppius's description, which is however a very indefinite one, and it may nevertheless be the plant of Dillenius. This specimen was gathered in July last by Dr. Smith, at Matlock Bath, Derbyshire, where it grows abundantly, thriving much in the calcareous rocky soil originally deposited by the Matlock water. Mr. Hudson mentions the neighbourhood of Kendall in Westmoreland as its place of growth.

The root is perennial. Stems square, extremely numerous, from three to ten inches high, forming large tufts covered with innumerable milk-white flowers, very conspicuous at a distance. The leaves are tipped with a short pale bristle, and, as well as the stem, are generally, but not always, rough with short spreading hairs. They are not exactly linear, but rather lanceolate, from six to eight, or even nine, in a whorl, equally spreading; the lower ones so close together that they are almost imbricated; but that is by no means peculiar to this species. We have therefore omitted it in the specific character.

Our specimens agree precisely with those in the Linnæan Herbarium from Mons. Gerard, except that his are rather less. There is no certain figure of this Galium extant, except the indifferent one of Mons. Villars.

GALIUM verum.

Yellow Bed-ſtraw.

TETRANDRIA Monogynia.

GEN. CHAR. *Cor.* of one petal, flat, ſuperior. *Seeds* two, roundiſh.

SPEC. CHAR. Leaves 8 in a whorl, linear, channelled, entire, rough. Flowers in denſe panicles. Fruit ſmooth.

SYN. Galium verum. *Linn. Sp. Pl.* 155. *Sm. Fl. Brit.* 178. *Hudſ.* 69. *With.* 191. *Hull.* 36. *Relh.* 66. *Sibth.* 59. *Abbot.* 34. *Curt. Lond. faſc.* 6. *t.* 13. *Mart. Fl. Ruſt. t.* 54. *Dickſ. H. Sicc. faſc.* 17. 4.

G. luteum. *Raii Syn.* 224.

FREQUENT in the borders of dry fields, and on little buſhy hills, which it enlivens with a profuſion of bright-yellow flowers, diffuſing a honey-like rather oppreſſive ſcent, in the months of July and Auguſt.

Root perennial, creeping, of a tawny hue, evincing its affinity to Madder. Stems about a foot and half high, ſeldom quite upright, unleſs ſupported; branched at the baſe; panicled above; roundiſh, ſmooth. Leaves eight in each whorl, pointing downward, linear, entire, tipped with a ſmall point, dark green, rough above. Flower-ſtalks much branched, corymboſe, many-flowered, cluſtered together into a long denſe leafy panicle. Flowers yellow. Stamina very ſhort. Antheræ turning brown in decay. Fruit ſmooth, blackiſh.

The power of this herb to coagulate milk is well known, and Gerarde tells us the beſt Cheſhire cheeſe in his time was made with it. Ray relates, on the authority of an old Daniſh writer, that a pleaſant acid liquor is procured from the flowers by diſtillation in a moderate ſand-heat. From ſome handfulls of the flowery tops the quantity of 3 ounces of this liquor, a kind of vinegar, was obtained.

Nov.r 1. 1799 Published by J.r Sowerby London.

GALIUM Mollugo.

Great Hedge Bedstraw.

TETRANDRIA Monogynia.

GEN. CHAR. *Cor.* of one petal, flat, superior. *Seeds* 2, roundish.

SPEC. CHAR. Leaves eight in a whorl, elliptical, bluntish, pointed, rough-edged. Flowers in loose spreading panicles.

SYN. Galium Mollugo. *Linn. Sp. Pl.* 155. *Sm. Fl. Brit.* 178. *Huds.* 68. *With.* 189. *Hull.* 36. *Relh.* 57. *Sibth.* 59. *Abbot.* 34. *Fl. Dan. t.* 455.
Mollugo vulgatior. *Raii Syn.* 223.
β Galium scabrum. *With.* 190, but not of Jacquin.

THE tallest of our native species of *Galium*. It grows, not unfrequently, among bushes or upon hedges, rising to 3 or 4 feet or more in height, supporting its weak stem among their branches, and in return decorating them with a profusion of flowers throughout July and August. On open chalky hills it is of more humble growth.

The root is perennial and creeping. Stems flaccid, branched, leafy, swelling and pale above the joints, generally smooth; often a little downy; sometimes (as well as the leaves) rather hairy, in which case it is Dr. Withering's *G. scabrum*. Leaves 8 in a whorl, elliptic-lanceolate, or obovate, tipped with a small point, their edges rough with teeth pointing forwards. Panicles terminal, numerous, spreading. Flowers abundant, pure white, the segments of their corolla tipped each with a little erect point. Fruit small, smooth, often abortive.

Nov.1 1806. Publish'd by Ja.t Sowerby, London.

GALIUM anglicum.

Small Ladies-bedſtraw.

TETRANDRIA Monogynia.

GEN. CHAR. *Cor.* of one petal, flat. *Seeds* two, roundiſh.

SPEC. CHAR. Leaves about ſix in a whorl, lanceolate, pointed, ciliated with prickles. Stems ſtraggling, rough. Flower-ſtalks cloven. Fruit without hairs.

SYN. Galium anglicum. *Hudſ. Fl. An.* 69. *With. Bot. Arr.* 153.

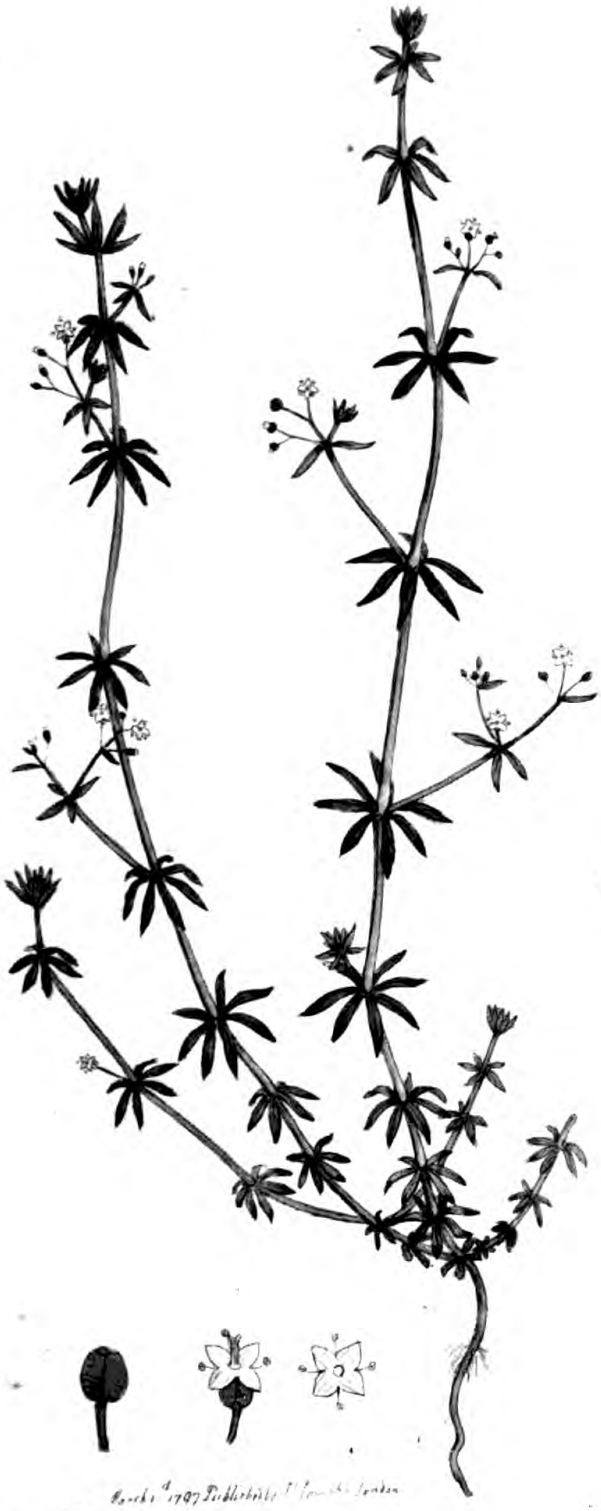
G. pariſienſe. *Relh. Cant.* 67. *Linn. Sp. Pl.* 157 ?

Aparine minima. *Raii Syn.* 225. *t.* 9. *f.* 1.

SENT from Cambridgeſhire by the Rev. Mr. Hemſted. It is found alſo in Norfolk and Suffolk, though very rarely, for the moſt part upon walls in a dry ſandy ſoil, flowering in June and July, after which the plant is ſoon dried up and periſhes.

Root ſmall, annual. Stems ſeveral, ſpreading, branched, ſquare, their angles rough with reflexed briſtles. Leaves ſmall, about 6 in a whorl, reflexed, lanceolate, pointed, their edges, and ſometimes their upper ſurface, rough with briſtles pointing forwards. Flower-ſtalks terminal, ſlender, ſmooth, forked, with a pair of leaves at their firſt divarication, and here and there a minute ſolitary leaf above. Flowers pale greeniſh yellow, very ſmall, with pointed ribbed petals. Germen and fruit deſtitute of hairs, but when magnified they appear rough with minute tubercles.

This may poſſibly be, as Dr. Stokes ſuſpected, merely a variety of the G. *pariſienſe* of Linnæus; for no difference is diſcoverable between his original ſpecimens and ours, except the fruit of the former being thickly clothed with prominent hairs. Whether the abovementioned tubercles on the fruit of G. *anglicum* may, in any circumſtances, produce ſuch hairs, has not yet been aſcertained. In the mean while we here exhibit what is undoubtedly Mr. Hudſon's plant, as well as Ray's, that there may be no uncertainty about that part of the queſtion in future.



GALIUM boreale.

Crofs-leaved Ladies Bedftraw.

TETRANDRIA Monogynia.

GEN. CHAR. *Cor.* of one petal, flat. *Seeds* two, roundifh.

SPEC. CHAR. Leaves in fours, lanceolate, three-nerved, not hairy. Stem nearly erect. Seeds briftly.

SYN. Galium boreale. *Linn. Sp. Pl.* 156. *Hudf. Fl. An.* 70. *With. Bot. Arr.* 156.

Mollugo montana erecta quadrifolia. *Raii Syn.* 224.

THE Galium before us is one of the moft eafily determined, being diftinguifhed from the common *Aparine* by having four leaves only at each joint, and from every other Britifh fpecies by its hairy or briftly fruit. It grows only in mountainous countries, in rocky fhady places about rivers, very plentifully at Kirkby Lonfdale, and in other parts of Weftmoreland, as well as in Scotland. Mr. Robfon fent this fpecimen from the county of Durham.

The root is long and flender, running deep among the ftones, tinged with red, which colour it communicates to woollen. Stems much branched, rough to the touch as well as the leaves, though not hairy. The leaves are pale beneath, blunt, and very accurately three-nerved. Copious panicles of milk-white flowers terminate the ftem in July, at firft fight appearing like thofe of Galium Mollugo, efpecially when growing among bufhes. The hairs on the fruit are flightly curved upwards, and of a whitifh colour.

GALIUM Aparine.

Goose-grass, or Cleavers.

TETRANDRIA Monogynia.

GEN. CHAR. *Cor.* of one petal, flat, superior. *Seeds* 2, roundish.

SPEC. CHAR. Leaves eight in a whorl, lanceolate, keeled, rough, fringed with reflexed prickles. Stem weak. Fruit bristly.

SYN. Galium Aparine. *Linn. Sp. Pl.* 157. *Sm. Fl. Brit.* 180. *Hudf.* 70. *With.* 192. *Hull.* 36. *Relh.* 67. *Sibth.* 60. *Abbot.* 34. *Curt. Lond. fasc.* 2. *t.* 9. *Mart. Fl. Rust. t.* 104. *Woodv. Suppl. t.* 269. *Dickf. H. Sicc. fasc.* 17. 3.
Aparine. *Raii Syn.* 225.

THIS grows on every hedge, and is well known by the facility with which it adheres to the hands or clothes of such as go in the way of it. The ripe seeds especially hang to the coats of animals, and are thus widely dispersed. Most truly has Linnæus observed, in one of his excellent dissertations, that plants so furnished with the means of sticking to animals, and which therefore are likely finally to be scattered about their habitations, are such as thrive best in a rank manured soil; instances of which are *Arctium*, *Xanthium*, *Cynoglossum*, *Asperugo*, and many more. The pert sceptic may despise the investigation of final causes; a rational naturalist will not easily resign the privilege of adoring at every step the immediate agency of an all-wise and beneficent Providence.

The *G. Aparine* is an annual, and flowers all summer long. The weak stem is supported by bushes. The minute prickles that clothe the whole herb point backwards, and are somewhat hooked. The flowers grow but few together, and are of a pale buff-colour. The expressed juice of the plant is recommended as an antiscorbutic. We have not had an opportunity of judging of its merits, nor does Dr. Woodville bring any fresh testimonies in its favour.

25.

RUBIA peregrina.

Wild Madder.

TETRANDRIA Monogynia.

GEN. CHAR. *Cor.* of one petal, bell-ſhaped, ſuperior. *Berries* 2, each with a ſingle ſeed.

SPEC. CHAR. Leaves about four in a whorl, elliptical; ſhining and ſmooth on their upper ſide. Flowers five-cleſt.

SYN. Rubia peregrina. *Linn. Sp. Pl.* 158. *Sm. Fl. Brit.* 181. *Hudſ.* 65.

R. tinctorum. *With.* 193. *Hull.* 35.

R. ſylveſtris aſpera, quæ ſylveſtris Dioſcoridis. *Raii Syn.* 223.

THE Wild Madder is not unfrequent in South Wales, Cornwall, Devonſhire, St. Vincent's rocks Briſtol, and ſome few other places in the ſouth-weſt part of England. It grows among buſhes on a rich or loamy ſoil, flowering in July, and ripening its berries rather late in the autumn.

Roots perennial, creeping, their inner bark red or orange-coloured, having the property of dyeing red like the *R. tinctorum*, from which however this ſpecies is moſt decidedly diſtinct, and from which it may be known by the ſmooth (though finely granulated) upper ſurface of its leaves. The herb in mild winters is ever-green. Stems branched, ſquare, prickly, brittle, and, when not ſupported, procumbent. Leaves rigid, four (rarely five or ſix) in a whorl, reflexed, ſhining, elliptical, broader and leſs pointed than thoſe of *R. tinctorum*, very rough with little hooked prickles on the margin and nerve. Panicles forked, terminal. Calyx none. Corolla almoſt univerſally 5-cleft, with 5 ſtamina, yellowiſh green, concave, but ſhallow. Germen ſmooth. Berries in pairs, deep-black; one of them often abortive.

Marchant sc. Published by J. Sowerby London.

EXACUM filiforme.

Leaſt Gentianella.

TETRANDRIA Monogynia.

GEN. CHAR. *Cal.* in 4 ſegments. *Cor.* ſalver-ſhaped, with an inflated tube. *Capſ.* with 2 furrows, 2 cells, and many ſeeds, burſting at the top. *Stigma* capitate.

SPEC. CHAR. Leaves ſeſſile. Stem filiform, forked. Flowers on long footſtalks.

SYN. Gentiana filiformis. *Linn. Sp. Pl.* 335. *Hudſ. Fl. An.* 103. *With. Bot. Arr.* 263. *Fl. Dan. t.* 324. Centaurium paluſtre luteum minimum noſtras. *Raii Syn.* 286.

THIS very uncommon and curious little flower was ſent us by Dr. Pulteney from Dorſetſhire, being found there, as well as in Cornwall, not very ſparingly, in boggy ſituations. It is an annual, and flowers in July, ripening its minute ſeeds in Auguſt.

Root fibrous, ſmall and whitiſh. Stem from two to four inches high, erect, round, ſlender, more or leſs branched in a forked manner, ſometimes from the very bottom; but the lateral branches have ſeldom ſtrength enough to become again forked, bearing only a pair of leaves about their middle, where the ſubdiviſion would have been. Leaves oppoſite, lanceolate, ſomewhat ſpatulate, entire, ſmall, and few in number, chiefly three or four pair near the root, and one ſmaller pair at each ſubdiviſion of the ſtem. Every part of the herb is ſmooth. Flowers terminal, ſolitary, ſtanding on long flower-ſtalks, which are in fact elongations of the ſtem or branch. Bracteæ none. Calyx ovate, divided half way down into 4 ſharp ſegments, with membranous edges. Tube of the corolla about as long as the calyx, inflated and pellucid; limb yellow, in 4 equal ſpreading concave ſegments, expanding only in bright ſunſhine; orifice naked, into which the 4 little ſhort curved ſtamina are inſerted. Germen elliptical; ſtyle about as long as the germen, ſlightly curved; ſtigma capitate, ſcarcely perceptibly cloven.

That this plant belongs to the genus of *Exacum*, and not to *Gentiana*, there can be no doubt. See Dr. Smith's *Icones pictæ faſc.* 3. *t.* 18, where the characters of *Exacum* and its allies are determined. But that genus was not known when Linnæus deſcribed the plant before us, nor had he ſtudied the natural order to which it belongs.

27.

PLANTAGO major.

Greater Plantain.

TETRANDRIA Monogynia.

GEN. CHAR. *Cal.* 4-cleft. *Cor.* 4-cleft, inferior; its limb reflexed. *Stamina* very long. *Caps.* with 2 cells, bursting all round.

SPEC. CHAR. Leaves ovate, smoothish, somewhat toothed, with longish footstalks. Stalk round. Flowers imbricated. Seeds numerous.

SYN. Plantago major. *Linn. Sp. Pl.* 163. *Sm. Fl. Brit.* 182. *Huds.* 63. *With.* 195. *Hull.* 34. *Relh.* 59. *Sibth.* 56. *Abbot.* 30. *Curt. Lond. fasc.* 2. *t.* 11.

P. latifolia vulgaris. *Raii Syn.* 314. *n.* 1. 3 and 4.

FEW plants are more common than the Greater Plantain, in pastures, waste or cultivated ground, and even in places much trodden upon. It varies greatly in size according to the soil, and flowers at almost all seasons in mild weather.

Root perennial, consisting of numerous long fibres. Leaves radical, upright or spreading, on channelled, ribbed footstalks, (which vary in length, and are sometimes very long,) ovate, broad, more or less toothed or waved, nearly smooth, furnished with 7 or 9 ribs. Stalks several, longer than the leaves, erect, simple, round, smooth or downy. Spike long, slender, acute, of innumerable closely imbricated flowers. Corolla and filaments white. Antheræ incumbent, reddish. Style and stigma simple and downy. Capsule membranous, each cell containing several seeds, as Mr. Curtis very justly observes. The seeds are eaten by small birds, and are frequently given to those kept in cages. The juices of the plant are slightly astringent and mucilaginous, but no great dependance is at present placed on its healing powers.

Feb.y 1. 1806. Published by Jas. Sowerby, London.

28.

PLANTAGO media.

Hoary Plantain.

TETRANDRIA Monogynia.

GEN. CHAR. *Cal.* 4-cleft. *Cor.* 4-cleft, inferior; its limb reflexed. *Stamina* very long. *Caps.* with 2 cells, bursting all round.

SPEC. CHAR. Leaves ovate, downy, depressed, with very short footstalks. Stalk round. Spike cylindrical. Seeds solitary.

SYN. Plantago media. *Linn. Sp. Pl.* 163. *Sm. Fl. Brit.* 183. *Huds.* 63. *With.* 196. *Hull.* 34. *Relh.* 59. *Sibth.* 56. *Abbot.* 31. *Curt. Lond. fasc.* 4. *t.* 14.

P. major incana. *Raii Syn.* 314.

THIS is extremely common, and not unornamental on dry chalky hills and pastures, flowering throughout the summer. In lawns on a dry soil it is often a great nuisance, occupying much space, and leaving unpleasant vacancies when eradicated. The Rev. Mr. Watts of Ashill, who is possessed of one of the finest grass-plats in England, has found it worth while to apply a drop of oil of vitriol on the crown of each of the roots of this plant, to destroy it effectually.

The root is perennial, very large and woody. Leaves pressed close to the ground, ovate, about 5-ribbed, entire, downy and hoary, more or less blunt. Footstalks broad and short. Flowerstalks tall, hoary. Spike much thicker and shorter than in *P. major*. Filaments long, conspicuous for their pale purple, shining hue. Antheræ whitish, pointed. Seeds only one in each cell of the capsule.

Feb. 1 1806. Published by Jas. Sowerby, London.

29.

PLANTAGO lanceolata.

Ribwort Plantain.

TETRANDRIA Monogynia.

GEN. CHAR. *Cal.* four-cleft. *Cor.* four-cleft, inferior; its limb reflexed. *Stamina* very long. *Caps.* with 2 cells, bursting all round.

SPEC. CHAR. Leaves lanceolate, tapering at each end. Spike ovate, naked. Stalk angular.

SYN. Plantago lanceolata. *Linn. Sp. Pl.* 164. *Huds.* 64. *With.* 196. *Relh.* 62. *Sibth.* 56. *Curt. Lond. fasc.* 2. *t.* 10. *Mart. Fl. Rust. t.* 67.

P. quinquenervia. *Raii Syn.* 314.

COMMON every where in meadows and pastures, flowering in June and July, and the root is perennial. The leaves all grow from the root, and are for the most part upright; their form is truly lanceolate, pointed, entire, each tapering at the base into a long flat footstalk, ribbed like the leaf itself with five strong prominent nerves; they are of a dark green, most hairy beneath, and at their insertion invested with long white woolly hair springing from the crown of the root. Stalks erect, growing from among the leaves, and clothed at their base with the same kind of hair; upwards they are smoothish, simple, round with five deep furrows, twisted, a little longer than the leaves, and terminated by an ovate spike, which is imbricated with black scales, and enlivened by the prominent cream-coloured antheræ.

Some farmers have recommended this plant, by the name of rib-grass, as a good food for sheep, or to be made into hay for cattle in general. It yields indeed an abundant crop, but it has been said no domestic animal will eat it, except mixed with other vegetables; which, if true, is not much in its favour.

Mr. Woodward has observed that the spike is sometimes surrounded by large leaves, instead of the usual small bracteæ; and we know it to become sometimes an abortive panicle.


Nov. 1, 1790 Published by J. Sowerby London.

V

PLANTAGO maritima.

Sea Plantain.

TETRANDRIA Monogynia.

GEN. CHAR. *Cal.* 4-cleft. *Cor.* 4-cleft; its limb reflexed. *Stamina* very long. *Capſ.* with two cells, burſting all round.

SPEC. CHAR. Leaves linear, moſtly entire, channelled, woolly at the baſe. Spike cylindrical. Stalk round.

SYN. Plantago maritima. *Linn. Sp. Pl.* 165. *Hudſ. Fl. An.* 64. *With. Bot. Arr.* 144. *Relh. Cant. Suppl.* 2. 9.

P. marina. *Raii Syn.* 315.

NO plant varies more in ſize than this. Its leaves are ſometimes ſcarcely an inch, at other times more than a foot in length. The height of the ſtalk is more conſtant, but the number of flowers in the ſpike varies beyond computation. Ours is a moderately luxuriant ſpecimen. It loves a muddy ſoil, and flowers late in the ſummer. The root is perennial. It is as various in its place of growth as in ſize, being found on the higheſt of our mountains as well as on the ſhore, like Statice armeria. Hence it has been taken for P. alpina, which laſt is a very different plant, with ſhort oval ſpikes, and lanceolate flat leaves, and has never (we believe) been found in Britain. Still leſs reſemblance has our Plantago, though it has ſometimes dentated leaves, to P. Loeflingii, that having flat leaves, and very ſhort roundiſh pale ſpikes of flowers, much like thoſe of P. Pſyllium, and having certainly never been met with in our iſland.

P. maritima may be known by its very fleſhy and ſmooth leaves, channelled above and concave below, with a tuft of wool at their baſe, which indeed occurs in other ſpecies. The ſpike, however ſhort, is always cylindrical.


J.e Sowerby del.t

PLANTAGO Coronopus.

Buck's-horn Plantain.

TETRANDRIA Monogynia.

GEN. CHAR. *Cal.* 4-cleft. *Cor.* 4-cleft, inferior; its limb reflexed. *Stamina* very long. *Capſ.* with 2 cells, burſting all round.

SPEC. CHAR. Leaves linear, in many pinnate ſegments. Stalk round.

SYN. Plantago Coronopus. *Linn. Sp. Pl.* 166. *Sm. Fl. Brit.* 185. *Hudſ.* 64. *With.* 198. *Hull.* 34. *Relh.* 62. *Sibth.* 56. *Abbot.* 31.

P. foliis laciniatis, Coronopus dicta. *Raii Syn.* 315.

β. P. gramineo folio hirſuto, minor, capitulo rotundo brevi. *Dill. in Raii Syn.* 316.

COMMON on dry ſandy or gravelly ground, and by the ſea ſide in many places, flowering all ſummer long.

Root annual, tapering. Leaves radical, numerous, ſpreading in a ſtar-like form and generally preſſed cloſe to the ground, whence one of the old names of this ſpecies, Star of the Earth; they are divided in a pinnatifid manner into numerous deep linear ſegments, frequently toothed and ſubdivided, pointed, more or leſs hairy. Stalks ſeveral, ſimple, round, hairy, ſpreading from the baſe, then aſcending, the central one only being quite erect. Spike about an inch long, denſe, greeniſh. Corolla white. Antheræ terminated by a membrane.

Few plants vary more in ſize. On dry expoſed heaths the little hoary leaves ſeem almoſt preſſed into the earth, and the ſpikes are ſo ſhort as to become capitate. In the maritime variety β the leaves are almoſt entire.

We ſhould be tempted to adopt (with Mr. Relhan) the name *coronopifolia* for this ſpecies inſtead of the ſubſtantive *Coronopus*, as another *Coronopus* now ſtands as a genus in the *Fl. Brit.* *p.* 690; but this being the identical plant ſo named by the oldeſt writers, ſuch an innovation is perhaps better avoided.

CENTUNCULUS minimus.

Chaff-weed or *Baſtard Pimpernel.*

TETRANDRIA Monogynia.

GEN. CHAR. *Cal.* 4-cleft. *Cor.* 4-cleft, inferior, tubular; limb ſpreading. *Stam.* ſhort, ſmooth. *Capſ.* of 1 cell, burſting all round, with many ſeeds.

SPEC. CHAR. .....

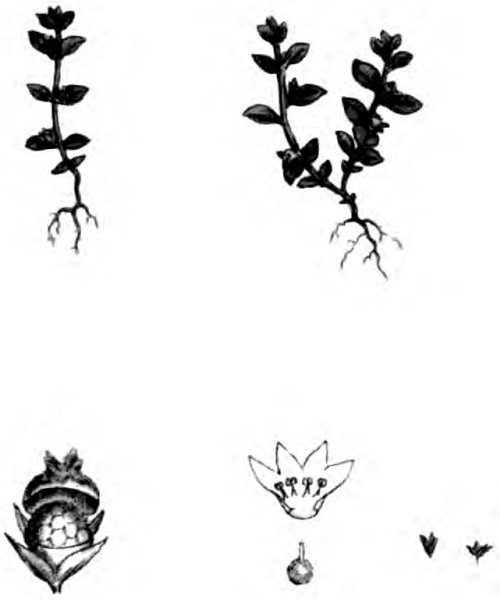
SYN. Centunculus minimus. *Linn. Sp. Pl.* 169. *Hudſ.* 63. *With.* 198. *Curt. Lond. faſc.* 3. *t.* 11. *Dickſ. H. Sicc. faſc.* 7. 2.

Centunculus. *Dill. in Raii Syn.* 1.

ONE of the leaſt of our "perfect plants," as they are called, which, perhaps, is reckoned more rare than it really is, from being ſo eaſily overlooked. It grows on watery, ſandy heaths, and has been ſent us from near Ampthill, Bedfordſhire. It has been found on ſeveral heaths to the weſt and ſouth of London, flowering in June and July.

Root ſmall, and annual. The herb varies much in ſize, like all annuals. Stem generally a little branched at the baſe, erect, an inch or two high, a little angular, leafy, ſmooth. Leaves alternate, ſeſſile, ſpreading, ovate, entire, ſmooth. Flowers ſolitary, ſeſſile in the boſoms of the leaves, white or reddiſh, expanded only in the moſt brilliant ſunſhine, and very ſhort-lived. Segments of the calyx lanceolate, acute. Corolla permanent, tubular at the baſe, its limb in 4 acute ſpreading ſegments. Stamina awl-ſhaped, ſmooth, very ſhort, inſerted into the tube. Capſule globoſe, crowned with the permanent ſtyle.

There is certainly great affinity between this plant and the *Anagallis*; M. de Juſſieu has even ſaid that it has ſometimes 5-cleft flowers, with 5 ſtamina, and ſo becomes an *Anagallis*. We think, however, the ſmooth ſtamina, as well as the tubular form of the corolla, independent of number, juſtify Dillenius in making it diſtinct. It has the habit and flower nearly of *Lyſimachia Linum-ſtellatum*, with the fruit of *Anagallis*. The corolla is permanent, though it ſoon withers, being forced off only by the ſwelling ſeed-veſſel.



SANGUISORBA officinalis.
Great Burnet.

TETRANDRIA Monogynia.

GEN. CHAR. *Cal.* 4-cleft. *Germen* between the calyx and corolla. *Seed* 1.

SPEC. CHAR. Spikes ovate.

SYN. Sanguisorba officinalis. *Linn. Sp. Pl.* 169. *Sm. Fl. Brit.*186. *Huds.*65. *With.*199. *Hull.*35. *Relh.*61. *Sibth.* 57. *Abbot.* 31. *Mart. Rust. t.* 142.
S. major, flore spadiceo. *Raii Syn.* 203.

AS the *Poterium, v.* 12. *t.* 860. prefers such chalky or limestone situations as are very dry and open, this plant, closely allied to it in habit and qualities, though different in botanic characters, is found in rather moist and rich pastures, but always in limestone countries. It is most abundant in the North, and flowers in June and July.

Root strong and perennial. Stem 2 feet high, erect, furrowed, with but few leaves, panicled above. Leaves unequally pinnate, the leaflets opposite, on stalks, ovate or somewhat heartshaped, deeply and sharply crenate, smooth, veiny, having, in the larger leaves, a pair of little toothed appendages at the base of their partial stalks. The radical leaves stand on long footstalks; the rest are nearly sessile, with a pair of lunate, toothed, stem-clasping stipulæ. Flowers of a dark dull purple, in dense, ovate, obtuse, terminal, long-stalked heads. The uppermost flowers expand first; which is singular. Calyx inferior, in 4 green, ovate, acute segments. Corolla deeply divided into 4 purple, ovate, acute, equal, spreading segments, hairy at their base, which appear to crown the germen; and hence is derived the very unusual character of the genus as above mentioned. The corolla has, however, strictly a tube, though it so closely enfolds the germen as to seem its proper integument. Stamina 4, equal. Style simple, with a 4-cleft stigma. Seed solitary, elliptical.

May 1 1804 Published by J. Sowerby London.

34.

EPIMEDIUM alpinum.

Barren-wort.

TETRANDRIA Monogynia.

GEN. CHAR. *Petals* 4. *Nectaries* 4 pouches, lying on the petals. *Calyx* opposite to the petals, caducous. *Pod* of one cell, with many seeds.

SPEC. CHAR. . . . . .

SYN. Epimedium alpinum. *Linn. Sp. Pl.* 171. *With.* 199. *Ait. Hort. Kew. vol.* 1. 157.

THE first information we had of this as a British production was from Thomas Gisborne, Esq. of Yoxall Lodge, Staffordshire, who about six or seven years ago received a living plant collected by Mr. Thomas Hutton some time before upon Carrock Fell, Cumberland. Our specimen came from the garden of John Walker, Esq. who last year received from Mr. Hutton a portion of the original root. Dr. Withering has lately introduced the *Epimedium* into his work on the authority of Dr. Richardson, who is said in Blackstone's *Specimen Botanicum* to have found it in Bingley Woods, Yorkshire, and of Mr. Robson, who lately obtained a specimen from Skiddaw. We think therefore there can be no further doubt upon the subject. It is probable that this plant, curious and beautiful as it is, may have generally escaped notice, from flowering early in the spring, after which its leaves soon wither away, before the wild bushy places it inhabits are commonly visited by botanists.

Root perennial, slender, creeping. Stems upright, scarcely a foot high, round, smooth, simple, bearing one alternately branched upright panicle of dark red drooping flowers, and one large twice or thrice compound leaf, divided in a threefold order, and composed of large, thin and delicate heart-shaped, pointed, finely ciliated leaflets, glaucous beneath, pendent, and, from their almost capillary foot-stalks, trembling to every breath of air. The terminal leaflets, and one of the lateral ones, are ternate; the other lateral one mostly simple: nor are the two sides of the general leaf ever compounded exactly in the same manner. Perhaps what is called the stem ought to be reckoned only the foot-stalk of the leaf, which, as in *Turnera*, bears the flower-stalk. The peduncles are rough with glandular hairs. Calyx of four concave greenish leaves, falling off as the flower expands. Petals dark red, ovate, opposite to the calyx. Nectary of four oblong blunt yellowish pouches, opening inwards, full of honey, and lying on the petals. Stamina awl-shaped; antheræ united with them longitudinally, and bursting on each side by a cover which separates from the base as in *Leontice* and *Laurus*. Germen ovate, becoming an oblong pod of one cell, two valves, and several seeds.

Oct. 1797 Published by J. Sowerby London

35.

CORNUS ſanguinea.

Wild Cornel-tree, or Dog-wood.

TETRANDRIA Monogynia.

GEN. CHAR. *Cal.* of 4 teeth. *Petals* four. *Drupa* inferior. *Nut* of two cells.

SPEC. CHAR. Branches ſtraight. Leaves ovate, green on both ſides. Cymes without involucra.

SYN. Cornus ſanguinea. *Linn. Sp. Pl.* 171. *Hudſ. Fl. An.* 70. *With. Bot. Arr.* 160. *Relh. Cant.* 68. *Sibth. Oxon.* 61. *L'Herit. Corn.* 5.

C. fœmina. *Raii Syn* .460.

COMMON every where in hedges, yet moſt plentiful on a chalk or lime-ſtone ſoil. It flowers in June, and the berries ripen in Auguſt.

This ſhrub grows to the height of 4 or 5 feet; its wood is hard and even, fit for the uſe of turners, the bark ſmooth and of a dark red, except on the very youngeſt branches. Leaves oppoſite, ovate, entire, ſtrongly nerved, green (not ſilky) beneath, entirely red before they fall, as in many American ſhrubs, to which country the genus of *Cornus* (though not this ſpecies) moſtly belongs. Cymes terminal, flattiſh, of many greeniſh-white flowers, with an unpleaſant ſmell. Petals revolute in the margin. Germen crowned with a glandular ring, into which the petals and ſtamina are inſerted. Stigma obtuſe. Berries dark purple, very bitter, as is the whole plant. It is ſaid oil for lamps may be procured from them if boiled in water and preſſed. See Ray's Synopſis, 460.


May 1st 1795 Published by J. Sowerby London

CORNUS Suecica.

Dwarf Cornel.

TETRANDRIA Monogynia.

GEN. CHAR. *Cal.* of 4 teeth. *Petals* 4. *Drupa* inferior. *Nut* of 2 cells.

SPEC. CHAR. Herbaceous. Flower between two branches.

SYN. Cornus Suecica. *Linn. Sp. Pl.* 171. *With. Bot. Arr.* 161.

C. herbacea. *Hudſ. Fl. An.* 71.

Chamæpericlymenum. *Raii Syn.* 261.

MR. William Travis of Scarborough gathered the ſpecimen here figured on the ſide of a valley in that neighbourhood, called the *Hole of Horcum*, where this alpine plant grows abundantly, as well as about the Cheviot hills, Northumberland, and in the Highlands of Scotland, flowering in June and July. It is nearly allied to a favourite American plant, C. *canadenſis*, but does not thrive ſo well in a garden.

Root perennial, creeping, long and ſlender. Stems perfectly herbaceous, erect, riſing to the height of 3 or 4 inches, ſquare, leafy. Leaves oppoſite, ſeſſile, ovate, entire, ſtrongly ribbed, without ſtipulæ. Flowers in a little terminal pedunculated umbel, with a large involucrum of 4 ovate unequal white leaves, often bordered with red, and turning green as the fruit ripens. Each flower ſtands on a ſhort partial ſtalk, and is in every part, except the ſtamina, of an exceedingly deep purple, almoſt black. Stamina and antheræ whitiſh. The umbel might eaſily be taken, by a caſual obſerver, for one ſimple flower with 4 white petals, and we are afraid Ray underſtood it ſo, having perhaps not ſeen it alive. The fruit is round, red, ſweetiſh. On each ſide the ſtalk that ſupports the umbel ariſes the rudiment of a branch, which overtops the fruit before it arrives at maturity. The preſence of theſe branches diſtinguiſhes this ſpecies from *Cornus canadenſis*.

V

37.

PARIETARIA officinalis.

Pellitory of the Wall.

TETRANDRIA Monogynia.

GEN. CHAR. *Cal.* four-cleft, inferior. *Cor.* none. *Stamina* elastic. *Seed* one, clothed with the lengthened calyx.

Some flowers female only, whose calyx remains unchanged.

SPEC. CHAR. Leaves lanceolate-ovate, without lateral ribs at the base. Segments of the involucrum ovate. Stem ascending.

SYN. Parietaria officinalis. *Linn. Sp. Pl.* 1492. *Sm. Fl. Brit.* 189. *Hudf.* 442. *With.* 201. *Hull.* 226. *Relh.* 378. *Sibth.* 62. *Abbot.* 218. *Curt. Lond. fasc.* 4. *t.* 63.

Parietaria. *Raii Syn.* 158.

AN inhabitant of rubbish and old walls in sheltered places; for it is more impatient of cold than many of our wild plants, and its juicy stems perish at the first attack of frost. The flowers are abundant from June to the end of autumn.

Root perennial. Stem bushy, ascending, spreading, angular, leafy, smooth, very shining and generally red. Leaves alternate, on stalks, of a lengthened or sharp-ovate figure, obliquely twisted, entire, a little hairy, pale beneath, the lateral nerves all springing from the main rib considerably above the base of the leaf, in which this differs from some foreign species. Flowers axillary. Each involucrum cut into 7 ovate segments, and containing 3 flowers, all producing fertile seeds, though the central one, having no stamina, is impregnated by its neighbours. Stamina curiously jointed or wrinkled, starting back elastically when once touched, and so discharging the pollen with great force. Stigma pencilled. Seed ovate, smooth, shining, invested with the four-cleft calyx, which in the 2 lateral blossoms is remarkably lengthened out after flowering.

This is reckoned among the emollient herbs by writers on the Materia Medica, and indeed is of a mucilaginous quality, though inferior in that respect to the Mallow tribe.

Day & Hague sculpt. & Published by [illegible]

ALCHEMILLA vulgaris.

Common Ladies Mantle.

TETRANDRIA Monogynia.

GEN. CHAR. *Cal.* in 8 ſegments. *Cor.* none. *Seed* 1, naked.

SPEC. CHAR. Leaves lobed, plaited.

SYN. Alchemilla vulgaris. *Linn. Sp. Pl.* 178. *Hudſ.* 71. *With.* 204. *Hull.* 37. *Relh.* 68. *Sibth.* 61. *Abbot.* 36. *t.* 1.
Alchimilla. *Raii Syn.* 158.

A NATIVE of dry and rather mountainous paſtures, in which it often conſtitutes a great part of the herbage, flowering from the end of May to Auguſt.

The root is woody and perennial, with fibres running deep into the ground. Stems more or leſs procumbent, alternately branched, round, hairy, leafy. Radical leaves on long footſtalks, large, roundiſh, many lobed, plaited, ſerrated, more or leſs hairy, eſpecially beneath. The verdure of their upper ſurface is remarkably fine. The ſtem-leaves are much ſmaller, almoſt ſeſſile, connected with a pair of large toothed ſtipulæ, which embrace the ſtem, and the upper leaves gradually diminiſh into bracteæ. Flowers in terminal corymboſe cluſters, numerous, green, downy, their centre yellow. Structure of the flower much as in A. *alpina*, ſee *t.* 244. Style generally ſingle, with a capitate ſtigma; but ſometimes there are 2 ſtyles, and in that caſe 2 ſeeds.

The A. *minor* of Hudſon's firſt edition ſeems a trivial variety; more downy than the common kind, from growing in more expoſed places.

"Of all our natives," ſays Mr. Abbot with an amiable degree of enthuſiaſm, "this is the moſt elegant plant." Various circumſtances often combine to attach a botaniſt to ſome particular favourite, and give it for him almoſt an excluſive charm. Haller was enamoured with *Aſtrantia major*; Linnæus with *Trientalis europæa*, and *Melampyrum nemoroſum*. If I were to avow a ſimilar partiality, it would be in favour of *Geum rivale*.

39.

ALCHEMILLA alpina.

Alpine Ladies' Mantle.

TETRANDRIA Monogynia.

GEN. CHAR. *Cal.* in 8 ſegments. *Cor.* none. *Seed* 1, naked.

SPEC. CHAR. Leaves digitate, ſerrated.

SYN. Alchemilla alpina. *Linn. Sp. Pl.* 179. *Hudſ. Fl. An.* 71. *With. Bot. Arr.* 162.

A. Alpina pentaphyllos. *Raii Syn.* 158.

MOST rocky mountains in the alpine parts of England and Scotland produce this elegant little plant; and in proportion to the barrenneſs and openneſs of its ſituation, is the rich ſilvery ſatin of the back of its leaves more denſe and ſplendid. It is moſt conſpicuous when agitated by the wind; for the flowers, though they partake externally of the ſame ſilvery hue, are ſmall and inconſiderable.

The root is perennial, ſtrong, and deeply fixed in the clefts of rocks, chiefly preferring the micaceous kind. Leaves radical, on long ſlender footſtalks, deeply cloven into five (rarely more) obovate ſerrated ſegments, dark green and ſmooth on the upper ſide, very ſilky beneath. Stalk erect, alternately branched, with a ſmall leaf and 2 ſtipulæ at each ſubdiviſion. Flowers on partial ſlender ſilky flower-ſtalks, downy without, ſmooth and green within. Calyx cup-ſhaped, rim ſpreading, in 4 large ſegments, with 4 ſmall intermediate, rather external, ones, oppoſite to which laſt the ſtamina are placed. Germen ovate, in the bottom of the calyx, which inveſts alſo the ripe ſeed. Style from the baſe of the germen, evincing its affinity to *Potentilla*, *Fragaria*, &c. which its habit and aſtringent qualities confirm. The flowers appear in July.

April 1795 Published by J. Sowerby London

ALCHEMILLA arvenſis.

Field Ladies Mantle, or Parſley Piert.

TETRANDRIA Monogynia.

GEN. CHAR. *Cal.* in 8 ſegments. *Cor.* none. *Seed* 1, naked.

SPEC. CHAR. Leaves plain, three-lobed, notched.

SYN. Alchemilla arvenſis. *Sm. Fl. Brit.* 190.

A. Aphanes. *Leers.* 54. *Sibth.* 61. *Abbot.* 36.

Aphanes arvenſis. *Linn. Sp. Pl.* 179. *Hudſ.* 72. *With.* 4. *Hull.* 37. *Relh.* 69.

Percepier Anglorum. *Raii Syn.* 159.

VERY frequent in fallow fields, gardens, and on heathy banks where the ſoil is gravelly, or ſandy, ſpringing up in autumn or during mild weather in the courſe of the winter or early months, and flowering all ſummer long.

Root annual, ſmall. Stems numerous, ſpreading or proſtrate, round, leafy. Leaves alternate, on ſhort footſtalks, plain (not plaited), palmate, three-lobed, deeply cut, ſomewhat glaucous and a little hairy, marked with ſtraight ribs. Stipulæ attached to the footſtalk, large, deeply cut. Flowers in axillary hairy tufts, green and inconſpicuous. Calyx urn-ſhaped, angular, with 4 larger ſegments, and 4 ſmaller intermediate external ones. Stamina generally 4, though often but 1, inſerted into the mouth of the calyx. Germen in the bottom of the calyx, ovate, ſmall, with a ſimple ſtyle ſpringing from its baſe. Stigma cloven. Sometimes there are 2 germens and ſtyles in one calyx, as in the common *Alchemilla*, *v.* 9. *t.* 597, with which this plant moſt indubitably accords as to genus. Its ſtipulæ, inſertion of the ſtamina and ſtyle, the alternate ſmall lobes of the calyx, and we may add its flavour and ſcent reſembling Burnet, all prove its relation to the Icoſandrous plants. It was formerly eſteemed to promote urine very powerfully, and conſequently to remove gravel and even the ſtone.

41.

BUFFONIA tenuifolia.

Slender Buffonia.

TETRANDRIA Digynia.

GEN. CHAR. *Cal.* of 4 leaves. *Petals* 4. *Capsule* of 1 cell and 2 valves, with 2 *seeds.*

SPEC. CHAR.....

SYN. Buffonia tenuifolia. *With.* 205. *Sm. Fl. Brit.* 191.
Bufonia tenuifolia. *Linn. Sp. Pl.* 179. *Huds.* 72. *Hull.* 38.
Alsine polygonoides tenuifolia, flosculis ad longitudinem caulis velut in spicam dispositis nostra. *Raii Syn.* 346. *Pluk. Phyt. t.* 75. *f.* 3.

THE plant here delineated from a garden specimen is introduced to remove, if possible, the doubts respecting it as a native of Britain, for which Plukenet is the original authority. He has certainly figured the real *Buffonia*, and asserts its being found by the sea side about Boston, Lincolnshire. Ray relied on him, but no succeeding botanist has found it. Sir J. Banks suspects that *Bupleurum tenuissimum* might have been mistaken for it; see *t.* 478. Doody is said to have gathered the plant in question on Hounslow Heath; but there it has equally been sought in vain since his time. Boston is the most likely place. We recommend the search to all our maritime botanists.

It is annual, flowering in June. Habit much like an *Arenaria*. Stems 1 or more, erect, branched, round, leafy, smooth. Leaves erect, opposite, awlshaped, 3-ribbed, with a broad sheathing base. Flowers on roughish stalks, upright, small, white. Calyx-leaves lanceolate, striated, with a white edge. Petals obtuse, undivided, shorter than the calyx. Stamina equal. Germen superior, obovate, with 2 very short distant styles, and capitate stigmas. Capsule of 2 flattish valves, containing 2 large rough seeds.

This is a very distinct genus. Linnæus named it, at the suggestion of Sauvages, after the celebrated Buffon, but is thought to have applied the specific name *tenuifolia* to express the *slenderness* of the great zoologist's claim to a botanical honour, and also to have rather maliciously dropped one *f* in the generic name. The latter idea has been confirmed by the authors of the Botanical Arrangement, who call it *Toad-grass*.

May 1. 1804. Published by Jas Sowerby, London.

42.

ILEX Aquifolium.

Common Holly.

TETRANDRIA Tetragynia.

GEN. CHAR. *Calyx* with 4 or 5 teeth. *Corolla* wheel-ſhaped. *Styles* none. *Berry* with 4 ſeeds. Some male flowers, which are four-cleft.

SPEC. CHAR. Leaves ovate, acute, ſpinous.

SYN. Ilex Aquifolium. *Linn. Sp. Pl.* 181. *Hudſ.* 446. *With.* 210. *Relh.* 382. *Sibth.* 64.

Agrifolium. *Raii Syn.* 466.

IN woods, hedges and thickets not uncommon, flowering in May, the berries ripening in autumn, and laſting through the winter. There is a natural wood of holly half a mile from Norwich in the way to Thorpe, the ground of which is an entire mat of lily of the valley, mixed with hare-bells and wood ruſh.

The holly tree is of ſlow growth and long duration, its wood conſequently hard, and cloſe-grained; the bark ſmooth, grey, abounding in mucilage, and hence by maceration in water it makes bird-lime. Leaves alternate, on footſtalks, elliptical, pointed, waved, rigid, evergreen, ſhining, their margins (except on very old branches) divided into ſpinous lobes. In ſome cultivated varieties the upper ſurface is prickly, and the leaves are very liable to be variegated with pale or deep yellow. Flowers white, in axillary cluſters, either 4 or 5-cleft; the early ones generally imperfect, and intermixed with ſome that have no germen, and theſe are always 4-cleft. Stamina ſpreading, alternate with the lobes of the corolla. Stigmas ſeſſile. Berry ſcarlet, rarely yellow, laſting long, and uninjured by our ſevereſt froſt.

The branches of this tree laden with berries, and mixed with miſeltoe and the ſpindle-tree, are uſed in many parts of England to ornament churches and houſes at Chriſtmas, and hence the holly is in Norfolk vulgarly called *Chriſtmas*.

43.

POTAMOGETON natans.

Broad-leaved Pond-weed.

TETRANDRIA Tetragynia.

GEN. CHAR. *Cal.* none. *Petals* 4. *Style* none. *Seeds* 4.

SPEC. CHAR. Upper leaves oblong-ovate, on footstalks, floating; lower linear. Flower stalks cylindrical.

SYN. Potamogeton natans. *Linn. Sp. Pl.* 182. *Sm. Fl. Brit.* 193. *Huds.* 74. *With.* 211. *Hull.* 39. *Relh.* 63. *Sibth.* 64. *Abbot.* 37. *Fl. Dan. t.* 1025.
P. rotundifolium. *Raii Syn.* 148.

COMMON in pools and slow rivers, covering the surface of the water all summer with broad floating leaves, and decorating it in July with innumerable pale upright spikes of flowers, raised 2 or 3 inches above its level.

The roots are long, perennial, creeping in the mud. Stems much branched, several feet in length, round, leafy. Lower leaves far beneath the surface, membranous, linear and very narrow: upper ones numerous, all floating on the top, 2 inches or more in length, coriaceous, oval-oblong, many-ribbed, on long stalks. Stipulas large, lanceolate, concave, acute. Flower-stalks solitary, axillary, (with a bractea like the stipulas,) thick, nearly cylindrical, being merely contracted just under the spike; and not swelling upwards before that contraction, as in *P. heterophyllum*, *t.* 1285. Flowers dull green, with copious whitish pollen.

This is the largest British Pond-weed, and the most commonly noticed. It can be confounded with none but *heterophyllum*, which we have already explained to be sufficiently distinct.

Dec. 1822. Published by Jas. Sowerby, London.

44.

POTAMOGETON heterophyllum.
Various-leaved Pond-weed.

TETRANDRIA Tetragynia.

GEN. CHAR. *Cal.* none. *Petals* 4. *Style* none. *Seeds* 4.

SPEC. CHAR. Leaves under water membranous, linear-lanceolate, and sessile; floating ones coriaceous, elliptical, on footstalks. Flower-stalks swelling.

SYN. Potamogeton heterophyllum. *Schreb. Lips.* 21. *Hoffm. Germ. ann.* 1800. 81. *Willden. Sp. Pl. v.* 1. 713. *Sm. Fl. Brit.* 1390.

P. palustre. *Teesdale Tr. of L. Soc. v.* 5. 43. *Relh.* 64.

P. gramineum. *Lightf.* 123. *Fl. Dan. t.* 222; without the floating leaves.

WE received this *Potamogeton* from Mr. Teesdale and the Rev. Mr. Hemsted several years ago, but have long been in doubt about it. A collection of fine specimens, in various states, sent from Shropshire by the Rev. Mr. Williams, have enabled us better to understand it, and to refer it without any hesitation to the *heterophyllum* of Schreber. That great author never saw the flowers. With us they are produced from July to September. The plant seems not to be uncommon in pools and ditches throughout England, but has generally been mistaken, before its floating leaves appear, which is often not till late in autumn, for *P. gramineum*, because botanists have relied on the name in *Fl. Danica*. Mr. Turner found this plant at Old Buckenham, Norfolk.

The roots are perennial, creeping in the mud. Stems branched. Most of the leaves under water membranous, lanceolate or linear, sessile; the rest floating, leathery in texture, on footstalks, elliptical, entire, various in size and breadth. Stipulæ and bracteæ large, concave, sheathing. Flower-stalks swelling upwards, contracted under the spike, and often curved. The upper leaves resemble those of *P. natans*, the only species at all akin to this; but the flower-stalk, and lower leaves, sufficiently distinguish them.

March 1 1804. Published by Jas. Sowerby, London.

POTAMOGETON perfoliatum,

Perfoliate Pond-weed.

TETRANDRIA Tetragynia.

GEN. CHAR. *Cal.* none. *Petals* 4. *Style* none. *Seeds* 4.

SPEC. CHAR. Leaves heart-ſhaped, embracing the ſtem.

SYN. Potamogeton perfoliatum. *Linn. Sp. Pl.* 182. *Hudſ. Fl. An.* 74. *With. Bot. Arr.* 172. *Relh. Cant.* 70. *Raii Syn.* 149.

VERY common in ponds and rivers in every part of England; nor is it, as far as we have obſerved, at all peculiar to a clay ſoil, as Linnæus ſeems to hint.

Every part of the plant, except the flower-ſtalks, is completely immerſed in the water, ſo that it is only to be diſcovered by the ſpikes of flowers about July and Auguſt ſtanding a little above the ſurface, and abounding in whitiſh pollen. It ſhould ſeem the reſpiration of ſuch truly aquatic vegetables muſt be as different from the reſpiration of thoſe which inhale atmoſpheric air, as the breathing of fiſhes is from that of beaſts and birds. Accordingly we find their leaves of an extremely different texture, pellucid like oiled paper (as Haller remarks), very vaſcular, harſh and ribbed, but often extremely brittle. The ſurface of ſuch plants, like that of aquatic animals, is deſtitute of hair or down of any kind.

The ſtalks of this Pond-weed are very long, round, with leaves crowded about the top and branches. Theſe leaves might rather be called ovate than heart-ſhaped, at leaſt in the moſt common appearance of the plant. The petals are of a dull purple, and ſo ſituated that the air eaſily paſſes between them to waft the pollen to the ſtigma. The ſeeds are compreſſed, and ſhining.

J. Sowerby del.t Apr.l 1794

V

46.

POTAMOGETON densum.

Close-leaved Pond-weed.

TETRANDRIA Tetrogynia.

GEN. CHAR. *Cal.* none. *Petals* 4. *Style* none. *Seeds* 4.

SPEC. CHAR. Leaves ovate, acuminated, opposite, crowded. Stem forked. Spike of four flowers.

SYN. Potamogeton densum. *Linn. Sp. Pl.* 182. *Huds. Fl. An.* 75. *With. Bot. Arr.* 173. *Relh. Cant.* 72. *Sibth. Ox.* 65.

P. seu Fontinalis media lucens. *Raii Syn.* 149.

NOT uncommon in ditches, ponds, and slow streams, flowering in the early part of summer.

It is perennial, propagating itself by runners which throw out fibrous roots here and there in the mud, and send up round stems, naked and simple below, forked above, and thickly clothed with numerous pairs of opposite sessile spreading leaves, both rows of which often incline to one side. Each leaf is ovate, lengthened out into a point, ribbed, undulated, entire; we have not found any serratures or prickles on their margin, as some authors describe. Flower-stalks from between the divisions of the stem (the uppermost terminal, till young branches are protruded beyond it), short, round, recurved, bearing a short spike, or rather a little head, of 2 or 4 flowers, well compared by Clusius, and by Gerarde after him, to those of *Adoxa*; but it must be observed that Johnson, the professed corrector of Gerarde, has erroneously inserted a figure from Clusius of *P. crispum* under the synonym of *P. densum*. Every part of the flower is green.

47.

POTAMOGETON fluitans.

Long-leaved Floating Pond-weed.

TETRANDRIA Tetragynia.

GEN. CHAR. *Cal.* none. *Petals* 4. *Style* none. *Seeds* 4.

SPEC. CHAR. Lower leaves lanceolate, pointed and membranous; upper elliptic-lanceolate, somewhat coriaceous: all on footstalks.

SYN. Potamogeton fluitans. *Roth. Germ. v.* 1. 72. *v.* 2. 202. *Hoffm. Germ. ann.* 1800. 81. *Willden. Sp. Pl. v.* 1. 713. *Sm. Fl. Brit.* 1391.

ANOTHER new *Potamogeton* is here added to the British Flora. This has been found in the river at Scole, Norfolk, by Mr. Woodward and Mr. Turner; in ditches in the marshes near Beverley, by Mr. Teesdale; and in Lilleshall Mill-pool, Shropshire, by the Rev. Mr. Williams. It is, like others of its genus, perennial, flowering in August and September.

Writers who have described this on the continent consider it as allied to *P. natans;* we think it more approaches *P. lucens, v.* 6. *t.* 376.

Its leaves are much more coriaceous than those of the *lucens,* in which respect it more agrees with *natans;* particularly the upper leaves, which float on the water, and are somewhat elliptical, with very considerable footstalks: the lower are membranous, more lanceolate, acute, tapering down into less evident footstalks. Flower-stalks axillary, from various parts of the stem, solitary, long, but little swelling. Spike reddish. The whole plant is remarkable for a reddish hue, especially in the upper part.

March 1 1804 Published by Jas Sowerby, London

48.

POTAMOGETON lucens.

Shining Pond-weed.

TETRANDRIA Tetragynia.

GEN. CHAR. *Cal.* none. *Petals* 4. *Style* none. *Seeds* 4.

SPEC. CHAR. Leaves flat, ovato-lanceolate, tapering down into foot-stalks. Spike dense, many-flowered.

SYN. Potamogeton lucens. *Linn. Sp. Pl.* 183. *Huds. Fl. An.* 74. *With. Bot. Arr.* 173. *Relh. Cant.* 71. *Sibth. Ox.* 65.

P. aquis immersum, folio pellucido, lato, oblongo, acuto. *Raii Syn.* 148.

FREQUENT in ditches, ponds, lakes or slow-flowing rivers, chiefly on a clay soil, growing, like most others of its genus, all immersed in the water, except the spike of flowers, which appears above the surface about midsummer, or a little after.

The root is perennial, stems long, nearly simple, a little zigzag, leafy, round. Leaves alternate (except where the flowers are situated) lanceolate or ovate, entire, a little waved, ribbed, running down into a short foot-stalk, and accompanied by a long obtuse folded intrafoliaceous stipula, longer than each joint of the stem. The flowers grow in a long dense spike, on a round tumid stalk, which stands solitary in the axilla of one of the opposite leaves, and is sheathed at the bottom by the stipula. Flowers dark green, the stigma often purplish.

There are two common varieties of this species, one of which has lanceolate leaves, tapering down very gradually to their insertion. This being figured in the *Flora Danica, t.* 195, and most other authors, we have represented the other variety, No. 2 of Withering, whose leaves are perfectly ovate, and placed on a real foot-stalk, less perceptibly winged by the running down of the leaf: these two plants however differ in no other respect, and may easily be traced one into the other.

49.

POTAMOGETON lanceolatum.
Lanceolate Pondweed.

TETRANDRIA Tetragynia.

GEN. CHAR. *Cal.* none. *Petals* 4. *Style* none. *Seeds* 4.
SPEC. CHAR. Leaves lanceolate, membranous, entire, tapering at the base. Spike ovate, dense, of few flowers.
SYN. Potamogeton ramosum angustifolium. *Bauh. Pin.* 193. *Prod.* 101 ?

THIS *Potamogeton* was communicated by the Rev. H. Davies from the lakes of North Wales, flowering in August. The stems are floating, very slender, round, branched, with creeping perennial roots. Leaves an inch and half or 2 inches long, uniform, lanceolate, bluntish, entire, flat, thin, with 1 rib and several reticulated veins, tapering at the base. They are alternate except where the flowers are situated. Stipulas narrow, lanceolate, acute. Flower-stalks solitary from the bosom of 1 stipula of the opposite leaves, nearly as long as the corresponding leaf, cylindrical, equal. Spike short and ovate, obtuse, dense, uninterrupted, of 8, 10 or 12 small flowers. The colour of the whole plant is either dark green or brownish.

We dare not positively quote any synonym for the above plant, yet we are not without suspicion that those of Bauhin applied to *P. setaceum* may possibly belong to it. Can it be the *setaceum* of Hudson or Linnæus ? Their specific character, whatever we may think of the name, is not altogether adverse. No one knows this *setaceum*. Botanists copy its barren definition from each other, but scarcely any appears to have examined it. Being like others in total ignorance, I have merely hazarded a presumption in *Fl. Brit.* that its "leaves are *setaceous*," which word perhaps may only apply to their points, or to the stems, flower-stalks, or stipulas. In this uncertainty we can but offer conjectures to be confirmed or refuted by future inquiries, and in the mean while we have given our plant a name which is free from all ambiguity.

Feb 1 1809 Published by Jas Sowerby London

50.

POTAMOGETON crispum.

Curled Pond-weed.

TETRANDRIA Tetragynia.

GEN. CHAR. *Cal.* none. *Petals* 4. *Style* none. *Seeds* 4.

SPEC. CHAR. Leaves lanceolate, alternate, waved, serrated.

SYN. Potamogeton crispum. *Linn. Sp. Pl.* 182. *Sm. Fl. Brit.* 195. *Hudſ.* 75. *With.* 213. *Hull.* 39. *Relh.* 71. *Sibth.* 65. *Abbot.* 38. *Curt. Lond. faſc.* 5. *t.* 15.

P. ſeu Fontinalis criſpa. *Raii Syn.* 149.

COMMON in ditches, ponds, and ſlow ſtreams, floating under water, except the flowers, which are ſeen emerging in June and July.

The creeping perennial roots run deep into the mud, and throw up numerous branched ſtems, varying in length according to the depth of the water, or force of the ſtream, as uſual in this genus, and clothed above with numerous leaves. Each ſpace between the leaves is a little compreſſed, and grooved on each ſide. Lower leaves alternate; upper generally oppoſite: all ſeſſile, lanceolate, bluntiſh, waved, finely ſerrated, pellucid, of a dull green. Flower-ſtalks a little longer than the leaves, ſolitary, each bearing a looſe ſpike of 6 or 8 ſeſſile browniſh flowers, with a tinge of purple, purple ſtyles, and yellowiſh nearly ſeſſile antheræ.

Mr. Curtis obſerves that Ducks eat the leaves as well as ſeeds of this ſpecies, and may therefore be uſeful where it increaſes to a troubleſome degree, which is not unfrequently the caſe.

What Mr. Hudſon took for *P. ſerratum* of Linnæus is certainly no other than this ſpecies with a greater proportion of oppoſite leaves, and rather leſs waved, than uſual; but the ſynonym he has applied to it from Ray's *Synopſis* probably belongs to *lucens*.

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51.

POTAMOGETON compressum.

Flat-stalked Pond-weed.

TETRANDRIA Tetragynia.

GEN. CHAR. *Cal.* none. *Petals* 4. *Style* none *Seeds* 4.

SPEC. CHAR. Leaves linear, obtuse. Stem compressed.

SYN. Potamogeton compressum. *Linn. Sp. Pl.* 183. *Huds. Fl. An.* 75. *With. Bot. Arr. ed.* 3. *v.* 2. 213. *Relh. Cant.* 72.

P. caule compresso, folio Graminis canini. *Raii Syn.* 149.

IN the difficult genus of *Potamogeton* we find it necessary to proceed with the utmost caution, publishing a species now and then as (we presume at least) we clearly understand it. That this is the true original *compressum* of Linnæus, as well as of all British writers, we learn from the Cliffortian Herbarium in Sir Joseph Banks's possession, that being in the present case the original authority, Linnæus having afterwards confounded with this a very different plant, which by no means answers to the character.

Potamogeton compressum is not very uncommon in ditches and slow streams about London, and other parts of Great Britain, flowering in June and July, when its small spikes of about 4 or more brownish green flowers just emerge from the water. It has most affinity with P. *pusillum*, see our Vol. 3, t. 215, but is twice as large in all its parts, and essentially distinguished by its compressed stem; neither do the leaves spread so immediately from the base as in that species. The root is perennial. Stem zigzag, alternately branched, very much compressed all the way up. Leaves generally alternate, but the uppermost often opposite, all exactly linear, obtuse, with a strong central nerve, and 2 fine lateral ones on each side. Stipulæ intrafoliaceous, one to each leaf, embracing the stem; the lower ones generally acute and lacerated, the upper ones more obtuse and entire. Flower-stalk short, solitary, terminal till the stem grows above it.

1797 Pubd by J. Sowerby London

52.

POTAMOGETON gramineum.

Grassy Pondweed.

TETRANDRIA Tetragynia.

GEN. CHAR. *Cal.* none. *Petals* 4. *Style* none. *Seeds* 4.

SPEC. CHAR. Leaves linear-lanceolate, alternate, sessile, broader than their stipula. Stem round, somewhat forked.

SYN. Potamogeton gramineum. *Linn. Sp. Pl.* 184. *Sm. Fl. Brit.* 196. *Huds.* 76. *With.* 214. *Hull. ed.* 2. 49.

P. gramineum latiusculum, foliis et ramificationibus densissimè stipatis. *Dill. in Raii Syn.* 149. *t.* 4. *f.* 3.

DILLENIUS mentions this as growing in ditches, near Deptford. We have a specimen from Mr. Rose's herbarium. That in our plate was gathered near Beverley, Yorkshire, by the late Mr. R. Teesdale. It is a species which few botanists seem to have ascertained, but we can see no obscurity about it.

The whole herb grows under water, except the spikes, which in July rise above the surface. The root is perennial. Stem slender, round, zigzag, much branched, and partly forked. Leaves grassy, alternate, except at the forks, spreading, crowded, linear, bluntish, entire. Stipulas rolled inwards cylindrically, and thence most of them, at least in the lower part of the stem, narrower than the leaves, all pale brown or whitish. Spikes ovate, dense, solitary, of few flowers, from the forks of the stem, except some of the upper ones, each standing on a swelling stalk of its own length.

Lightfoot justly complains that the plate of Dillenius in Ray's *Synopsis* wants the stipulas, but his own *P. gramineum* is not this plant. We have ventured to cite it, and the figure in *Fl. Dan. t.* 222, which he commends, as one state of our *heterophyllum*, *t.* 1285.

Mesr. published by Jas Sowerby London

POTAMOGETON pusillum.

Small Pond-weed.

TETRANDRIA Tetragynia.

GEN. CHAR. *Cal.* none. *Petals* 4. *Style* none. *Seeds* 4.

SPEC. CHAR. Leaves linear, opposite and alternate, distinct, spreading from the base. Stem cylindrical.

SYN. Potamogeton pusillum. *Linn. Sp. Pl.* 184. *Hudſ. Fl. An.* 77. *With. Bot. Arr.* 176. *Relh. Cant.* 73. *Sibth. Oxon.* 66.

P. pusillum, gramineo folio, caule tereti. *Raii Syn.* 150.

NOT very uncommon in ponds and ditches throughout England. The root has all the appearance of being perennial (though Linnæus marks it as annual), and several fibres are thrown out from the lower part of the stem, which is round, very slender, and alternately branched above. Leaves linear, very narrow, mostly alternate, but opposite under every flower-stalk, sessile, spreading from the very base, and not sheathing the stem, their margin perfectly smooth and entire. Stipulæ membranous, lanceolate, inserted above each leaf, and embracing the stem. Flower-stalks axillary, frequently terminal till the stem shoots beyond them, shorter than the leaves, each bearing a spike of 3 or 4 greenish flowers in the middle of summer.

The able authors of the *Bot. Arrangement* have in this instance not translated the specific character of Linnæus with their usual accuracy. Neither do we conceive the scales mentioned in Dr. Withering's description to be *bracteæ*, or belonging to the flower-stalks; it is evident, from an inspection of the plant, they are real *stipulæ intrafoliaceæ*.


Pubd by J. Sowerby London

54.

POTAMOGETON pectinatum.

Fennel-leaved Pond-weed.

TETRANDRIA Tetragynia.

GEN. CHAR. *Cal.* none. *Petals* four. *Style* none. *Seeds* four.

SPEC. CHAR. Leaves bristle-shaped, parallel, thickly set in two ranks.

SYN. Potamogeton pectinatum. *Linn. Sp. Pl.* 183. *Huds. Fl. An.* 76. *With. Bot. Arr.* 175. *Relh. Cant.* 72. *Sibth. Ox.* 66.

P. millefolium, seu foliis gramineis, ramosum. *Raii Syn.* 150.

THE Linnæan Herbarium has no specimen of the *Potamogeton pectinatum;* but from the whole history of this plant in Linnæus and other authors, there can be no doubt of its being what we have here delineated. We are sure this is what Mr. Relhan intended, having received specimens from himself. It occurs not unfrequently in rivers, though, if the stream be rapid, it rarely flowers.

The root is perennial, originating from a tuberous lump, then creeping horizontally, slender, much branched, as is also the stem, which floats under water, extending often two or three feet. The leaves, though extremely narrow and pointed, are flat, and grow alternately, spreading in two directions, on the small branches, having long sheathing bases. The flowers only rise above the water about June or July, in a simple spike, but clustered two or three together irregularly. Petals kidney-shaped, of a dull olive colour. Antheræ yellow, very distinctly two-lobed. Stigmas obtuse, entire.

RUPPIA maritima.

Sea Ruppia.

TETRANDRIA Tetragynia.

GEN. CHAR. *Cal.* none. *Cor.* none. *Seeds* 4, on foot-ſtalks.

SPEC. CHAR. .....

SYN. Ruppia maritima. *Linn. Sp. Pl.* 184. *Hudſ. Fl. An.* 77. *With. Bot. Arr.* 177.

Potamogiton maritimum gramineis longioribus foliis, fructu ferè umbellato. *Raii Syn.* 134. *t.* 6. *f.* 1.

Fucus ferulaceus. *Ger. em.* 1573, good.

A GOOD obſerver may, we believe, find this curious plant in moſt of our Britiſh ſalt-water ditches, eſpecially in the latter part of ſummer, when its pedunculated ſeeds diſtinguiſh it from all vulgar pond-weeds. Mr. E. Forſter, jun. favoured us with this ſpecimen from a ditch by the road from Maldon to Goldhanger, where Ray obſerved it.

Whether the root be annual or perennial is not eaſy to determine. The ſtems are long and ſlender, round, very much branched, clothed with alternate linear pointed leaves, which embrace the ſtem with a membranous ſheath at their baſe. Two flowers commonly ſtand ſeſſile, one a little above the other, on an axillary flower-ſtalk, various in length, and ſometimes coiled, by means of which they alone are raiſed above the water when the pollen is ripe. The antheræ are ſeſſile, burſting at top into two hemiſpheres; the germens ſeem ſcarcely pedunculated before impregnation, but are afterwards raiſed in a wonderful manner from the receptacle, each on its own proper foot-ſtalk. The ſeeds are oval, ſlightly gibbous on one ſide, eſpecially when young. They ripen in Auguſt.

The account in Ray's Synopſis, written by Dillenius, is incorrect in ſaying the flowers (or ſtamina) grow remote from the fruit, and that the latter appears firſt.

Potamogeton marinum moſt reſembles the Ruppia, but even before flowering it may be diſtinguiſhed by its leaves for the moſt part being not ſo membranous, and alſo leſs tumid, at the baſe. We have in the Linnæan Herbarium a ſpecimen from Dr. Hope of that variety mentioned in Lightfoot (*Append.* 1091), which ſeems to differ from ours merely in the greater length of its ſpiral flower-ſtalk, poſſibly having grown in deeper or more fluctuating water. Its ſeeds are indeed ſpotted with red, which we have never obſerved in any other ſpecimen.

56.

SAGINA procumbens.
Procumbent Pearlwort.

TETRANDRIA Tetragynia.

GEN. CHAR. *Cal.* 4-leaved. *Petals* 4. *Capſule* of 1 cell.

SPEC. CHAR. Stems procumbent, ſmooth. Petals very ſhort.

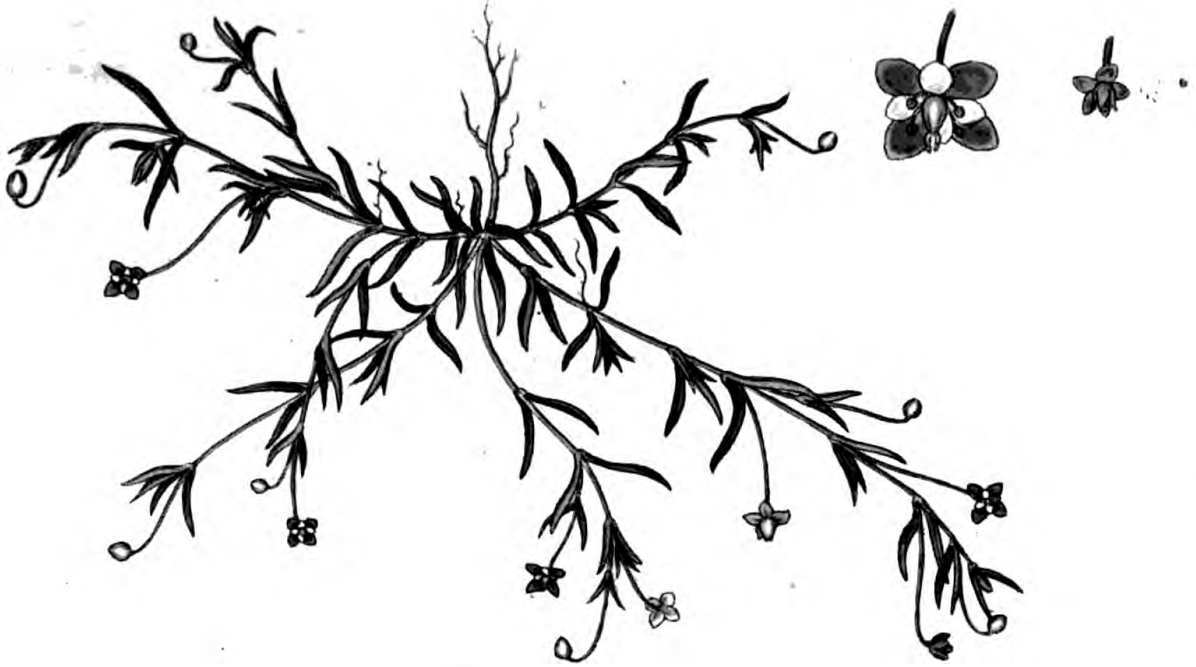
SYN. Sagina procumbens. *Linn. Sp. Pl.* 185. *Sm. Fl. Brit.* 199. *Hudſ.* 73. *With.* 215. *Hull.* 38. *Relh.* 73. *Sibth.* 66. *Abbot.* 39. *Curt. Lond. faſc.* 3. *t.* 12.

Alſinella muſcoſo flore, repens. *Raii Syn.* 345.

NOTHING can be more common than this humble weed in ſandy waſte places, neglected walks of gardens, and the interſtices of paved courts, where its flowers are to be ſeen in plenty from May to the end of autumn, provided the plant be not entirely burnt up by the ſummer's ſun.

Root perennial, ſmall and fibrous. Stems ſeveral, procumbent, ſmooth, taking root at their joints, and, according to Mr. Curtis's obſervations, conſtantly remaining with their leaves green through the winter. Leaves oppoſite, and even connate, linear, convex beneath, entire, ſmooth in every part, tipped with a minute point. Flower-ſtalks axillary, ſolitary, ſimple, ſmooth, longer than the leaves, each bearing a ſmall nodding flower. Calyx of four ſpreading elliptical blunt leaves. Petals white, roundiſh, but half the length of the calyx, entire. Capſule ovate. Seeds ſmall, reddiſh brown, of a wedge-like, or ſomewhat of a kidney form.

The old name *Sagina*, from *ſagino* to cram or fatten, which appears to have belonged to ſome kind of corn, as Millet, or *Sorghum*, is but ill applied to this little plant, and indeed ſeems to have deſcended to it by chance, having been firſt joined as an adjective to *Alſine* (on which indeed ſeveral animals do feed), and then for want of a better denomination retained for the preſent genus when ſeparated from *Alſine, Spergula, &c.*



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57.

SAGINA maritima.

Sea Pearlwort.

TETRANDRIA Tetragynia.

GEN. CHAR. *Cal.* 4-leaved. *Petals* 4. *Capsule* of 1 cell.

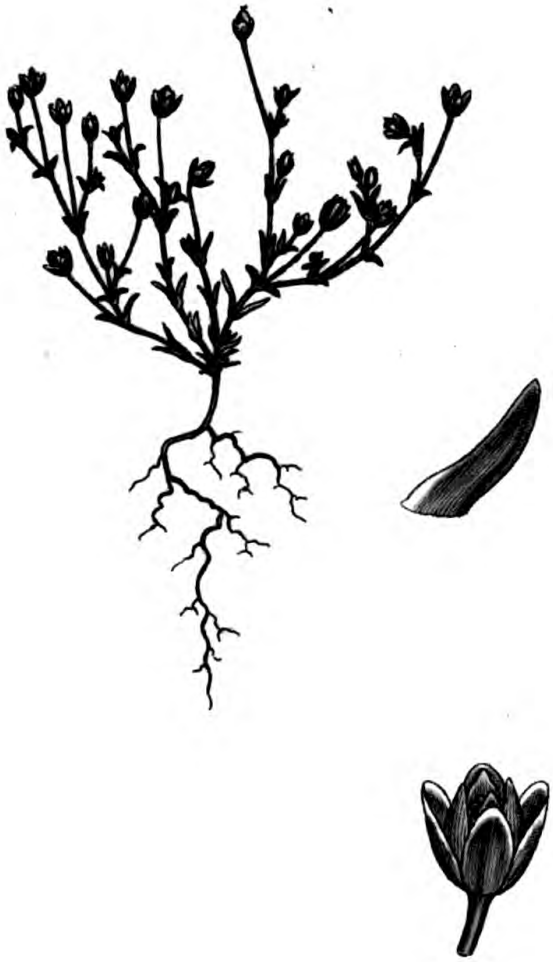
SPEC. CHAR. Stems nearly upright, divaricated, smooth. Leaves obtuse, without bristles. Petals obsolete.

SYN. Sagina maritima. *Don Herb. Brit. fasc.* 7. 155.

WE originally received this plant from Mr. R. Brown, who gathered it in 1799, at Bally-castle in Ireland, near the Giant's Causeway. Mr. G. Don sent the same from the summit of Ben Nevis in 1803, and we find no difference between this and his *S. maritima*, gathered on various parts of the Scottish coast. It is annual, flowering from May to August.

The root is small and slender. Stems several, 2 to 4 inches high, some of them decumbent at the base, then ascending or nearly upright, much branched, partly forked, and spreading; they are round, smooth, leafy, frequently purplish. Leaves opposite at each joint, clasping the stem with a peculiarly white and conspicuous membranous edge. Their form is short, thick and blunt, inclining to spatulate, often tipped with a minute point, but no bristle, and the base is very rarely slightly fringed. Flower-stalks axillary, lateral or terminal, slender, erect, from half an inch to an inch long. Calyx of four broad-ovate, obtuse leaves, with a white membranous edge. Petals minute, often altogether wanting. Stamens observed by Mr. Don to be sometimes eight. Capsule of four ovate valves, about the size and shape of the calyx.

The capsule of *S. apetala, t.* 881, is twice as long as the calyx, and the linear leaves, tipped with a bristle, as well as the hairy stems, sufficiently mark that species. The present agrees more in character with *procumbens, t.* 880, but differs widely in habit, and is not procumbent nor perennial.



58.

SAGINA apetala.

Annual Small-flowered Pearlwort.

TETRANDRIA Tetragynia.

GEN. CHAR. *Cal.* 4-leaved. *Petals* 4. *Capsule* of 1 cell.

SPEC. CHAR. Stems nearly upright, hairy. Petals obsolete.

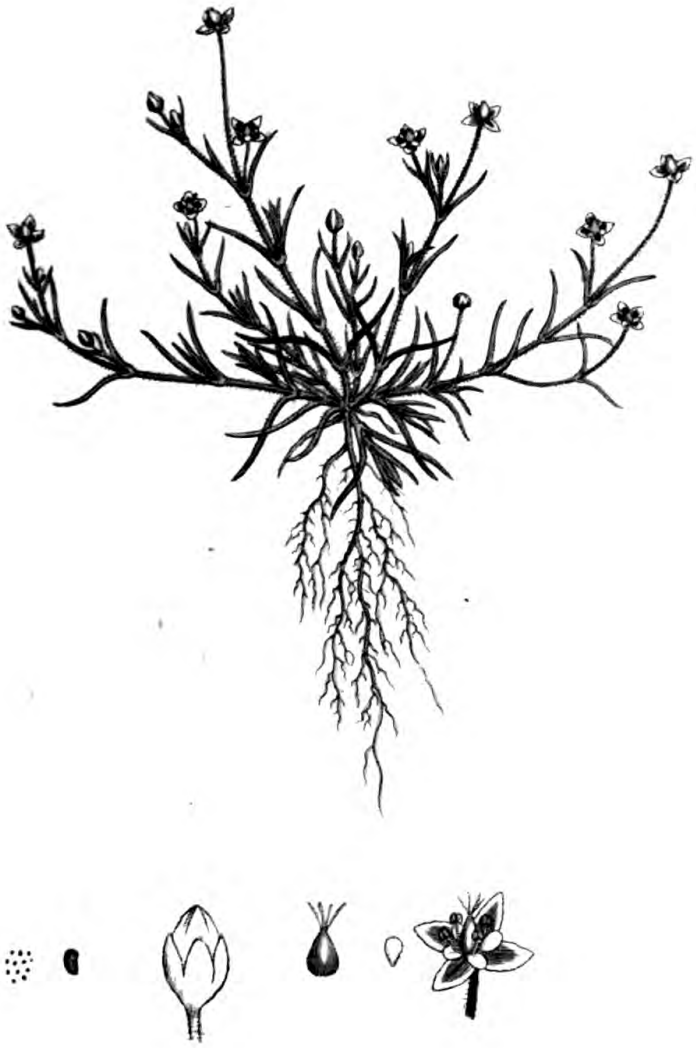
SYN. Sagina apetala. *Linn. Mant.* 2. 559. *Sm. Fl. Brit.* 199. *With.* 216. *Hull.* 38. *Sibth.* 67. *Abbot.* 39. *Curt. Lond. fasc.* 5. *t.* 14. *Dicks. H. Sicc. fasc.* 3. 6.

Saxifraga anglica alsinefolia annua. *Raii Syn.* 345.

THIS species of *Sagina* is scarcely less frequent than the preceding, but generally found in more dry barren and open places, flowering in May and June.

Root constantly annual. Stems nearly upright, or if they spread they never take root; they differ moreover from those of the last in being clothed with short scattered hairs. Leaves also frequently hairy, and always (we believe) fringed at the base. Flower-stalks slender, often, but not always, hairy. Petals white, very minute, and often altogether wanting; frequently they are notched. Seeds generally marked with a black line on their outward edge, but this is not absolutely invariable.

Our specimens precisely accord with those of Linnæus sent by Professor Arduino; though we should hardly have recognized his figure (*Spec. Adv. Bot.* 2. *t.* 8. *f.* 1.), which is by no means expressive. Linnæus appears not to have been practically acquainted with the differences between these two species, and he certainly confounded *Spergula subulata*, *Fl. Brit.* with the former,



59.

SAGINA erecta.

Upright Pearlwort.

TETRANDRIA Tetragynia.

GEN. CHAR. *Cal.* 4-leaved. *Petals* 4. *Capſ.* of one cell.

SPEC. CHAR. Stem erect, nearly ſingle-flowered. Calyx-leaves acute. Petals undivided.

SYN. Sagina erecta. *Linn. Sp. Pl.* 185. *Hudſ.* 73. *With.* 216. *Relh.* 74. *Sibth.* 67. *Abbot.* 40. *Curt. Lond. faſc.* 2. *t.* 12. *Dickſ. Hort. Sicc. faſc.* 6. 6.

Alſinella foliis caryophylleis. *Raii Syn.* 344. *t.* 15. *f.* 4.

THIS is a little plant of conſiderable neatneſs and elegance of ſtructure, which grows frequently on dry gravelly paſtures and heaths among graſs, flowering in May.

Root ſmall and fibrous. Whole herb ſmooth and glaucous. Stems two or three inches high, ſtraight, generally very few and upright, ſometimes more numerous and divaricated, each bearing one or two flowers. Leaves oppoſite, lanceolate, acute. Flower-ſtalks ſolitary, very long, ſingle-flowered, frequently purpliſh. Flowers upright, of a bright pearly white. Calyx-leaves lanceolate, acute, with a membranous edge. Petals about as long as the calyx, undivided. Stamina four, ſhort. Stigmas four, club-ſhaped, nearly ſeſſile, downy. Capſule cylindrical, undivided, opening with eight or ten teeth, of one cell, containing many rough kidney-ſhaped ſeeds.

Mr. Curtis has well obſerved that the fruit of this plant is that of a *Ceraſtium*. It is certainly not that of the other *Saginæ*, which is formed with four entire valves, neither does the habit well agree with the reſt of the genus. Profeſſor Ehrhart accordingly made it a new one by the name of *Mœnchia*, perhaps not unjuſtly.

It is proper here to correct an accidental fault in our generic character of *Sagina*, p. 166, "capſule with 4 cells," which ought to be *one cell*, and to expreſs our aſſent to Mr. Curtis's opinion of the ſpecies there deſcribed being a *Ceraſtium*.

60.

TILLÆA muſcoſa.

Moſſy Tillæa.

TETRANDRIA Tetragynia.

GEN. CHAR. *Calyx* three or four-cleft. *Petals* three or four. *Capſules* three or four, with many ſeeds.

SPEC. CHAR. Stems procumbent. Flowers three-cleft.

SYN. Tillæa muſcoſa. *Linn. Sp. Pl.* 186. *Hudſ. Fl. An.* 132. *With. Bot. Arr.* 132. *Roſe's Elem. (Appendix)* 448. *t.* 2. *f.* 2.

THE moſt dreary ſands are not always unprofitable to a botaniſt, their looſe and fluctuating ſurface being often arreſted for a while, and deſtined to afford ſupport to a tribe of plants whoſe conſtitution is fitted by the all-wiſe Creator to thrive beſt on the meagre nouriſhment they afford. Thus ſome of the vaſt African deſerts are turned to account by means of Meſembryanthemums, Cotyledons, and other ſucculent vegetables, and we have here a production nearly allied to the latter, which flouriſhes on the drieſt ſandy heaths, where few others would live, and at a ſeaſon when Moſſes and Lichens are dried up. Large tracts of the above deſcription in Norfolk, as Drayton, Cawſton and Mouſhold heaths, as well as Brandon heath in Suffolk, are enlivened by its red colour from the end of May to September. Mr. Roſe ſays this plant was firſt determined by the Rev. Mr. Bryant in 1766. Sir Thomas Cullum has found it near Bury, from whence our ſpecimen was ſent by W. Matthew, Eſq.

The root is ſmall, and annual. Stems after a while procumbent, round, becoming quadrangular when dry. Leaves oppoſite and ſtrictly perfoliate, very fleſhy, obtuſe, punctated, concave above, convex on the under ſide, ſoon turning red as well as the ſtem. The flowers are one or two together in the boſoms of the leaves, nearly ſeſſile, and ſometimes accompanied with a pair of ſmaller leaves, denominated *bracteæ* by Mr. Roſe. Calyx of three ſtill ſmaller leaves, diſtinguiſhable by their ſharp points. Petals 3, ovate, acute, pellucid, leſs than the calyx. Stamina and ſtyles ſtill ſhorter. Germens 3, ovate, each producing two ſeeds.

Although this plant is always triandrous, yet as the three remaining ſpecies of Tillæa have 4 ſtamina, we cannot (with Dr. Withering) accommodate the Engliſh ſtudent ſo far as to remove the genus from the fourth claſs, where Linnæus has placed it, to the third.

61.

RADIOLA millegrana.
All-ſeed.

TETRANDRIA Tetragynia.

GEN. CHAR. *Cal.* in many ſegments. *Petals* 4. *Capſule* ſuperior, with 8 valves and 8 cells. *Seeds* ſolitary.

SPEC. CHAR. . . . .

SYN. Radiola millegrana. *Sm. Fl. Brit.* 202.

R. vulgaris ſerpyllifolia. *Dill. in Raii Syn.* 345. *t.* 15. *f.* 3.

Linum Radiola. *Linn. Sp. Pl.* 402. *Hudſ.* 134. *With.* 323. *Hull.* 67. *Lightf.* 174. *Dickſ. H. Sicc. faſc.* 10. 7.

IN ſandy plaſhy ſpots, ſuch as the Toad Ruſh generally inhabits, the little annual repreſented on the annexed plate may often be found; yet it ſhould ſeem to be far from a general plant, not being mentioned in any of our three principal local Floras, though noticed by Mr. Jacob in his *Plantæ Faverſhamienſes*, and by Mr. Teeſdale among the rarer Yorkſhire plants, *Tr. of L. Soc. v.* 2. 107. It flowers in July and Auguſt, ſoon evincing the propriety of its old names *Millegrana* and All-ſeed, by the multitude of little capſules, each containing 8 ſeeds, with which it is laden.

The root is ſmall and fibrous. Stem an inch or two high, repeatedly forked, and forming altogether a kind of *corymbus*. Leaves oppoſite, ſeſſile, ſmall, ovate, entire, ſmooth. Flowers ſpringing ſolitarily from the forks of the ſtem on little ſtalks, the upper ones only being terminal. Calyx 4-cleft, its lobes deeply 3-cleft. Petals white, obovate. Stamina about equal to the corolla. Styles ſhort, with capitate ſtigmas, permanent, each combining 2 of the valves of the capſule. Seeds ſolitary, compreſſed, poliſhed.

The remarkable ſtructure of the calyx, and the habit of the plant, not to mention differences of number, ſurely juſtify the ſeparation of this genus from *Linum*, in which we follow Dillenius and the preſent Profeſſor Gmelin.

MYOSOTIS arvensis.

Field Scorpion-grass.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* salver-shaped, 5-cleft, slightly notched; its orifice closed with concave valves.

SPEC. CHAR. Seeds smooth. Leaves oblong. Branches spreading. Clusters many-flowered, without bracteas; their lower stalks axillary and remote. Calyx ovate, with spreading incurved bristles.

SYN. Myosotis arvensis. *Roth. Germ. v.* 2. 222. *With.* 225. *Sibth.* 68. *Abbot.* 40. *Willd. Sp. Pl. v.* 1. 747.

M. scorpioides arvensis. *Linn. Sp. Pl.* 188. *Huds.* 78. *Sm. Fl. Brit.* α. 212. *Ehrh. Herb.* 41. *Beitr. v.* 5. 176.

M. scorpioides hirsuta. *Raii Syn.* 229.

COMMON in dry fields, and on sunny sandy banks, flowering early in Summer.

The accurate observations of Mr. W. Borrer, and a comparison of them with those of preceding botanists, have enabled us still further to correct the British history of this genus, and to define all the four supposed varieties of *M. scorpioides* as distinct species, besides describing a new one in *t.* 2559.

The present has an annual root. Stem divided from the bottom into wide-spreading branches. Stem-leaves more tapering at their base than in the other species. Clusters long; very lax in their lower part, the lowest flowerstalk, and sometimes several more, axillary, and becoming remarkably distant as the upper flowers are developed. Calyx ovate, clothed with numerous spreading hooked bristles. Corolla palish purple before it expands, then sky-blue, its valves sunk in the tube, which is longer in proportion than that of *M. palustris.* See *t.* 1973; and substitute the following synonyms and characters at

tab. 480, *fig.* 1.

MYOSOTIS versicolor.

Yellow and blue Scorpion-grass.

SPEC. CHAR. Seeds smooth. Leaves oblong. Branches ascending. Clusters many-flowered, on long naked stalks, without bracteas. Calyx ovate, with spreading incurved bristles.

SYN. Myosotis scorpioides β. *Sm. Fl. Brit.* 212, with the synonyms.

M. scorpioides collina. *Ehrh. Herb.* 51. *Beitr. v.* 5. 177.

FOUND in dry sandy places, and in somewhat boggy meadows. Flowers yellow when they first expand; then blue.

Sep. 1st published by Jas. Sowerby London

63.

MYOSOTIS ſcorpioides.

Mouſe-ear Scorpion-graſs.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* ſalver-ſhaped, 5-cleft, ſlightly notched; its orifice cloſed with concave valves.

SPEC. CHAR. Seeds ſmooth. Leaves elliptic-lanceolate. Cluſters of many flowers, without bracteæ.

SYN. Myoſotis ſcorpioides. *Linn. Sp. Pl.* 188. *Hudſ.* 78. *Relh.* 75.

M. arvenſis. *Sibth.* 68. *With.* 225.

M. ſcorpioides hirſuta. *Raii Syn.* 229.

β M. ſcorpioides paluſtris. *Linn. Sp. Pl.* 188. *Curt. Lond. faſc.* 3. *t.* 13. *Raii Syn.* 229.

M. paluſtris. *With.* 225. *Relh.* 76. *Sibth.* 68.

THE ſmaller variety of this plant, repreſented entire in our figure, is common on dry ſandy or gravelly hillocks, generally near water upon heaths; it is alſo frequent in fallow fields: and a ſtill ſmaller variety, with flowers entirely yellow, grows on walls. It is annual, flowering throughout the ſummer. The large variety, of which we exhibit only a branch, Mr. Curtis having given the whole plant, is ſaid to be perennial; a matter we have never been able to verify, and are inclined to doubt. It grows in ditches and clear ſprings, to which its enamelled blue flowers, generally pink in the bud, are a diſtinguiſhed ornament. There is alſo a variety much like this aquatic one, but more hairy, figured in Ray's Syn. by Dillenius, *t.* 9. We are perſuaded theſe make but one ſpecies. No plant varies more palpably in ſize and hairineſs. The teeth of the calyx in the aquatic kind are indeed generally ſhorter and blunter, which is made a ſpecific diſtinction by ſeveral ingenious authors quoted above, and has almoſt ſtaggered us: as to hairineſs, it varies, like every other part. The ſhape of the leaves is pretty conſtant. Linnæus characterizes them as callous at the tip, which is not very generally perceptible. Neither are the lobes of the corolla ſo evidently or conſtantly notched as his generic definition implies.

MYOSOTIS palustris.

Water Scorpion-grass.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* salver-shaped, 5-cleft, slightly notched; its orifice closed with concave valves.

SPEC. CHAR. Seeds smooth. Leaves oblong. Clusters many-flowered, without bracteas. Calyx funnel-shaped, its hairs straight and close-pressed.

SYN. Myosotis palustris. *Roth. Germ. v.* 1. 87. *v.* 2. 221. *Catal. v.* 3. 30. *With.* 225. *Hull.* 46. *Relh. ed.* 1. 76. *Sibth.* 68. *Abbot.* 40.

M. scorpioides palustris. *Ger. em.* 337. *Linn. Sp. Pl.* 188. *Sm. Fl. Brit.* 212, δ. *Huds.* 78. *Curt. Lond. fasc.* 3. *t.* 13. *Raii Syn.* 229. *Ehrh. Herb.* 21.

Scorpiurus n. 591. *Hall. Hist. v.* 1. 261.

WITH great pleasure we profit of a remark made by the learned Dr. Roth in his *Catalecta*, after his friend Trentepohl, to decide the long-disputed question concerning the British species of *Myosotis*. The acute botanist last mentioned applying our principles, first suggested with regard to *Menthæ*, to the present case, has found the pubescence of the calyx confirm all the other less decisive marks, and stamp the present as a very distinct species from our *t.* 480, where is moreover an uncoloured morsel of the plant now before us.

The peculiar characters then of *M. palustris*, a common plant about rivers and clear watery places, where it blossoms in July and August, are the creeping perennial root, and the funnel-shaped calyx, *fig.* 1. clothed all over with straight, rigid, shining, close-pressed hairs, and having its teeth broad, triangular, shorter than the tube. The enamelled brilliancy of the corolla renders this flower generally admired. The calyx of *M. arvensis* (*M. scorpioides*, *t.* 480,) is ovate, with deeper and sharper segments, and clothed with spreading incurved bristles, by which it sticks to the coats of animals; see *fig.* 2. Perhaps the yellow-flowered kind, *Fl. Brit.* β, is indeed a variety of this last, but the γ, which grows in woods and is the tallest of all, though its calyx agrees with *arvensis*, seems distinct. We hope to examine it another spring. We here acknowledge the favour of our excellent friend Professor Martyn, who 9 years ago furnished us with hints on the above subject. See his edition of Miller's Dictionary.

Jan. 1. 1809. Published by Jas. Sowerby London.

65.

MYOSOTIS rupicola.

Rock Scorpion-grass.

PENTANDRIA Monogynia.

Gen. Char. *Cor.* salver-shaped, 5-cleft, slightly notched; its orifice closed with concave valves.

Spec. Char. Seeds smooth. Leaves oblong; the radical ones on long footstalks. Clusters many-flowered, without bracteas. Calyx divided above half way down, its hairs copious, spreading, and elongated.

We have long ago received, from the Highlands of Scotland, specimens of this plant, gathered there by Mr. G. Don, the late Mr. J. Mackay, and other friends. Mr. W. Borrer found it abundantly on the rocks of Ben Lawers, and has pointed out the marks by which we have ventured to establish it as a species.

The root appears to be perennial, as in *palustris*, *t.* 1973, to which the plant before us is most allied; but the flowers are more large and showy than even in that beautiful species, pink in the bud, bright blue when expanded. Their calyx is also more deeply cut, and covered with longer, more spreading and copious hairs, of which Mr. Borrer found the lowermost slightly curved, though not positively hooked, and we remark the same in Swiss specimens. The long slender stalks of the radical leaves afford another striking distinctive mark.—We have from M. Villars a specimen of this *Myosotis*, by which it proves to be what he mentions as the alpine state of *M. scorpioides*, in his *Plantes de Dauphiné*, v. 2. 458.

Pub. as published by Jas. Sowerby, London.

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66.

LITHOSPERMUM officinale.

Common Gromwell.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* funnel-ſhaped, pervious, and naked. *Cal.* in five diviſions.

SPEC. CHAR. Seeds ſmooth. Corolla ſcarcely longer than the calyx. Leaves lanceolate.

SYN. Lithoſpermum officinale. *Linn. Sp. Pl.* 189. *Hudſ. Fl. An.* 79. *With. Bot. Arr.* 189. *Relh. Cant.* 76.

Lithoſpermum, ſeu Milium Solis. *Raii Syn.* 228.

FOUND here and there flowering in May, in a dry, gravelly, or chalky ſoil. Root perennial and ſtrong. Stems erect, roundiſh, rough with cloſe-preſſed briſtles, and clothed with alternate, lanceolate, entire leaves, which are ſlightly revolute in their margin, hairy beneath, rough above with minute cartilaginous tubercles, as in many of this tribe. Each of the numerous flowering branches terminates in a recurved leafy ſpike of pale yellowiſh flowers; in the ſeeding ſtate theſe branches become erect, much elongated, and the leaves they bear are conſiderably enlarged, being broader than thoſe on the ſtem. It is ſeldom that more than two ſeeds are perfected in each flower. They are exquiſitely poliſhed, of a grey or yellowiſh hue, very hard, but brittle, ſeeming of a ſtony ſubſtance; whence the generic name, and whence alſo the ancient celebrity of theſe ſeeds as a cure for the ſtone, though it is difficult to imagine on what principle ſtony ſubſtances ſhould be given as a cure of that complaint. The excellent Ray, too credulous in medical matters, celebrates them, truſting to others for that honeſty and judgment in their ſtudies which he exerciſed in his own. Others have aſſerted that the ſeed effervefces with acids; but Linnæus *(Flo. Suec.)* contradicts this, and we have carefully made the experiment without ſucceſs.

Drawn by [illegible] Sc. 79.

67.

LITHOSPERMUM arvenſe.

Corn Gromwell.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* funnel-ſhaped, pervious and naked. *Cal.* in five diviſions.

SPEC. CHAR. Seeds rugged. Corolla obtuſe, ſcarcely longer than the calyx.

SYN. Lithoſpermum arvenſe. *Linn. Sp. Pl.* 189. *Hudſ. Fl. An.* 79. *With. Bot. Arr.* 189. *Relh. Cant.* 76. Bugloſſum arvenſe annuum, Lithoſpermi folio. *Raii Syn.* 227.

FREQUENT in corn-fields and waſte places, flowering from May to July. The root is annual, ſmall, and not much branched; its bark abounding with a deep red dye, which ſtains paper, linen, &c. of the ſame colour, and is eaſily communicated to oily ſubſtances. Hence the name of Baſtard Alkanet, ſometimes given to this plant. Linnæus, in Flo. Suecica, ſays, the country girls in the north of Sweden uſe the root to paint their faces, by which they ſhould ſeem to be terribly deficient either in healthy natural bloom or in taſte.

The ſtem is often very much branched, round, rough, clothed with alternate, lanceolate, entire, rough and rigid leaves, in the axillæ of the uppermoſt of which the flowers ſtand ſolitary, nearly ſeſſile. The corolla is ſmall and white, with fine ſwellings around its orifice, exactly as in L. *purpuro-cœruleum*, t. 117. Very near the bottom of its tube ſtand the 5 very ſhort and minute ſtamina, on a level with the ſtyle, which is about half as long as the tube. The ſeeds are brown, rugged, and produced in great abundance, ſo that the plant is often a very troubleſome weed.

68.

LITHOSPERMUM purpuro-cœruleum.

Creeping Gromwell.

PENTANDRIA Monogynia.

GEN. CHAR. *Corolla* funnel-ſhaped, pervious, and naked. *Calyx* in five diviſions.

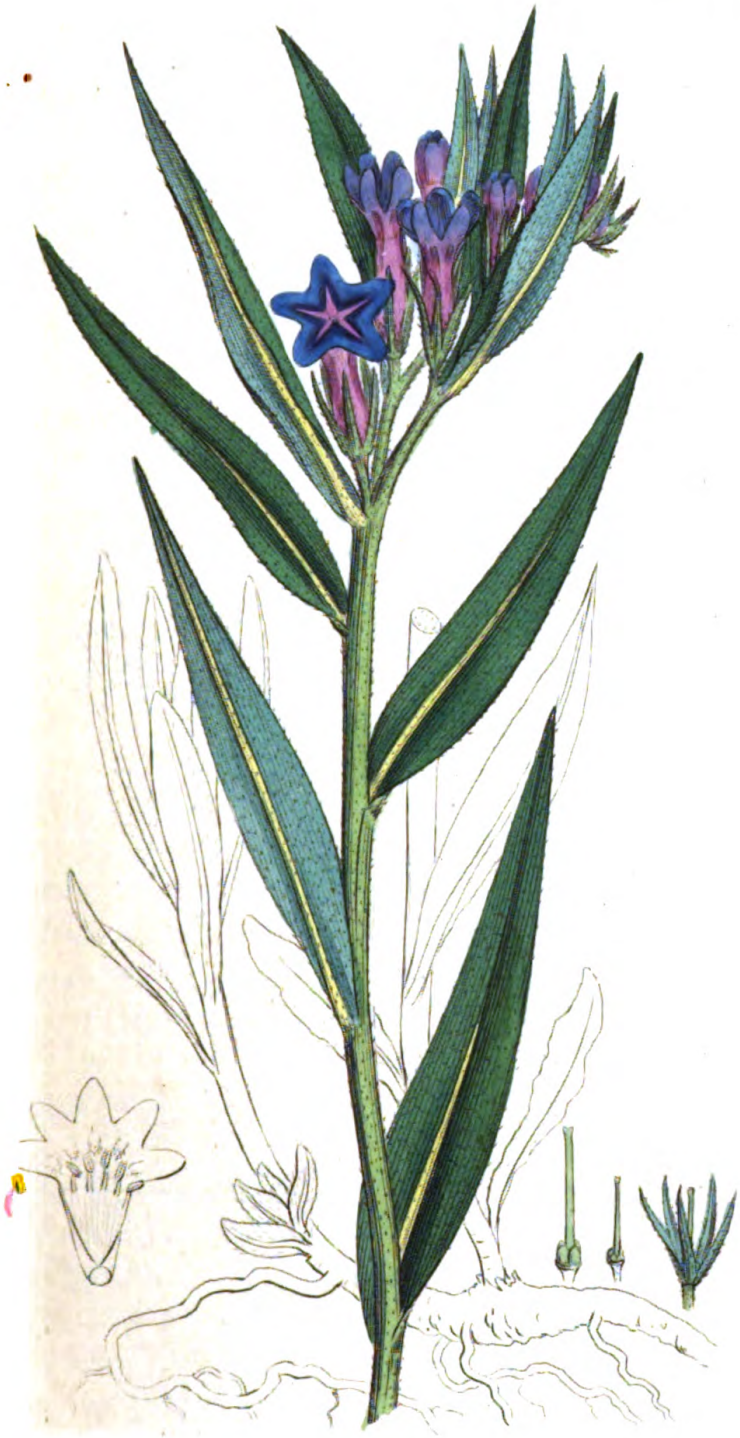
SPEC. CHAR. Seeds ſmooth. Corolla obtuſe, much longer than the calyx. Leaves lanceolate. Barren ſtems creeping.

SYN. Lythoſpermum purpuro-cœruleum. *Linn. Sp. Pl.* 190. *Hudſ. Fl. An.* 79. *With. Bot. Arr.* 190.

L. majus Dodonæi, flore purpureo, ſemine Anchuſæ. *Raii Syn.* 229.

MR. Latham of Dartford, the celebrated ornithologiſt, has favoured us with wild ſpecimens of this uncommon ſpecies of Lithoſpermum, collected by himſelf in a chalky ſoil not far from Greenhithe in Kent. It has hitherto been found only in two or three ſpots in the weſt of England, being moſt abundant in the more temperate parts of Europe.

The long woody perennial root produces many round, hairy, leafy ſtems, moſt of which are procumbent, and throw out roots: the flowering ones only are perfectly erect, and about 12 or 18 inches high. Leaves numerous, alternate, lanceolate, acute, clothed with ſhort cloſe-preſſed briſtles, which on the upper ſide of the leaf often ariſe from minute white tubercles or warts, as in many of this natural order. The beautiful flowers appear in April or May, ſtanding erect in a ſort of double leafy ſpike, whoſe extremities are a little curved downwards before flowering. Calyx hairy, divided to the baſe into five very narrow linear obtuſe ſegments. Corolla about twice as long (not ſeveral times longer), firſt purple, then blue, with a pale reddiſh tube; around its orifice are five blunt hairy ſwellings, which however do not cloſe it. The ſtamina are ſomewhat ſhorter than the tube, and united with that part half way up. Style about as long, with a ſlightly-notched ſtigma. Germen and ſeeds very ſmooth; the latter are frequently abortive, as in moſt plants that increaſe much by their roots.



69.

ANCHUSA officinalis.
Common Alkanet.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* funnel-ſhaped: its orifice cloſed with valves. *Seeds* hollowed out at the baſe.

SPEC. CHAR. Spikes imbricated, the flowers all on one ſide. Bracteæ ovate. Leaves lanceolate.

SYN. Anchuſa officinalis. *Linn. Sp. Pl.* 191. *Sm. Fl. Brit.* 214. *Fl. Dan. t.* 572.

A. tinctoria. *Woodv. Med. Bot. t.* 92.

Bugloſſa vulgaris. *Ger. em.* 798.

FOR this entirely new acceſſion to the catalogue of Britiſh plants, we are indebted to the Rev. Mr. Thomas Butt, of Areley, Staffordſhire, who found it plentifully, and to all appearance perfectly wild, on the links near Hartley Pans in Northumberland, and favoured us with living ſpecimens. It is perennial, flowering in June and July.

Root ſpindleſhaped, black on the outſide. Whole herb rough with briſtly hairs. Stem about 18 inches or two feet high, erect, angular, leafy, a little branched, panicled at the top. Leaves alternate, lanceolate, acute, entire, ſcarcely at all waved or criſped in the margin; the upper ones ovate at the baſe. Spikes generally in pairs, revolute; all the flowers thickly ſet on one ſide, and pointing upwards. As the ſtalk lengthens, they become more remote. Bracteæ ovate. Calyx deeply five-cleft. Corolla red at firſt, then deep purple, cloſed with hairy concave valves. Seeds brown, pointed, with a little ſpace hollowed out at their baſe.

The whole plant is mucilaginous; but neither its ſenſible qualities, nor any effects it produces in practice, are ſufficient to account for its antient reputation as a cordial, which, as Dr. Woodville well remarks, (*Suppl. p.* 10), is rather to be attributed to the wine in which it was adminiſtered. It is neceſſary to obſerve that *t.* 92 of the *Medical Botany* repreſents our plant, the real *A. tinctoria* being very different. *T.* 214 of the *Supplement* to the ſame work ſeems rather *A. undulata* of Linnæus.

70.

ANCHUSA ſempervirens.

Evergreen Alkanet.

PENTANDRIA Monogynia.

GEN. CHAR. *Corolla* funnel-ſhaped: its orifice cloſed with valves. *Seeds* hollowed out at the baſe.

SPEC. CHAR. Flower-ſtalks axillary, bearing little heads of flowers, accompanied by two leaves.

SYN. Anchuſa ſempervirens. *Linn. Sp. Pl.* 192. *Hudſ. Fl. An.* 80. *With. Bot. Arr.* 191. *Relh. Cant.* 77. Bugloſſum latifolium ſemper virens. *Raii Syn.* 227.

NO plant can be more common than this is in waſte ground in and about Norwich; throughout moſt other parts of England it is rarely met with. The firſt flowers appear in May, and are followed by a long ſucceſſion of others. They are beautiful in their form and colour when cloſely examined, otherwiſe the plant is of an unſeemly appearance; it is always, however, in leaf, and has from thence obtained the name of *ſempervirens*, though perfectly herbaceous, and not at all ſhrubby. Its habit and generic characters approach nearly to thoſe of Myoſotis, the corolla being rather ſalver-ſhaped, than of the true funnel form of other ſpecies of Anchuſa.

The leaves are very rough; the juices of the plant mucilaginous, as in others of this tribe. We do not know of its being applied to any uſe.

71.

CYNOGLOSSUM officinale.

Common Hounds-tongue.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* funnel-ſhaped; orifice cloſed with arched valves. *Seeds* depreſſed, fixed to the ſtyle by their inner margin only.

SPEC. CHAR. Stamina ſhorter than the corolla. Leaves broad-lanceolate, downy, ſeſſile.

SYN. Cynogloſſum officinale. *Linn. Sp. Pl.* 192. *Sm. Fl. Brit.* 216. *Hudſ.* 80. *With.* 227. *Hull.* 46. *Relh.* 77. *Sibth.* 69. *Abbot.* 41. *Curt. Lond. faſc.* 4. *t.* 16. *Woodv. Suppl. t.* 216.
Cynogloſſum. *Raii Syn.* 226.

ABUNDANT in waſte ground and by road ſides, flowering in June and July.

The root is biennial. Whole herb downy and ſoft to the touch, exhaling a ſtrong fœtid ſmell reſembling that of mice, or, as ſome ſay, the urine of dogs, whence the plant has obtained a coarſe, though appropriate, denomination, which may be found in Gerarde's herbal. The ſtem is about 2 feet high, round, often furrowed, leafy. Leaves remarkably ſoft and pliable, entire, waved, veiny, of a dull grayiſh green; the lowermoſt largeſt, ſtalked, lanceolate; the upper ones embracing the ſtem, and almoſt heartſhaped. Flowers in terminal recurved cluſters, growing out into ſpikes forming a panicle. Calyx downy. Corolla dull purpliſh red, its lobes rounded, as are alſo the little hollow valves that cloſe the mouth and conceal the ſtamina. Stigma acute. Seeds 4, horizontal, obovate, attached by their points, each clothed in a flat, thick coat, rough with numerous hooked prickles, by which the ſeeds ſtick to the coats of animals, and are widely diſperſed.

The *Cynogloſſum* is narcotic, aſtringent and mucilaginous, but dangerous to be taken internally, at leaſt in quantity.

Published by J. Sowerby London.

72.

CYNOGLOSSUM sylvaticum.

Green-leaved Hound's-tongue.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* funnel-shaped; orifice closed with arched valves. *Seeds* depressed, fixed to the style by their inner margin only.

SPEC. CHAR. Stamina shorter than the corolla. Leaves lanceolate, somewhat spatulate, shining, partly naked, rough beneath.

SYN. Cynoglossum sylvaticum. *Haenke in Jacq. Coll. v.* 2. 77. *Sm. Fl. Brit.* 216. *With.* 228. *Hull.* 46. *Sym.* 51. *Sibth.* 70.

C. officinale γ. *Linn. Sp. Pl.* 193. β. *Huds.* 80.

Cynoglossa folio virente. *Raii Syn.* 226.

THE plant from which our specimen was taken was collected by the Rev. Dr. Abbot in Oxfordshire. This is unquestionably a distinct species from *C. officinale, t.* 921. Its leaves are more dilated at the base, of a bright and shining green, destitute of the soft downiness and grey hue of that common plant, though more or less hairy underneath: both sides are roughish with small tubercles. Calyx hairy. Flowers at first reddish, assuming a blueish hue as they advance to maturity. The whole herb is almost without any fœtid smell. The root is biennial, and the flowers appear in June. Mr. J. D. Sowerby has observed that wherever a flower is cut off, a sweet honey-like juice oozes from the wound.

This species is found about hedges in several parts of England, especially in Essex; but, like many other biennials or annuals, it often changes its abode. It is also a native of Switzerland, being Haller's *Cynoglossum,* No. 588.

Sept. 1, 1806. Published by Jas. Sowerby, London.

PULMONARIA officinalis.

Common Lungwort.

PENTANDRIA Monogynia.

GEN. CHAR. *Corolla* funnel-ſhaped, pervious. *Calyx* priſmatic, five-ſided.

SPEC. CHAR. Calyx nearly as long as the tube. Upper leaves ovate, acute, rough.

SYN. Pulmonaria officinalis. *Linn. Sp. Pl.* 194. *Hudſ. Fl. An.* 81. *With. Bot. Arr.* 193.

P. foliis Echii. *Raii Syn.* 226. *Ger. em.* 808.

HOWEVER common in every garden, the Pulmonaria is of very unfrequent occurrence with us in a wild ſtate, inſomuch that authors are not agreed about the identity of our Britiſh ſpecies (ſee Withering). We have fortunately obtained, by the favour of Mr. E. Robſon, a wild ſpecimen from near Darlington, which being compared with the Linnean herbarium, decides the P. officinalis, at leaſt, to be a Britiſh plant. Mr. Goodyer's plant from the New Foreſt is moſt probably the ſame. How far the real P. anguſtifolia *(Herb. Linn.)* may be ſpecifically diſtinct, we dare not determine. The P. maculoſa, *Ger. em.* 808. *f.* 1. ſhould ſeem to be a broad-leaved variety of ours, from whence the ſpecific character of Linnæus was taken, which we have ventured to alter that it may better accord with our ſpecimens, and indeed with his own, which exhibit the uſual appearance of the wild plant throughout Europe. In Italy nothing is more common in groves and thickets.

The root is perennial; ſtems ſimple, erect, near a foot high, angular and rough. Lower leaves much lengthened out at the baſe, of a light green; the upper ones only, which are ovate, and rather broad, being ſpeckled with white on the upper ſide. This however is a variable circumſtance. The flowers appear in April or May. The plant loves ſhade. Every part is mucilaginous; but its reputation as a cure for coughs, aroſe not from that circumſtance, but from its ſpeckled appearance, reſembling the lungs!

Much conformity is obſervable between the ſtructure of this flower and that of Lithoſpermum purpuro-cœruleum, *t.* 117. Indeed the genera of many of the *Aſperifoliæ* are ſomewhat too nearly allied.

74.

PULMONARIA angustifolia.

Narrow-leaved Lungwort.

PENTANDRIA Monogynia.

GEN. CHAR. *Corolla* funnel-shaped, pervious. *Calyx* prismatic, five-sided.

SPEC. CHAR. Calyx nearly as long as the tube. Leaves all lanceolate, rough.

SYN. Pulmonaria angustifolia. *Linn. Sp. Pl.* 194. *With.* 228. *Hull.* 47. *Fl. Dan. t.* 483. *Park. Parad.* 251. *f.* 2.

P. foliis echii. *Raii Syn.* 226. *Ger. em.* 808.

AFTER much doubt and confusion we are at length able to determine the *Pulmonaria angustifolia* to be a native of Britain. This specimen was gathered by Mr. Turner and Mr. W. Borrer, June 3, 1806, in a wood between Newport and Ride in the Isle of Wight. It is certainly the plant of Linnæus, agreeing with his specimens from Scara (see *Fl. Suec.*), and we are now satisfied of its being what Mr. Waring sent Mr. Robson from Flintshire; see Withering. It must also be what Ray intended, and we therefore venture to remove his synonym from the *P. officinalis, Fl. Brit.* 217, our *t.* 118; from which last also the citation of Gerarde is to be erased, and replaced by his *P. maculosa.* We are obliged to Mr. Robson for pointing out an error in our *t.* 118, the uncoloured radical leaves of which belong to *P. angustifolia,* and were probably sent us by mistake. Hence arose our doubts as to the distinction of the two species, which are now removed.

The plant before us is known from the other, so common in gardens, by being much less spotted, and especially by the long lanceolate form of its radical leaves, which are not at all cordate or ovate. There is also a difference in the aspect of the two plants and their flowers. Both are perennial, flowering about May.

Aug. 1806. Published by Jas. Sowerby, London.

75.

PULMONARIA maritima.

Sea Lungwort.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* funnel-shaped, pervious. *Calyx* prismatic, five-sided.

SPEC. CHAR. Calyx short. Leaves ovate. Stem much branched, procumbent.

SYN. Pulmonaria maritima. *Linn. Sp. Pl.* 195. *Huds. Fl. An.* 81. *With. Bot. Arr.* 194. *Dicks. H. Sicc. fasc.* 1. 3. *Lightf. Scot.* 134. *t.* 7.

Echium marinum. *Raii Syn.* 228.

A BEAUTIFUL ornament of the sandy sea-coasts of Scotland and the north of England, for specimens of which we are obliged to Mr. Robson. It flowers in July, and is perennial according to the opinion of most authors, though the observations of Dillenius in the *Hortus Elthamensis* seem to prove it biennial. There is no less uncertainty about the genus of this plant. It is certainly a very bad *Pulmonaria*, the calyx being too deeply divided to be deemed prismatic, which is also the case in P. *virginica & sibirica*. Dillenius (as well as Linnæus formerly) made it a *Cerinthe*, with which it most agrees in habit, but the essential character of *Cerinthe* is not to be found in the fruit. In fact the genera of this order (*Asperifoliæ*), though so multiplied, are many of them ill defined and unnatural, as we have before observed, *p.* 118.

The root is fleshy. Stems procumbent, much branched. Leaves ovate, entire, undulated, covered with a beautiful glaucous efflorescence, and sprinkled with minute cartilaginous tubercles, characteristic of the order. Flowers on longish simple flower-stalks, one or two together, sometimes axillary, and generally clustered about the extremities of the branches. Calyx glaucous, in 5 ovate acute segments, its base a little prismatic. Corolla with a short thick tube, and a small border in 5 obtuse segments, red at first, then blue; orifice a little toothed, but pervious. Stamina inserted about the middle of the tube, and projecting beyond the orifice. Stigma capitate. The whole plant turns black in drying, unless it be first immersed in fresh water for 24 hours to extract the sea-salt, according to Dillenius.

Jan.y 1797 Published by P. Lowerby London

76.

SYMPHYTUM officinale.

Common Comfrey.

PENTANDRIA Monogynia.

GEN. CHAR. Limb of the *corolla* tubular, ſwelling; its orifice cloſed with awl-ſhaped rays. *Cal.* in 5 deep ſegments. *Seeds* 4, naked.

SPEC. CHAR. Leaves ovato-lanceolate, decurrent.

SYN. Symphytum officinale. *Linn. Sp. Pl.* 195. *Sm. Fl. Brit.* 218. *Hudſ.* 81. *With.* 230. *Hull.* 47. *Relh.* 78. *Sibth.* 70. *Abbot.* 42. *Curt. Lond. faſc.* 4. *t.* 18. *Woodv. Suppl. t.* 215.

S. magnum. *Raii Syn.* 230.

A FREQUENT native of watery places, banks of rivers, and about ditches, flowering from the end of May to September.

Root perennial, fleſhy, externally black. Stem two or three feet high, upright, leafy, winged, branched at the top, clothed with ſhort briſtly hairs that point rather downward. Leaves decurrent, ovato-lanceolate, waved, pointed, veiny, rough; the radical ones on footſtalks, and broader than the reſt. Cluſters of flowers in pairs on a common ſtalk, with an odd flower between them, recurved, denſe, hairy. Corolla yellowiſh-white, ſometimes purple, the rays downy at each edge.

Dr. Sibthorp has made a new ſpecies of the red or purple-flowered variety, diſtinguiſhing it by a ſhorter and ſpreading calyx, a mark which we and ſeveral of our friends have in vain tried to diſcover.

The Comfrey root abounds in a pure taſteleſs mucilage, like that of the Marſh-mallow; and being (as Dr. Woodville obſerves) more eaſily obtained, it ought not to be omitted in liſts of medicinal plants. Such medicines are uſeful in irritations of the throat, inteſtines, and above all the bladder.

Published Decr 1. 1800 by Jas Sowerby, London.

SYMPHYTUM tuberosum.

Tuberous-rooted Comfrey.

PENTANDRIA Monogynia.

GEN. CHAR. Limb of the *corolla* tubular, swelling; its orifice closed with awl-shaped rays. *Cal.* in 5 deep segments. *Seeds* 4, naked.

SPEC. CHAR. Leaves ovate, slightly decurrent; the upper ones opposite.

SYN. Symphytum tuberosum. *Linn. Sp. Pl.* 195. *Lightf.* 1091. *Sm. Fl. Brit.* 219. *Huds.* 648. *With.* 230. *Hull.* 47. *Jacq. Obs. fasc.* 3. 12. *t.* 63. *Ger. em.* 806.

WE have been obliged to delineate this plant from a garden specimen at Mr. Forster's of Clapton; for although it has been sent us from Durham, many different times, by Mr. Robson, we were never so fortunate as to receive it in a fit state for drawing. We know it to be what Lightfoot intended, and we believe it may not be rare in the northern counties, though so like the Common Comfrey as to be neglected for a starved plant of that species.

It is perennial and flowers in June or July. Root tuberous, white externally, not black. Stem a foot high, scarcely winged, rough with deflexed hairs. Stem-leaves ovate, on winged stalks, which are a little decurrent. Clusters of flowers in pairs, terminal. Flowers few, yellowish white, cylindrical. Calyx but little spreading. Rays of the flower finely toothed, or roughish, at each edge, rather longer than in *S. officinale.*

Mr. Lightfoot, on the authority of his friend Yalden, first introduced this plant to British botanists.

Sept. 1. 1805. Published by Jas. Sowerby, London.

BORAGO officinalis.

Common Borage.

PENTANDRIA Monogynia.

GEN. CHAR. *Corolla* wheel-ſhaped: the orifice cloſed with rays.

SPEC. CHAR. Leaves all alternate. Calyx ſpreading.

SYN. Borago officinalis. *Linn. Sp. Pl.* 197. *Hudſ. Fl. An.* 82. *With. Bot. Arr.* 197. *Relh. Cant.* 78. Borrago hortenſis. *Raii Syn.* 228.

THE Borage, whoſe bright blue flowers decorate almoſt every dunghill and heap of rubbiſh, is one of thoſe vegetables which, although not originally of Britiſh growth, are now ſo perfectly naturalized as to find a place in every catalogue of our wild plants. It is ſaid to have been brought from the Levant; and was at firſt cultivated in gardens as a medicinal herb, being reckoned, apparently without reaſon, one of the four cordial flowers. Hence the old adage,

"Ego Borago gaudia ſemper ago"—

which Gerarde renders,

"I Borage bring always courage—"

a tranſlation worthy of the elegance of the original. The ſame author adds from Dodonæus—

"Thoſe of our time do uſe the floures in ſallads, to exhi-
"larate and make the minde glad. There be alſo many things
"made of them, uſed for the comfort of the heart, to drive
"away ſorrow, and increaſe the joy of the minde."

Very light ſurely were thoſe ſorrows that could be ſo driven away! Yet the Borage flowers were at leaſt innocent, which is more than can be ſaid of many more general remedies for care.

The whole herb is ſucculent and very mucilaginous, and has a peculiar faint ſmell when bruiſed. All the green parts are extremely hiſpid, with ſharp rigid white briſtles. The root is ſcarcely more than biennial with us. The flowers appear in great plenty in the ſummer months.

J. Sowerby del.t Oct.r 1, 1791.

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79.

ASPERUGO procumbens.

German Madwort.

PENTANDRIA Monogynia.

GEN. CHAR. *Cal.* of the fruit compreſſed, its two margins flat and parallel, ſinuated.

SPEC. CHAR. *Calyx* of the fruit flattened throughout.

SYN. Aſperugo procumbens. *Linn. Sp. Pl.* 198. *Sm. Fl. Brit.* 220. *Hudſ.* 82. *With.* 231. *Hull.* 47. *Relh.* 79. *Fl. Dan. t.* 552.

A. vulgaris. *Raii Syn.* 228.

THIS is a plant of very rare occurrence. Ray mentions Boxley in Suſſex, and the Holy Iſland as its places of growth. He ſays alſo "near Newmarket, where I hear it is now loſt." The ſpecimen before us was found at Wangford near Brandon by Francis Eagle jun. Eſq., and ſent by the Rev. Mr. Hemſted*. It is an annual plant, and flowers in July.

The root is ſmall and ſlender. Herb rough and ſticking to the hands or clothes by means of ſmall hooked ſpines, like *Galium Aparine*; hence it has been called *Aparine major*, and Great Gooſe-graſs. Such of theſe hooks as ſtand upon the ſtem point downward; thoſe on the leaves forward, or towards the point of the leaf. The ſtems are proſtrate, ſquare, leafy. Leaves two three or four together, not exactly oppoſite, ſpreading when the plant is ſupported, when it lies flat they are directed upwards from the ground. They are oblong or lanceolate, and entire. Flowers ſmall, axillary, ſolitary, on ſhort ſtalks, deep blue. Corolla in 5 rounded ſegments, its orifice cloſed with ſmall purple concave blunt valves. Stamina in the tube, very ſhort. After flowering, the flower-ſtalks are reflexed, the calyx much enlarged, compreſſed, enfolding 4 ſeeds, which are ſmooth in a young ſtate, rugged when ripe.

* Mr. Hemſted informs us the *Senecio paludoſus, t.* 650, was gathered in Lakenheath fen, not far from Wangford, by himſelf and Mr. Eagle.

Nov. 1. 1799 Published by J. Sowerby London.

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80.

LYCOPSIS arvenſis.

Small Bugloſs.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* with a curved tube, the mouth cloſed with convex ſcales.

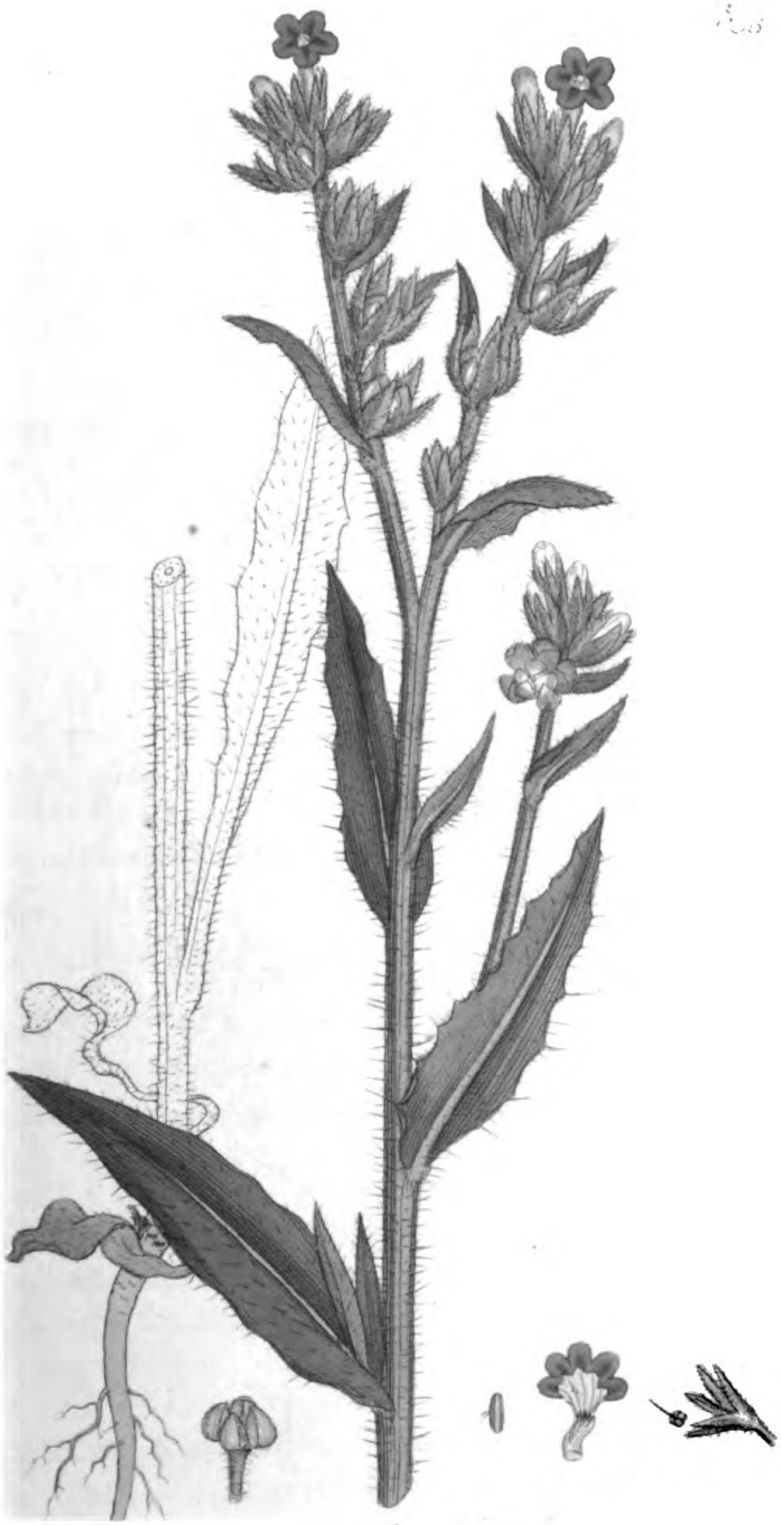
SPEC. CHAR. Leaves lanceolate, briſtly. Calyx while in flower erect.

SYN. Lycopſis arvenſis. *Linn. Sp. Pl.* 199. *Sm. Fl. Brit.* 221. *Hudſ.* 82. *With.* 231. *Hull.* 47. *Relh.* 79. *Sibth.* 71. *Abbot.* 43. *Curt. Lond. faſc.* 5. *t.* 17.

Bugloſſa ſylveſtris minor. *Raii Syn.* 227.

COMMON every where in fields and on dry hedge banks during the early part of ſummer, flowering chiefly in June, after which the herb is dried up, ſcatters its ſeeds, and the ſmall annual root withers away.

The ſtem is upright, ſtraight, more or leſs branched, angular, leafy. Leaves alternate, lanceolate; heart-ſhaped, and claſping the ſtem at their baſe, (except the radical ones, which taper into a footſtalk,) waved in their margin. Flowers in terminal revolute ſpikes ſoon lengthened out into leafy *racemi.* Calyx of 5 lanceolate ſegments, erect both in flower and fruit. Tube of the corolla white, cylindrical, remarkably, and ſeemingly artificially, bent, containing the 5 ſhort ſtamina at the curved part. Its mouth is completely cloſed by 5 convex white downy valves, which elegantly contraſt with the bright blue of the limb of the corolla, and entirely conceal all the organs of fructification. Four vertical angular rugged naked ſeeds are at length contained in the enlarged calyx. Every part of the herb, except the corolla, is clothed with pungent briſtles. Its juices are mucilaginous, like thoſe of Borage, to which it is nearly akin, however widely different in the corolla and ſtamina; ſee *vol.* 1. *t.* 36.



81.

ECHIUM italicum.

White Viper's-Bugloss.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* irregular, its orifice open and naked. *Stigma* cloven.

SPEC. CHAR. Stem erect, hairy. Spikes lateral, very hairy, spreading upward. Corolla nearly equal. Stamens very long.

SYN. Echium italicum. *Linn. Sp. Pl.* 200. *Sm. Fl. Brit.* 221. *Huds.* 83. *With.* 232. *Hull.* 48. *ed.* 2. 61. *Dicks. H. Sicc. fasc.* 14. 8.

Lycopsis. *Raii Syn.* 227.

A NATIVE of Jersey, for specimens of which from Chelsea garden we are obliged to our kind friend Mr. Fairbairn. It is biennial, flowering in July.

At *t.* 181 we have expressed doubts, which are now removed, respecting the distinction betwixt this and *E. vulgare.* The *italicum* is rather hairy than bristly, and has a much more hoary aspect. The flowers are white, not half so large as those of the common kind, still more nearly regular or equal, with blunt segments and very long stamens. Calyx excessively bristly, especially in wild specimens.——The stem is erect. Leaves lanceolate, or tongue-shaped, clothed with hairs springing from callous tubercles. Spikes lateral, somewhat deflexed, much elongated and ascending as they ripen seed. The flower-buds are of a pale pink before they open.

2081.

New Republished by J. Somerby London.

83.

ECHIUM vulgare.

Common Viper's Bugloſs.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* irregular, its orifice open and naked.

SPEC. CHAR. Stem briſtly and tuberculated. Stem-leaves lanceolate, and rough with ſtiff hairs. Flowers in lateral ſpikes.

SYN. Echium vulgare. *Linn. Sp. Pl.* 200. *Hudſ. Fl. An.* 83. *With. Bot. Arr.* 200. *Relh. Cant.* 80. *Raii Syn.* 227.

A BEAUTIFUL and magnificent, though very vulgar weed, whoſe frequency in every high-way and field, eſpecially in a light ſoil, makes us deſpiſe it as an unprofitable intruder; yet we have ſeen inhabitants of tropical countries, on their arrival in Europe, ſo charmed with the viper's bugloſs, as to call it worthy to "decorate the gardens of the gods." The dry fields of Cambridgeſhire and Norfolk are perfectly blue with theſe flowers in June and July, nor is any part of England without more or leſs of them.

The root is biennial. Stem ſtrong, erect, round, moſtly ſprinkled with red tubercles bearing ſome of the very ſtiff briſtles which clothe every part of the herb, and which on the upper ſide of the leaves ariſe from white calloſities. The radical leaves are numerous, ſpreading in the form of a ſtar. Spikes ſolitary from each axilla of the ſtem-leaves, pendulous, but growing erect as the flowers open. Buds red. Corolla nearly regular, purple, then bright blue, downy on the outſide about the ribs. Stamina varying in length, but always ſomewhat longer than the corolla. The juices of the herb are very mucilaginous.

We can ſcarcely define the difference between this and E. italicum (for in this caſe the Linnæan characters unfortunately teach nothing), except that the ſtalk of the latter ſeems not to be tuberculated, and the flowers are not half ſo large as in E. vulgare.

[illegible] 1794

PRIMULA vulgaris.

Common Primrose.

PENTANDRIA Monogynia.

GEN. CHAR. *Capsule* 1-celled, superior. *Tube* of the *corolla* cylindrical, mouth pervious. *Stigma* globose.

SPEC. CHAR. Leaves dentated, wrinkled. Border of the corolla flat.

SYN. Primula vulgaris. *Hudſ. Fl. An.* 83.
P. acaulis. *Witb. Bot. Arr.* 204.
P. veris var. γ. *Linn. Sp. Pl.* 205. *Fl. Dan. t.* 194.
P. veris vulgaris. *Raii Syn.* 284.

LINNÆUS, ever deſirous of avoiding too great a multiplication of ſpecies, conſidered the Primroſe, Oxlip and Cowſlip, as varieties only of each other; but moſt botaniſts have differed from him in this particular. Some have gone ſo far as to reckon them three diſtinct ſpecies. It ſeems however moſt agreeable to nature to conſider the firſt and laſt as diſtinct, though much more nearly akin than an inexperienced obſerver would ſuppoſe, and the rim of the corolla being concave in one and flat in the other, is a ſufficiently good ſpecific character.

The Oxlip (P. veris β of Linn. *Fl. Dan. t.* 434.), if not an hybrid production between the other two, may perhaps with the greateſt propriety be reckoned a variety of the Primroſe, from which it principally differs in having an elongated common foot-ſtalk, like the Cowſlip; whereas the common foot-ſtalk of the Primroſe is ſo ſhort as to be concealed among the leaves, as Linnæus and Dr. Stokes have obſerved. This plant is found every where in woods, thickets, and paſtures, flowering in April and May. Its bloſſoms have an agreeable fragrance.

"The Primroſe pale and Violet blue," being the chief ornaments of a ſeaſon which every paſtoral poet delights to celebrate, have been more frequently honoured in verſe than moſt other wild flowers.

rerby del. Jun.ᵗ 1 1794.

PRIMULA elatior.

Oxlip.

PENTANDRIA Monogynia.

GEN. CHAR. *Capſ.* 1-celled, ſuperior. *Tube* of the *corolla* cylindrical, mouth pervious. *Stigma* globoſe.

SPEC. CHAR. Leaves dentated, wrinkled. Stalk many-flowered. Border of the corolla flat.

SYN. Primula elatior. *With.* 234. *Sibth.* 72. *Symons's Syn.* 53.

P. veris β. *Linn. Sp. Pl.* 204.

P. vulgaris β. *Hudſ.* 84.

P. inodora. *Relh.* 81.

P. pratenſis inodorata lutea. *Raii Syn.* 284.

THE Oxlip, or Greater Cowſlip, is much leſs frequent than the two moſt common kinds of *Primula* figured in *tab.* 4 and 5 of this work, but nevertheleſs occurs here and there in woods, thickets, or paſtures, flowering in April. We received this ſpecimen from the Rev. Mr. Hemſted, who juſtly obſerves that the flowers are by no means inodorous, but have a very grateful ſmell.

In deſcribing the Primroſe, we expreſſed a ſuſpicion that the Oxlip might be a variety of that rather than of the Cowſlip, or poſſibly an hybrid between the two. We are ſtill much inclined to the latter opinion, and that it has originated from a Primroſe impregnated by a Cowſlip; its external habit, the contraction towards the middle of the leaf, and the umbellate flower-ſtalk indicating (according to Linnæus's ingenious idea) the *father*, while the bloſſom itſelf, in form, colour and ſcent, moſt reſembles its *mother*. See Linn. Diſſ. on the Sexes of Plants, *Lond.* 1786. However this may be, the Oxlip is propagated by ſeed, which is the caſe with ſome other mule plants, as Geraniums. It alſo increaſes faſt by its perennial root. Haller characteriſes it as having only the outer flowers nodding, while thoſe of the Cowſlip all droop; but the flat limb of the corolla affords a much better mark. The ſame author calls the umbel a *racemus*, not from ignorance, but he aimed at conſequence by uſing terms different from thoſe generally adopted.

XV

85.

PRIMULA veris.

Common Cowſlip.

PENTANDRIA Monogynia.

GEN. CHAR. *Capſule* one-celled, ſuperior. *Tube* of the *corolla* cylindrical, mouth pervious. *Stigma* globoſe.

SPEC. CHAR. Leaves dentated, wrinkled. Border of the corolla concave.

SYN. Primula veris. *Hudſ. Fl. An.* 84. *Linn. Sp. Pl.* 204. *Fl. Dan. t.* 433.
P. officinalis. *With. Bot. Arr.* 203.
P. veris major. *Raii Syn.* 284.

IN ſpeaking of the Primroſe we have already mentioned its affinity to this plant; one circumſtance is however remarkable in the Cowſlip, a contraction towards the middle of its leaves, which is not ſeen in the former. The Cowſlip is nearly as common, and flowers at the ſame time: it prefers a clay ſoil, and generally an open ſituation.

Cowſlip flowers are fragrant, and make a pleaſant wine, approaching in flavour to the Muſcadel wines of the South of France.

The leaves of this plant and the Primroſe are ſaid to afford nouriſhment to ſilk-worms: but thoſe animals are ſo very delicate, and the quality of their ſilk is ſo apt to be injured by the moſt trifling cauſes, that they are ſeldom found worth cultivating as an article of commerce, unleſs fed with the beſt and moſt healthy leaves of the White Mulberry (Morus alba). It is however an object worthy of the curioſity of thoſe who breed them for amuſement, to try what kinds of food may beſt be ſubſtituted in the place of their natural aliment, when a backward ſpring retards the growth of the Mulberry leaves.

...erby del. Jan.y 1.1791.

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86.

PRIMULA farinosa.

Bird's-Eye Primrose.

PENTANDRIA Monogynia.

GEN. CHAR. *Capsule* one-celled, superior. *Tube* of the *corolla* cylindrical, mouth pervious. *Stigma* globose.

SPEC. CHAR. Leaves crenated, smooth. Border of the corolla flat.

SYN. Primula farinosa. *Linn. Sp. Pl.* 205. *Hudf. Fl. An.* 84. *With. Bot. Arr.* 204. *Fl. Dan. t.* 125.

Verbasculum umbellatum alpinum minus. *Raii Syn.* 285.

WET pastures and little rills on the sides of mountains in the north of England, especially in Westmoreland, are the favourite situations of this elegant plant, nor can our British Flora boast many more beautiful productions. Of late years it has been frequently introduced into gardens. The powdery whiteness of its stalks and the backs of its leaves resembles that of the Auricula. This circumstance, from whence the trivial name *farinosa* is taken, is not represented in the Flora Danica.

The habit of this Primula most nearly approaches that of the genera Androsace and Aretia, two very elegant tribes of plants found in alpine situations on the continent, and much sought after by botanists. In those genera however the tube of the corolla is oval, not cylindrical, and its orifice more or less closed with glands; whereas in all the Primulas that part is open, and only slightly crenated. Nevertheless these three genera, and even Cortusa, might perhaps be united without any great violence to nature.

A.L. del. & Sc. Jan.y 1. 1791

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87.

CYCLAMEN europæum.

Spring Cyclamen, or Sow-bread.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* wheel-shaped, reflexed; tube very short; orifice prominent. *Berry* superior, enclosed in a case.

SPEC. CHAR. Corolla bent backwards. Leaves heart-shaped, angular, finely toothed.

SYN. Cyclamen europæum. *Linn. Sp. Pl.* 207. *With.* 235. *Sym. Syn.* 53.

C. vernum. *Ger. em.* 843.

WILD specimens of the Cyclamen have been sent us by D. E. Davy, Esq. from a bank in the parish of Bramfield, Suffolk, far from any house or garden, where if not originally a native, it is at least perfectly naturalized. The ground is a wet clay soil, sloping towards the south or west, and is overshadowed with trees. Gerarde was told that this plant had been observed in Wales, Lincolnshire, and Somersetshire; but no one has confirmed that report. It is perennial, flowering in April, and in a cultivated state sometimes in autumn.

Root a large roundish knob, throwing out several branched fibres. Leaves all radical, on long foot-stalks, heart-shaped, roundish or oblong, acute, waved, and angular, finely crenate or toothed, veiny, smooth; stained above with white radiated or sinuated spots; purplish beneath. Foot-stalks round, zig-zag, slender at the base. Flower-stalks like them, but longer, simple, naked. Flowers drooping, white, purplish about the mouth, their segments upright, twisted. Stamina very short, not projecting. Antheræ awl-shaped, tawny. Germen superior, roundish. Style awl-shaped. Stigma acute. After impregnation the stalks curl in a close spiral manner, and bury the ripening fruit in the earth.

This pretty plant is easily cultivated in a shady border, and its leaves, which are in their greatest beauty in autumn, are scarcely less ornamental than the flowers. The root is very purgative, and has a nauseous bitter acrid taste, not at first perceived, but very durable. Gerarde believed that merely stepping over this herb caused abortion, and very prudently guarded it in his garden with sticks.

88.

MENYANTHES trifoliata.

Common Buckbean.

PENTANDRIA Monogynia.

GEN. CHAR. *Corolla* hairy. *Stigma* cloven. *Capsule* of 1 cell.

SPEC. CHAR. Leaves ternate.

SYN. Menyanthes trifoliata. *Linn. Sp. Pl.* 208. *Hudſ.* 85. *With.* 236. *Relh.* 82. *Sibth.* 73. *Curt. Lond. fasc.* 4. *t.* 17.

M. paluſtre triphyllum latifolium et anguſtifolium. *Raii Syn.* 285.

OUR aquatic plants are thoſe which principally vie with the moſt favoured exotics in beauty, and this is one of the moſt elegant of them. It is very frequent in watery places, in a black boggy ſoil, and flowers in June or July.

Root perennial, long, round, throwing out many fibres deep into the mud. Stem ſpreading, clothed with the ſheathing foot-ſtalks, each of which bears three obovate ſmooth bluntly-toothed or waved leaflets. Flower-ſtalk oppoſite to a leaf, but ſpringing from within its ſheath, longer than the leaves, erect, round, ſmooth, bearing a ſimple thyrſus of about 10 or 15 flowers, accompanied by ſmall ovate entire bracteæ. Calyx with 5 blunt teeth. Corolla of one funnel-ſhaped petal, deeply divided into 5 lanceolate acute ſegments, which are white tipped with red, and clothed with long fleſhy ſhaggy fibres on their upper ſide. This conſtitutes the proper character of the genus, though in ſome ſpecies the hairineſs is confined to the edge, in others upon both parts, ſee *t.* 217. Antheræ ſagittate. Germen round. Stigma cloven and notched.

This herb is very bitter. An infuſion of it was long ago recommended for the rheumatiſm, and has been a popular medicine in England. It has alſo been given for the gout, ſcurvy, ague, catarrh, and dropſy, a formidable liſt of diſorders: if it has any right to ſuch celebrity, it muſt act as a powerful tonic.

89.

MENYANTHES nymphoides.

Fringed Buckbean.

PENTANDRIA Monogynia.

GEN. CHAR. *Corolla* hairy. *Stigma* cloven. *Capſ.* of 1 cell.

SPEC. CHAR. Leaves heart-ſhaped, entire, waved. Corolla ciliated.

SYN. Menyanthes nymphoides. *Linn. Sp. Pl.* 207. *Hudſ. Fl. An.* 85. *With. Bot. Arr.* 206. *Relh. Cant.* 82. *Sibth. Oxon.* 73.

Nymphæa lutea minor flore fimbriato. *Raii Syn.* 368.

Limnanthemum peltatum. *Gmelin in Act. Petrop. anno* 1769, *v.* 14. *p.* 527. *t.* 17. *f.* 2. è MSS. Linn.

Waldſchmidia nymphoides. *Wiggers Flo. Holſat.* 20.

THIS beautiful aquatic is found occaſionally in the Thames, chiefly in little receſſes of its ſhores out of the great ſtream; Lord Lewiſham communicated it from near Walton bridge. It is much more frequent in the ſtill canals of Holland than with us.

Root perennial, long and ſtringy, as are alſo the ſtems. They produce a few pair of oppoſite floating leaves, growing on foot-ſtalks various in length according to the depth of the water, their margin ſcarcely toothed, but rather waved. Theſe leaves, like thoſe of the Nymphææ, perſpire quicker than almoſt any others we have obſerved, ſo as to become dry in a few hours, though at firſt ſo ſucculent. The flowers grow from the axillæ about Auguſt, in a kind of ſeſſile umbel, 4 or 5 together, on long foot-ſtalks, and when expanded in the ſun have a brilliant appearance. Their corolla is ciliated, but not hairy upon the ſurface like M. trifoliata: hence ſome have thought it did not anſwer to the generic character, and Wiggers has aſſerted that it belongs even to a different natural order from the laſt-mentioned plant, but without telling us why. As Mr. de Juſſieu, whoſe authority is very great upon ſuch a point, has not ſeparated them, and as M. indica ſeems to connect the two, we think they may ſafely remain as they are.

90.

HOTTONIA palustris.

Water Violet or Featherfoil.

PENTANDRIA Monogynia.

GEN. CHAR. *Corolla* salver-shaped. *Stamina* standing on the margin of the tube. *Capsule* with 1 cell.

SPEC. CHAR. Stalk bearing many flowers in whorls.

SYN. Hottonia palustris. *Linn. Sp. Pl.* 208. *Huds. Fl. An.* 85. *With. Bot. Arr.* 207. *Relh. Cant.* 83. *Sibth. Ox.* 73. *Curt. Lond. fasc.* 1. *t.* 11. *Dicks. H. Sicc. fasc.* 7. 7.

Hottonia. *Raii Syn.* 285.

CLEAR ditches and ponds on a gravelly soil, in various parts of England, are frequently adorned with the beautiful *Hottonia*, which may vie with many of the most admired exotics in elegance, having indeed, like some other European aquatics, very much the air of a tropical plant. Its English name, Water Violet, is far from apt, even though we understand it as contrasting this plant with the Dame's Violet, or *Hesperis*, to which its resemblance is slight, and its affinity none, for it belongs to the same natural order as the Primrose and Pimpernel.

The white fibrous radicles run deep into the ground, and from the crown of the perennial root spring several leaves in a star-like form, and a few long runners, which are leafy and take root at their extremities, flowering the next year. The leaves are smooth, bright-green, elegantly and deeply pinnatifid, or pectinated, their segments linear and entire, varying in breadth, acute. All these parts are constantly under water. The stalk alone rises above the surface to the height of 8 or 10 inches, being solitary, erect, round, naked, smooth below, roughish above, and bearing 5 or 6 whorls, each of 5 to 10 pedunculated flowers, with an oblong bractea at the base of each flower-stalk. The flowers are not unlike those of a *Primula*. They are naturally 5-cleft, but may be found with 6 or 7 segments, and as many stamina. Their colour is pale purple, with a yellow tube and orifice. Capsule globular, with many seeds standing on a large globose receptacle. Stigma concave. It flowers in June.

Boerhaave named this genus in honour of his predecessor in the Leyden Professorship, Peter Hotton, of whose character and abilities he speaks with great respect in his Index to the Leyden Garden.

91.

LYSIMACHIA vulgaris.

Yellow Looſeſtrife.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* wheel-ſhaped. *Capſ.* globoſe, pointed, with 10 valves.

SPEC. CHAR. Panicled. Cluſters terminal. Leaves ovato-lanceolate, acute.

SYN. Lyſimachia vulgaris. *Linn. Sp. Pl.* 209. *Sm. Fl. Brit.* 227. *Hudſ.* 86. *With.* 237. *Hull.* 49. *Relh.* 84. *Sibth.* 74. *Abbot.* 45. *Curt. Lond. faſc.* 5. *t.* 19.

L. lutea. *Raii Syn.* 282.

AN elegant ornament of watery ſhady places, and the reedy banks of rivers, where it intermingles with the Common Valerian, the *Eupatorium*, the *Lythrum Salicaria*, &c. but is much leſs common than any of them. It flowers in July, and, having a perennial creeping root, may be eaſily propagated in a garden, even where the ſoil is not very wet. In a moiſt one it would ſoon become a troubleſome weed.

The ſtems riſe to the height of 3 feet or more, and are ſtraight, leafy, panicled at the top. The leaves, though generally oppoſite only, very often grow 3 or 4 in a whorl, almoſt ſeſſile, of a broad lanceolate form, entire, veiny, frequently downy beneath. Cluſters from the boſoms of the uppermoſt leaves, joining to form a panicle of large handſome yellow flowers. Each partial flower-ſtalk has an awl-ſhaped bractea at its baſe. The diviſions of the calyx are pointed and fringed. Corolla ſpreading, divided almoſt to the baſe. Stamina ſmooth, united at the bottom, ſo as to be perfectly monadelphous. Seeds numerous and ſmall, not always perfected.

It ſeems moſt probable that this herb received its Greek name in honour of Lyſimachus, (as *Gentiana* and *Euphorbia* are ancient names of ſimilar origin,) and that Looſeſtrife is merely a tranſlation of it. The fable of the plant taming enraged animals, was probably, like many others, the invention of ſome perſon of more learning than wiſdom.

92.

LYSIMACHIA thyrſiflora.

Tufted Looſeſtrife.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* wheel-ſhaped. *Capſule* globoſe, pointed, with 10 valves.

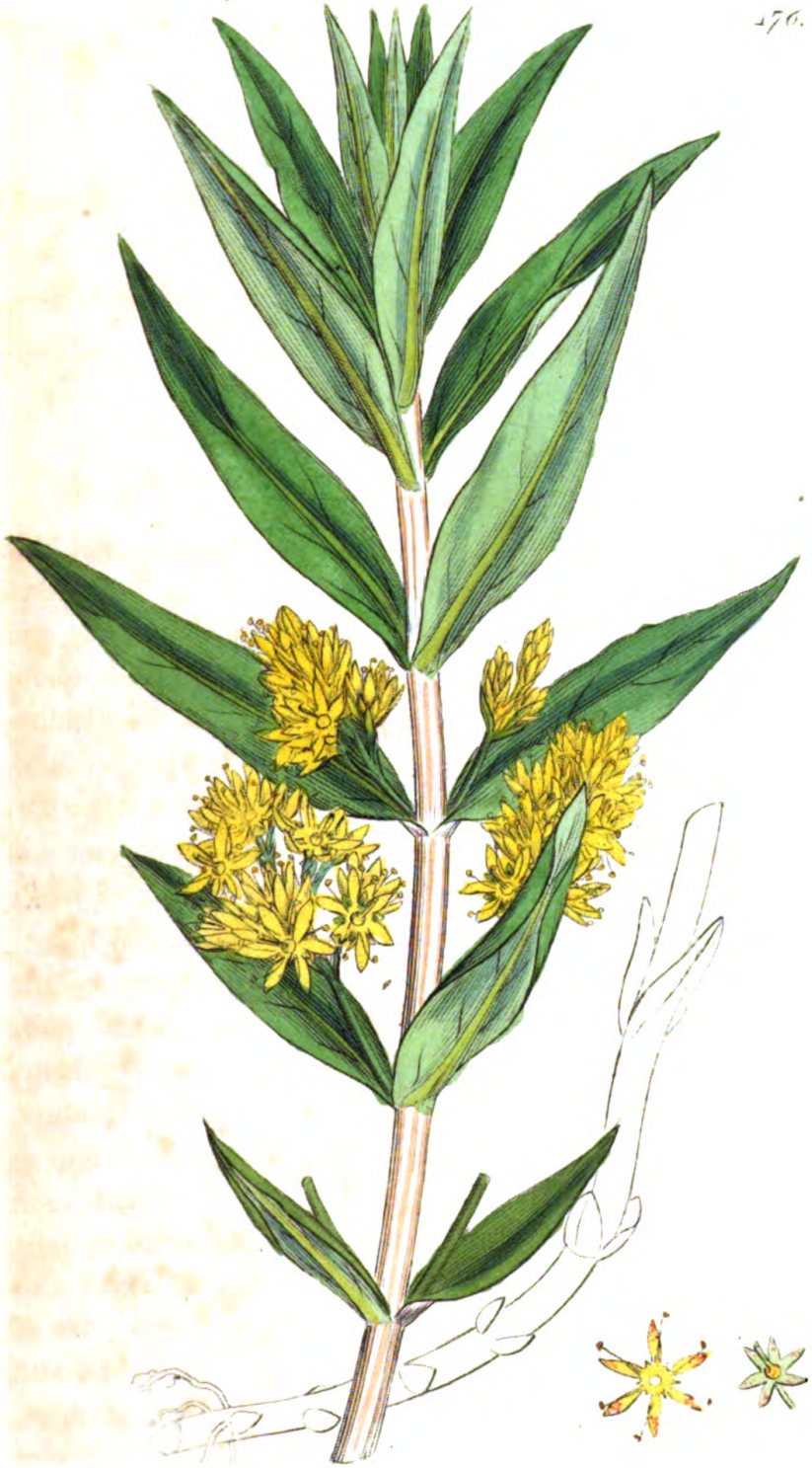
SPEC. CHAR. Flowers in lateral pedunculated cluſters.

SYN. Lyſimachia thyrſiflora. *Linn. Sp. Pl.* 209. *Hudſ. Fl. An.* 86. *With. Bot. Arr.* 209.

L. lutea, flore globoſo. *Raii Syn.* 283.

DESPAIRING of procuring recent wild ſpecimens of this very rare plant, we cannot refrain from exhibiting a figure of a cultivated one, which has been compared with wild ones, and found in no reſpect to differ. It grows in boggy places, about running ſtreams, and was found in Ray's time in the Eaſt Riding of Yorkſhire, as well as about King's Langley in Hertfordſhire. Dr. Smith ſaw, in the year 1781, ſpecimens gathered by Dr. White in a bog near Severus's hills at York; but the plant was then loſt, from the place having been drained, ſo that we really do not know a certain ſtation of this Lyſimachia at preſent.

It has a long root with whorls of fibres like many aquatic plants. The ſtem 10 or 20 inches high, erect, round, perfectly ſimple, ſlightly woolly, covered with oppoſite, lanceolate, entire leaves, which are pale beneath, and ſomewhat revolute. The bunches of flowers ſtand oppoſite, one from the boſom of each leaf about the middle of the ſtem, erect, pubeſcent, each of about ten flowers, on partial footſtalks, accompanied by ſolitary lanceolate bracteæ. The corolla is very deeply cloven into lanceolate ſegments, with a ſmall tooth between every two of them. The ſtamina are capillary, longer than the corolla, and oppoſite to its ſegments. Style ſimple. The calyx, germen, and tips of the corolla are prettily ſpotted with red. It flowers about midſummer, and may be eaſily known from all other Britiſh vegetables.



93.

LYSIMACHIA nemorum.

Yellow Pimpernel, or Wood Looſeſtrife.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* wheel-ſhaped. *Capſ.* globoſe, pointed, with 10 valves.

SPEC. CHAR. Leaves ovate, acute. Flowers ſolitary. Stem procumbent. Stamina ſmooth.

SYN. Lyſimachia nemorum. *Linn. Sp. Pl.* 211. *Hudſ.* 86. *With.* 237. *Relh. Suppl.* 3. 1. *Sibth.* 74. *Curt. Lond. faſc.* 5. *t.* 18.
Anagallis lutea. *Raii Syn.* 282.

THE pretty yellow Pimpernel of the Woods is a great ornament to moiſt ſhady groves, flowering from the end of May till September, though in the greateſt perfection and brilliancy about Midſummer. As the ſeaſon advances, its long trailing branches hang elegantly over broken ground or moſſy rocks, among little trickling rills, while its neat ſhining myrtle-like leaves are intermixed and entangled with tufted *Hypnums* or the ſmaller kinds of fern.

The roots are perennial. Stems procumbent or pendent, taking root from ſome of the lower joints, branched, ſquare, red and pellucid, leafy. Leaves oppoſite, on footſtalks, ovate, entire, veiny, rather ſucculent. Every part of the herb is ſmooth. Flowers on long, ſlender, ſolitary, axillary, ſimple, often twiſted, ſtalks. Calyx in 5 equal awl-ſhaped ſegments. Corolla ſpreading, divided about half way to the baſe, or farther, into 5 lobes. Filaments ſmooth, ſhorter than the corolla. Style a little club-ſhaped, with a ſimple blunt ſtigma. Capſule ſuperior, globoſe, of 1 cell, burſting into 10 valves, which often ſtick together in pairs or irregularly in this as in other ſpecies. Seeds ſeveral, roundiſh.

94.

LYSIMACHIA Nummularia.

Moneywort, or Creeping Looſeſtrife.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* wheel-ſhaped. *Capſ.* globoſe, pointed, with 10 valves.

SPEC. CHAR. Leaves ſomewhat heart-ſhaped. Flowers ſolitary. Stem creeping. Stamina glandular.

SYN. Lyſimachia Nummularia. *Linn. Sp. Pl.* 211. *Hudſ.* 87. *With.* 238. *Relh.* 84. *Sibth.* 74. *Curt. Lond. faſc.* 3. *t.* 14. *Dickſ. H. Sicc. faſc.* 12. 10.

Nummularia. *Raii Syn.* 283.

MONEYWORT, or Herb Twopence as it was formerly called, inhabits ſimilar places with the preceding ſpecies, or rather the banks of wet ditches, creeping over the black boggy ſoil of very moiſt meadows, or on the margins of ſhady rivulets, flowering copiouſly in June and July. Root perennial. Stems ſeveral, perfectly proſtrate and creeping, quadrangular but compreſſed, moſtly ſimple. Leaves much rounder, paler, and more undulated than in the laſt. Segments of the calyx ovate, pointed. Corolla pale lemon-coloured, divided almoſt to the baſe; when magnified it is found to be clothed with ſmall glands ſtanding on footſtalks, as are alſo the ſtamina. The antheræ are arrow-ſhaped. The ſtigma blunt, notched. The capſule is ſeldom perfected, nor are we able to figure it any more than Mr. Curtis.

The qualities of theſe two ſpecies of *Lyſimachia*, either in medicine or for agricultural purpoſes, are, we believe, altogether unimportant. Their taſte is herbaceous, with a little unpleaſant pungency or aſtringency.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95.

ANAGALLIS arvenſis.

Scarlet Pimpernel.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* wheel-ſhaped. *Capſ.* burſting all round. *Stamina* hairy.

SPEC. CHAR. Leaves ovate, dotted beneath. Stem procumbent.

SYN. Anagallis arvenſis. *Linn. Sp. Pl.* 211. *Hudſ.* 87. *With.* 238. *Relh.* 85. *Sibth.* 74. *Curt. Lond. faſc.* 1. *t.* 12. *Dickſ. H. Sicc. faſc.* 12. 11.

A. flore phœniceo. *Raii Syn.* 282.

A COMMON weed on ſandy or gravelly ſoils in all kinds of cultivated land, flowering all ſummer long; yet, as Dr. Withering obſerves, "every part of it is ſingularly beautiful, and will amply repay the trouble of a minute examination."

Root ſmall, annual. Stem procumbent, much branched at the bottom, ſquare, ſmooth, leafy. Leaves oppoſite, rarely in fours, ſeſſile, ovate, entire, ſmooth, with one rib and ſeveral longitudinal veins, dotted all over the under ſide with purple. Flowers axillary, ſolitary, on ſtalks longer than the leaves. Calyx-leaves lanceolate, with a membranous edge, very ſharp-pointed. Corolla in 5 deep-cut roundiſh ſegments, minutely crenate or ſomewhat fringed, of a vivid ſcarlet with purple at the baſe. Stamina purple, fringed with hairs of the ſame colour. Antheræ heart-ſhaped, yellow. Stigma blunt, notched. Capſule globoſe, greeniſh, ſemitranſparent, burſting in two equal hemiſpheres. Seeds many, angular, thickly crowded into a globe.

The blue Pimpernel is ſuppoſed to be a permanent variety of this. We have as yet found no ſpecific difference. Ray mentions a white one.

This pretty flower opens only in fine weather, and infallibly cloſes againſt rain; hence it is called the poor man's weather-glaſs, and it is one of the moſt certain that can be conſulted, as we have often experienced.

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96.

ANAGALLIS cærulea.

Blue Pimpernel.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* wheel-shaped. *Caps.* bursting all round. *Stamina* hairy.

SPEC. CHAR. Leaves ovate inclining to lanceolate, dotted beneath. Stem upright. Corolla strongly crenate.

SYN. Anagallis cærulea. *Abbot.* 46.

A. arvensis. *Sm. Fl. Brit.* 230, γ. *Huds.* 87, δ. *With.* 238, 2. *Hull.* 49, 2. *Relh.* 84, β. *Sibth.* 75, β.

A. fœmina. *Raii Syn.* 282.

WE are induced to publish this plant on account of its beauty and rarity, and even to allow it the rank of a species at the persuasion of the Rev. G. R. Leathes, added to the authority of Dr. Abbot and several other botanists. Mr. Leathes sent our specimens, along with the much rarer white-flowered variety of *A. arvensis*, from fields at Great Saxam, Suffolk. He remarks that "the stem of the *cærulea* is invariably erect, leaves narrower than in *A. arvensis*, *t.* 529, the corolla much smaller, and more deeply crenate." Our *t.* 529 incorrectly shows this part fringed rather than crenate. Haller notices some of these marks, and adds as a more material one that the calyx-leaves are awl-shaped, which we cannot find more remarkable in this than the other, and Haller has omitted this species (which is *n.* 626 of his great work) in his *Nomenclator*, as if he doubted its permanency, though such an omission may have arisen from accident.

A. cærulea flowers in July, about the same time as the scarlet kind. We have received it from North Luffenham, near Stamford, by favour of G. Ainslie, Esq., and from various other places. The root is annual. *A. Monelli* is very distinct from this, being perennial, with broad leaves, very long flower-stalks, large scarcely crenate flowers, and much more awl-shaped calyx-leaves. Perhaps Haller had examined this species in a garden, and confounded it with ours.

1823

Dec. 1st 07. Published by Ja.s Sowerby, London

J

97.

ANAGALLIS tenella.

Bog Pimpernel.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* wheel-ſhaped. *Capſ.* burſting all round. *Stamina* hairy.

SPEC. CHAR. Leaves roundiſh, ſomewhat pointed, on foot-ſtalks. Stem creeping. Stigma acute.

SYN. Anagallis tenella. *Linn. Syſt. Veg. ed.* 14. 196. *With.* 239. *Relh.* 86. *Sibth.* 75. *Curt. Lond. faſc.* 3. *t.* 15.

Lyſimachia tenella. *Linn. Sp. Pl.* 211. *Hudſ.* 87. *Dickſ. H. Sicc. faſc.* 2. 12.

Nummularia minor, flore purpuraſcente. *Raii Syn.* 283.

THIS moſt elegant little plant was ſent us from Staffordſhire by the Rev. T. Giſborne. It is not unfrequent on wet bogs throughout theſe kingdoms, flowering in July and Auguſt.

Root perennial. Stems ſpreading in every direction cloſe to the ground, and taking root as they advance; they are ſlender, angular, ſmooth, clothed with oppoſite, ſmall, roundiſh, or ovate, entire, ſmooth leaves, on ſhortiſh foot-ſtalks. Flowers erect, on very long, axillary, ſolitary ſtalks. Calyx-leaves lanceolate, acute. Corolla of an elegant roſe-colour, deeply divided, but with a tubular baſe, ſo as to be rather funnel-ſhaped. Stamina clothed with numerous, curiouſly jointed, hairs. Antheræ roundiſh. Style long, tapering into a ſimple acute ſtigma. Capſule cut round, not often perfected. Linnæus had not ſeen the fruit when, in his *Species Plantarum*, he reduced this plant to the genus *Lyſimachia*, with which it agrees indeed in habit, but the ſtamina, capſule and ſeeds are thoſe of an *Anagallis*. It bears a very conſiderable affinity to the *Centunculus*, but the ſtamina of that are ſmooth.

98.

AZALEA procumbens.

Trailing Azalea.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* bell-ſhaped. *Stamina* regular, inſerted into the receptacle. *Capſ.* ſuperior, 5-celled.

SPEC. CHAR. Branches ſpreading and procumbent. Leaves oppoſite, revolute, very ſmooth.

SYN. Azalea procumbens. *Linn. Sp. Pl.* 215. *Sm. Fl. Brit.* 231. *Hudſ.* 88. *With.* 239. *Hull.* 50. *Lightf.* 139. *Dickſ. H. Sicc. faſc.* 12. 12.

THE heathy ſummits of all the highland mountains of Scotland are clothed with a profuſion of this elegant little ſhrub. We are not certain whether it was firſt obſerved by the Rev. Mr. Stuart of Luſs, or by any of Dr. Hope's travelling pupils, whoſe labours ſo eminently contributed to enrich the *Flora Scotica.* Our ſpecimens were gathered by Mr. Mackay and Mr. G. Don.

The roots are woody, branched and creeping, running deep into the black moory ſoil among the fiſſures of rocks. Stems alſo much branched, procumbent, buried in moſs, intricate and tufted, taking root occaſionally at their baſe, clothed with numerous, oppoſite, ſmall, elliptical, entire, revolute leaves, very ſmooth ſhining and evergreen, ſtanding on ſhort broad footſtalks, and marked above with a longitudinal furrow, beneath by a projecting nerve. The footſtalks are often fringed. Flower-ſtalks forming a ſort of terminal umbel, each having a concave bractea at its baſe, and bearing one flower. Calyx purpliſh, ſmooth, regularly five-cleft. Corolla roſe-coloured, regular, bell-ſhaped, with a ſpreading five-cleft border. Stamina equal and regular, ſhorter than the corolla. Antheræ violet. Style ſhort, ſtraight. Stigma capitate. Capſule of 5 valves, whoſe inflexed margins divide it into 5 cells containing many ſeeds.

The flowers appear early in July. We believe they are inodorous. The capſules ripen in Auguſt.

Spon. Nat. Drawn by J. Sowerby, Lond.

99.

CONVOLVULUS arvensis.

Small Bind-weed.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* bell-shaped, plaited. *Stigmas* 2. *Capsule* with 2 cells, and 2 seeds in each.

SPEC. CHAR. Leaves arrow-shaped, the lobes acute. Flowers generally solitary. Bracteæ minute, remote from the flower.

SYN. Convolvulus arvensis. *Linn. Sp. Pl.* 218. *Hudf. Fl. An.* 88. *With. Bot. Arr.* 212. *Relb. Cant.* 86. *Sibth. Ox.* 76. *Curt. Lond. Fasc.* 2. *t.* 13. C. minor vulgaris. *Raii Syn.* 275.

BUT too common for the farmer and gardener in fields and all kinds of cultivated land, especially in a gravelly soil, flowering copiously from May to the end of July.

The root is perennial, running so very deep into the ground, and growing so fast, that it is next to impossible to destroy it. Stems very numerous, long, climbing and twining round every thing in their way, angular, slightly downy, not much branched except at the very bottom, clothed with alternate arrow-shaped leaves on downy footstalks; the leaves are very various in breadth, entire, except one tooth sometimes near the base, and a little downy. Stipulæ none. Flowers from the bosom of each leaf, solitary, on long (generally undivided) angular stalks swelling upwards, with a pair of minute bracteæ about their middle, which are downy, narrow, rather lanceolate than subulate, and sometimes even obovate. Flowers very beautiful, rose-coloured, varying with lighter or deeper shades and lines of crimson, the plaits yellowish. They generally close before rain; in dry warm weather they have a very sweet almond-like smell. Calyx with a membranous edge, the leaves obtuse, lying over each other. Antheræ red or white. Style not very long; stigmas nearly equal to it in length, linear, distant. The seeds happily are rarely perfected.

There is a singular variety mentioned by Ray, with a smaller flower, deeply divided into 5 segments, and of a darker red than the common kind. Dr. Smith has observed this in a hedge out of St. Giles's gates, Norwich.


March 1 1795 Published by J. Sowerby, London

100.

CONVOLVULUS sepium.

Great Bind-weed.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* bell-shaped, plaited. *Stigmas* 2. *Capsule* with 2 cells, and 2 seeds in each.

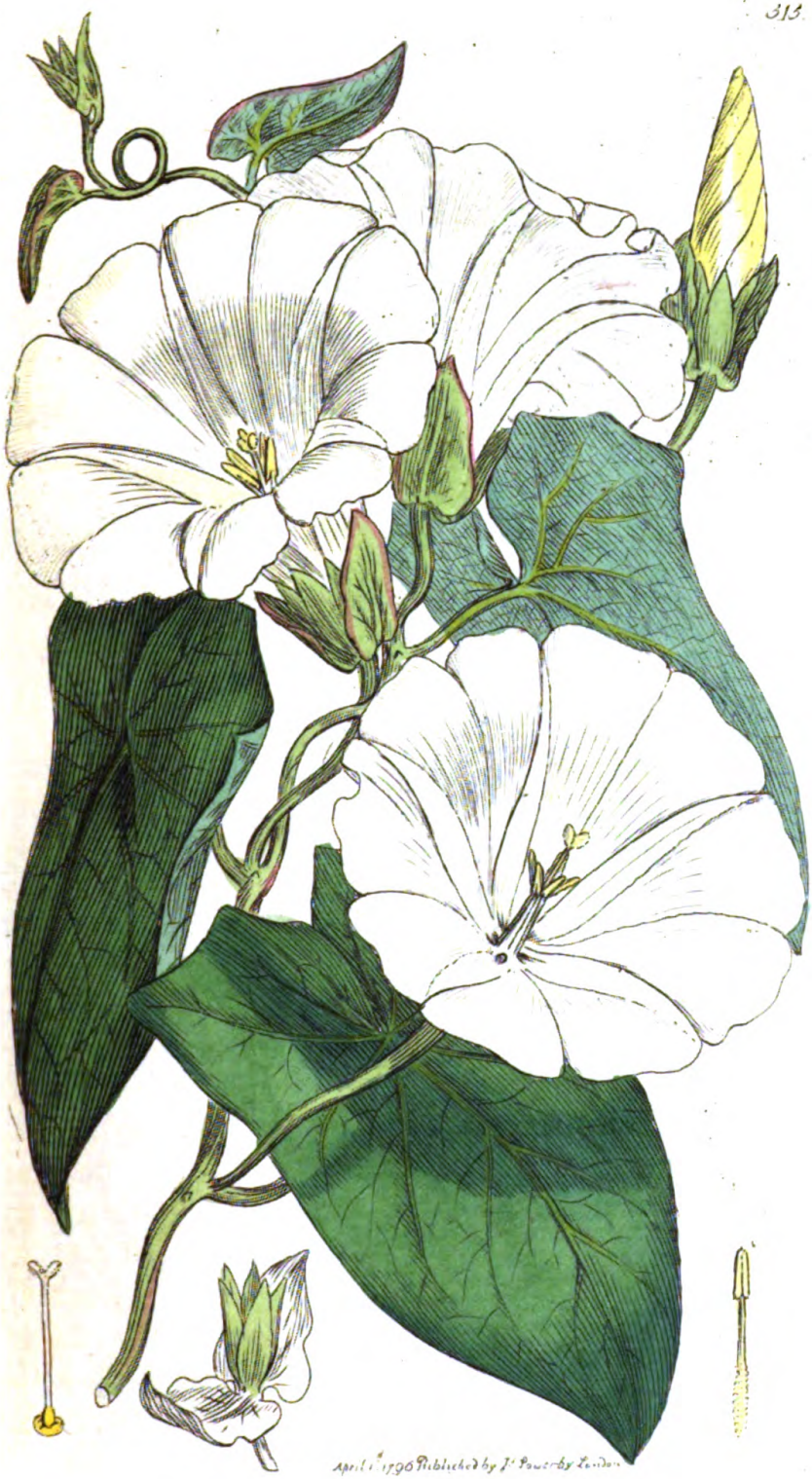
SPEC. CHAR. Leaves arrow-shaped, the posterior lobes lopped. Flower-stalks square, single-flowered. Bracteæ heart-shaped, close to the flower.

SYN. Convolvulus sepium. *Linn. Sp. Pl.* 218. *Huds. Fl. An.* 88. *With. Bot. Arr.* 213. *Relh. Cant.* 87. *Sibth. Ox.* 76. *Curt. Lond. fasc.* 1. *t.* 13.
C. major. *Raii Syn.* 275.

THIS, one of the most elegant and graceful of all our wild flowers, is equally common with the preceding species, though its place of growth be different. It inhabits moist hedges, twining about willows and reeds, and decorating them with its very conspicuous flowers throughout July and August.

The roots are long, creeping, and perennial, a little fleshy. Stems very long, twining, somewhat angular, smooth, not much branched. Leaves alternate, on smooth footstalks about half their own length, dependent, smooth, of a swelling arrow-shape, with the angles at the base abruptly cut off. Stipulæ none. Flowers solitary, on axillary, undivided, square, curved stalks, with a pair of heart-shaped, red-bordered bracteæ, close to the flower and enfolding the proper calyx, which is smaller, of 5 lanceolate leaves. Corolla generally white, but sometimes (as Dillenius observes in Ray's Synopsis) of an uniform flesh or rose-colour. Antheræ cream-coloured. Stigmas short and thick. Seeds scarcely ever perfected.

An extract of the herb is said to be a violent purge, like Scammony.



April 1. 1798 Published by J. Power by London

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101.

CONVOLVULUS Soldanella.

Sea Bind-weed.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* bell-shaped, plaited. *Stigmas* 2. *Capsule* with 2 cells, and 2 seeds in each.

SPEC. CHAR. Leaves kidney-shaped. Flower-stalks single-flowered, with membranous angles.

SYN. Convolvulus Soldanella. *Linn. Sp. Pl.* 226. *Huds. Fl. An.* 89. *With. Bot. Arr.* 214.

C. maritimus, Soldanella dictus. *Raii Syn.* 276.

A NATIVE of our sandy sea shores, as at Yarmouth, Lowestoft, &c. The Rev. Mr. Baker and A. B. Lambert, Esq. sent it from Weymouth. The beautiful flowers may be found in July, not much later; they expand only in fine weather and in the early part of the day.

Root long, creeping, perennial. Stems procumbent, spreading in a circular form, 5 or 6 inches long, but little branched, angular, purplish. Leaves on longish foot-stalks, small, dark green, heart- or kidney-shaped, entire, sometimes a little angular. The whole herb is smooth and succulent. Flowers few and large, axillary, solitary, on long flower-stalks thickened upwards, and with 3 or 4 dilated membranous angles. Bracteæ large, ovate, close to the flower. Calyx-leaves large, ovate. Corolla with five acute angles, rose-coloured, the plaits yellowish. Antheræ yellow. Stigmas small and sharp. Capsule four-lobed.

April 1st 1796 Published by Jn Sowerby London

102.

POLEMONIUM cæruleum.

Jacob's Ladder.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* in five ſegments. *Stamina* ſtanding on five valves which cloſe the tube. *Stigma* three-cleft. *Capſule* three-celled, ſuperior.

SPEC. CHAR. Leaves pinnated. Flowers erect. Calyx longer than the tube of the corolla.

SYN. Polemonium cæruleum. *Linn. Sp. Pl.* 230. *Hudſ. Fl. An.* 89. *With. Bot. Arr.* 215.

P. vulgare cæruleum. *Raii Syn.* 288.

THIS, although very common in gardens, is one of the plants moſt rarely found wild in this country. Botaniſts of the laſt century gathered it in the romantic and mountainous country about Malham Cove, in the north of Yorkſhire, where it ſtill grows, as well as in ſome parts of Derbyſhire (*Withering*).

A variety with white flowers is very common, ſometimes even from the ſame root as the blue ones (*Linnæus*); the faint purpliſh blue ſeen in the flowers of this plant, being that which of all colours is moſt apt to vary to white.

Its ſtems riſe to the height of eighteen or twenty inches, ſeldom more. The root is fibrous and perennial.

This plant is abſurdly enough reckoned among the Valerians by the old authors, with which it has not the leaſt affinity either in appearance, botanical characters, ſenſible qualities, or medical virtues.

F.A. Wendly del. et sc. 1791

CAMPANULA rotundifolia.

Round-leaved Bell-flower.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* bell-ſhaped, cloſed at the bottom by valves bearing the ſtamina. *Stigma* 3-cleft. *Capſule* inferior, opening by lateral pores.

SPEC. CHAR. Radical leaves kidney-ſhaped: upper ones linear.

SYN. Campanula rotundifolia. *Linn. Sp. Pl.* 232. *Sm. Fl. Brit.* 235. *Hudſ.* 95. *With.* 241. *Hull.* 52. *Relh.* 93. *Sibth.* 80. *Abbot.* 48. *Curt. Lond. faſc.* 4. *t.* 21. *Raii Syn.* 277.

YOUNG botaniſts are not unfrequently puzzled with the name of this *Campanula*, if they find it (as is frequently the caſe) with only the linear leaves remaining; and indeed when it grows on a rich ſoil among buſhes, the round leaves ſoon diſappear, and a profuſion of long narrow ones only clothes the ſtem. It however teaches an uſeful leſſon, that we ought never to decide upon Nature's works from ill-choſen or ſolitary ſpecimens, or haſty obſervations.

It is one of our prettieſt wild flowers, found every where on heaths, mouldering walls, and buſhy borders of fields, flowering from July to the end of the ſeaſon. The root is branched and perennial. Herbage ſmooth, dark green. Stems upright, branched. Lower leaves on long footſtalks, kidney or heart-ſhaped, ſerrated; thoſe above them ovate or oblong; the reſt linear, ſeſſile, moſtly entire. Flower-ſtalks panicled, ſlender, bracteated. Flowers drooping, quivering to every breeze, ſky-blue, rarely white. Teeth of the calyx entire, ſpreading; in the alpine variety erect, but we can ſcarcely find that or any other mark hitherto obſerved ſufficient to conſtitute it a different ſpecies.

We ſuſpect poets ſometimes take this for the hare-bell. We have ſomewhere read of

"The trembling rye-graſs and the hare-bell blue"

growing on "mouldering turrets," which could ſcarcely be the real hare-bell, (ſee our *t.* 377); and probably the ſuppoſed rye-graſs might rather be *Bromus ſterilis*.

April 2. 1801 Published by J. Sowerby Strand

CAMPANULA patula.

Spreading Bell-flower.

PENTANDRIA Monogynia.

GEN. CHAR. *Corolla* bell-ſhaped, cloſed at the bottom by valves bearing the ſtamina. *Stigma* three-cleft. *Capſule* inferior, opening by lateral pores.

SPEC. CHAR. Leaves ſtraight; the radical ones nearly oval. Panicle ſpreading. Calyx denticulated.

SYN. Campanula patula. *Linn. Sp. Pl.* 232. *Hudſ. Fl. An.* 95. *With. Bot. Arr.* 216.

ONE of the rareſt Engliſh plants, gathered at Cobham in Surry, in the park of the late Lord Ligonier, by Dr. Smith. Mr. Woodward found it in the borders of Buddon wood, Leiceſterſhire; not in the wood itſelf, as has been commonly reported.

The root is biennial, ſlender, and white. Radical leaves growing many together, ſpreading, ſmall, roundiſh, or oval, ſoon turning yellowiſh; thoſe on the ſtem lanceolate, ſtraight, and even; not undulated, as in Campanula Rapunculus. The panicle is alſo much more ſpreading than in that ſpecies, and the bloſſoms fewer. The flowers appear in July; and as the herb, though milky and bitter, is frequently eaten down by cattle, ſide branches ſpring up, and flower till the winter froſts deſtroy the root. The corolla is of an elegant form, tapering at the baſe, but ſpreading in the rim. This ſpecies has no kind of affinity with the common C. rotundifolia; ſome of whoſe varieties, when their radical leaves are loſt, have been occaſionally miſtaken for it. It eſcaped the notice of Ray, but is admirably figured by Dillenius in his Hortus Elthamenſis, tab. lviii. f. 68.

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105.

CAMPANULA Rapunculus.

Rampion Bell-flower.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* bell-shaped, closed at the bottom by valves bearing the stamina. *Stigma* 3-cleft. *Capsule* inferior, opening by lateral pores.

SPEC. CHAR. Leaves undulated; the radical ones lanceolate inclining to oval. Panicle compact.

SYN. Campanula Rapunculus. *Linn. Sp. Pl.* 232. *Huds. Fl. An.* 95. *With. Bot. Arr.* 217.

Rapunculus esculentus. *Raii Syn.* 277.

A NATIVE of banks and borders of fields in some parts of England, more particularly Surrey and Kent. It is an old kitchen-garden vegetable, the root having been formerly eaten either raw in sallads or boiled. When recent it is the size and shape of a radish, but white, milky, sweetish with some pungency and bitterness. It is now out of use.

Root biennial. Stem erect, angular, rough (especially on the angles) with deflexed white hairs, the upper part being less rough, panicled and sometimes branched. Leaves roughish, undulated and toothed; the lowest somewhat elliptical, the others lanceolate; the floral leaves very narrow. Panicle compact, upright, its side branches bearing from one to three or more flowers. Germen in our specimen smooth, in those of Linnæus hairy, the hairs often inflated and becoming globular; teeth of the calyx very long and taper, generally entire, but sometimes bearing one small tooth on each side near the base, though they are by no means so denticulated as in *C. patula* (tab. 42), neither is the corolla taper at the base, as in that species, but inflated. The flowers appear in July and August.

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106.

CAMPANULA latifolia.

Giant Bell-flower.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* bell-shaped, closed at the bottom by valves bearing the stamina. *Stigma* 3-cleft. *Caps.* inferior, opening by lateral pores.

SPEC. CHAR. Leaves ovato-lanceolate. Stem unbranched, round. Flowers solitary, pedunculated. Fruit drooping.

SYN. Campanula latifolia. *Linn. Sp. Pl.* 233. *Huds. Fl. An.* 96. *With. Bot. Arr.* 218. *Relh. Cant. Suppl.* 2. 10. *Lightf. Scot.* 141.

C. maxima foliis latissimis. *Raii Syn.* 276.

IN the north of England, and in Scotland according to Mr. Lightfoot, this species of *Campanula* is not unfrequent, though rare in the southern counties. It grows in shady moist places, about the bases of mountains. Mr. Rose observed it in Forehoe wood near Kimberley, Norfolk. Our wild specimen grew near Dunstable, where it was first remarked and ascertained by our obliging correspondent the Rev. Mr. Abbot, for many botanists overlook this plant for *C. Trachelium*.

Root perennial, very milky as well as the whole herb. Stem 3 or 4 feet high, erect, simple, cylindrical or very slightly angular, leafy. Leaves alternate, nearly sessile, large, roughish, paler beneath, doubly serrated. From the bosoms of the upper ones arise solitary naked flower-stalks, scarcely ever bearing more than one flower; we have not found the pair of "leaf-scales," or rather bracteæ, mentioned in the Bot. Arr. Calyx smooth, serrated. Corolla large and handsome. The antheræ are not large, but afford plenty of pollen, which copiously adheres to the style.

This is sometimes cultivated in gardens. It flowers in August, and is rather ornamental; occasionally varying to white or pale rose-colour.

Feb.1 1796 Published by J. Phillips, London.

107.

CAMPANULA rapunculoides.

Creeping Bell-flower.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* bell-shaped, closed at the bottom by valves bearing the stamina. *Stigma* 3-cleft. *Capsule* inferior, opening by lateral pores.

SPEC. CHAR. Leaves heart-shaped; the uppermost lanceolate. Stem branched. Flowers scattered, drooping towards one side. Calyx reflexed.

SYN. Campanula rapunculoides. *Linn. Sp. Pl.* 234. *Sm. Fl. Brit.* 237.

C. repens, flore minore cæruleo. *Bauh. Hist. v.* 2. 806.

C. hortensis, Rapunculi radice repente. *Moris. Hist. v.* 2. 460. *sect.* 5. *t.* 3. *f.* 32.

IN the herbarium of Buddle, preserved in the British Museum, are specimens of this *Campanula* said to have been gathered in some woods in Oxfordshire, among yew trees. Dr. Skrimshire having found the same at Blair in Scotland, apparently wild, confirms it to us as a British plant. It may in other places have been overlooked as *C. Trachelium*, though essentially different in many respects. We have delineated a garden specimen, not having seen a recent wild one.

This plant flowers in July and August, and is perennial, increasing considerably by its creeping roots. The radical leaves much resemble those of violets, and are heart-shaped, crenate, roughish, on long footstalks. The lower stem-leaves are narrower, and have shorter stalks; the upper grow gradually more lanceolate and sessile. The stem is about a foot high, more or less branched, angular, rough with deflexed hairs. Flowers pendulous, on short simple solitary stalks, from the bosoms of the small upper leaves. Calyx rough; its segments reflexed, entire. Corolla of a deep blue, hairy, mostly larger than that of *C. Rapunculus*, *t.* 283.

Oct.r 1 1804 Published by Jas. Sowerby, London.

CAMPANULA glomerata.

Cluſtered Bell-flower.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* bell-ſhaped, cloſed at the bottom by valves bearing the ſtamina. *Stigma* three-cleft. *Capſule* inferior, opening by lateral pores.

SPEC. CHAR. Stem angular, ſimple. Flowers ſeſſile, moſt of them in a terminal cluſter. Leaves ovate.

SYN. Campanula glomerata. *Linn. Sp. Pl.* 235. *Hudſ. Fl. An.* 96. *With. Bot. Arr.* 219. *Relh. Cant.* 94.

C. pratenſis, flore conglomerato. *Raii Syn.* 277.

A NATIVE of dry chalky paſtures, as Gogmagog hills, Newmarket heath, the neighbourhood of Marham in Norfolk, Bury in Suffolk, and various parts of Yorkſhire, Surrey, and other chalk countries, which its conſpicuous flowers adorn very copiouſly in the months of July and Auguſt.

The ſtem is never (we believe) branched, unleſs it happens to have been eaten off by cattle when young; it is erect, angular, hairy, from ſix to eighteen inches high. Leaves rough, pale but not hoary, beneath; the calyx, and even corolla, are ſometimes hairy, and the latter occaſionally varies from purple to white. Root perennial, with long fibres.

This plant is no contemptible ornament for rock-work, or flower-borders in dry ground, where little elſe will grow. A moiſt or rich ſoil makes the herb too luxuriant, the flowers pale and degenerate, taking awa its alpine habit.

V

CAMPANULA Trachelium.

Nettle-leaved Bell-flower.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* bell-ſhaped, cloſed at the bottom by valves bearing the ſtamina. *Stigma* three-cleft. *Capſule* inferior, opening by lateral pores.

SPEC. CHAR. Stem angular. Leaves on foot-ſtalks. Calyx fringed. Flower-ſtalks three-cleft.

SYN. Campanula Trachelium. *Linn. Sp. Pl.* 235. *Hudſ. Fl. An.* 96. *With. Bot. Arr.* 218. *Relh. Cantab.* 94.

Campanula vulgatior foliis Urticæ, vel major et aſperior. *Raii Syn.* 276.

FOUND in woods and hedges in a gravelly ſoil in various parts of Great Britain. The root is perennial; and the flowers, which are occaſionally found white, appear in the middle of ſummer. The ſtem is from two to three feet high, and the harſh rough leaves look very like thoſe of a nettle.

Of all our Britiſh ſpecies of Campanula, except the *rotundifolia*, this is the moſt common: the reſt may be reckoned among the rarer plants.

Fig. 1. Repreſents a ſtamen on its valve, ſeparate.

— 2. Seed-veſſel.

Edwards del. March 1. 1791

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CAMPANULA hybrida.

Corn Bell-flower.

PENTANDRIA Monogynia.

GEN. CHAR. Corolla bell-shaped, closed at the bottom by valves bearing the stamina. *Stigma* 3-cleft. Capsule inferior, opening by lateral pores.

SPEC. CHAR. Stem often branched from the base. Leaves roughish, crenate and undulated. Corolla rather shorter than the calyx. Capsule prismatic.

SYN. Campanula hybrida. *Linn. Sp. Pl.* 239. *Huds. Fl. Ang.* 97. *With. Bot. Arr.* 219. *Relh. Cant.* 95. *Sm. Eng. Bot.* 81.

C. arvensis erecta, vel Speculum Veneris minus. *Raj. Syn.* 278.

SENT to the Rev. Mr. Hemsted from Cambridgeshire. It is found also in Norfolk and Suffolk, in corn-fields on a chalky soil, but by no means frequently, flowering towards autumn.

Root small, fibrous and annual. Stem nearly erect, with a tendency to branch more or less at the base as well as in the upper part, very various in luxuriance, a little zigzag, angular, roughish, leafy. Leaves alternate, undulated, sparingly crenate, rough, especially on the margin. Flowers terminal, solitary, sessile among a few leaves. Germen prismatic, long, roughish. Calyx-leaves about half as long as the germen, lanceolate, revolute, hairy. Corolla very small, rotate, half as long as the calyx-leaves, seldom fully expanded, pale purple. Style and stigma club-shaped, hairy.

Such is the description of our plant, which will not be found to accord exactly with what Linnæus has said. His remarks however agree with his original specimen now before us, which is apparently a cultivated one, with very long linear calyx-leaves, and a very small corolla. The stem too is upright and smooth. From the consideration of many wild as well as cultivated specimens of *C. Speculum* and *hybrida*, we are persuaded they are varieties of each other, and that the calyx-leaves in both are very variable in length and breadth, as well as the corolla in size.

CAMPANULA hederacea.

Ivy-leaved Bell-flower.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* bell-ſhaped, cloſed at the bottom by valves bearing the ſtamina. *Stigma* three-cleft. *Capſule* inferior, opening by lateral pores.

SPEC. CHAR. Leaves heart-ſhaped, five-lobed, on footſtalks, ſmooth. Stem flaccid.

SYN. Campanula hederacea. *Linn. Sp. Pl.* 240. *Hudſ. Fl. An.* 97. *With. Bot. Arr.* 220. *Dickſ. Dried Plants*, 56.

C. Cymbalariæ foliis. *Raii Syn.* 277.

FEW plants exceed this Campanula in elegance, and yet it has never had the fortune to be well figured. The old authors repreſent its corolla very erroneouſly, and Flo. Dan. t. 330, is one of the worſt figures in every reſpect that can be. Our ſpecimens were collected on a bog near High-beech, Epping Foreſt, by Mr. Edward Forſter, junior. This ſpecies was never before found ſo near London, though not rare in moiſt woods in the midland and ſouthern counties, and very plentiful in Cornwall, from whence Francis Borone brought it to Mr. Dickſon for his Faſciculi of Dried Plants. Though a bog plant, it is capable of cultivation, and is almoſt naturalized under a magnificent ſhrubbery of Kalmias in Kew garden. It flowers throughout the ſummer.

Its roots are perennial, fibrous, and ſlender, ſprouting from various parts of the procumbent ſtems, which are matted together, and ſpread very far. The whole herb is pale, tender, and delicate, ſmooth, except a very few ſcattered hairs occaſionally found on ſome of the leaves. Flowers ſolitary, on long terminal footſtalks, a little drooping, fugacious, and ſoon withering after they are gathered. Segments of the calyx pointed and entire.

Linnæus's ſuſpicion of this being a hybrid plant (Am. Acad. v. 3. 55) is unwarrantable. He ſuppoſes it may have been produced from ſome Campanula impregnated by Veronica hederifolia, and gives for reaſon that its leaves are quite foreign to thoſe of others of its genus; yet ſurely they much more reſemble the radical leaves of C. rotundifolia than thoſe of this Veronica.

112.

PHYTEUMA orbicularis.

Round-headed Rampion.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* wheel-ſhaped, in five linear ſegments. *Stigma* three-cleft. *Capſule* three-celled.

SPEC. CHAR. Flowers in a roundiſh head. Leaves ſerrated; the radical ones heart-ſhaped.

SYN. Phyteuma orbicularis. *Linn. Sp. Pl.* 242. *Hudſ. Fl. An.* 97. *With. Bot. Arr.* 220.
Rapunculus corniculatus montanus. *Raii Syn.* 278.

WE are obliged to Thomas Cornwall, Eſq. of Chalk Park Surrey for this ſpecimen, gathered wild in that county, in ſeveral parts of which, as well as in Suſſex and Hampſhire, this rare plant is found abundantly on a chalky ſoil, and flowers about July or Auguſt. It is one of our more elegant and ſingularly conſtructed productions, and may be cultivated without trouble in a dry gravelly or calcareous ſituation, though we muſt own the rich blue of its flower-buds is moſt conſpicuous in a wild ſtate.

The long woody root branches near the ſurface of the ground into ſeveral diviſions, each bearing a denſe tuft of petiolated, ſmooth, veiny, ſerrated, or rather crenated, leaves, the firſt of which are heart-ſhaped, the reſt ovato-lanceolate, and from the centre of which ariſes a ſimple erect ſtem, ſlightly angular, and clothed with alternate lanceolate leaves, the uppermoſt of them very acute, and ſomewhat recurved. A ſingle round head of flowers ſtands erect on a few ovate, acute, ciliated bracteæ. The parts of fructification agree in ſtructure with the genus of Campanula, except that the corolla is divided to the very baſe, into five linear ſpreading ſegments, which in the bud cohere together, forming a curved horn, and ſeparating firſt at their lower part. Every part of the flower remains permanent, though faded, till the ſeeds are diſperſed, or longer. The herb is milky, but not acrid.

113.

JASIONE montana.

Sheep's-bit, or Sheep's Scabious.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* wheel-ſhaped, deeply divided into 5 linear ſegments. *Stigma* club-ſhaped, notched. *Antheræ* united at the baſe. *Capſ.* inferior, imperfectly 2-celled, burſting at the top.

SPEC. CHAR. . . . .

SYN. Jaſione montana. *Linn. Sp. Pl.* 1317. *Sm. Fl. Brit.* 241. *Hudſ.* 377. *With.* 247. *Hull.* 190. *Relh.* 328. *Sibth.* 85. *Abbot.* 189. *Curt. Lond. faſc.* 4. *t.* 58.

Rapunculus Scabioſæ capitulo cæruleo. *Raii Syn.* 278.

THE pretty blue flowers of the Sheep's Scabious are conſpicuous in dry ſandy fields and paſtures in the middle of ſummer, and in autumn the bladdery little capſules remain ſome time after their ſeeds are ſcattered. It has obtained the name of Scabious from its reſemblance to the genus properly ſo called, a reſemblance which is merely external, for the *Jaſione* is next akin to *Lobelia*, *Campanula* and *Phyteuma* in qualities and botanical characters, being indeed diſtinguiſhed from the latter only by the coheſion of its antheræ, and by the fruit being but imperfectly 2-celled, the partitions not reaching to the central column as in all others of this natural order.

The root is tapering, a little woody though annual. Stems ſeveral, ſpreading, ſcarcely a foot high, leafy, roundiſh, rough, branched above. Leaves oblong, blunt, waved, entire, rough; thoſe on the ſtem alternate. Flowers blue, forming hemiſpherical heads, each of which ſtands on a permanent common calyx of many leaves; but every flower has its own partial ſtalk, and a five-toothed ſuperior calyx. Dr. Perſoon has obſerved (ſee Hull) that the central flowers only have fertile *antheræ*, with barren club-ſhaped *ſtigmata*, while the flowers of the circumference have barren *antheræ*, with proper cloven *ſtigmata*, and that theſe alone ripen ſeed. It is certain the central flowers with us are often abortive, and the *ſtigmata* more or leſs club-ſhaped, but always notched in ſome degree, nor do we ſee either kind of ſtigma ſtrictly confined to any particular ſet of flowers.

May 1. 1801. Published by Jas. Sowerby, London.

[illegible]

LOBELIA Dortmanna.

Water Lobelia.

LOBELIA *Monogynia.*

Gen. Char. Cal. perianth. [illegible] of one petal, irregular. [illegible] anther. with 2 or 3 cells.

Spec. Char. Leaves linear, 2 celled, entire. Stem [illegible].

Syn. Lobelia Dortmanna. *Linn. Sp. Pl.* 1318. *Hudf. Fl. Ang.* [illegible]. *Wall. Bot. Arv.* 930. *Lightf. Fl. Scot.* [illegible].

Lobelia aquatica. *Ger. em.* 105. Dortmanni. *Raii syn.* [illegible].

THE beautiful lakes of Westmoreland and Cumberland abound with this elegant and singular plant. Their gravelly bottoms are generally covered with thick tufts of its leaves, the flowering top of the stem being all that rises above the water; so that in latest floods it is sometimes entirely overflowed, not having, like some vegetables, the means of accommodating itself to such sudden changes, either by a more or less inclined position, or a spiral structure. Dr. Woodville favoured us with this recent specimen from Keswick Lake. The plant grows also in Wales and Scotland, flowering in July.

Root of many simple whitish fibres, perennial. Leaves almost wholly radical, linear, entire, and very blunt, recurved, fleshy, chiefly remarkable for their internal structure, as they consist of two longitudinal hollow cells with a partition between. Stem erect, simple, varying in length according to the depth of the water wherein it grows, round, smooth, hollow, terminated by a simple upright loose spike or racemus of elegant pale purplish drooping flowers, standing on short footstalks with a small blunt bractea at the base of each. The segments of the corolla are slightly bearded at their base, as are the antheræ at their tip. The stigma too is ciliated. The germen in ripening becomes erect; an example, among innumerable others, shewing it is not the weight of drooping flowers that makes them take an inclined position; the fruit of such, though much the heavier, being almost always upright, for the seeds are thus more surely retained till ripe, and then more extensively scattered; whereas by the inclined corolla, or rather, in this genus, by the incurved figure of the antheræ themselves, the pollen is sheltered from wet.—This herb abounds with milky juice.

1793.

115.

LOBELIA urens.

Acrid Lobelia.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* irregular, ſlit longitudinally on its upper ſide. *Stigma* capitate. *Antheræ* united into a tube. *Capſ.* inferior, with 2 or 3 cells.

SPEC. CHAR. Stem upright. Lower leaves obovate; upper ones lanceolate; all toothed. Flowers racemoſe, downy.

SYN. Lobelia urens. *Linn. Sp. Pl.* 1321. *Sm. Fl. Brit.* 243. *Hudſ.* 378. *With.* 246. *Hull.* 191. *Curt. Lond. faſc.* 6. *t.* 63. *Dickſ. H. Sicc. faſc.* 16. 9.

THIS rare plant was ſcarcely known to the generality of Engliſh botaniſts, except by Mr. Hudſon's report, till Mr. Curtis received it from Lord Webb Seymour, and figured it extremely well in his Flora. We have been, like him, obliged to delineate a garden ſpecimen, taken from the choice collection of James Vere, Eſq., Knightſbridge. It has never been found (in England) out of Devonſhire; but in addition to the two ſpots already on record we can add Ottery St. Mary, near which town it was obſerved in the autumn of 1800 by Miſs Burgeſs. It is perennial, growing on heaths among ſmall ſhrubs, and flowering about September.

Root fibrous, increaſing by offsets. Stem about a foot high, branched, leafy, angular, roughiſh, but not hairy. Leaves all irregularly toothed rather than ſerrate, alternate, the loweſt obovate. Flowers in very long, terminal, ſimple, bracteated ſpikes or cluſters. Calyx of 5 linear rough ſpreading leaves, crowning the furrowed roughiſh germen. Corolla of a full purpliſh blue, rough with minute points. Stamina protruding through the fiſſure of the corolla, their filaments in the upper part, as well as the antheræ, united into a tube. Stigma deflexed, its head cloven, and, when in perfection, gaping, fringed beneath with ſhort hairs. Capſule 2-celled. Seeds numerous, ſmall. Herb milky, fœtid and very acrid.

Nov.t 1. 1801. Published by Jas Sowerby. London.

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116.

IMPATIENS *Noli me tangere.*

Yellow Balſam.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* of 5 petals, irregular, with an hood-ſhaped nectary. *Antheræ* ſlightly connected. *Capſule* ſuperior, of 5 elaſtic valves. *Cal.* of 2 leaves.

SPEC. CHAR. Flower-ſtalks ſolitary, bearing many flowers. Leaves ovate. Joints of the ſtem ſwelling.

SYN. Impatiens Noli me tangere. *Linn. Sp. Pl.* 1329. *Sm. Fl. Brit.* 244. *Hudſ.* 380. *With.* 263. *Hull.* 192.

Balſamine lutea, ſive Noli me tangere. *Raii Syn.* 316.

RAY mentions this elegant plant as a native of ſeveral places in Weſtmoreland, Lancaſhire, Yorkſhire, and Wales. We have ſeen it plentifully about the north end of Winandermere, in watery ſpots. It will ſucceed well in ſhady gardens, ſcattering its ſeeds ſpontaneouſly with more ſucceſs than if ſown by the hand. We have been obliged now to have recourſe to a garden ſpecimen, (differing in no reſpect from wild ones,) the herb being ſo delicate, and from the quick evaporation of its juices liable to wither ſo very ſoon, that it could not have been obtained freſh from any great diſtance.

The root is annual, branched, fleſhy, ſpreading horizontally. Stem ſolitary, erect, about 2 feet high, branched, leafy, round, ſucculent, very ſmooth and poliſhed. Leaves alternate, on footſtalks, ovate, obtuſe, ſerrated, ſmooth, veiny. Villars ſays they become flaccid and as if withered, during the night, but we have found them otherwiſe in a garden. Flowerſtalks axillary and branched, bearing 4 or 5 large handſome pendulous flowers, yellow ſpotted internally with red, conſiſting of a horn-ſhaped nectary, 1 upper petal, and 2 large lateral lobed ones, accompanied at the baſe by 2 ſmall entire petals united to them. Antheræ united at their baſes rather than their ſummits. The elaſtic valves of the capſule, when ripe, curl up, and fly aſunder on the ſlighteſt touch, whence the common name *Touch me not.*

Oct. 1814 Published by Jos. Sowerby, London

VIOLA hirta.

Hairy Violet.

PENTANDRIA Monogynia.

GEN. CHAR. *Cal.* 5-leaved, lengthened out at the base. *Pet.* 5, irregular; the lowermost spurred behind. *Antheræ* slightly cohering. *Caps.* superior, of 1 cell, with 3 valves.

SPEC. CHAR. Stem none. Leaves heart-shaped, rough, as well as their footstalks, with hairs. Calyx obtuse.

SYN. Viola hirta. *Linn. Sp. Pl.* 1324. *Sm. Fl. Brit.* 244. *Huds.* 379. *With.* 260. *Hull.* 191. *Relh.* 329. *Sibth.* 83. *Abbot.* 190. *Curt. Lond. fasc.* 1. *t.* 64.

V. martia major, hirsuta, inodora. *Raii Syn.* 365.

THE Hairy Violet, which to a careless observer differs from the common sweet one chiefly in having rather paler and scentless flowers, is notwithstanding a most distinct species from that, and by far less frequent. It is only found on a chalk or lime-stone soil, flowering in April or May. Our specimen grew at Charlton in Kent.

Root perennial, somewhat woody. Stem none. Scyons short, simple, prostrate, but not taking root. Leaves on long upright hairy foot-stalks, heart-shaped, serrated, veiny, clothed on both sides with short dense hoary hairs. Stipulæ in pairs, radical, lanceolate, toothed. Flower-stalks taller than the leaves, smooth, bearing *below* their middle (as Mr. Curtis first observed) a pair of lanceolate smooth bracteæ. Calyx smooth. Lateral petals marked with a hairy line, as in *V. odorata.* Stamina flat. Antheræ terminating in an orange-coloured membrane, approaching each other, but not united. Capsule roundish, hairy, containing several round seeds.

118.

VIOLA odorata.

Sweet Violet.

PENTANDRIA Monogynia.

GEN. CHAR. *Cal.* 5-leaved. *Petals* 5, irregular, the lowermoſt ſpurred behind. *Capſ.* ſuperior, of one cell, with three valves.

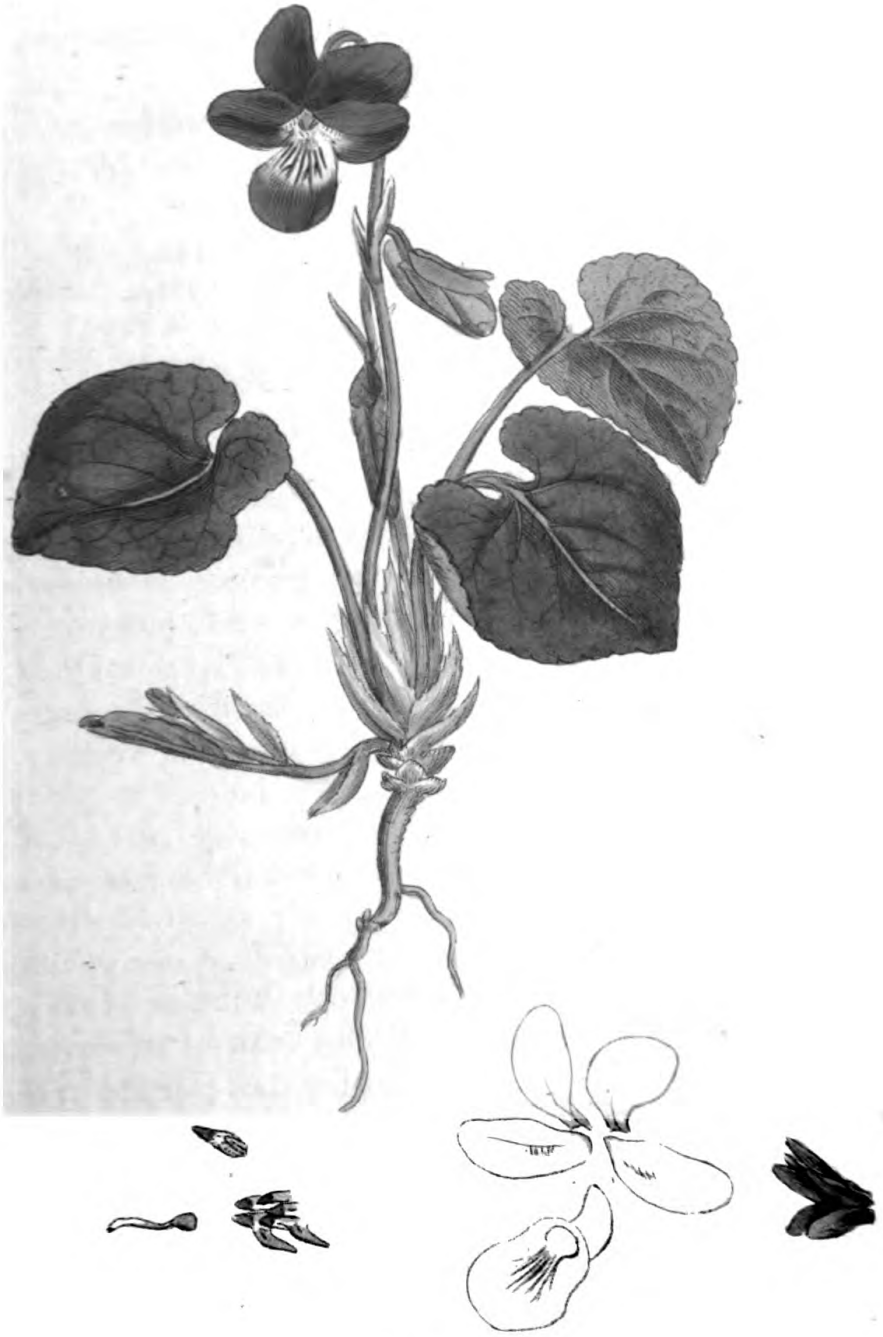
SPEC. CHAR. Stem none. Scyons creeping. Leaves heart-ſhaped, ſmoothiſh as well as the footſtalks. Calyx obtuſe.

SYN. Viola odorata. *Linn Sp. Pl.* 1324. *Hudſ.* 378. *With.* 260. *Hull.* 191. *Relh.* 329. *Sibth.* 83. *Abbot.* 190. *Curt Lond. faſc.* 1. *t.* 63.

V. martia purpurea. *Raii Syn.* 364.

THE favourite Violet, ſo juſtly eſteemed for its delightful fragrance, is, like many other moſt deſirable plants, frequently found wild, and eaſily cultivated in a garden. It requires only a moderate degree of ſhade and moiſture, and commonly flowers in March or April. A white-flowered variety ſometimes occurs, and a double one is preferred by floriſts, not merely becauſe it is unnatural, but on account of its richer ſcent.

Root perennial, rather woody. Stem none. Scyons very long, proſtrate, and creeping, leafy, generally not producing flowers till the ſecond year; but that rule is not without exception. Leaves on longiſh upright nearly ſmooth footſtalks, heart-ſhaped, ſerrated, ſmooth, very ſlightly downy beneath. Stipulæ in pairs, lanceolate, dentate, pale. Flower-ſtalks taller than the leaves, ſimple, ſmooth, bearing a pair of narrow bracteæ above their middle, and one nodding dark purple irregular flower. Calyx ſmooth. Spur ſhort and blunt. Lateral petals marked with a hairy line on the inſide. Stamina flat. Antheræ orange-coloured, dilated, approaching each other, but ſcarcely connected, ſo that few perſons would look for this genus in the claſs *Syngeneſia*. The ſeeds are ſeveral, and roundiſh.



119.

VIOLA paluſtris.

Marſh Violet.

PENTANDRIA Monogynia.

GEN. CHAR. *Cal.* 5-leaved. *Petals* 5, irregular, the lowermoſt ſpurred behind. *Capſule* ſuperior, of one cell, with 3 valves.

SPEC. CHAR. Stem none. Leaves kidney-ſhaped.

SYN. Viola paluſtris. *Linn. Sp. Pl.* 1324. *Hudſ.* 379. *With.* 261. *Lightf.* 506. *Curt. Lond. faſc.* 3. *t.* 58. V. paluſtris rotundifolia glabra. *Raii Syn.* 364.

ON the moiſt parts of ſandy or turfy heaths, more frequent in Scotland, and the north of England, than in the ſouth; yet it is found plentifully (according to Mr. Curtis) near Croydon, and our ſpecimen was gathered in Norfolk by Mr. Dawſon Turner. This violet is not mentioned in the Floras of Relhan or Sibthorp, though Ray ſays it grows near Oxford.

Root perennial, creeping, ſomewhat fleſhy, with many fibres. Stem none. Leaves on ſmooth ſemi-cylindrical foot-ſtalks, ſpreading, kidney-ſhaped, more or leſs pointed, crenate, veiny, ſmooth, of a delicate texture, often purple beneath. Stipulæ radical, ovate, acute, ſmooth, ſcarcely perceptibly ſerrated. Flower-ſtalks longer than the leaves, erect, ſquare, ſmooth, with a pair of lanceolate erect bracteæ about the middle, not always below the middle as mentioned in the Flora Londinenſis. Flowers appearing in May, ſolitary, drooping, inodorous, paler and ſmaller than in the more common ſpecies. Calyx-leaves rather elliptical, ſlightly membranous at the edge. The 2 upper petals are ſcarcely ſtreaked at all; the 2 lateral ones have one dark longitudinal line, and are bearded with white near the baſe; the lowermoſt is beautifully marked with numerous branched ſtreaks, and terminates behind in a ſhort blunt honey-bearing ſpur. The antheræ are bordered with an orange-coloured membrane; but, though collected together, they are ſcarcely united, any more than in other ſpecies of *Viola*, ſo that whether the Linnæan Syſtem remain in its original form or not, this genus ought no longer to continue in the claſs *Syngeneſia*. Stigma acute, with a ſingular protuberance above it.

Such is our plant, which agrees preciſely with the Linnæan ſpecimen. The *Viola rubra ſtriata Eboracenſis* Raii Syn. 365, ſhould ſeem by coloured copies of the Flora Danica to be t. 83 of that work; and the leaves are there repreſented leſs pointed, or more truly kidney-ſhaped, than ours, but we have no doubt of its being merely a variety.

VIOLA canina.

Dog's Violet.

PENTANDRIA Monogynia.

GEN. CHAR. *Cal.* 5-leaved. *Petals* 5, irregular, the lowermoſt ſpurred behind. *Capſ.* ſuperior, of one cell, with three valves.

SPEC. CHAR. Stem at length aſcending, channelled. Leaves oblong-heartſhaped. Calyx acute.

SYN. Viola canina. *Linn. Sp. Pl.* 1324. *Hudſ.* 379. *With.* 261. *Hull.* 191. *Relh.* 329. *Sibth.* 83. *Abbot.* 190. *Curt. Lond. faſc.* 2. *t.* 61.
V. martia inodora ſylveſtris. *Raii Syn.* 364.

AFTER the flowers of the Sweet Violet are gone, every copſe, heath, and ſhady dell is decorated, for two or three months, with the paler and leſs welcome bloſſoms of the *Viola canina*, which are totally without ſmell. The epithet *canina* ſeems to have been given to it, as to the hedge roſe, to expreſs a degree of inferiority or unworthineſs, as if a dog were always a leſs reſpectable or uſeful animal than his maſter.

This ſpecies varies, like the preceding, in the colour of its bloſſoms: the whole herb is moreover extremely variable in ſize, and the leaves in form: we are almoſt perſuaded that our V. *lactea*, *t.* 445, is only a variety of this, for culture brings them very cloſely together.

Root perennial, ſomewhat woody. The firſt flowers are radical; but ſeveral branched angular leafy ſtems ſoon ſpring forth, which continue growing and bearing numerous flowers for ſeveral weeks. Leaves heart-ſhaped or oblong, crenate, ſmooth; their footſtalks ſmooth, ſomewhat dilated at the top. Stipulæ fringed. Flower-ſtalks axillary, ſolitary, erect, ſquare, bearing two awl-ſhaped bracteæ in the upper part, and one nodding blue flower. Antheræ ſcarcely cohering. Calyx-leaves acute. Stigma gibbous. Capſule rather more oblong than in the Sweet Violet. Seeds roundiſh.

Aug.st 1. 1799. Published J. E. Sowerby London.

121.

VIOLA lactea.

Cream-coloured Violet.

PENTANDRIA Monogynia.

GEN. CHAR. Cal. 5-leaved. *Petals* 5, irregular, the lowermoſt ſpurred behind. *Capſule* ſuperior, of one cell, with 3 valves.

SPEC. CHAR. Stem aſcending. Leaves ovato-lanceolate.

SYN. Viola canina, var. 3. *With.* 262.

WE are extremely doubtful of the permanency of this ſpecies, and now publiſh it as diſtinct from V. *canina*, rather in conformity to the opinion of others, and in hopes of having the point cleared up by inveſtigation and culture, than as wiſhing to decide upon it ourſelves. The root from which our ſpecimen was taken, was gathered on the wolds near Tunbridge-wells, by Mr. T. F. Forſter, jun. and flowered lately in his garden. This gentleman communicated it to Mr. Sowerby, as a new ſpecies of *Viola*; and his opinion is of the greateſt weight, no one hitherto having ſtudied this whole genus, both foreign and domeſtic, half ſo accurately and laborioufly.

The root is perennial. Herb in all its parts much ſmaller than the *canina*, quite ſmooth. Stems procumbent at the baſe, and throwing out radicles, then erect, round, branched, leafy. Leaves alternate, on footſtalks about their own length, generally erect, lanceolate or inclining to ovate, decurrent (not cordate) at their baſe, veiny, crenate, rather obtuſe. Stipulæ deeply toothed, and often pinnatifid. Flower-ſtalks axillary, ſolitary, erect, riſing as high as the branches, each bearing above its middle a pair of purpliſh lanceolate bracteæ, moſtly toothed near their baſe, and at the top one nodding flower. Calyx-leaves linear-lanceolate. Petals cream-coloured, obtuſe, much narrower than in V. *canina*, ſtreaked, eſpecially the lower one, with purple lines diſpoſed as thoſe in V. *canina*, and the two ſide petals (as in that) are hairy above the baſe. Spur ſhort and blunt. Antheræ terminating in a broad dilated membrane, not cohering to each other. What diſtinguiſhes our V. *lactea* from *canina* is principally the narrow and lanceolate (not heart-like) form of the leaves, which if permanent is ſufficient. The ſtipulæ alſo appear to be more deeply cut; and the bracteæ, which are entire and almoſt ſetaceous in *canina*, are lanceolate, and moſtly toothed. It flowers in May, and, if we are right in the quotation of Dr. Withering, has been found by Mr. Stackhouſe in Cornwall.

VIOLA tricolor.

Pansy Violet, or Heart's-ease.

PENTANDRIA Monogynia.

GEN. CHAR. *Cal.* 5-leaved, lengthened out at the base. *Pet.* 5, irregular; the lowermost spurred behind. *Antheræ* slightly cohering. *Caps.* superior, of 1 cell, with 3 valves.

SPEC. CHAR. Stem angular, spreading. Leaves oblong, deeply crenate. Stipulæ lyrate, pinnatifid.

SYN. Viola tricolor. *Linn. Sp. Pl.* 1326. *Sm. Fl. Brit.* 248. *Huds.* 380. *With.* 262. *Hull.* 191. *Relh.* 89. *Abbot.* 190. *Curt. Lond. fasc.* 1. *t.* 65. *Woodv. Suppl. t.* 252. *Raii Syn.* 365.

β. V. arvensis. *Sibth.* 84.

V. bicolor arvensis. *Raii Syn.* 366.

THE Wild Heart's-ease, the origin of all our annual garden ones, is very common in corn-fields, more particularly on a dry or gravelly soil, and varies so much in the size and colour of its flowers, in the field as well as the garden, that we cannot agree with those authors, however ingenious, who divide it into two species, especially as the hairiness of the calyx proves very uncertain.

It is annual, and flowers from May to September. Root fibrous, small. Stem branched, weak and spreading, leafy, angular, downy. Leaves alternate, on long stalks, ovate-oblong, more or less deeply notched or toothed, various in hairiness. Stipulæ pinnatifid, with a large, ovate, terminal, crenate lobe. Flowers on long axillary stalks, solitary, with very minute bracteæ. Petals generally longer than the calyx, variegated in colour, the lowermost generally yellow, the 2 upper ones most purple.

We believe this completes our history of British *Violæ*, except the *amœna*, described in Mr. Symons's *Synopsis*. That species we have never been able to ascertain, the specimens we have seen not appearing to be distinct from *V. lutea*; but we shall endeavour to learn more on the subject.

March 1. 1804. Published by Jo. Sowerby. London.

VIOLA lutea.

Yellow Mountain Pansy.

PENTANDRIA Monogynia.

GEN. CHAR. *Cal.* 5-leaved, lengthened out at the base. *Pet.* 5, irregular; the lowermost spurred behind. *Antheræ* slightly cohering. *Caps.* superior, of one cell, with three valves.

SPEC. CHAR. Stem triangular, unbranched. Leaves ovato-oblong, crenate, ciliated. Stipulæ lobed, palmate.

SYN. Viola lutea. *Sm. Fl. Brit.* 248. *Hudf. ed.* 1. 331. *With.* 263. *Hull.* 192.

V. grandiflora. *Hudf.* 380. *Lightf.* 508.

V. montana lutea grandiflora nostras. *Raii Syn.* 249.

THIS Violet, which a superficial botanist might pass by as one of the many varieties of the Common Heart's-ease, differs widely from that species in its place of growth, in being perennial, in having a simple stem, and in the shape of its stipulæ, which are deeply five-cleft and palmate, not pinnatifid nor lyrate, though their middle lobe is larger than the rest.

V. *lutea* is found only in grassy mountainous pastures, flowering from May to September. It is plentiful in the north of England, Scotland, and the wildest parts of South Wales. The root is small and slender. Stem unbranched, weak and prostrate at the base, then erect, rising to the height of 3 or 4 inches, leafy, triangular, very slightly downy, bearing one or two flowers on very long stalks from the bosoms of the upper leaves. Leaves alternate, on footstalks, more or less ovate, crenate, finely fringed, accompanied by a pair of large, deeply 5-cleft, fringed stipulæ, whose outer lobes are deepest and narrowest. Calyx toothed at the base. Petals either all yellow, with dark-purple radiating veins, or the 2 uppermost are of a blue purple, the rest yellow with a blue tinge; very often the whole are purple. The antheræ are slightly attached to each other. The singular form of the style and stigma is expressed in our figure greatly magnified; the purple line under the stigma is remarkable.

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VERBASCUM Thapsus.

Great Mullein, or High Taper.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* wheel-shaped, a little irregular. *Caps.* superior, with 2 cells and 2 valves. *Stamina* bearded.

SPEC. CHAR. Leaves decurrent, woolly on both sides. Stem simple.

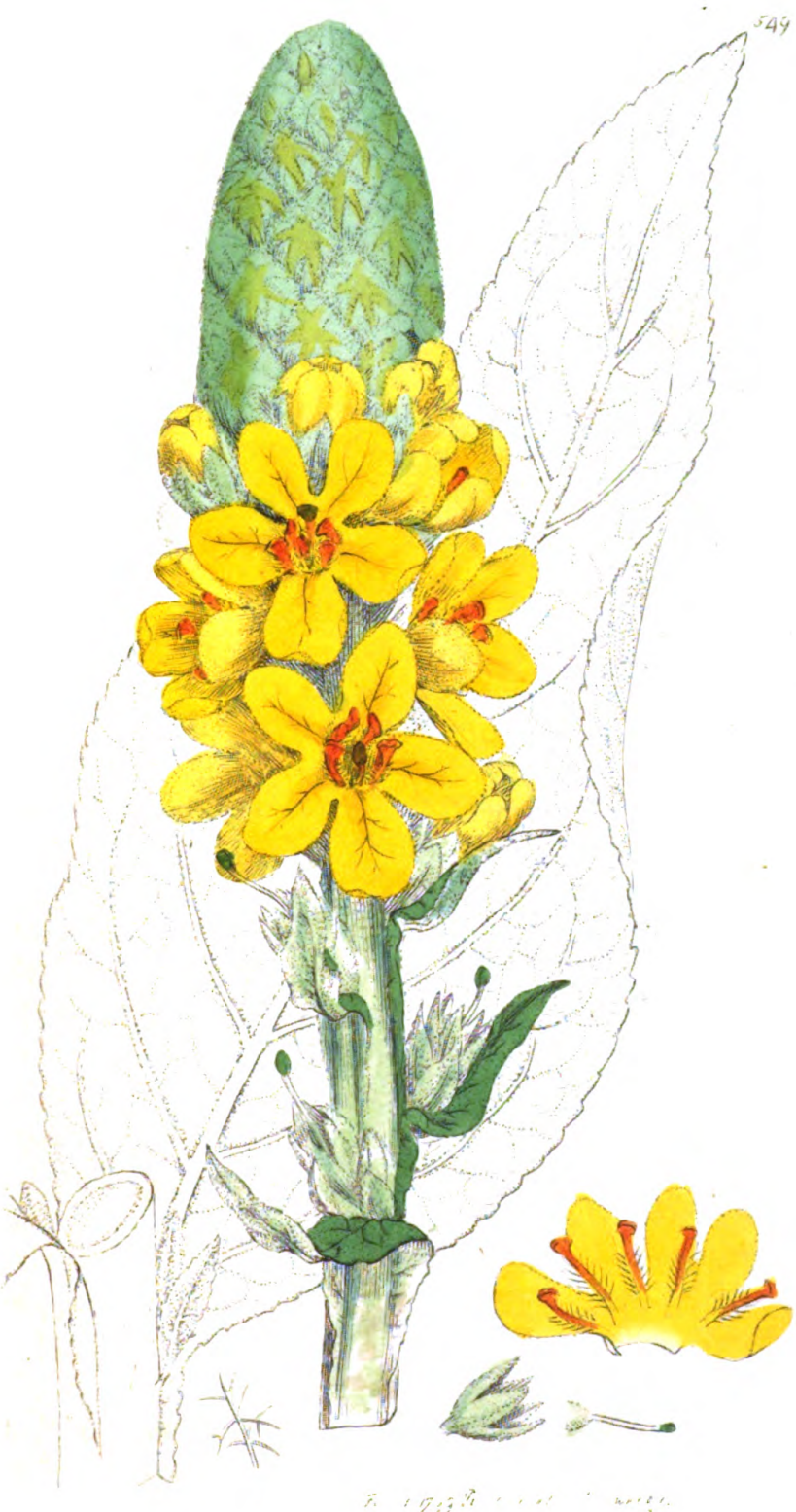
SYN. Verbascum Thapsus. *Linn. Sp. Pl.* 252. *Huds.* 89. *With.* 248. *Relh.* 88. *Sibth.* 77. V. mas latifolium luteum. *Raii. Syn.* 287.

FREQUENT on banks, hedges, and waste ground, more especially on a gravelly or calcareous soil, flowering in July and August.

The root is biennial, spindle-shaped. Stem erect, simple, stiff and straight, from 3 to 5 feet high, leafy, woolly, angular, winged. Leaves alternate, decurrent, oblong, nearly entire, very thickly clothed on both sides with white, branched, intricate, woolly hairs. Spike terminal, erect, cylindrical, dense, many-flowered. Flowers sessile, closely set, bright yellow, rarely white. Stamina yellow, hairy. Antheræ red. Stigma club-shaped.

Mr. Robson communicated to Dr. Withering a mule plant, produced under his own eyes, from this species impregnated by V. nigrum. Indeed no genus is more apt to engender such than this.

A pint of cow's milk with a handful of the leaves of this Mullein, or the V. *pulverulentum*, *t.* 487, boiled in it to half a pint, sweetened with sugar, strained and taken at bed-time, is a pleasant emollient and nutritious medicine for allaying a cough, and more particularly for taking off the pain and irritation of the piles. The whole herb is mucilaginous, and a little narcotic.



125.

VERBASCUM Lychnitis.

White Mullein.

PENTANDRIA Monogynia.

GEN. CHAR. *Corolla* wheel-ſhaped, a little irregular. *Capſule* with one cell, and two valves.

SPEC. CHAR. Leaves oblong-wedge-ſhaped, nearly ſmooth on the upper ſide.

SYN. Verbaſcum Lychnitis. *Linn. Sp. Pl.* 253. *Hudſ. Fl. An.* 90. *With. Bot. Arr.* 225 β.

V. flore albo parvo. *Raii Syn.* 287.

GATHERED in lanes about Dartford in Kent, flowering in June. It loves a chalky ſoil, and is moſt frequent in that county.

Our ſpecimens agree preciſely with that in the Herbarium of Linnæus, which we learn, from certain marks and numbers, to be what he intended in the 1ſt edition of *Species Plantarum* for V. Lychnitis, though even in that work he ſeems to reckon our hoary yellow Mullein as the original ſpecies, making the white a variety.

This Mullein is remarkable for its ſtraight, wand-like, angular ſtem; its leaves very white beneath, but green with a ſlight hoarineſs above; and its cream-coloured flowers, which are produced in great numbers in a compound, cluſtered, terminal racemus, one of the lateral branches of which is all our figure would admit.

The yellow hoary Mullein is ſurely a very diſtinct ſpecies, its leaves being, on both ſides, covered with thick wool—not to mention other differences.

126.

VERBASCUM pulverulentum.

Yellow hoary Mullein.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* wheel-ſhaped, a little irregular. *Capſ.* with 2 cells and 2 valves.

SPEC. CHAR. Leaves oblong-ovate, ſlightly ſerrated, mealy on both ſides. Stem round, panicled.

SYN. Verbaſcum pulverulentum. *Curt. Cat.- Saliſb. Prod.* 104.

V. pulverulentum, flore luteo parvo. *Raii Syn.* 287.

V. Lychnitis β. *Hudſ.* 90. var. 1. *With.* 249.

GATHERED by Mr. John Wagſtaff, at Norwich, about which town, as well as Bury, and in ſome other parts of Norfolk and Suffolk, this beautiful plant grows plentifully in waſte ground, hedges, and the borders of fields. It is biennial, flowering in July; at which time, if not previouſly broken or damaged, it forms a golden pyramid a yard high, of many hundreds of flowers, and is one of the moſt magnificent of Britiſh herbaceous plants.

The leaves are often above a foot long, of a ſomewhat elliptical pointed form, thoſe on the ſtem more ovate and ſeſſile, all of them ſlightly ſerrated, and clothed on both ſides with white mealy down, which eaſily rubs off, and, when ſeen in a microſcope, is found to conſiſt of numerous ſtarry entangled tufts. The ſtem is round, not angular as in true V. *Lychnitis*, *t.* 58, woolly, as well as the calyx, forming a pyramidal branched panicle. The flowers are cluſtered on its branches. Corolla large, bright yellow. Stamina ſcarlet, bearded with pale or white hairs. In ſome places, as Helleſdon, near Norwich, a mule plant is produced between this and V. *nigrum*, having the habit of the former, and flowers with purple ſtamina like the latter.

We are now ſatisfied that the capſule of this genus has 2 cells, and have corrected ourſelves accordingly.

A ſingular inſtance of irritability in this and ſome other ſpecies of *Verbaſcum* has been pointed out to us by Mr. Correa. In ſtill warm weather, if 2 or 3 ſmart blows be given to the ſtem with a cane or ſtick, all the corollæ then open, though not immediately looſened, in a few minutes fall off, ſeparating one after another from their baſe, and the calyx cloſes round the germen, ſeeming as it were to puſh the bloſſom off.

127.

VERBASCUM nigrum.

Dark Mullein.

PENTANDRIA Monogynia.

GEN. CHAR. *Corolla* wheel-ſhaped, a little irregular. *Capſule* with one cell, and two valves.

SPEC. CHAR. Leaves oblong-heart-ſhaped, on footſtalks.

SYN. Verbaſcum nigrum. *Linn. Sp. Pl.* 253. *Hudſ. Fl. An.* 90. *With. Bot. Arr.* 226. *Relh. Cant.* 88.

V. nigrum flore parvo, apicibus purpureis. *Raii Syn.* 288.

BY what figure of ſpeech this beautiful plant can be called *black*, not having a particle of that colour about it, we will not determine. All the old botaniſts, however, have ſo denominated it; and if they had any meaning, it can only have been that it was *not white*.

Its dark-green leaves are ſometimes hoary beneath, eſpecially the upper ones. The racemus of flowers is longer and more ſimple than in moſt of the other ſpecies. Nothing can be more elegant than the purple ſtamina contraſted with the yellow corolla.

This ſpecies loves a gravelly ſoil, and is not rare in Norfolk and Suffolk. It is very conſpicuous at a diſtance under hedges in green ſhady lanes, to which it is a great ornament. The flowers appear about Midſummer, and laſt till September. The root is perennial.

128.

VERBASCUM virgatum.
Large-flowered Mullein.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* wheel-shaped, a little irregular. *Caps.* superior, with 2 cells and 2 valves. *Stamina* bearded.

SPEC. CHAR. Leaves oblong-lanceolate, dentate, sessile; the radical ones somewhat lyrate, downy. Stem branched. Flowers clustered, nearly sessile.

SYN. Verbascum virgatum. *With.* 250. *Sym. Syn.* 56. Blattaria flore amplo. *Ger. em.* 778.

DR. STOKES first clearly ascertained this species, which in many respects is closely allied to V. *Blattaria*, *t.* 393; but we see no reason to think it a variety, nor scarcely a mule, of that, especially as it is copiously propagated by seed, and as the *Blattaria* does not grow where this is found. It is biennial, flowering in September and later. Our worthy friend the Rev. Mr. Baker took this individual plant, when a seedling, from one of the spots near Worcester mentioned in Withering, and it flowered in his garden. He informs us this Mullein was first observed growing plentifully in a field near Wrexham, by Mrs. Nash, who planted it in her garden at Bevere, from whence probably its seeds got to the neighbouring turnpike-road to Ombersley, and from thence to the lane leading to Gregory's mill.

The root is thick, branched. Whole plant much larger and stronger than the *Blattaria*, clothed generally all over, and the lower leaves constantly, with short, prominent, often forked, glandular hairs. Stem 5 or 6 feet high, branched from the bottom, leafy, round, but somewhat angular or winged from the leaves running down it. Radical leaves resembling those of the primrose, but larger, and more or less lyrate; those on the stem oblong-lanceolate, doubly dentate, sessile; the upper ones heart-shaped long-pointed, dentate, sessile, and in some degree embracing the stem. Flowers axillary, clustered, on short woolly stalks, and some of them sessile, large, yellow, purple about the centre, soon falling off. Segments of the calyx ovate, larger and broader than in V. *Blattaria*. Stamina yellow, bearded in the middle with purple.

Mr. Baker has observed that the woolliness of the stem and branches varies in degree, and that weak plants have sometimes solitary flowers, but always on much shorter thicker stalks than the *Blattaria*.

Drawn & Coloured by J. Sowerby

129.

VERBASCUM Blattaria.

Moth Mullein.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* wheel-shaped, a little irregular. *Caps.* with one cell, and two valves.

SPEC. CHAR. Leaves embracing the stem, oblong, smooth, serrated. Flower-stalks single-flowered, solitary.

SYN. Verbascum Blattaria. *Linn. Sp. Pl.* 254. *Huds. Fl. An.* 91. *With. Bot. Arr.* 229.
Blattaria lutea. *Raii Syn.* 288.

FOUND by Mr. Jacob Rayer on a bank about 3 miles from Rochester, near the river Medway, in which neighbourhood it is mentioned as growing in Ray's time. We are enabled by means of this wild specimen to remove Dr. Stokes's doubt in the *Bot. Arr.* whether the true *V. Blattaria* be an English plant or not. In gardens it is frequently cultivated, and very ornamental, flowering from July to November, or even later, if the weather be mild.

Root annual, fusiform. Stem 3 or 4 feet high, branched, leafy. Radical leaves slightly pinnatifid; stem-leaves ovate, or oblong, pointed, embracing the stem; all smooth, veiny, unequally or doubly serrated. The upper ones gradually diminish into pointed *bracteæ*, from each of whose bosoms arises a solitary simple slender flower-stalk, bearing one handsome yellow flower, streaked more or less with purple. The calyx is in 5 nearly equal segments. Stamina clothed with purple hairs. Germen globose. Capsule rather oblong. The upper part of the stem, as well as the germen, calyx, bracteæ and upper leaves, are clothed with short hairs tipped with a minute globe.

We have been favoured by the Hon. Mrs. F. Howard with a specimen gathered in Norfolk, near Lynn, which is either a variety of this plant with a large purplish flower, or the *V. phœniceum* of Linnæus; we have not yet been able to determine which.


May 1st 1797 Published by J. Sowerby, London

DATURA Stramonium.

Common Thorn-apple.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* funnel-shaped, plaited. *Cal.* tubular, angular, deciduous. *Capsule* superior, of 2 cells and 4 valves.

SPEC. CHAR. Fruit spinous, ovate, erect. Leaves ovate, smooth.

SYN. Datura Stramonium. *Linn. Sp. Pl.* 255. *Sm. Fl. Brit.* 254. *Huds.* 92. *With.* 251. *Hull.* 51. *Relh.* 90. *Curt. Lond. fasc.* 6. *t.* 17.

Solanum pomo spinoso oblongo, flore calathoide, Stramonium vulgò dictum. *Raii Syn.* 266.

LIKE the Borage, and a few other plants that thrive on dunghills, the Thorn-apple, though originally exotic, is now naturalized amongst us. It often occurs about London, and wherever there are any curious gardens in the neighbourhood. Mr. Curtis observes that it is sure to spring up from American earth. When once introduced into a garden, it comes up every year like the Great Persicaria.

As an ornamental plant it has not much to recommend it, though the flowers have a very sweet smell; but its whole habit is rank and cumbersome, and its narcotic dangerous qualities make it still less desirable.

The root is annual. Herb smooth, fœtid, about two or three feet high, flowering from July to October. Stem much branched, forked, spreading. Leaves from the forks of the stem, which seems rather peculiar to the plants called *lurid*, on foot-stalks, ovate, acute, sinuated, unequal at their base. Flowers axillary, solitary, on short stalks, upright, white. Calyx smooth, breaking off above the base. Fruit ovate, with 4 furrows, very spinous, of 2 cells when ripe, each containing many black rugged seeds on a double receptacle.

March 1 1804. Published by Jas Sowerby, London.

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131.

HYOSCYAMUS niger.

Common Henbane.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* funnel-ſhaped, obtuſe, irregular. *Stamina* inclined. *Capſule* with a lid, two-celled.

SPEC. CHAR. Leaves ſinuated, embracing the ſtem. Flowers ſeſſile.

SYN. Hyoſcyamus niger. *Linn. Sp. Pl.* 257. *Hudſ.* 92. *With.* 252. *Relh.* 90. *Sibth.* 77. *Abbot.* 50. *Woodv. Med. Bot. t.* 52.
H. vulgaris. *Raii Syn.* 274.

HENBANE is not uncommon in waſte ground, about villages, and by the ſides of roads in dry duſty places, more eſpecially on a calcareous ſoil, flowering in July.

Root annual, ſpindle-ſhaped. Stem buſhy, round, leafy. Leaves alternate, ſeſſile, ſharply ſinuated. Spikes terminal, recurved, leafy, ſimple. Flowers ſeſſile, erect. Calyx pitcher-ſhaped, with a regular five-cleft border, reticulated with veins, permanent. Corolla ſtraw-coloured, moſt elegantly pencilled with a net-work of purple veins. Antheræ and ſtyle purpliſh. Capſule clothed with the body of the calyx, divided into two cells, and cloſed with a convex ſmooth lid. Seeds numerous.

The whole herb is downy, viſcid, and extremely fœtid, though a ſlight degree of its odour is to ſome people not unpleaſant. Its qualities are highly and dangerouſly narcotic, but like many other poiſons, it may, under proper management (as Dr. Withering obſerves), prove an uſeful medicine. The ſeeds and capſules together, ſmoked as tobacco, are in ſome places a popular remedy for the toothach, but convulſions and temporary inſanity ſometimes follow its uſe. The ſeeds alone, abounding with oil which counteracts their noxious properties, may be ſafely eaten, as I have often in my youth experienced, having been told the plant was Clary, and having then a predilection for its flavour. So the ſeeds of Poppies, which have a very ſweet nut-like taſte, may be eaten without any narcotic effect.


Jan. 1794. Published by Mr. Sowerby London.

ATROPA Belladonna.

Dwale, or Deadly Nightſhade.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* bell-ſhaped. *Stam.* diſtant. *Berry* ſuperior, of two cells.

SPEC. CHAR. Stem herbaceous. Leaves ovate, undivided.

SYN. Atropa Belladonna. *Linn. Sp. Pl.* 260. *Hudſ.* 93. *With.* 252. *Relh.* 90. *Sibth.* 78. *Abbot.* 51. *Curt. Lond. faſc.* 5. *t.* 16. *Woodv. Med. Bot. t.* 1.

Belladonna. *Raii Syn.* 265.

IN hedges and waſte-ground, more eſpecially on a calcareous ſoil, but happily not very frequent at preſent, it having by common conſent been generally eradicated. The caſtle-hill at Caſtle-acre, Norfolk, was a few years ago over-run with it. Indeed it generally occurs about ruined caſtles and monaſteries. Sir T. Frankland found it at Knareſborough, and near Sir Walter Vavaſor's at Haſlewood, Yorkſhire. The flowers appear in June, and the fruit ripens in Auguſt.

Root perennial, creeping, thick, fleſhy, whitiſh. Stems annual, erect, about 3 feet high, branched, leafy, round. Leaves lateral, in pairs, one ſmaller than its companion, ovate, entire, of a dull green. Flowers on ſolitary, ſimple, axillary flower-ſtalks, drooping. Corolla of a dull purpliſh hue, truly expreſſive of the lurid poiſonous tribe to which it belongs. Berry about the ſize of a ſmall cherry, but flatter, of a ſhining black, its juice of a fine and laſting violet. Seeds numerous.

This is perhaps the moſt dangerous Britiſh plant. Its fruit is tempting in appearance, ſweetiſh, and without any remarkable or repulſive flavour, ſo that children have often eaten it, and even half a berry is ſaid to have proved fatal. It occaſions a deep and deadly ſtupor. A draught of vinegar, and keeping the patient walking to prevent ſleep, are ſaid to be the ſureſt means of cure. As this poiſon is not corroſive, and acts ſolely on the nerves, oil is not ſo beneficial, and emetics do not take effect.

The leaves given internally in infuſion, and applied externally, have been much recommended in cancers; but the ſufferings of the patient under ever ſo ſmall a doſe are dreadful.

SOLANUM Dulcamara.

Woody Nightshade, or Bitter-sweet.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* wheel-shaped. *Antheræ* slightly connected, opening by two pores at the top. *Berry* superior, two-celled.

SPEC. CHAR. Stem shrubby, zigzag, without thorns. Upper leaves hastate. Clusters cymose.

SYN. Solanum Dulcamara. *Linn. Sp. Pl.* 264. *Hudſ.* 93. *With.* 253. *Relh.* 91. *Sibth.* 78. *Curt. Lond. fasc.* 1. *t.* 14. *Woodv. Med. Bot. t.* 33.

S. lignosum, seu Dulcamara. *Raii Syn.* 265.

A NATIVE of hedges and shady places where the soil is moist, flowering in June and July.

The woody, branched, twisted stem climbs to the height of several feet. Leaves alternate, on footstalks, entire, smooth, except on the sea shores, where they are hairy; the lowermost are heartshaped and undivided; the uppermost more or less completely halberdshaped. Clusters opposite to the leaves or terminal, having the general appearance, but not the structure, of a cyme, drooping. Flowers very elegant, purple, with two green dots at the base of each segment, and large yellow antheræ. Berries oval, scarlet, very juicy, bitter and poisonous.

The young branches, or the root, employed in a decoction, are much celebrated by some practitioners for removing various obstructions, promoting expectoration, and are useful in obstinate coughs as well as rheumatic disorders.

This medicine is to be cautiously administered in small doses and diluted with milk, especially in the beginning, it being sometimes liable to produce vomiting, convulsions and delirium. See Woodville. Mr. Saunders, author of an elegant Introduction to Botany published in 1792, has, in the course of an extensive country practice, used the *dulcamara* with great success, and without the inconveniences just mentioned.

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SOLANUM nigrum.

Common or Garden Nightshade.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* wheel-shaped. *Antheræ* slightly connected, opening by two pores at the top. *Berry* superior, two-celled.

SPEC. CHAR. Stem herbaceous, without thorns. Leaves ovate, bluntly toothed and waved. Umbels lateral, drooping.

SYN. Solanum nigrum. *Linn. Sp. Pl.* 266. *Hudf.* 92. *Wilb.* 254. *Relb.* 51. *Sibth.* 78. *Curt. Lond. fasc.* 2. *t.* 14.

S. vulgare. *Raii Syn.* 265.

COMMON every where in cultivated as well as waste ground, more especially on dunghills, thriving most in a rich soil, and flowering from June to September.

Root annual, much branched. Stem branched, spreading, leafy, angular, sometimes winged, and often of a woody hardness; for in our mildest seasons, as in hot climates, it survives the winter. Leaves alternate, on footstalks, ovate, waved, lengthened out at the base, somewhat downy. Umbels lateral, from the interstices of the stem between the leaves, drooping, downy, bearing a few white musky-scented flowers. Berries black, globular. Hudson mentions their being sometimes yellow.

The whole herb is fœtid, narcotic, celebrated for promoting perspiration and urine, but to be used with great caution. An infusion of from one to three grains of the dried leaf, is said to be amply sufficient for a dose, a larger quantity occasioning violent sickness, with head-ach, giddiness, and other dangerous symptoms. An ointment made of these leaves and hog's lard was used by Solano de Luque, a famous Spanish physician, about two centuries since, in the cure of consumptions. The patient was to be buried for some time up to the chin in the earth, and afterwards rubbed with this ointment. See Dr. Simmons's Observations on the Treatment of Consumptions. Few practitioners now would expect any good from this prescription, at least as far as the nightshade is concerned.