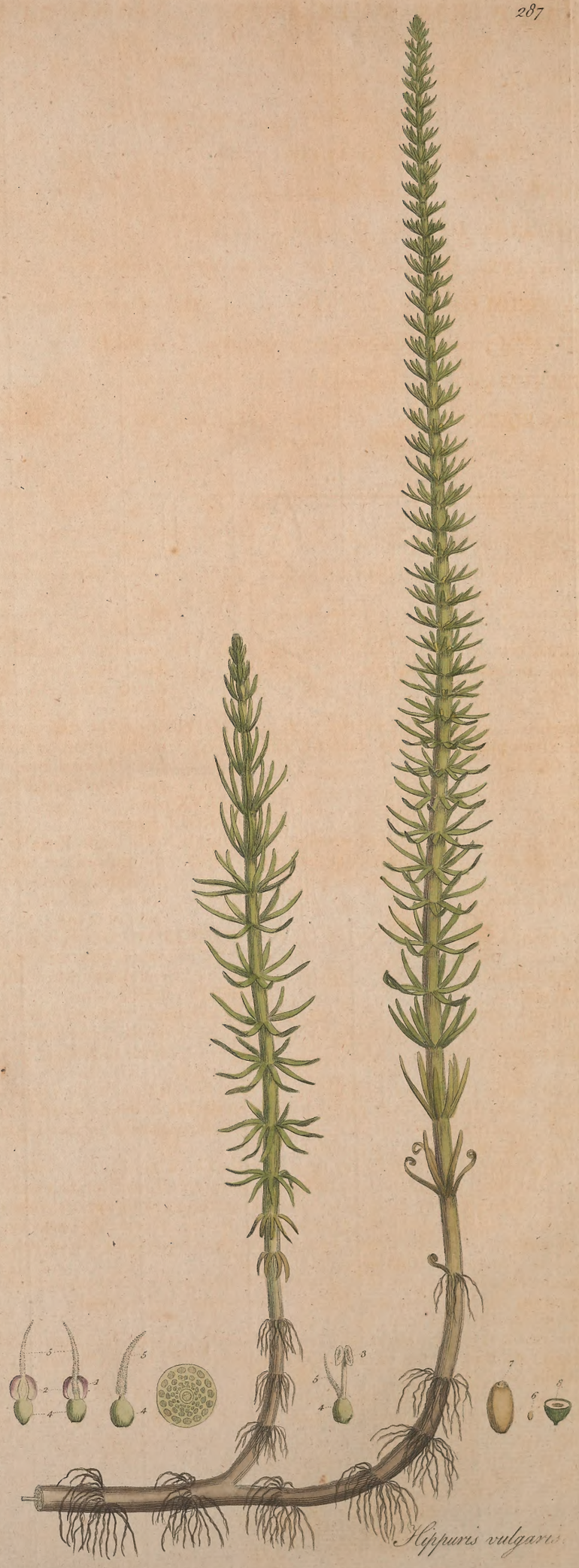

Hippuris vulgaris.

HIPPURIS VULGARIS. MARES-TAIL.

HIPPURIS *Lin. Gen. Pl.* MONANDRIA MONOGYNIA.

Cal. 0. *Petala* 0. *Stigma* ſimplex. *Sem.* 1.

Raii Syn. Gen. 5. HERBÆ FLORE IMPERFECTO SEU STAMINEO VEL APETALO POTIUS.

HIPPURIS *vulgaris. Lin. Syſt. Vegetab.* p. 51. *Sp. Pl.* p. 6. *Fl. Suec.* n. 2.

PINASTELLA. *Dillen. Nov. Gen.* p. 168.

LIMNOPEUCE. *Haller. Hiſt.* p. 264. *Vaillant. Mem. de l'Acad. anno* 1716, t. 1. f. 3.

POLYGONUM fæmina. *Matth. in Dioſc.* p. 952. *Dodon. Pempt.* p. 113.

EQUISETUM paluſtre brevioribus foliis polyſpermon. *C. B. pin.* 15.

EQUISETUM paluſtre alterum brevioribus ſetis. *Park.* 1200.

CAUDA EQUINA fæmina. *Ger. emac.* 1114. *Raii Syn.* p. 136. *Hudſon. Fl. Angl. ed.* 2. p. 2. *Lightfoot Fl. Scot.* p. 70.

RADIX perennis, repens, geniculata, alba, geniculis plurimis fibris capillata.

CAULES plurimi, ſeſquipedales et ultra, erecti, ſimplices, glabri, ſtriati, teretes, ſpongioſi, *fig.* 1. medulla filiformi, compacta, in radicibus tenaci.

FOLIA verticillata, octo circiter, brevia, linearia, glaberrima, avenia, ad lentem punctata, punctis excavatis.

FLORES hermaphroditi plerumque, preſertim vere, ad finem æſtatis plures fæmineos obſervavi, axillares, ſeſſiles.

CALYX nullus.

COROLLA nulla.

STAMEN: FILAMENTUM unicum, apici germinis inſidens, primo breviſſimum, demiſſo polline longitudine piſtilli. ANTHERA biloba, purpuraſcens, majuſcula, *fig.* 2, 3.

PISTILLUM: GERMEN oblongum. STYLUS breviſſimus, nudus. STIGMA ſubulatum, album, ad lentem villoſum, *fig.* 4, 5, 6.

PERICARPIUM nullum.

SEMEN unicum, oblongum, nudum, ſuboſſeum, intus album, medio fuſcum, membranâ ſeu arillo tenui obtectum, *fig.* 7, 8, 9.

ROOT perennial, creeping, jointed and white, the joints furniſhed with numerous capillary fibres.

STALKS numerous, a foot and a half or more in height, upright, ſimple, ſmooth, ſtriated, round, ſpongy, *fig.* 1. the pith like a thread in the center, compact, and in the roots tough.

LEAVES growing in whirls, about eight in number ſhort, linear, perfectly ſmooth, without veins, dotted when magnified, the dots appearing hollow.

FLOWERS for the moſt part hermaphrodite, eſpecially in the ſpring, at the cloſe of the ſummer I have obſerved many of them to be female, growing in the alæ af the leaves, and ſeſſile.

CALYX none.

COROLLA none.

STAMEN: a ſingle FILAMENT, ſitting on the top of the germen, at firſt very ſhort, on ſhedding the pollen becoming as long as the piſtillum. ANTHERA compoſed of two lobes, purpliſh and rather large, *fig.* 2, 3.

PISTILLUM: GERMEN oblong. STYLE very ſhort, naked. STIGMA tapering to a point, white and downy when magnified, *fig.* 4, 5, 6.

SEED-VESSEL none.

SEED ſingle, oblong, naked, hard, white within, and in the center brown, covered with a thin membrane or arillus, *fig.* 7, 8, 9.

Greater ſimplicity in the conſtruction of a flower can ſcarcely exiſt than in the *Hippuris*. Here we have neither calyx, corolla, nor ſeed-veſſel; and thoſe parts which are univerſally conſidered as eſſential to the fructification are in the preſent inſtance as few as poſſible, there being only one ſtamen, with its correſponding piſtillum, yet perfect ſeed, and that in conſiderable quantity, is produced.

The *Hippuris* here deſcribed, which takes its name from the Greek Ἱππῶρις, ſive *Cauda equina*, is not the *Hippuris* of the firſt Botaniſts. They applied the term to our *Equiſetum*, the *Hippuris* of LINNÆUS is the *Polygonum fæmina* of DIOSCORIDES, and arranged by his commentator MATTHIOLUS with our *Polygonum aviculare* and *Herniaria*. Succeeding Botaniſts imagining, from the growth of its leaves, or from its producing ſeed, that it had better pretenſions to be ranked with the *Equiſetum*, abſurdly enough called it *Cauda equina fæmina*, to which Mr. HUDSON could not well avoid giving the Engliſh name of *Mares-tail*.

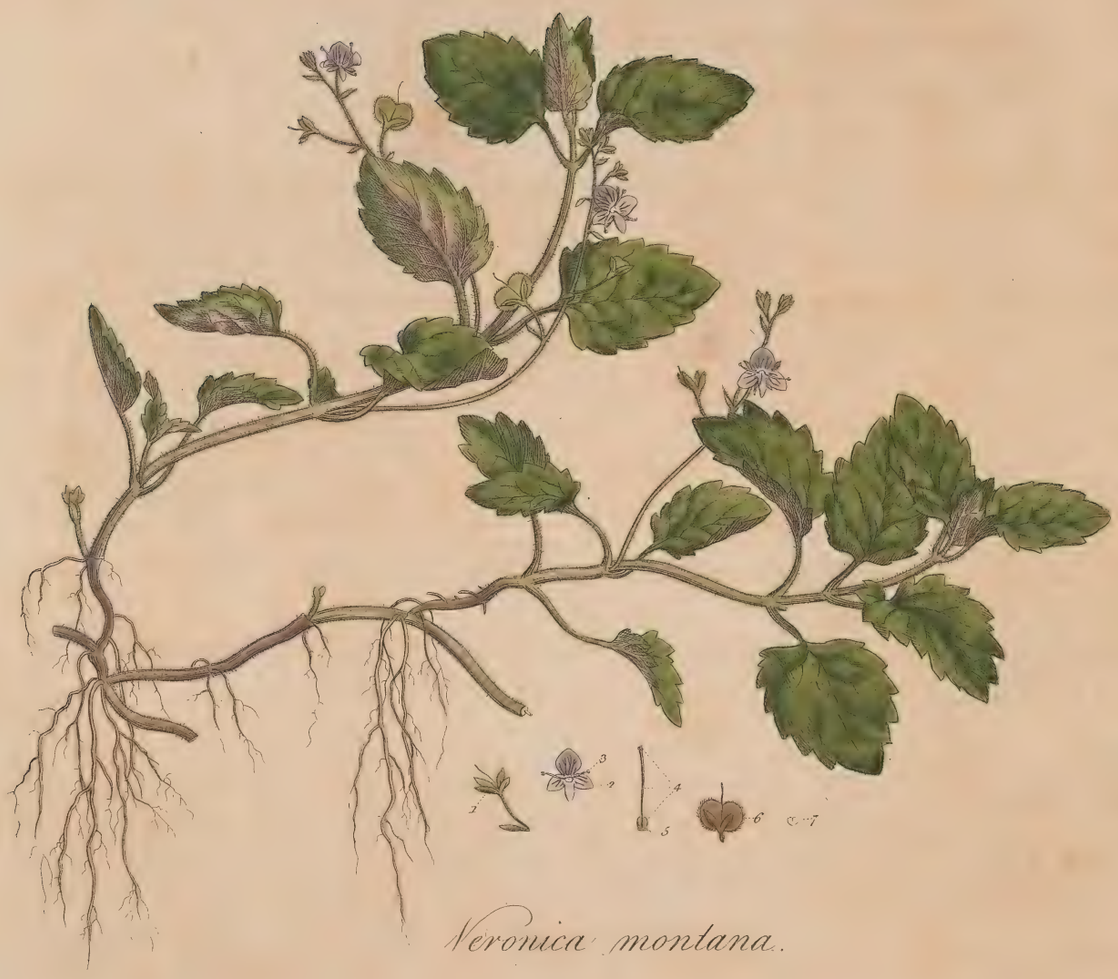
Although common in many parts of *Great Britain*, this plant is very rare about *London*, Mr. HUDSON mentions it as growing in a part of the New River near *Hornſey*, where it may ſtill be found.

It flowers and produces its ſeeds from *June* to *Auguſt*.

In running ſtreams it is frequently extended to a great length; and we have been informed, that in ſome rivers it is an exceedingly troubleſome weed, which we can the more readily believe, having experienced its roots to be of the moſt powerfully creeping kind.

A tranſverſe ſection of its ſtalk is a beautiful microſcopic object.

On examining this plant we have ſometimes found its flowers to be female only.



Veronica montana.

VERONICA MONTANA. MOUNTAIN SPEEDWELL.

VERONICA *Lin. Gen. Pl.* DIANDRIA MONOGYNIA.

Cor. Limbo 4 partito, laciniâ infimâ anguſtiore. *Capſula* bilocularis.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

VERONICA *montana* racemis lateralibus paucifloris, calycibus hirſutis, foliis ovatis rugoſis crenatis petiolatis, caule debili. *Lin. Syſt. Vegetab. Sp. Pl.* p. 56.

VERONICA caule procumbente, foliis hirſutis, cordatis, retuſis, racemis paucifloris. *Haller. hiſt.* n. 539.

CHAMÆDRYI ſpuriæ affinis rotundifolia ſcutellata. *Bauh. pin.* 249.

ALYSSON Dioſcoridis montanum. *Col. Ecph.* 1. 286.

VERONICA Chamædryoides, foliis pediculis oblongis inſidentibus. *Raii Syn.* p. 281. Wild Germander with Leaves ſtanding on long Foot-ſtalks.

Lightfoot Fl. Scot. p. 6.

Hudſon. Fl. Angl. ed. 2. p. 74.

RADIX perennis, fibroſa, fibrillis prælongis, fuſcis.

CAULES procumbentes, verſus baſin ſæpe radicantes, teretes, pilis mollibus undique hirſuti, purpuraſcentes.

FOLIA oppoſita, petiolata, ovato-cordata, obtuſiuſcula, inæqualiter ſerrata, hirſutula, nitidula, ſubtus purpuraſcentia, parum concava et bullata.

PETIOLI longitudine fere foliorem, hirſutiſſimi.

RACEMI laterales, alterni, ſubinde oppoſiti, tenues, hirſuti, pauciflori.

PEDUNCULI alterni, hirſuti, bractæâ lanceolatâ ſuffulti.

CALYX: PERIANTHIUM tetraphyllum, foliolis ſubæqualibus, ovatis, baſi anguſtatis, hirſutis, pilis ad lentem globuligeris. *fig.* 1.

COROLLA monopetala, rotata, ex purpureo-cæruleſcens, ſupremâ laciniâ ſaturatius coloratâ, una cum lateralibus venis cæruleis pictâ, infimâ minore immaculata, *tubus* breviſſimus, albus. *fig.* 2.

STAMINA: FILAMENTA duo, tubo corollæ inſerta, baſi albida, curvata, medio craſſiora; ANTHERÆ cæruleæ; POLLEN album. *fig.* 3.

PISTILLUM: GERMEN obovatum, hirſutum; STYLUS ſuperne ſenſim incraſſatus; STIGMA capitatum, album. *fig.* 4. 5.

PERICARPIUM: CAPSULA magna, orbiculata, emarginata, compreſſa. *fig.* 6.

SEMINA pauca, ovata, plana, flaveſcentia. *fig.* 7.

ROOT perennial and fibrous, the fibres very long and brown.

STALKS procumbent, often taking root towards the baſe, round, covered with ſoft hairs, and purpliſh.

LEAVES oppoſite, ſtanding on footſtalks, ovato-cordate, a little blunt, unequally ſerrated, ſlightly hairy, ſomewhat ſhining, purpliſh underneath, a little hollow and cockled.

LEAF-STALKS almoſt the length of the leaves, and very hairy.

FLOWER-BRANCHES lateral, alternate, ſometimes oppoſite, ſlender, hairy, ſupporting few flowers.

FLOWER-STALKS alternate, hairy, ſupported by a narrow floral-leaf.

CALYX: a PERIANTHIUM compoſed of four leaves, which are nearly equal, ovate, narrowed at the baſe, hairy, the hairs globular at the extremity when magnified. *fig.* 1.

COROLLA monopetalous, wheel-ſhaped, of a blueiſh purple colour, the uppermoſt ſegment more deeply coloured than the others, and together with the ſide ones ſtreakt with blue veins, the lowermoſt leaſt without any veins, the *tube* very ſhort and white. *fig.* 2.

STAMINA: two FILAMENTS, inſerted into the tube of the corolla, whitiſh at the baſe, bent, thickeſt in the middle; ANTHERÆ blue; POLLEN white. *fig.* 3.

PISTILLUM: GERMEN inverſely ovate, hairy; STYLE towards the top gradually thickened; STIGMA forming a ſmall white head. *fig.* 4. 5.

SEED-VESSEL: a large, round, flat CAPSULE nicked at top. *fig.* 6.

SEEDS few, ovate, flat and yellowiſh. *fig.* 7.

The *Veronica montana* is very ſimilar in its general appearance to the *Chamædrys*, and of which, by ſome authors, it has been conſidered as only a variety; but this has ariſen from a very ſuperficial enquiry, as no two plants can be more diſtinct; LINNÆUS might indeed have ſelected a ſpecific character, which would effectually have removed every doubt of this kind, viz. the ſhape and ſize of the ſeed-veſſels, theſe in the *montana* are at leaſt thrice as large as thoſe of the *chamædrys*, they are alſo much rounder and flatter, while the flowers on the contrary are not more than half as large, and much leſs ſhowy; when we have not theſe characters to aſſiſt us, the ſtalk and leaves will in general be ſufficient, in the *chamædrys* the hairs grow on two ſides of the ſtalk only, in the *montana* they grow all around it, in the *chamædrys* the leaves are generally ſeſſile, in the *montana* they ſtand on footſtalks.

Theſe two plants differ alſo in their places of growth, the *montana*, ſo far as I have obſerved it, preferring moiſt and ſhady ſituations, whence the term *montana* ſeems ill-applied to it; near London, it is found plentifully in Charlton Wood, behind the Church, and flowers in June and July.

VALERIANA DIOICA. MARSH VALERIAN.

VALERIANA *Linnæi Gen. Plant.* TRIANDRIA MONOGYNIA.

Cal. o *Cor.* 1. petala, basi hinc gibba, supera. *Sem.* 1.

VALERIANA *dioica* floribus triandris dioicis foliis pinnatis integerrimis. *Lin. Syst. Vegetab. Sp. Pl. p.* 44. *Fl. Suec. n.* 35.

VALERIANA foliis radicalibus petiolatis ovatis; caulinis pinnatis, sexu distincta. *Haller. hist.* 208.

VALERIANA *dioica. Scopoli Fl. Carn. n.* 40.

VALERIANA palustris minor. *Bauhin. p.* 164.

VALERIANA minor. *Ger. em.* 1075.

VALERIANA sylvestris minor. *Park.* 122.

Raii Syn. p. 200. Small wild Valerian, or Marsh Valerian. *Hudson. Fl. Angl. ed.* 2. *p.* 12. *Lightfoot Fl. Scot. p.* 85.

RADIX perennis, geniculata, repens, crassitie pennæ coracis, albida, rubore aliquando tincta, odore subaromatico valerianæ sylvestris.

CAULIS pedalis aut sesquipedalis, erectus, simplex, tetragonus, striatus, lævis; rami pauci, striati.

FOLIA opposita, radicalia integerrima, ovata, obtusa, caulina pauca, pinnatifida, pinnis duodecim circiter, venosis, obtuse serratis.

FLORES subcorymbosi, rubelli, dioici, femineis multo minoribus. *fig.* 1. flor. femin. magn. nat. *fig.* 2. flor. masc.

BRACTEÆ plurimæ, lanceolatæ, floribus subjectæ.

FLOS FEMIN.

CALYX vix ullus, margo superus. *fig.* 7.

COROLLA monopetala, tubus a latere inferiore gibbus, nectariferus; *limbus* quiquefidus, laciniis obtusis, subæqualibus; antherarum rudimenta intra tubum cernantur.

PISTILLUM: GERMEN inferum, ovatum, compressum, sulcatum, longitudine fere corollæ; STYLUS albus, superne paulo incrassatus, corolla paulo longior, obliquus; STIGMA trifidum. *fig.* 6, 7, 8, 9.

SEMEN ovato-oblongum, pallide fuscum, hinc carinatum, illinc trinerve, pappo piloso coronatum. *fig.* 11, 12, 13.

FLOS MASC.

CALYX et corolla sicut in fem. *fig.* 2.

STAMINA: FILAMENTA tria, filiformia, corolla longiora; ANTHERÆ albæ; seu pallide rubentes, *fig.* 5. Pistillum imperfectum in centro floris. *fig.* 10.

ROOT perennial, jointed, creeping, the thickness of a crow-quill, white, sometimes tinged with red, having nearly the same aromatic smell as the wild valerian.

STALK a foot, or a foot and a half high, upright, unbranched, four-cornered, striated and smooth; branches, few and striated.

LEAVES opposite, the radical ones entire, ovate, obtuse, those of the stalk few, pinnatifid, pinnæ about twelve in number, veiny, and obtusely serrated.

FLOWERS forming a kind of corymbus, of a pink colour, and dioicous, the female flowers much the smallest. *fig.* 1. a female flower of its natural size. *fig.* 2. a male flower.

BRACTEÆ numerous, lanceolate, placed beneath the flowers.

FEMALE FLOWER.

CALYX scarce any, being only a prominent rim surrounding the top of the germen. *fig.* 7.

COROLLA monopetalous, the *tube* gibbous on the under side, and containing honey; the limb divided into five segments, which are blunt and nearly equal; rudiments of Antheræ are visible within the tube. *fig.* 1.

PISTILLUM: GERMEN placed below the corolla, ovate, flat, grooved, nearly the length of the corolla; STYLE white, somewhat thickened near the top, a little longer than the corolla, oblique; STIGMA trifid. *fig.* 6, 7, 8, 9.

SEED of an ovate oblong shape, and pale brown colour, a single rib on one side, and three on the other, crowned with a feathery down, *fig.* 11, 12, 13.

MALE FLOWER.

CALYX and corolla the same as in the female. *fig.* 2.

STAMINA: three FILAMENTS filiform, longer than the corolla; ANTHERÆ white, or pale red, *fig.* 5. an imperfect Pistillum in the center of each flower. *fig.* 10.

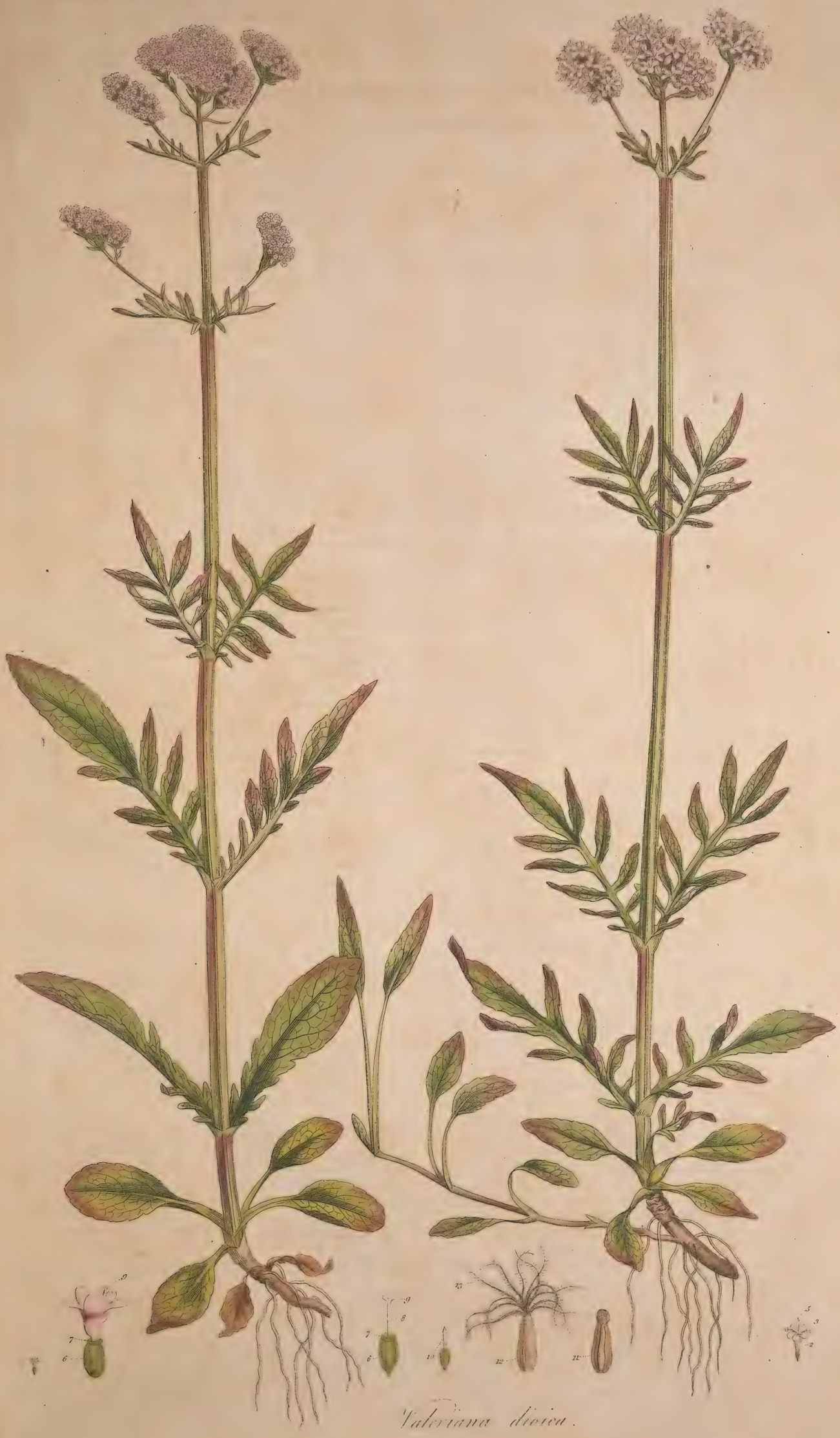
There are few plants in which nature sports more than in the Valerians, even out of the *four* species which we have growing wild with us, *one* is monandrous, viz. the *rubra*, and *another* dioicous as the present. These deficiencies in their classical character are however the less to be lamented, as they furnish excellent specific distinctions.

The *dioica* is found only in wet and boggy situations; in the meadows and osier-grounds about *Battersea* it grows abundantly; its blossoms before they open are of a bright red colour, and being collected into small heads, are very conspicuous among the herbage in the month of April; in June and July it produces its downy seeds, which, for their beauty and singular manner of expanding their pappus or down, are highly deserving the attention of the curious.

The roots having a similar smell, and probably the same medicinal virtues, as the officinal Valerian, may be substituted in lieu thereof, if necessary.

What SCOPOLI asserts of this plant is so contrary to the common opinion of botanists and our own observations, that we cannot forbear transcribing his own words; they will either prove that his observations are not to be depended upon, or that this plant puts on a very different appearance in *Carniola* than it does in the other parts of *Europe*.

"Millena specimina examinavi et nunquam vidi flores dioicos, sed nunc omnes hermaphroditos, nunc filamento "uno aliove castrato instructos, nunc masculos et femineos in eadem planta, ita tamen ut masculi flores con- "tinerent rudimentum germinis et styli; sine seminibus vero perfectis nullam hactenus inveni plantam."



Valeriana dioica.

SCIRPUS MARITIMUS. ROUND-ROOTED OR SEA CLUB-RUSH.

SCIRPUS *Lin. Gen. Pl.* TRIANDRIA MONOGYNIA.

Glumæ paleaceæ, undique imbricatæ. *Cor.* o. *Sem.* 1 imberbe.

Raii Syn. Gen. 28. HERBÆ GRAMINIFOLIÆ FLORE NON CULMIFERÆ IMPERFECTO SEU STAMINEO.

SCIRPUS *maritimus* culmo triquetro, panicula conglobata foliacea ſpicularum ſquamis trifidis: intermedia ſubulata. *Lin. Syſt. Vegetab.* p. 86. *Sp. Pl.* p. 74. *Fl. Suec.* n. 47.

SCIRPUS *maritimus*. *Scopoli Fl. Carn.* n. 57.

GRAMEN cyperoides panicula ſparſa majus. *Bauh. pin.* 6.

GRAMEN cyperoides paluſtre panicula ſparſa. *Parkins.* 1266. *Raii Syn.* p. 425. Water or Marſh Cyperus Graſs, with a ſparſed panicle.

CYPERUS rotundus littoreus inodorus. *Lob. ic.* 77. rotundus inodorus Anglicus. *C. B. Pin.* 14. rotundus littoreus. *Ger. em.* 31. *Park.* 1264. *Raii Syn.* p. 426. Round-rooted Baſtard Cyperus. *Hudſon. Fl. Anglic.* p. 21. *Lightfoot Fl. Scot.* p. 89.

RADIX perennis, repens, craſſitie calami ſcriptorii, pallide fuſca, ſtolonibus ſub finem anni apice bulboſis.

CULMUS bi ſeu tripedalis, erectus, folioſus, triqueter, angulis ſubaſperis.

FOLIA plurima, ſeptem ſive octo, pedalia aut ſeſquipedalia, lineas duas lata, ſenſim acuminata, ad carinam et oras vix aſpera, baſi vaginata, vagina minutiſſime ſtriata, nitida.

INVOLUCRUM: folia plerumque duo, rarius tria, inæqualia, longa, ad oras et carinam aſpera.

PANICULA terminalis, maxime varia, aliquando enim conſtat ſpiculis quinque vel ſex conglobatis ſeſſilibus, ſæpius vero præter has utrinque oritur pedunculus, tres quatuor vel quinque gerens ſpiculas.

PEDUNCULI glabri, nudi ad ſpiculas ſubincraſſati.

SPICULÆ magnæ, unciales fere, ovatæ; acutæ, primo atro purpureæ, demum ferrugineæ, ſquamis undique imbricatæ.

CALYX: *Squamæ* fuſcæ, corrugatæ, ſcarioſæ, carinatæ, apice ſæpius tridentatæ, dente medio ſubulato, in infimis floſculis longiore. *fig.* 1. 2.

COROLLA nulla.

STAMINA: FILAMENTA tria, alba, latiuſcula. ANTHERÆ, flavæ, lineares, membrana alba minuta terminatæ. *fig.* 3.

PISTILLUM: GERMEN obovatum, minimum, glabrum. STYLUS ſubulatus, longitudine ſtaminum. STIGMATA tria, capillaria. *fig.* 4.

VILLI quatuor aut quinque, ad baſin germinis, albi, erecti ad lentem retrorſum aculeati, germini longiores. *fig.* 5.

SEMEN unicum, ſubtriquetrum, acuminatum, fuſcum, nitidum. *fig.* 6.

ROOT perennial, creeping, the thickneſs of a gooſequill, of a pale brown colour, the ſhoots at the end of the year bulbous at their extremities.

STALK two or three feet high, upright, leafy, three-cornered, the angles ſomewhat rough.

LEAVES numerous, ſeven or eight, a foot or a foot and a half in length, two lines in breadth, gradually tapering to a point, the keel and edges ſcarcely rough, forming a ſheath at bottom, which is ſtriated and gloſſy.

INVOLUCRUM conſiſts generally of two, rarely of three leaves, which are long, unequal and rough on the edges and keel.

PANICLE terminal, and extremely various, ſometimes it conſiſts of only five or ſix cluſtered ſpiculæ, but for the moſt part, beſides theſe, a flower-ſtalk ariſes on each ſide, bearing three, four, or five ſpiculæ more.

FLOWER-STALKS ſmooth, naked, ſomewhat thickened at the ſpiculæ.

SPICULÆ large, almoſt an inch in length, ovate, pointed, at firſt of a blackiſh purple colour, afterwards ferruginous, covered with ſcales on every ſide.

CALYX: *Scales* brown, wrinkled, ſonorous to the touch, keeled, having the tip generally furniſhed with three teeth, of which the middle one runs out to a long point, in the lowermoſt flowers this is longeſt. *fig.* 1. 2.

COROLLA wanting.

STAMINA: three FILAMENTS, white and broadiſh. ANTHERÆ yellow, linear, tipt with a minute white membrane. *fig.* 3.

PISTILLUM: GERMEN inverſely ovate, very ſmall and ſmooth. STYLE tapering, the length of the ſtamina. STIGMATA three, capillary. *fig.* 4.

HAIRS four or five at the baſe of the germen, white, upright, when magnified having prickles which crook backward, longer than the germen. *fig.* 5.

SEED ſingle, ſomewhat three-cornered, pointed, brown, and ſhining. *fig.* 6.

LINNÆUS remarks, that this ſpecies cloaths the ſea-ſhores as the Bulruſh does the borders of the inland lakes; but it is frequently found where the water is not ſalt, as in the river *Thames*, and on the edges of the creeks running from it. In the *Iſle of Shepey* it fills almoſt every ditch, and appears to be more perfectly at home.

It flowers from June to Auguſt.

The older Botaniſts made ſeveral ſpecies of this plant, which LINNÆUS has very properly referred to varieties only. They did not attend to the œconomy of the plant, or they would have found, that the roots, in every variety, were bulbous at the extremities in the autumn, nor to the circumſtances of ſituation, &c. or they would have ſeen this plant ſometimes ſhorter, ſometimes taller, ſometimes with a ſimple, ſometimes with a branched panicle as is repreſented on the plate.

We know of no uſe to which this elegant ſpecies of Club-ruſh is applied. The roots have a remarkably ſweet taſte, and probably are very nutritious.

Swine are extremely fond of the roots of the *Scirpus paluſtris*, which the Swediſh peaſants collect and fodder them with in the winter: the roots of the preſent ſpecies, being much larger, would we conceive be much preferable for this or ſimilar purpoſes.

Scirpus maritimus.

PANICUM VIRIDE. GREEN PANIC GRASS.

PANICUM *Lin. Gen. Pl.* TRIANDRIA DIGYNIA.

Cal. 3-valvis: valvula tertia minima.

Raii Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

PANICUM *viride* ſpica tereti, involucellis bifloris faſciculato-piloſis, ſeminibus nervoſis. *Lin. Syſt. Vegetab.* p. 502. *Sp. Pl.* p. 83.

PANICUM ſpica unica, floſculis ſeſſilibus ſolitariis, ſetis numeroſis. *Haller. Hiſt.* n. 1542.

GRAMEN paniceum ſpica ſimplici. *Bauh. Pin.* 8.

GRAMEN panici effigie ſpica ſimplici. *Ger. emac.* 17.

GRAMEN paniceum ſpica ſimplici lævi. *Raii Syn.* p. 393. Panic-Graſs, with a ſingle ſmooth ear. *Hudſon Fl. Angl.* ed. 2. p. 24.

RADIX annua, fibroſa.

CULMI erecti, pedales et ultra, ſimplices, ſubinde ramoſi, quatuor aut quinque geniculis diſtincti, læves.

FOLIA palmaria et ultra, lineas duas, tres, quatuorve quandoque lata, acuminata, lævia, ad margines aſpera, in apricis ſæpe ſanguinea; foliorum *Vagina* ſtriata, lævis, ad internam foliorum baſin, loco membranulæ in pilos ſubtiliſſimos lineam dimidiam aut paulo plus longos terminatæ, qui pili etiam quandoque vaginæ margines ſupremas ipſique foliorum baſi proximas occupant.

SPICA ſimplex, teres, cylindracea, uncialis, ſeſquiuncialis et ultra, craſſitie pennæ anſerinæ majoris, aliquando tota ſpadicea vel atro-purpurea, alias ex viridi luteſcens, luteis pilis, aliquando rubris donata, denſe coagmentatis conſtans ſpiculis, molliuſcula, veſtibus nequaquam adhærens; ſetæ ſeu pili plurimi, erecti, tortuoſi, floſculis triplo longiores, ad lentem aculeati, aculeis erectis. *fig.* 1. 2.

CALYX: *Gluma* uniflora, trivalvis, valvulis duabus oppoſitis, æqualibus, ovatis, obtuſis, nervoſis, *fig.* 4. tertia minima, inferne poſita. *fig.* 3.

COROLLA: bivalvis, valvulæ ovatæ, concavæ, nitidæ, ſubæquales. *fig.* 5.

STAMINA: FILAMENTA tria, capillaria, breviſſima, corollam paulo excedentia. ANTHERÆ minimæ, purpureæ. *fig.* 6.

PISTILLUM: GERMEN ovatum. STYLI duo, capillares. STIGMATA plumoſa, alba. *fig.* 7.

SEMEN unicum, ſubovatum, tectum, hinc convexum, obſolete nervoſum, inde planiuſculum. *fig.* 8.

ROOT annual, and fibrous.

STALKS upright, a foot high or more, ſimple, now and then branched, furniſhed with four or five joints, and ſmooth.

LEAVES about a hand's breadth or more in length, two or three lines, and ſometimes more, in breadth, pointed, ſmooth, rough on the edges, in open ſituations often of a blood-red colour; *Sheath* of the leaves ſtriated, ſmooth, terminated at the inner baſe of the leaf, inſtead of a membrane, by very fine hairs, about half a line or ſomewhat more in length, which ſometimes alſo occupy the edges of the ſheath on its upper part, and of the leaves at their baſe.

SPIKE ſimple, round, cylindrical, an inch, an inch and a half or more in length, the thickneſs of a large gooſe quill, ſometimes wholly of a reddiſh purple colour, at others greeniſh yellow, furniſhed with yellowiſh, and ſometimes reddiſh hairs, compoſed of ſpiculæ cloſely compacted, ſoft to the touch, never adhering to garments; ſetæ or hairs numerous, upright, crooked, thrice the length of the floſcules, when magnified furniſhed with ſmall prickles, which are upright. *fig.* 1. 2.

CALYX: a *Glume* of one flower, and three valves, two of which are oppoſite, equal, ovate, obtuſe, and ribbed, *fig.* 4. the third is very minute, and placed below the others. *fig.* 3.

COROLLA compoſed of two valves, which are ovate, hollow, ſhining, and nearly equal. *fig.* 5.

STAMINA: three capillary FILAMENTS, very ſhort, a little longer than the corolla. ANTHERÆ very ſmall, and purple. *fig.* 6.

PISTILLUM: GERMEN ovate. STYLES two, capillary. STIGMATA feathery and white. *fig.* 7.

SEED ſingle, ſomewhat ovate, covered, convex, and faintly ribbed on one ſide, on the other flattiſh. *fig.* 8.

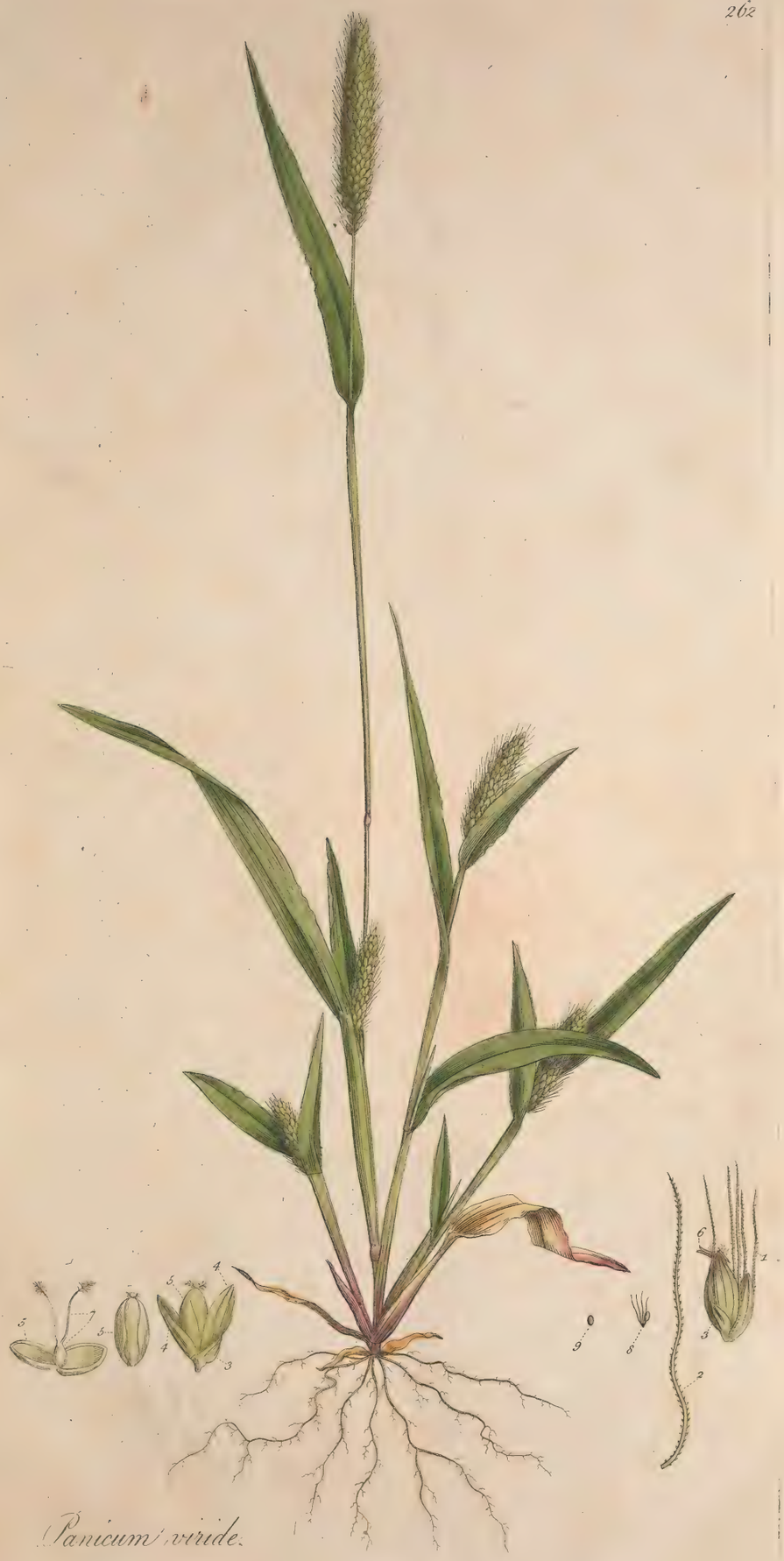
In a former part of this work we gave figures of the *Panicum cruſgalli* and *ſanguinale*: we here preſent our readers with two more, being the whole of this genus growing near *London*.

The *viride* is with us the moſt common of the four; yet at a diſtance from town it appears to have few *habitats*. Mr. HUDSON particularizes *Martha's Chapel* near *Guildford*; *Bateſea Fields* is the only place where we find this, and the others, all of which flower about the ſame period, viz. *Auguſt* and *September*.

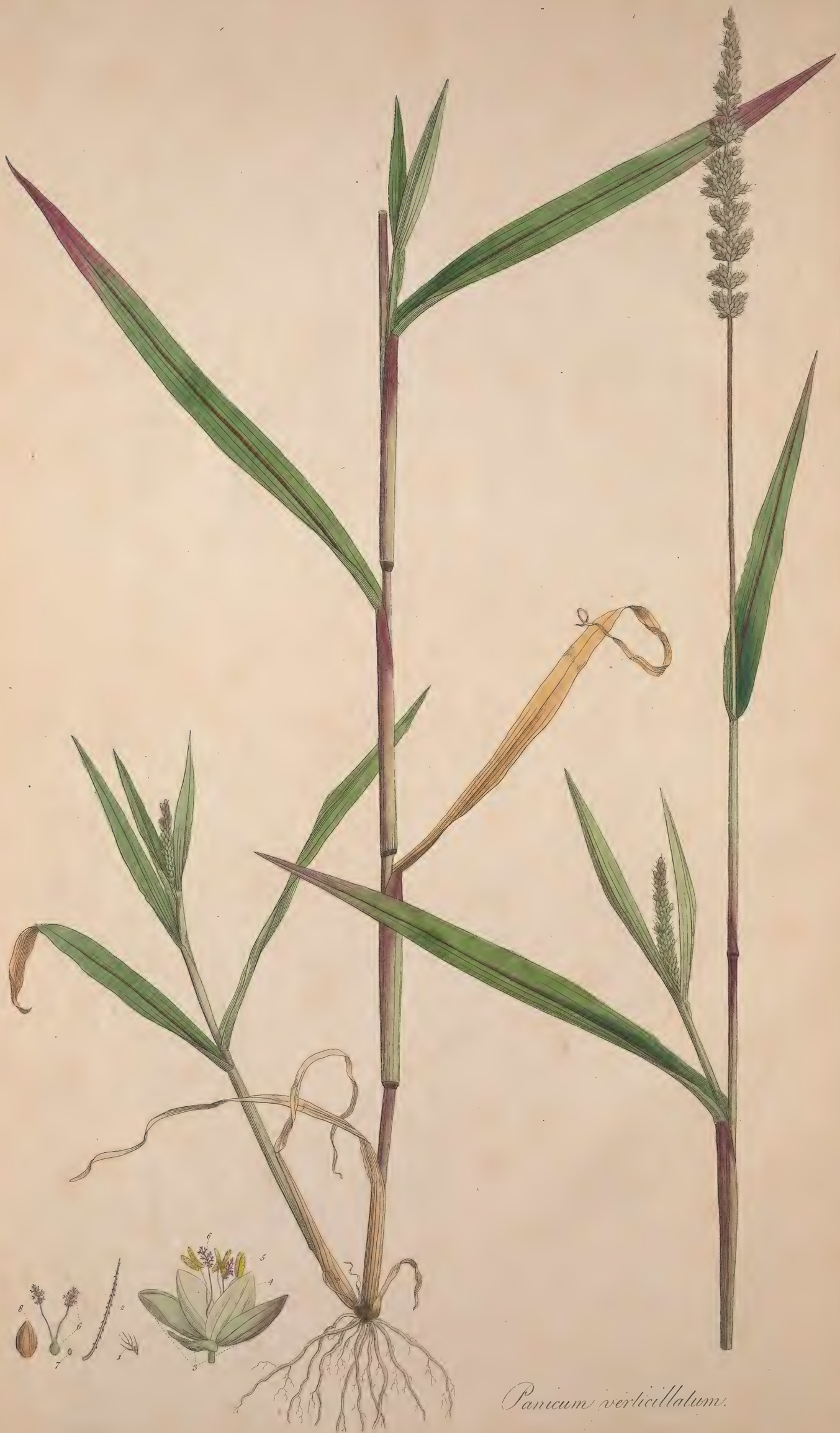
To correſpond with its name, the *viride* ſhould be always of a green colour; but we often find its foliage red, and its ſpikes reddiſh-brown, and the *verticillatum* vice verſa: we are not therefore to look for an infallible guide in its colour, but the ſpike will always diſtinguiſh it from the *verticillatum*. Between theſe two, indeed, there is a more ſenſible difference to the touch than betwixt the *Alopecurus pratenſis* and *Phleum pratenſe*; the hairs in the ſpike of the *viride* are much longer than thoſe of the *verticillatum*, and though the microſcope diſcovers them to be prickly, *vid. fig.* 1. 2. yet theſe being upright diſcover no manifeſt roughneſs.

Agriculturally it may be conſidered rather as a weed than an uſeful graſs.

Sparrows are remarkably fond of its ſeeds: the whole of this genus, when cultivated in a garden, require to be protected from them.



Panicum viride.



Panicum verticillatum.

PANICUM VERTICILLATUM. ROUGH PANIC GRASS.

PANICUM. *Lin. Gen. Pl.* TRIANDRIA DIGYNIA.

Cal. trivalvis, valvula tertia minima.

Raii Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

PANICUM *verticillatum* ſpica verticillata racemulis quaternis, involucellis unifloris biſetis, culmis diffuſis. *Lin. Syſt. Vegetab.* p. 89. *Sp. Pl.* p. 82.

PANICUM ſpica unica paniculata, ſetis paucioribus. *Haller. Hiſt.* n. 1543.

GRAMEN paniceum ſpica aſpera. *Bauh. Pin.* p. 8.

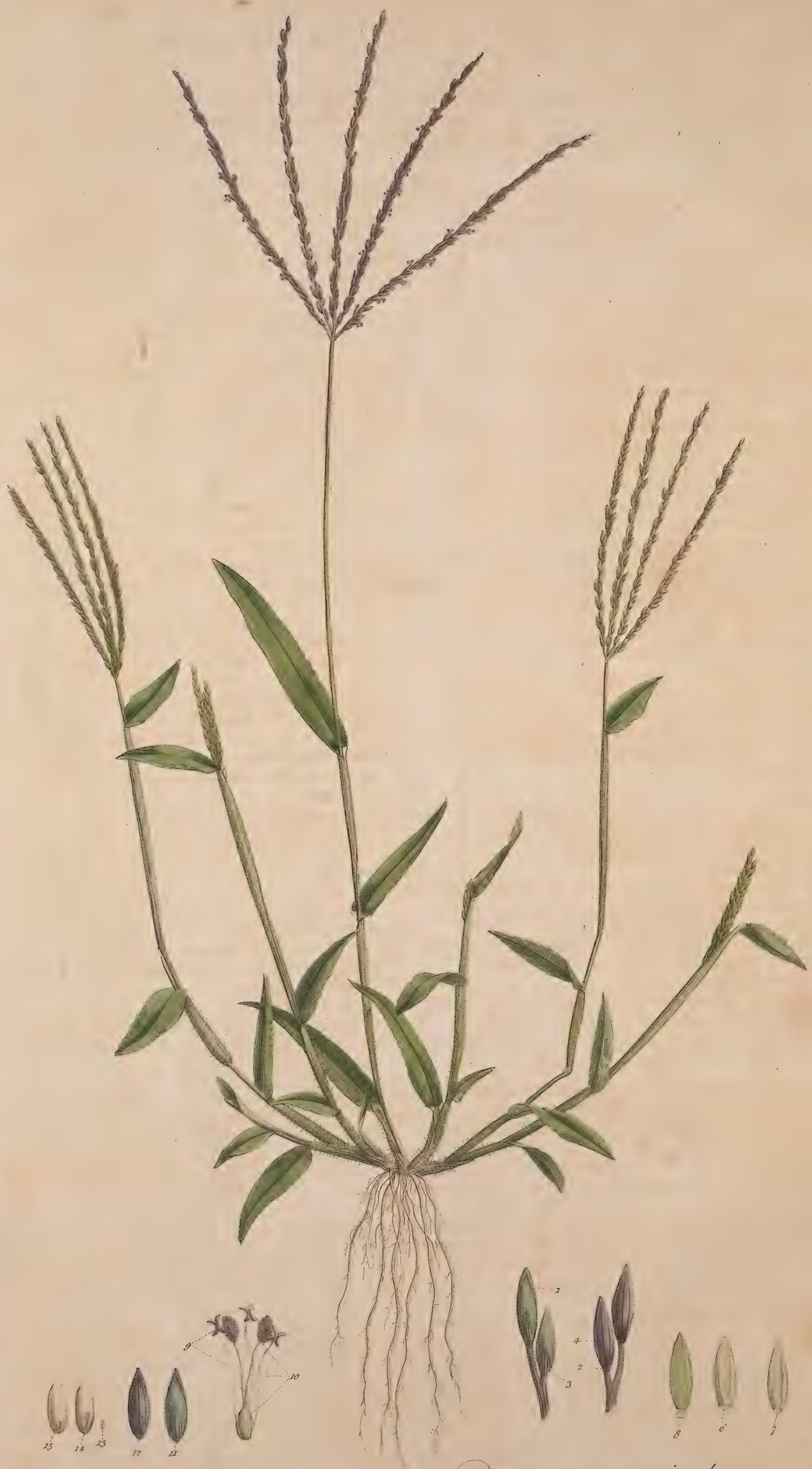
PANICUM vulgare ſpica ſimplici et aſpera. *Inſt.* 515. *Scheuch. Agroſt.* 47. *Raii Syn.* p. 394. Rough-eared Panic-Graſs. *Hudſon Fl. Angl. ed.* 2. p. 24.

Fig. 1. Racemula ramoſa magn. nat.
Fig. 2. Pars ejuſdem auct.
Fig. 3. Glumæ calycis auct.
Fig. 4. Corolla.
Fig. 5. Stamina.
Fig. 6. Piſtillum.
Fig. 7. Semen magn. nat.
Fig. 8. Idem auct.

Fig. 1. One of the ſmall branched racemi of its natural ſize.
Fig. 2. A part of the ſame magnified.
Fig. 3. The glumes of the calyx magnified.
Fig. 4. The Corolla.
Fig. 5. The Stamina.
Fig. 6. The Piſtillum.
Fig. 7. The ſeed of its natural ſize.
Fig. 8. The ſame magnified.

The *Panicum verticillatum* in its general habit agrees exactly with the *viride*, but in the ſize and form of the ſpike, and the parts compoſing it, it differs very materially: the whole plant is generally one-third larger than that of the viride; the ſpike is larger, and much leſs compact; it is evidently compoſed of little branches, which grow ſomewhat in whirls, whence its name. The ſetæ or hairs of the ſpike are conſiderably ſhorter than thoſe of the viride, and differ from them particularly in being hooked, ſo that the ſpike drawn over the back of the hand or cuff of the coat adheres very ſtrongly; and where ſeveral ſpikes grow near each other, they are very apt, from this cauſe, to become entangled.

I found this plant growing laſt year very ſparingly in the Gardeners Grounds *Bateſea Fields*, with the *viride*, and flowering at the ſame time. Mr. RAY deſcribes it as having been found in a Turnip Field betwixt *Putney* and *Roehampton*, alſo beyond the *Neat-houſes* by the *Thames* ſide, going from the Horſe Ferry above *Weſtminſter* to *Chelſea*. SCHEUCHZER remarks, that it is a troubleſome weed in the gardens at *Paris*.



Panicum sanguinale.

PANICUM SANGUINALE. COCK'S-FOOT PANIC-GRASS.

PANICUM *Lin. Gen. Pl.* TRIANDRIA DIGYNIA.
Cal. 3-valvis: valvula tertia minima.
PANICUM *ſanguinale* ſpicis digitatis baſi interiore nodoſis, floſculis geminis muticis, vaginis foliorum punctatis. *Lin. Syſt. Vegetab.* p. 90. *Sp. Pl.* 84.
DIGITARIA foliis ſubhirſutis, caule debili, ſpicis verticillatis. *Haller Hiſt.* n. 1526.
DIGITARIA *ſanguinalis. Scopoli Fl. Carn.* n. 72.
GRAMEN dactylon latiore folio. *Bauhin Pin.* 8.
ISCHÆMON ſylveſtre latiore folio. *Parkinſ.* 1178.
ISCHÆMON vulgare. *Ger. emac.* 27. Cock's-foot-graſs. *Raii Syn.* p. 399. *Scheuch. Agroſt.* 101. *Schreb. Agroſt.* t. 16. *Hudſon Fl. Angl. ed.* 2. p. 25.

RADIX annua, fibroſa.

CULMI ex una radice plures, ſpithamæi, pedales, ſubrubentes, ſubinde ramoſi, adſcendentes, infracti, tenues valde et debiles, quatuor plerumque geniculis diſtincti.

FOLIA uncialia, ſeſquiuncialia, et biuncialia, lineas duas aut duas cum dimidia lata, acuta, ad unum latus ſæpe undulata, ſuperne et inferne raris pilis hirſuta, marginibus ad lentem minutiſſime ſerrulatis; vagina ſtriata, valde piloſa, pilis e punctis prominulis prodeuntibus.

SPICÆ ternæ, quaternæ, et quinæ plerumque, in cultis ſæpe plures, digitatim ſummo culmo inſidentes, ſeſquiunciam ad quatuor uncias longæ, filiformes, vel eodem loco oriundæ omnes, vel alternatim e ſummo culmo prodeuntes, et exiguo ab invicem ſpatio diſcretæ, purpureæ, aut ex purpureo et viridante mixtæ.

SPICULÆ ſecundæ, binæ, rachi adpreſſæ, pedicellatæ, pedicello altero longiore, longitudine ſpiculæ, ovato-lanceolatæ, acutæ, nunc purpuraſcentes, nunc virides. *fig.* 1, 2, 3, 4. *auct.*

CALYX trivalvis, perſiſtens, infima minima, breviſſima, nudo oculo vix conſpicua, *fig.* 2. ſecunda et tertia oppoſitis, inæqualibus, acutis, nervoſis, margine ſcabris, ſuperiore longitudine corollæ quam margine ſuo amplectitur, inferiore dimidio breviore. *fig.* 3, 4.

COROLLA: bivalvis, valvulis æqualibus, glabris, alterâ alteram recipiente, *fig.* 8. ubi membranula ad baſin earum pingitur, *fig.* 6, 7. diſjunctæ apparent.

STAMINA: FILAMENTA tria, capillaria, corollâ paulo longiora; ANTHERÆ breves, parvæ, purpuraſcentes, utrinque bifurcæ. *fig.* 9.

PISTILLUM: GERMEN oblongum; STYLI duo, filiformes, longitudine ſtaminum; STIGMATA plumoſa, purpurea. *fig.* 10.

SEMEN minimum, oblongum glumis calycinis æque ac corollaceis incluſum, *fig.* 11, 12. denudatum, *fig.* 13. *magnit. nat. fig.* 14, 15. *auct.*

ROOT annual and fibrous.

STALKS ſeveral from one root, a ſpan or a foot in height, of a reddiſh colour, ſometimes branched, bending upward, crooked, very ſlender and weak, and generally furniſhed with four joints.

LEAVES an inch, an inch and a half, or two inches in length, and from two to two lines and a half in breadth, pointed, often waved on one ſide, on both ſides beſet with a few hairs, the edges when magnified very finely ſawed; the ſheath ſtriated, very hairy, the hairs proceeding from little prominent points.

SPIKES ſitting on the top of the ſtem, generally three, four or five together, often more in cultivated places, branching out like fingers, from one inch and a half to four inches in length, filiform, all of them proceeding from the ſame point, or growing alternately, leaving a ſmall ſpace betwixt them, of a dark purple colour, or purple and green mixed together.

SPICULÆ growing one way, preſſed to the rachis, ſtanding on foot-ſtalks, the longeſt of which is of the length of one of the ſpiculæ, ovato-lanceolate and pointed, ſometimes purpliſh, and ſometimes green. *fig.* 1, 2, 3, 4. *magnified.*

CALYX compoſed of three valves, and permanent, the lowermoſt very minute and ſhort, ſcarcely perceptible by the naked eye, *fig.* 2. the ſecond and third oppoſite, unequal, pointed, rib'd, rough on the edges, the upper one the length of the corolla, which it enfolds with its margin, the lower one half its length. *fig.* 3, 4.

COROLLA: compoſed of two valves which are equal and ſmooth, the one receiving the other, *fig.* 8. where a ſmall membrane is painted at their baſe; at *fig.* 6. and 7. they appear disjoin'd.

STAMINA: three FILAMENTS, very ſlender, a little longer than the corolla; ANTHERÆ ſmall, ſhort, purpliſh, forked at each end. *fig.* 9.

PISTILLUM: GERMEN oblong; STYLES two, filiform, the length of the ſtamina; STIGMATA feather'd and purple. *fig.* 10.

SEED very ſmall, oblong, incloſed by the glumes of the calyx, as well as of the corolla, *fig.* 11, 12. ſtripped of theſe, *fig.* 13. of its natural ſize, and magnified at *fig.* 14, 15.

Modern Botaniſts are divided in their opinions reſpecting the genus of this plant, LINNÆUS, SCHREBER, and others conſidering it as a *Panicum*; ADANSON, HEISTER, HALLER and SCOPOLI arranging it under a new genus, viz. *Digitaria*, a name adapted to the particular diſpoſition of its ſpikes, but as that particular diſpoſition has little to do with its generic character, and as it has a triphyllous calyx, which LINNÆUS, with much propriety, conſiders as a principal character of the *Panicum*, we follow him in preference to the others, however reſpectable. We may obſerve, that the exterior leaf forming this triphyllous calyx is ſo very minute, that it may eaſily be overlooked.

The figures and deſcriptions, quoted by LINNÆUS, induce us to conſider this ſpecies as the *ſanguinale*, rather than his ſpecific deſcription, which certainly does not well accord with our plant. The *vaginæ punctatæ* are not mentioned either by HALLER, SCHEUCHZER, or SCOPOLI; the hairs certainly iſſue from little prominent points, ſcarcely viſible, unleſs magnified. If LINNÆUS means theſe, they are, in our apprehenſion, too minute to form a ſpecific character on.

According to the obſervations of botanic writers, this ſpecies is very univerſal, being found not only in *Europe*, but *Aſia* and *America*; nevertheleſs, it is not general throughout *England*. It is ſaid to grow about *Elden* in *Suffolk*, at *Witchingham* near *Norwich*, near *Martha's Chapel* by *Guildford*, and in the Gardener's grounds near *Batterſea*; in the latter place I found it laſt *September*, in great plenty; but in one part of the fields only, viz. among the *French* beans, and on the Aſparagus beds, in the Weſtern corner of the fields, at no great diſtance from the Church.

MATTHIOLUS relates, that in *Carniola* the ſeeds are collected for food, but this is flatly contradicted by SCOPOLI; indeed, for this purpoſe, it appears much inferior to many others of the ſame genus.

Its name of *ſanguinale* is not taken from its colour, but from an idle trick which the boys in *Germany* have of pricking their noſtrils with the ſpiculæ of this graſs, till they draw blood.

PANICUM CRUS GALLI. LOOSE PANIC-GRASS.

PANICUM *Lin. Gen. Pl.* TRIANDRIA DIGYNIA.
Cal. 3-valvis: valvula tertia minima.
PANICUM *Crus galli* ſpicis alternis conjugatiſque, ſpiculis ſubdiviſis, glumis ariſtatis hiſpidis, rachi quinquangulari. *Lin. Syſt. Vegetab.* p. 90. *Spec. Pl.* p. 83.
PANICUM ſpica remota, ſetis nullis. *Haller Hiſt.* n. 1544.
PANICUM *Crus galli. Scopoli Fl. Carn.* n. 70.
GRAMEN paniceum ſpica diviſa. *Bauh. Pin.* 8.
GRAMEN paniceum, ſpica diviſa, ariſtis longis armata. var. *β*. *Bauh. Pin.* 8.
PANICUM ſylveſtre Herbariorum. *Parkinſ.* 1154.
PANICUM *vulgare. Ger. emac.* 85. *Raii Syn.* p. 394. Panick Graſs with a divided Spike. *Hudſon Fl. Angl. ed.* 2. p. 24.

RADIX annua, fibroſa.
CAULES plerumque plures ex una radice, primo procumbentes, ſeu obliqui, demum ſuberecti, pedales aut bipedales, tribus aut quatuor geniculis diſtincti.
FOLIA in humilioribus tres quatuorve uncias longa, lineas duas aut tres lata, in procerioribus ſemipedalia, vel etiam pedalia fere, lineas quatuor, aliquando et ſex ſemptemve lata, acuminata, carinata, lævia, marginibus minutiſſime denticulatis et ad baſin circa orem vaginæ piloſis; *Membrana* nulla; *Vagina* magna, ſtriata, compreſſa.

FLORES paniculati.
PANICULA palmaris, et ultra, e pluribus ſpicis compoſita, pallide vireſcens.
SPICÆ ſæpe ad duodecim, craſſæ, teretiuſculæ, plerumque ſimplices et alternæ, etiam ramoſæ et oppoſitæ, inferioribus ſeſquiuncialibus, magiſque remotis.

RACHIS quinquangularis, angulo quinto obſoleto, ad baſin ſpicarum ſetoſa.

FLORES ſecundi, turgidi.
CALYX trivalvis, valvula inferiore minore, floſculum recipiente, *fig.* 1. prima et ſecundâ æqualibus, nervoſis, mucronatis, hirſutis, alterâ plana, alterâ gibboſa. *fig.* 2, 3. *auct.*

COROLLA bivalvis, valvulis æqualibus, glabris, ovatis, alterâ alteram margine ſuâ amplectente, *fig.* 4. intra valvulam calycis et corollæ, membrana tenuis, nunc acuta, nunc emarginata. *fig.* 5, 6.

STAMINA: FILAMENTA tria, capillaria, breviſſima; ANTHERÆ bifurcæ, purpuraſcentes. *fig.* 7.
PISTILLUM: GERMEN ſubrotundum; STYLI duo breviſſimi; STIGMATA plumoſa, purpuraſcentia. *fig.* 8.
SEMEN majuſculum, nitidum, glumis corollaceis tectum, hinc convexum, inde planum, *fig.* 9, 10. denudatum, *fig.* 11, 12, 13.

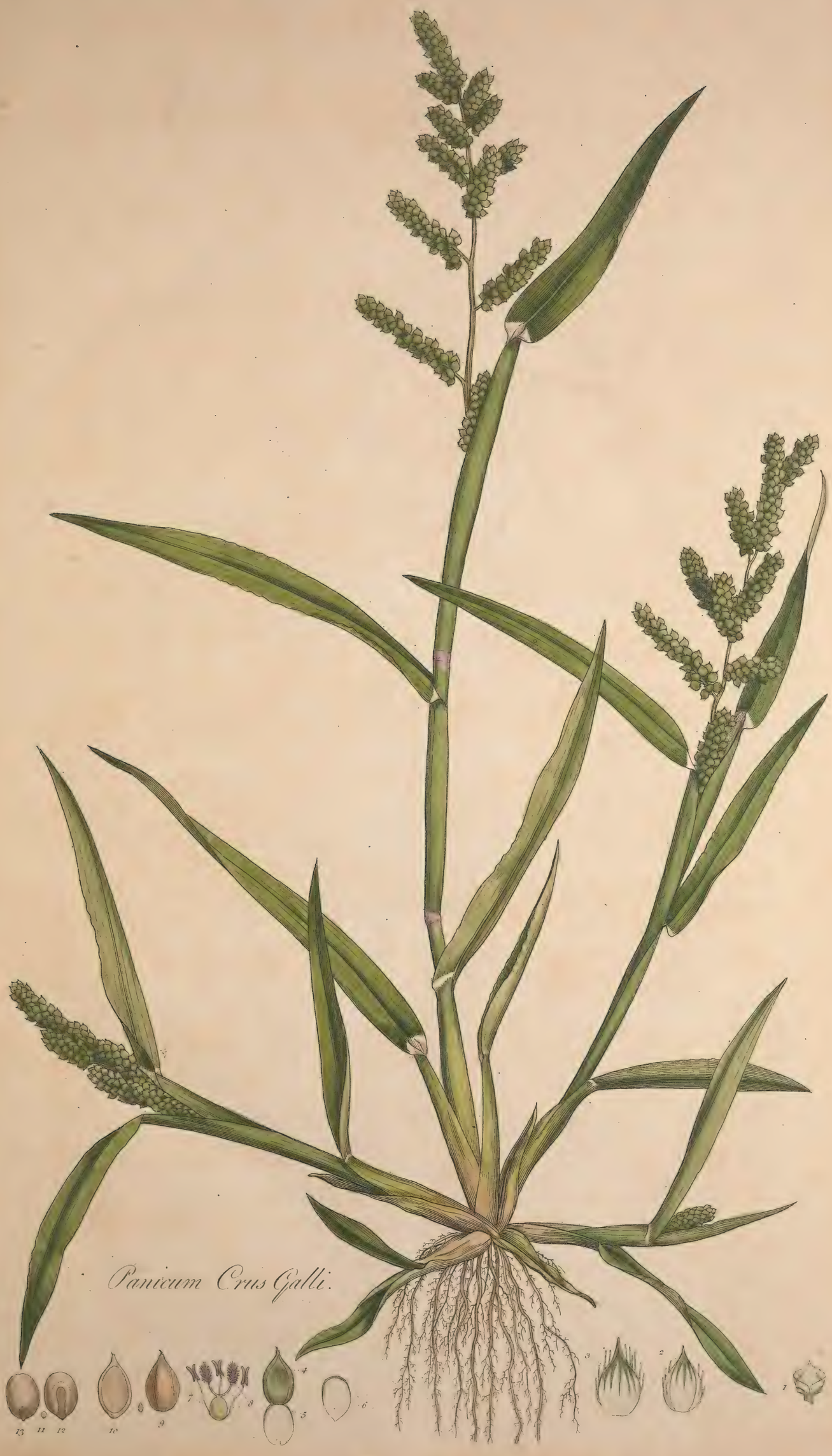
ROOT annual and fibrous.
STALKS generally ſeveral proceed from the ſame root, at firſt procumbent or oblique, finally nearly upright, from one to two feet in height, furniſhed with three or four joints.
LEAVES in the more humble plants three or four inches long, and from two to three lines in breadth; in the taller plants ſix inches, or nearly a foot in length, four lines, and ſometimes ſix or ſeven broad, tapering to a point, keeled, ſmooth, the edges very finely toothed, and about the mouth of the ſheath hairy; *Membrane* none; *Sheath* large, ſtriated and compreſſed.
FLOWERS in a panicle.
PANICLE a hand's breadth or more in length, of a pale green colour, compoſed of many ſpikes.
SPIKES often twelve in number, thick, roundiſh, generally ſimple and alternate, ſometimes alſo branched and oppoſite, the lowermoſt an inch and a half in length, longer and farther aſunder than any of the reſt.
RACHIS having five angles, the fifth leſs perceptible than the others, briſtly or hairy at the baſe of the ſpikes.
FLOWERS growing one way and turgid.
CALYX compoſed of three valves, the lowermoſt or third valve very ſmall, receiving the floſcule, *fig.* 1. the firſt and ſecond equal, rib'd, pointed, hirſute, the one flat, the other gibbous. *fig.* 2, 3. *magnified.*
COROLLA compoſed of two valves, the valves equal, ſmooth, ovate, the one with its margin embracing the other, *fig.* 4. betwixt the valve of the calyx and the corolla a thin membrane is obſervable, which is ſometimes notched, and ſometimes pointed. *fig.* 5, 6.
STAMINA: three very ſlender and ſhort FILAMENTS; ANTHERÆ forked and purpliſh. *fig.* 7.
PISTILLUM: GERMEN roundiſh; STYLES two, very ſhort; STIGMATA feathered and purpliſh. *fig.* 8.
SEED rather large, ſhining, covered by the valves of the corolla, round on one ſide, and flat on the other, *fig.* 9, 10. taken from its covering. *fig.* 11, 12, 13.

Near the ſame ſpot where the *Panicum ſanguinale* is found, this rare ſpecies alſo makes its appearance, a ſpace of about twenty yards ſquare was laſt autumn covered chiefly with this graſs, and the *Panicum viride*; in other parts of the fields it more rarely occurs; being an annual it may vary its particular place of growth, but by a diligent ſearch will probably always be found in ſome part of *Batterſea Fields*; Mr. RAY mentions it as having been found between *Deptford* and *Greenwich* in Garden Ground, alſo in a lane by the *Neat-houſe Gardens Chelſea*, and by the rivulet ſide near *Peterſfield, Hampſhire.* He is ſurely miſtaken in ſaying *aquoſis delectatur.* Mr. HUDSON deſcribes it as growing near *Martha's Chapel, Guildford.*

Botaniſts make two principal varieties of it, viz. one with awns, and another without; the latter, which is the ſtate in which we have figured it, moſt frequently occurs; it varies alſo in its colour, being ſometimes found with ſpikes of a purpliſh hue.

It has a very great affinity to the *Panicum Crus corvi*, a foreign graſs, but is too ſingular to be miſtaken for any *Engliſh* Panic.

Affording a large quantity of ſeeds of conſiderable magnitude, it is ſought for with great avidity by ſparrows and other ſmall birds.


Panicum Crus Galli.

Eriophorum polyſtachion. Many-Headed Cotton-Graſs.

ERIOPHORUM *Lin. Gen. Pl.* TRIANDRIA MONOGYNIA.

Glumæ paleaceæ, undique imbricatæ. *Cor.* o. *Sem.* 1. *Lanâ* longiſſimâ cinctum.

Raii. Syn. Gen. 23. HERBÆ GRAMINIFOLIÆ NON CULMIFERÆ FLORE IMPERFECTO SEU STAMINEO.

ERIOPHORUM *polyſtachion* culmis teretibus, foliis planis, ſpicis pedunculatis. *Lin. Syſt. Vegetab.* p. 87. *Sp. Pl.* p. 76. *Fl. Suec.* n. 49.

ERIOPHORUM foliis planis, ſpicis pendulis. *Haller. hiſt.* n. 1331.

LINAGROSTIS *polyſtachia. Scopoli. Fl. Carn. n.* 66.

GRAMEN pratenſe tomentoſum panicula ſparſa. *C. B. Pin.* 4.

GRAMEN tomentarium. *Ger. emac.* 29.

GRAMEN junceum lanatum, vel juncus bombycinus vulgaris. *Park.* 1271. *Scheuzch. Agroſt. ed. Haller.* p. 306. *Vaill. Bot. Paris.* t. 16. f. 1. 2. *Raii Syn.* p. 433. Cotton-graſs.

Lightfoot Fl. Scot. p. 89.
Hudſon Fl. Angl. ed. p. 21.

RADIX perennis, repens, fuſca, ſeu caſtanei coloris, fibrillis plurimis albis, aut rubentibus inſtructa.

CULMUS ſæpius ſolitarius, dodrantalis, ſeu pedalis, et ultra, erectus, teres, lævis, geniculis duobus parum extantibus plerumque notatus, vaginis foliorum per totam longitudinem tectus.

FOLIA *ima* marcida, caſtanea, brevia, lanceolata, ſtriato-reticulata; *ſuperiora* baſi ſua arctè culmum amplectentia, lineas duas ad tres lata, ſpithamæa et ultra, ſenſim attenuata, ſæpe præmorſa, hinc convexa, inde concava, glabra; *ſuprema* planiora, multo breviora, et manifeſte carinata; *vaginæ* foliorum culmi, æquali ubique fere magnitudine, ubi folium exit paulo laxiores, et fiſſurâ membranâ impleta notatæ.

BRACTEÆ tres aut quatuor, longitudine inæquales, baſi vaginantes, culmum terminant, e quarum ſinubus ſpiculæ prodeunt.

SPICULÆ plerumque plures a duabus ad ſeptem, ovatæ, immaturæ erectæ, per ætatem pendulæ.

CALYX: *ſpica* undique imbricata: ſquamis ovato oblongis, plano-inflexis, membranaceis, laxis, acuminatis, flores diſtinguentibus. *fig.* 1.

COROLLA nulla.

STAMINA: FILAMENTA tria, capillaria; ANTHERÆ erectæ, oblongæ. *fig.* 2.

PISTILLUM: GERMEN minimum; STYLUS filiformis, longitudine ſquamæ calycis; STIGMATA tria, ſtylo longiora, reflexa. *fig.* 3.

PERICARPIUM nullum.

SEMEN triquetrum, acuminatum, nigrum, villis ſpicâ longioribus inſtructum. *fig.* 4. 5. 6. 7.

ROOT perennial, creeping, of a brown or cheſnut colour, furniſhed with numerous white or reddiſh fibres.

STALK for the moſt part ſolitary, from nine inches to a foot or more in height, upright, round, ſmooth, for the moſt part furniſhed with two joints which project a little, covered throughout its whole length with the ſheaths of the leaves.

LEAVES *next the root* withered, of a cheſnut colour, ſhort, lanceolate, ſtriated, and marked with ſhort tranſverſe lines, which give them a reticulated appearance, the *ſucceeding leaves*, at their baſe cloſely embracing the ſtalk, from two to three lines in breadth, about ſeven inches or more in length, gradually tapering to the extremity, where they are often bit off, convex on one ſide, concave on the other, and ſmooth, the *uppermoſt leaves* flatter, much ſhorter, and manifeſtly keeled; *ſheaths* of the leaves nearly of an equal thickneſs throughout, where a leaf goes off more looſely connected, and marked with a fiſſure filled by a membrane.

FLORAL-LEAVES three or four of unequal lengths, forming ſheaths at bottom terminate the ſtalk, from the alæ of which the ſpiculæ proceed.

SPICULÆ for the moſt part ſeveral, from two to ſeven, ovate, firſt upright, afterwards pendulous.

CALYX: a *ſpike* covered on all ſides with imbricated ſquamæ, of an ovate-oblong ſhape, flat and bent in a little, membranous, looſe, running out to a long point, diſtinguiſhing the flowers. *fig.* 1.

COROLLA wanting.

STAMINA: three FILAMENTS very fine; ANTHERÆ upright and oblong. *fig.* 2.

PISTILLUM: GERMEN very ſmall; STYLE thread-ſhaped, the length of the ſcales of the calyx; STIGMATA three, longer than the ſtyle, turned back. *fig.* 3.

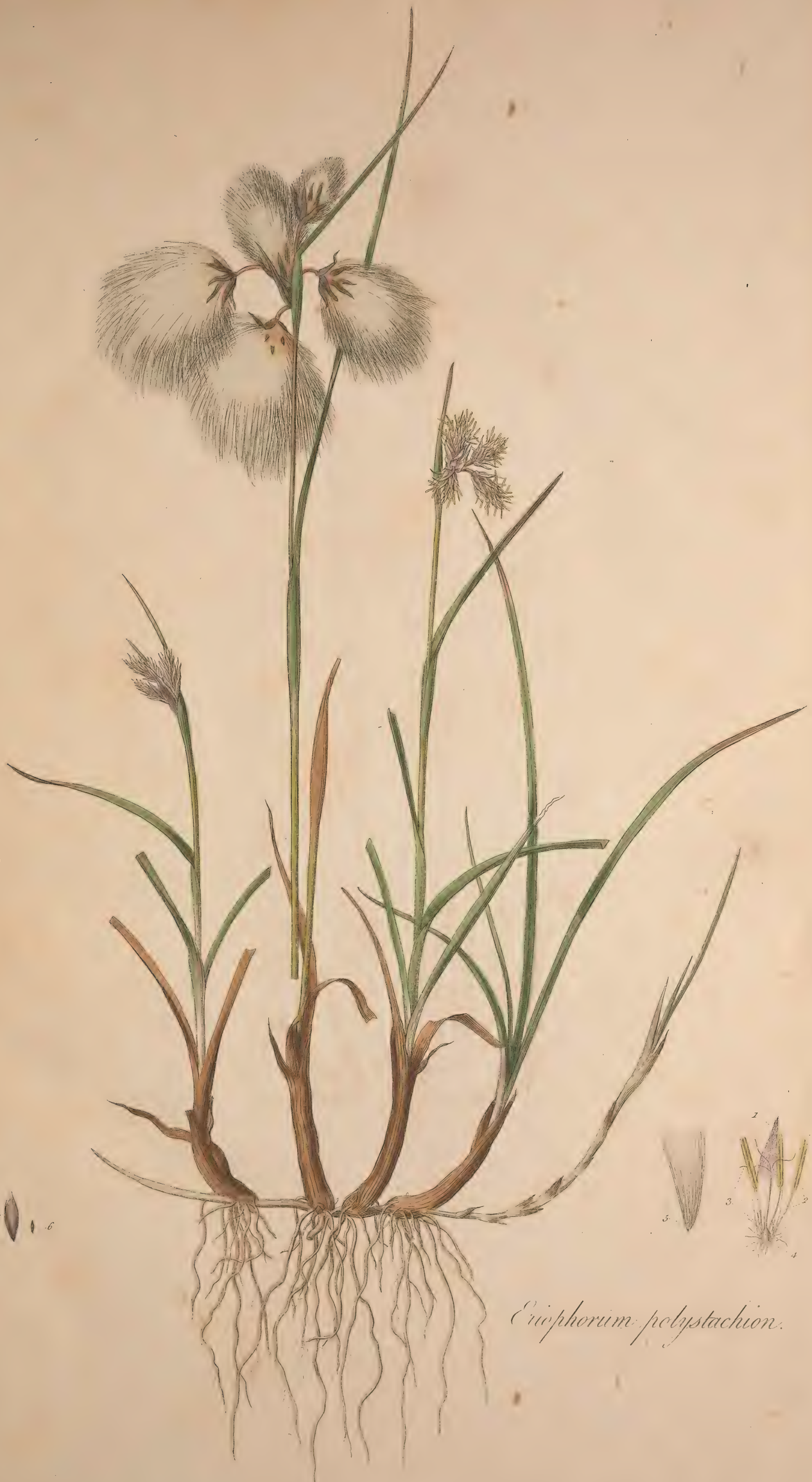
SEED-VESSEL none.

SEED three-cornered, pointed, black, furniſhed with hairs which are longer than the ſpike. *fig.* 4. 5. 6. 7.

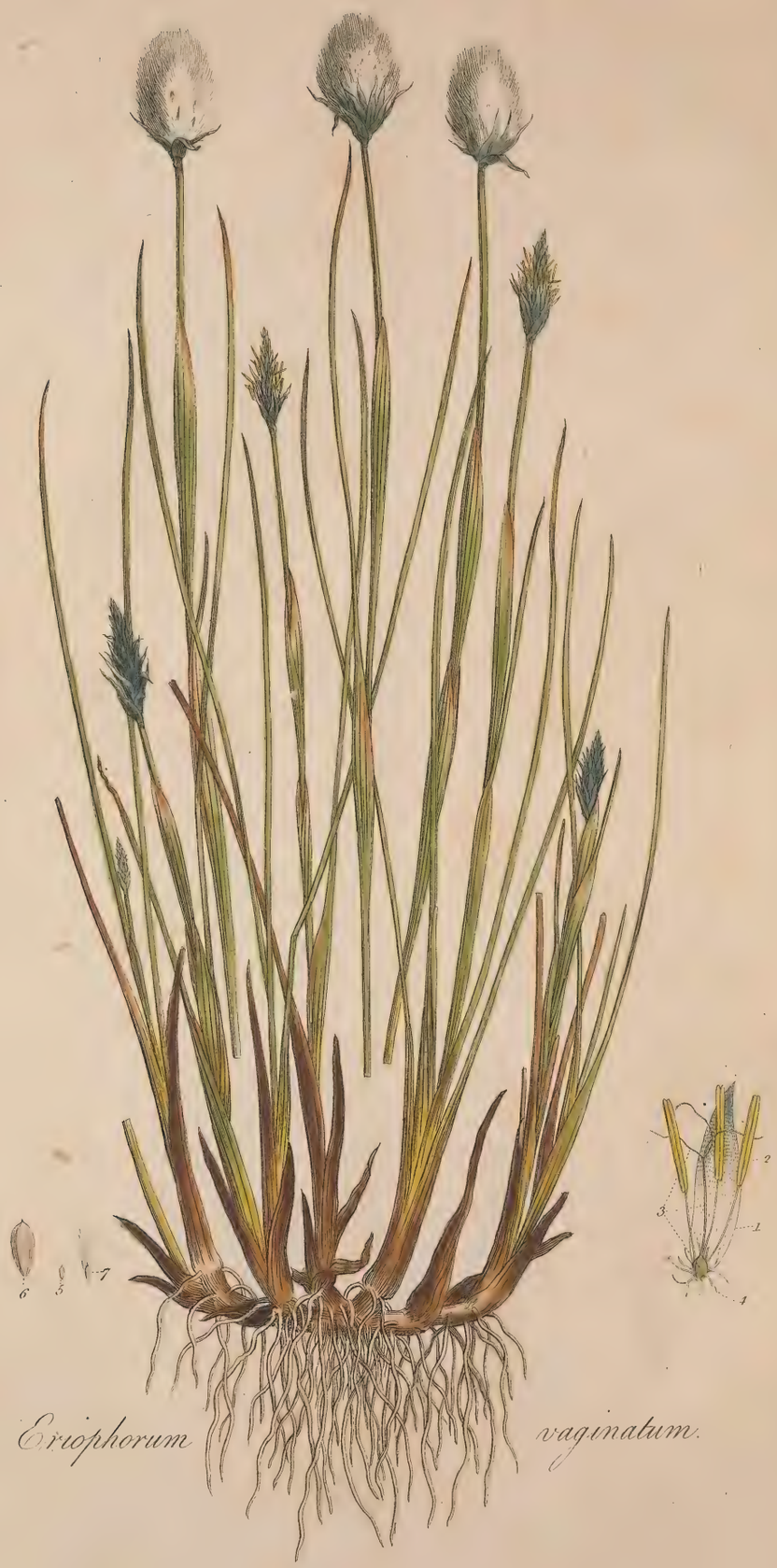
The Genus *Eriophorum* is in a particular manner diſtinguiſhed from the other genera related to it, by the length of the hairs which envelope the ſeed; and which, when the ſeed is ripe, aſſume the appearance of cotton, whence its name of Cotton-graſs, this cotton is much longer, and produced in greater quantities in the *polyſtachion*, than in the *vaginatum*: and in Germany, and the more northern countries, has been manufactured into various articles of dreſs, paper, and wicks for candles. LINNÆUS, in his *Flora lapponica*, informs us, that in ſome parts of Sweden, the peaſants ſtuff their pillows with it inſtead of feathers, but that in Lapland, where the plant is ſufficiently plentiful, they do not apply it to any ſuch purpoſe, the ſkin of the Rein-deer forming the whole of their bed and its furniture.

In the ſpring, Cattle appear to be very fond of its leaves, as they are generally found cropt, this may ariſe from the ſcarcity of herbage at that ſeaſon of the year, as the plant advances the ſtems are always left untouched; it is in moors and boggy ground only that this plant is found, and in ſuch ſituations it is very plentiful; whole acres being often rendered white as ſnow by it in the months of June and July when in ſeed.

It flowers in April and May, and may be found in Batterſea meadows.



Eriophorum polystachion.



Eriophorum vaginatum.

Eriophorum vaginatum. Single-headed Cotton-Grafs.

ERIOPHORUM *Lin. Gen. Pl.* TRIANDRIA MONOGYNIA. *Glumæ* paleaceæ, undique imbricatæ. *Cor.* o. *Sem.* 1. *Lanâ* longiſſimâ cinctum.

Raii Syn. Gen. 28. HERBÆ GRAMINIFOLIÆ NON CULMIFERÆ FLORE IMPERFECTO SEU STAMINEO.

ERIOPHORUM *vaginatum* culmis vaginatis teretibus, ſpica ſcarioſa. *Lin. Syſt. Vegetab.* p. 87. *Sp. Pl. p.* 76. *Fl. Suec. n.* 50.

ERIOPHORUM caule tereti, foliis caulinis vaginalibus, ſpica erecta, ovata. *Haller. hiſt.* n. 1332.

LINAGROSTIS *vaginata. Scopoli Fl. Carn. n.* 66.

JUNCUS alpinus, capitulo lanuginoſo, ſeu ſchænolaguros. *Bauh. pin.* 12. *Scheuzch Agroſt.* p. 302. t. 7.

JUNCUS alpinus cum cauda leporina, *Bauh. hiſt.* 2. 514.

GRAMEN juncoides lanatum alterum danicum. *Parkins.* 1271. *Raii Syn.* p. 436. Hares-tail ruſh.

Lightfoot Fl. Scot. p. 90.

Hudſon. Fl. Angl. ed. 2. p. 22.

The *Eriophorum vaginatum* is with us a much ſcarcer plant than the *polyſtachion*, but in ſome parts of *Great Britain*, and in other Countries, is equally common.

In its generic characters, excepting the ſhortneſs of its *Pappus*, it agrees with the *polyſtachion*; it has therefore the ſame figures of reference to them; in its ſpecific characters, it differs very obviouſly, its root is not creeping but more matted, and its leaves, which are much finer, are conſequently more apt to grow in tufts; the vagina of the upper ſtem-leaf in particular is remarkably inflated, and it never produces more than one ſpike, which is upright.

It is found in ſimilar ſituations to the other; on the boggy parts of Shirley Common, near Croydon, I have found it in tolerable plenty; it flowers ſomewhat earlier than the *polyſtachion*, but produces its *pappus* about the ſame time.

Sheep are very fond of it, whence in Weſtmoreland they call it Moſs-crops. *Raii. Syn.* p. 436.

HOLCUS LANATUS. MEADOW SOFT-GRASS.

HOLCUS *Lin. Gen. Pl.* POLYGAMIA MONOECIA.

HERMAPHROD. *Cal.* Gluma 1 five 2 flora. *Cor.* Gluma aristata. *Stam.* 3. *Styli* 2. *Sem.* 1.

MASC. *Cal.* Gluma 2-valvis. *Cor.* 0. *Stam.* 3.

Raii Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

HOLCUS *lanatus* glumis bifloris villosis: flosculo hermaphrodito mutico; masculo arista recurva. *Lin. Syst. Vegetab.* p. 760. *Sp. Pl.* 1485. *Fl. Suec.* n. 917.

AVENA diantha, floribus ovatis; perfecto mutico, imperfecto aristato. *Haller. hist.* n. 1484.

HOLCUS *lanatus.* *Scopoli Fl. Carn.* n. 1238.

GRAMEN pratense paniculatum molle. *Bauh. pin.* 2.

GRAMEN miliaceum pratense molle. *Pet. Conc. Gr.* 224. *Raii Syn.* p. 404. Soft-tufted Meadow-Grass.

Hudson. Fl. Angl. ed. 2. p. 440. *Lightfoot. Fl. Scot.* p. 631.

RADIX perennis, fibrosa, minime repens.
CULMI plures, bipedales, seu tripedales, raro ultra, erecti, quatuor communiter geniculis distincti, pubescentes, teretes, in quibusdam locis ad basin radicantes.
FOLIA pilis mollibus undique vestita, incana, tres lineas lata, plana, superne striata, inferne carinata; *vagina* lineis purpureis externe notata, interne nitida; *membrana* obtusa, externe pilosa, pilisque ciliata.

PANICULA primo spiciformis, mollis, laxus, rubellus, parum nutans, dein erecta, diffusa, albida.

SPICULÆ bifloræ, albidæ, villosulæ, versus apicem coloratæ.
CALYX: *Gluma* bivalvis, valvula exteriore majore, trinerve, interiore mucronata, minore carinata. *fig.* 1. auct.

FLOS FERTILIS.
COROLLA bivalvis, valvulæ teneræ, virides, nitidæ, muticæ, valvulâ exteriore majore. *fig.* 2.

STAMINA: FILAMENTA tria, capillaria; ANTHERÆ oblongæ, bifurcatæ, flavæ. *fig.* 5.

PISTILLUM: GERMEN obovatum; STYLI duo, ad basin usque ramosi. *fig.* 6.
SEMEN parvum, acuminatum, nitidum glumis corollæ tectum. *fig.* 9. et valvulis calycis inclusum. *fig.* 8.
FLOS STERILIS.
COROLLA bivalvis, valvulæ minores, exteriore aristata, arista e dorso valvulæ erumpente, longitudine valvulæ exterioris calycis. *fig.* 3, 4.

STAMINA ut in fertili. *fig.* 5.
PISTILLUM: *Germen* ut in fertili, sed multo minus; STYLI duo, subulati, simplices. *fig.* 7.

SEMEN minimum, abortivum.

ROOT perennial, fibrous, not at all creeping.
STALKS several, from two to three feet high, seldom higher, upright, generally furnished with four joints, downy, round, in some situation taking root at the bottom.
LEAVES covered on every part with soft hairs, which give them a greyish appearance, about three lines in breadth, flat, above striated, below keeled, the *sheath* marked externally with purple lines, internally shining; the *membrane* blunt, externally hairy, and edged with hairs.
PANICLE at first forms a kind of soft, loose, reddish spike, which droops a little, afterwards becomes upright, spreading and whitish.
SPICULÆ containing two flowers, whitish, somewhat villous, coloured towards the top.
CALYX: *a Glume* of two valves, the outer one largest, having three ribs, and terminating in a point, the inner one smaller and keeled. *fig.* 1. magnif.
FERTILE FLOWER.
COROLLA composed of two valves which are tender, green, shining, and pointless, the outer valve largest. *fig.* 2.
STAMINA: three capillary FILAMENTS; ANTHERÆ oblong, forked at each end, of a yellow colour. *fig.* 5.
PISTILLUM: GERMEN inversely ovate; STYLES two, branched quite down to the bottom. *fig.* 6.
SEED small, pointed, and shining, covered by the glumes of the corolla, *fig.* 9. and inclosed in the valves of the calyx. *fig.* 8.
BARREN FLOWER.
COROLLA composed of two valves, the valves small, the outer one bearded, the awn arising from the back of the valve, the length of the outer valves of the calyx. *fig.* 3, 4.
STAMINA as in the fertile flowers. *fig.* 5.
PISTILLUM: the *Germen* as in the fertile flower, but much less; STYLES two, tapering, and simple. *fig.* 7.
SEED very minute and abortive.

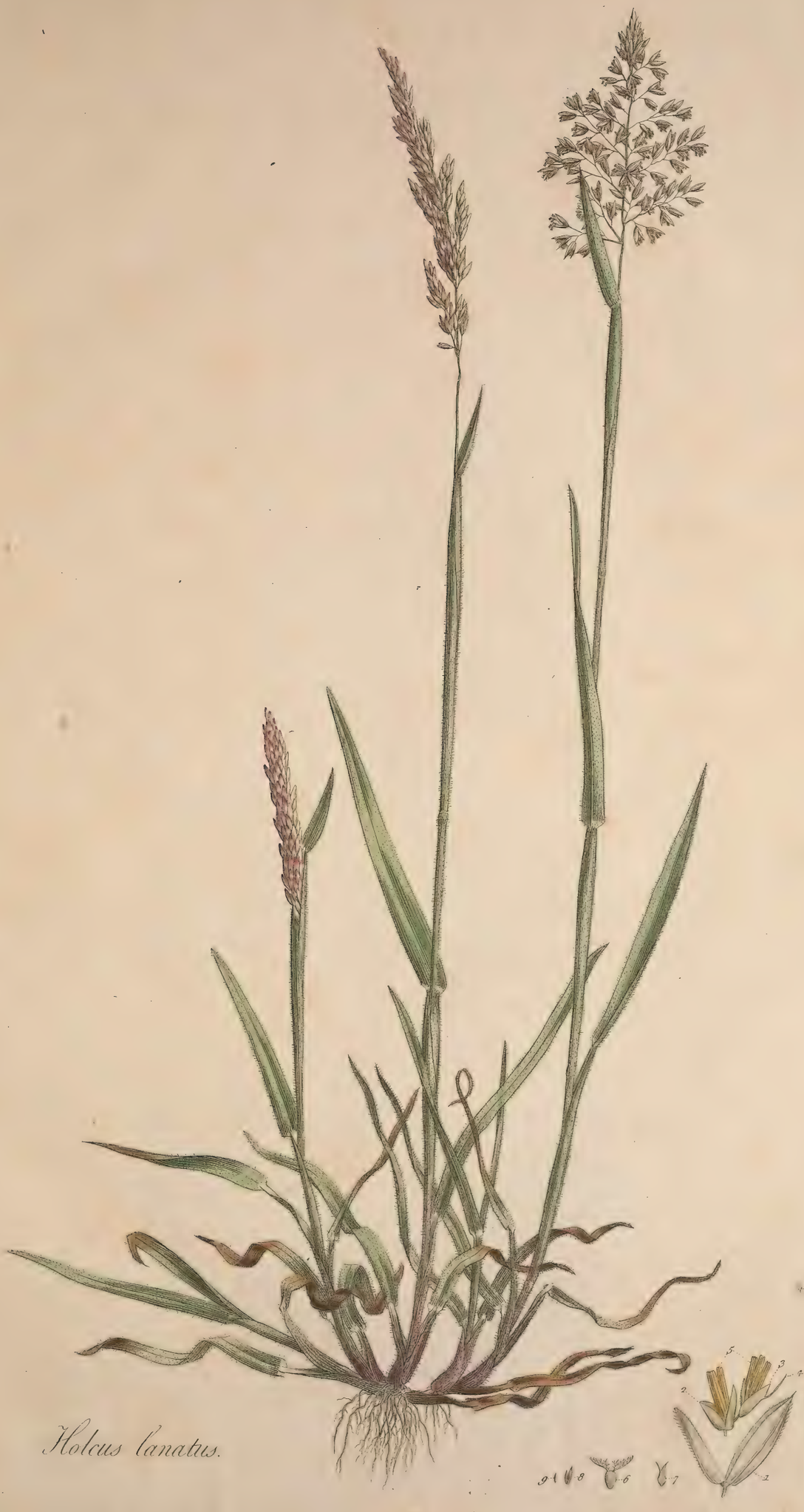
The *Holcus Lanatus* abounds in most meadows, is frequently found by road-sides, and sometimes on walls, so that it will thrive in almost any situation. The redness of its panicle when just opening, joined to the softness and hoariness of its leaves, render it a very conspicuous grass.

HALLER speaks highly of it as food for cattle, calling it *optimum pabulum.* We cannot coincide with him in this opinion, nor do the generality of our intelligent farmers and graziers, who condemn it as too soft and woolly; nevertheless the seed of it (being easily collected) is sometimes sent up to *London* in great quantities, and sold for pure grass-seed: but it were better to lay down ground for meadow or pasturage in the usual way, than fill it with this unprofitable, though pure grass-seed.

Mr. LIGHTFOOT informs us in his *Fl. Scot.* that it is sometimes used to make ropes for the fishing-boats.

It is a very distinct species from the *Holcus Mollis* (as we shall particularly explain when we treat of that grass), and flowers in *June* and *July.*

One cannot but lament that LINNÆUS should have separated the *Holcus* from the other grasses, with which it has so great an affinity, and have placed it among the plants of the class *Polygamia*, merely because some of its flowers were imperfect; it frequently happening, as HALLER very justly observes, that the *Triticum*, *Hordeum*, and several other grasses, are in the same predicament; and it was the less necessary here, as there is an evident pistillum in the barren flowers, though an imperfect one. *Vid. fig.* 7.


Holcus lanatus.

MILIUM EFFUSUM. MILLET GRASS.

MILIUM *Lin. Gen. Pl.* TRIANDRIA DIGYNIA.

Cal. 2-valvis, uniflorus: valvulis ſubæqualibus. *Corolla* breviſſima. *Stigmata* penicilliformia.

Raii Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

MILIUM *effuſum* floribus paniculatis diſperſis muticis. *Lin. Syſt. Veget.* p. 94. *Sp. Pl.* p. 90. *Fl. Suec.* n. 61.

MILIUM paniculis raris, longiſſime petiolatis. *Haller. Hiſt.* 1525.

GRAMEN ſylvaticum, panicula miliacea ſparſa. *Bauh. Pin.* 8.

GRAMEN miliaceum. *Lob. icon.* 3. *Ger. emac.* 6. *I. B. II.* 462.

GRAMEN miliaceum vulgare. *Park.* 1153. *Raii Syn.* p. 402. Millet-graſs. *Lightfoot Fl. Scot.* p. 92.

RADIX perennis, repens.

CULMI tenues, tres, quatuorve pedes alti, quatuor communiter geniculis diſtincti, totidemque, vel quinis foliis a geniculis oriundis, veſtiti.

FOLIA palmaria, ſpithamæa, et pedalia, glabra, tenuia, et infirma, ſubtiliſſimè per longitudinem ſtriata, ſupernâ et infernâ parte aſpera, marginibus etiam, ſi deorſum ſtringantur, aſperis donata, tres, quatuorve lineas lata, ſenſim in acutum mucronem terminata. *Vaginæ* ſtriatæ, glabræ, ad internam foliorum baſin in membranulam tenuem, plerumque laciniatam terminatæ.

PANICULA palmaris, frequentius tamen ſpithamæa, pedalis et longior quandoque, ſuberecta, diffuſa, laxa.

RAMI paniculæ, capillares, flexuoſi.

CALYX: *Gluma* uniflora, bivalvis, acuminata, valvulis æqualibus, lævibus, ovatis, acutis. *fig.* 1. 2.

COROLLA bivalvis, calyce minor: valvulæ ovatæ, obtuſiuſculæ, altera minore. *fig.* 3. 4.

STAMINA: FILAMENTA tria, capillaria, corollâ longiora. ANTHERÆ primo oblongæ, demum bifurcæ, flavæ. *fig.* 5.

PISTILLUM: GERMEN ſubrotundum, viride, glabrum; STYLI duo reflexi, plumoſi, albi. *fig.* 6.

SEMEN unicum, tectum, ſubrotundum, nitidum. *fig.* 7.

ROOT perennial, and creeping.

STALKS ſlender, three or four feet high, commonly furniſhed with four joints, and cloathed with as many or five leaves, ariſing from the joints.

LEAVES from four to ſeven inches or a foot in length, ſmooth, thin and weak, very finely ſtriated through their whole length, the upper and under ſide as well as the edges rough if drawn backward through the hand, three or four lines in breadth, terminating gradually in a fine point. *Sheath* ſtriated, ſmooth, at the inner baſe of the leaf terminating in a membrane which is often jagged.

PANICLE four inches in length, but more frequently a ſpan, a foot, or more, nearly upright, ſpreading and looſe.

BRANCHES of the panicle very fine, and crooked.

CALYX: a *Glume* of one flower, and two valves, pointed, the valves equal, ſmooth, ovate, and pointed. *fig.* 1. 2.

COROLLA compoſed of two valves, ſmaller than the calyx: the valves ovate, bluntiſh, one ſmaller than the other. *fig.* 3. 4.

STAMINA: three FILAMENTS, very fine, longer than the corolla. ANTHERÆ firſt oblong, then forked at each end, of a yellow colour. *fig.* 5.

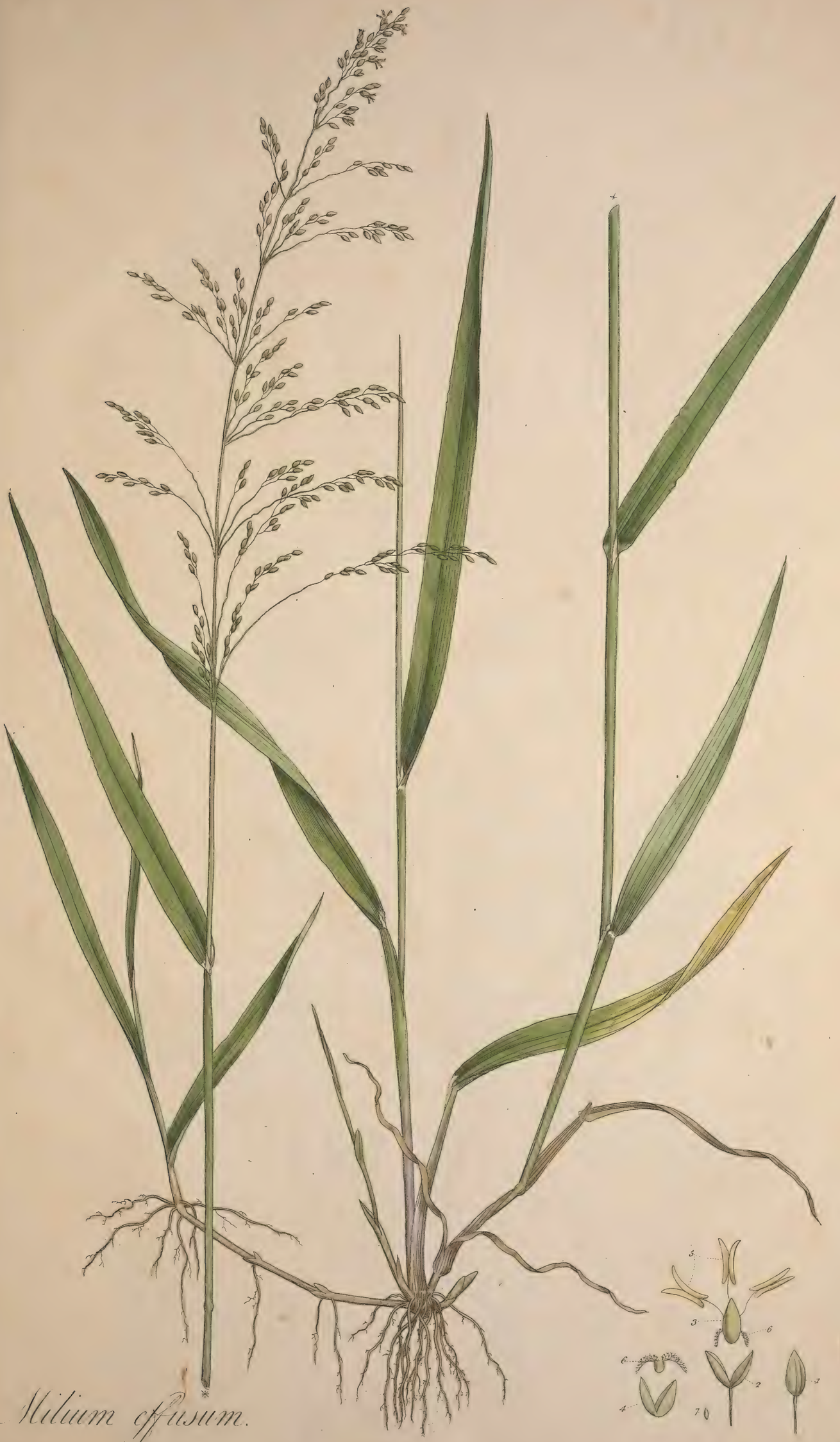
PISTILLUM: GERMEN roundiſh, green, ſmooth. STYLES two, turned back, feathered and white. *fig.* 6.

SEED ſingle, encloſed, roundiſh, and ſhining. *fig.* 7.

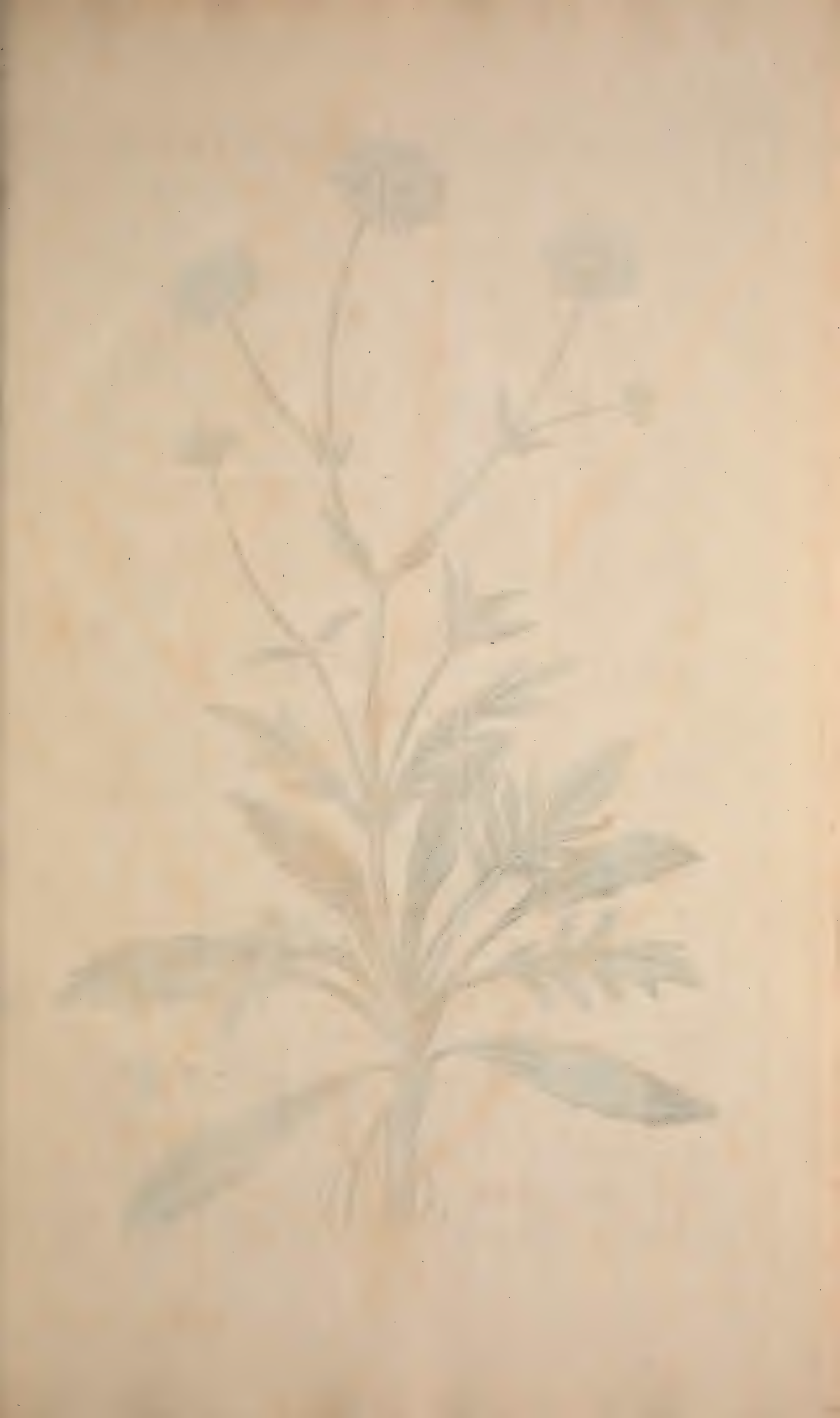
The graſs here figured is the only one we have of the genus *Milium*. It is diſtinguiſhed from the *Panics*, to which it has the greateſt natural affinity, by having a calyx of two valves only: the height it uſually attains, the particular ſituation in which it is found, joined to the delicacy of its panicle, eminently diſtinguiſh it from all our other graſſes.

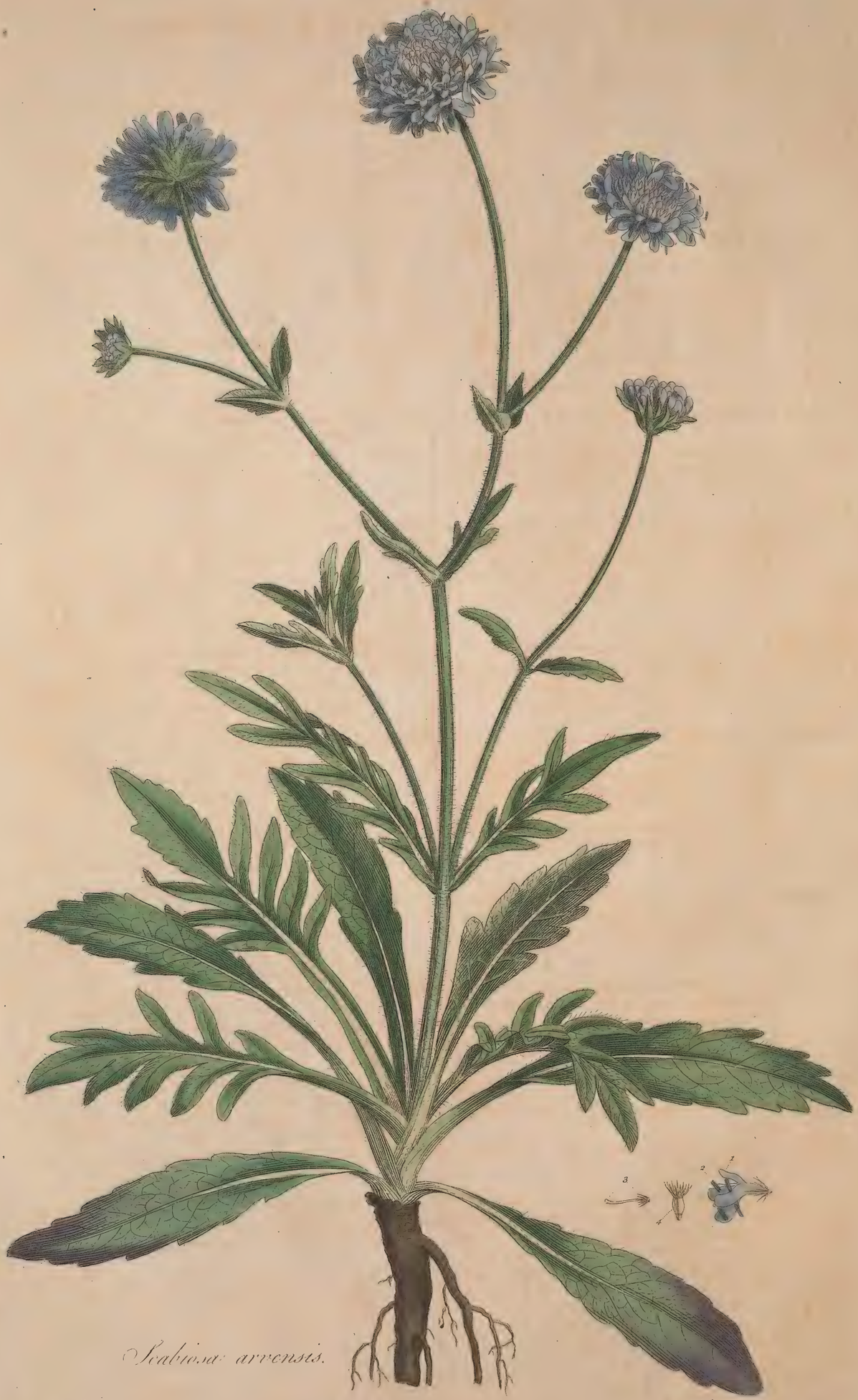
It abounds in many of the woods about town, particularly in *Charlton Wood*, and flowers in *May* with the Lily of the Valley and Hare-bell.

It has a creeping root, and grows readily in a ſhady ſituation.



Milium effusum.





Scabiosa arvensis.

SCABIOSA ARVENSIS. FIELD SCABIOUS.

SCABIOSA *Lin. Gen. Pl.* TETRANDRIA MONOGYNIA.

Cal. communis polyphyllus; *proprius* duplex, ſuperus. *Recept.* paleaceum ſive nudum.

Raii Syn. Gen. 8. HERBÆ FLORE COMPOSITO DISCOIDE, SEMINIBUS PAPPO DESTITUTIS, CORYMBIFERÆ DICTÆ.

SCABIOSA *arvenſis* corollulis quadrifidis radiantibus, foliis pinnatifidis inciſis, caule hiſpido. *Lin. Syſt. Vegetab.* p. 121. *Sp. Plant.* p. 143. *Fl. Suecic.* n. 117.

SCABIOSA foliis petiolatis, ovato-lanceolatis, dentatis, ſuperioribus ſemipinnatis. *Haller. Hiſt.* 206.

SCABIOSA arvenſis. *Scopoli Fl. Carn.* n. 135.

SCABIOSA pratenſis hirſuta quæ officinarum. *Bauh. pin.* 269.

SCABIOSA major vulgaris. *Ger. emac.* 719.

SCABIOSA vulgaris pratenſis. *Parkins.* 484. *Raii Syn.* p. 191. Common Field Scabious. *Hudſon. Fl. Angl. ed. II.* p. 62. *Lightfoot Fl. Scot.* p. 114. *Oeder Fl. Dan.* t. 447.

RADIX perennis, ramoſa, ſublignoſa, difficulter evulſa.

CAULIS pedalis vel ultra, teres, ſimplex ſeu ramoſus, ſcaber, ſuperne nudus, pubeſcens, inferne nigro punctatus, hiſpidus: pilis albidis.

FOLIA oppoſita, hiſpida, acuta, inferiora integra, ovali-oblonga, remote ſerrata; ſuperiora ſeſſilia, amplexicaulia, pinnatifida: laciniis linearibus, oppoſitis, ſubſerratis; intermedia duplo majore, lanceolata, utrinque attenuata, in medio ſerrata.

FLORES terminales, longius pedunculati, ſolitarii.

CALYX *communis* polyphyllus, imbricatus, foliolis ovatis, acutis, pubeſcentibus, ciliatis, plano-patentibus; interioribus paulo minoribus.

COROLLA compoſita hemiſphærica, dilute violacea, radiata; *propria radii* tubulata, longitudine calycis, intus villoſa, quadrifida; laciniis erectis, oblongis, obtuſis, inæqualibus; exteriore paullo majore; duabus lateralibus, oppoſitis, æqualibus; intima duplo minore, *fig.* 1.; *diſci* minor, ore quadrifido, obtuſo, inæquali.

STAMINA: FILAMENTA quatuor, ſetacea, tubo corollæ inferne adnata, longitudine corollæ; ANTHERÆ exſtantes, lineares, incumbentes, corollæ concolores. *fig.* 2.

PISTILLUM: GERMEN inferum, tetragonum, villoſo-hiſpidum, coronatum *pappo* campanulato, villoſo-ſetaceo, cinereo. STYLUS cylindricus, ſuperne incraſſatus, corolla longior, erectus. STIGMA exſertum, clavatum, emarginatum. *fig.* 3.

RECEPTACULUM barbatum, pilis germinibus brevioribus.

SEMEN villoſum, ſubtetragonum, pappo villoſo-ſetaceo coronatum. *fig.* 4.

ROOT perennial, branched, ſomewhat woody, with difficulty pulled up.

STALK a foot or more in height, round, ſimple or branched, rough, above naked of leaves, and downy below, dotted with black and hiſpid: the hairs whitiſh.

LEAVES oppoſite, hiſpid, pointed; the lower ones entire, of an oval oblong ſhape, remotely ſerrated; the upper ones ſeſſile, embracing the ſtalk, and pinnatifid; the ſegments linear, oppoſite, ſlightly ſerrated, the middle ſegment twice the ſize of the others, lanceolate, tapering at each extremity, and ſerrated in the middle.

FLOWERS terminal, ſtanding on long foot-ſtalks.

CALYX *common to all the florets* compoſed of many leaves, imbricated, the leaves ovate, pointed, downy, edged with hairs, flat and ſpreading; the innermoſt ſomewhat the ſmalleſt.

COROLLA compound, hemiſpherical, of a pale violet colour, radiate; the florets in the *circumference* tubular, the length of the calyx, villous within, divided into four ſegments which are upright, oblong, obtuſe and unequal; the outermoſt ſomewhat the largeſt; the two ſide ones oppoſite, and equal; the innermoſt twice as ſmall, *fig.* 1.; the *central florets* ſmaller, the mouth divided into four, obtuſe, unequal ſegments.

STAMINA: FILAMENTS four, tapering, growing to the lower part of the tube of the corolla, and of the ſame length as the corolla. ANTHERÆ projecting, linear, incumbent, of the ſame colour as the corolla. *fig.* 2.

PISTILLUM: GERMEN below the corolla, four-cornered, covered with numerous ſtiffiſh hairs and crowned with a bell-ſhaped *pappus* formed of numerous aſh-coloured briſtles. STYLE cylindrical, thickened above, longer than the corolla, upright. STIGMA projecting, club-ſhaped, with a notch. *fig.* 3.

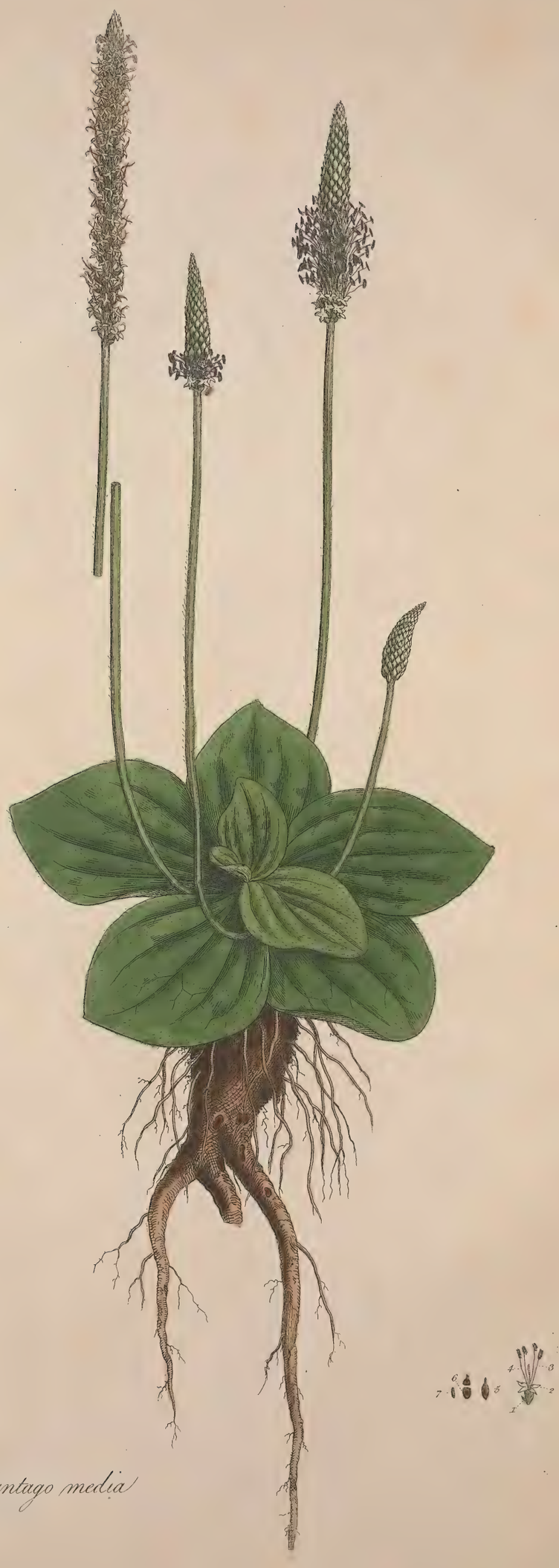
RECEPTACLE bearded, the hairs ſhorter than the germina.

SEED villous, ſomewhat four cornered, crowned with a briſtly villous down or pappus. *fig.* 4.

The *Scabioſa arvenſis* is a very common plant, both in Corn-fields and Meadows. In the former it is undoubtedly a troubleſome weed; in the latter it frequently forms a great part of the paſturage, and being a hardy plant, producing a large quantity of foliage, which is not refuſed, according to LINNÆUS's experiments by *Kine*, *Horſes*, or *Sheep*, it may perhaps be conſidered rather as uſeful.

Dr. RUTTY, in his Materia Medica, remarks, that the leaves have ſometimes been deſcribed as inodorous and inſipid; but, on a more accurate examination, they are found to be bitteriſh, with ſome degree of acrimony and aſtringency. Medicinally this ſpecies, as well as the *ſuccifa*, has been recommended internally in Coughs, Aſthmas, malignant Fevers, Lues venerea, Epilepſy, &c.; and externally in the Scurvy, Itch, Scabies, Tetters, &c.; and may be uſed in ſubſtance, infuſion, decoction, or any manner of way; but, as Dr. LEWIS obſerves, the preſent practice has little dependance on it.

It flowers in July and Auguſt, varies much in the diviſions of its leaves, and is ſometimes found with white flowers. The bloſſoms, and indeed the whole plant is much larger than the *Scabioſa ſuccifa*; its leaves are more jagged. It flowers much earlier, and it affects a drier ſituation.



Plantago media

PLANTAGO MEDIA. HOARY PLANTAIN.

PLANTAGO *Lin. Gen. Pl.* TETRANDRIA MONOGYNIA.

Cal. 4-fidus. *Cor.* 4-fida: limbo reflexo. *Stamina* longiſſima. *Capſ.* 2-locularis, circumſciſſa.

Raii Syn. Gen. 22. HERBÆ VASCULIFERÆ FLORE TETRAPETALO ANOMALÆ.

PLANTAGO *media* foliis ovato-lanceolatis pubeſcentibus, ſpica cylindrica, ſcapo tereti. *Lin. Syſt. Vegetab.* p. 131. *Sp. Pl.* p. 163. *Fl. Suec.* n. 130.

PLANTAGO foliis ſubhirſutis, ellipticis, ſpica cylindrica denſa. *Haller. Hiſt.* n. 659.

PLANTAGO *media.* *Scopoli Fl. Carniol.* 162.

PLANTAGO latifolia incana. *Bauhin. Pin.* 189.

PLANTAGO major incana. *Parkins.* 493.

PLANTAGO incana. *Ger. emac.* 419. *Raii Syn.* p. 314. Hoary Plantain, or Lamb's Tongue, *Hudſon Fl. Angl. ed.* 2. p. 63. *Lightfoot Fl. Scot.* p. 117.

RADIX perennis, craſſitie digiti aut pollicis, ſubconica, apice in crura aliquot diviſa, extus nigricans, plurimis fibrillis inſtructa.

ROOT perennial, the thickneſs of one's finger or thumb, ſomewhat conic, dividing at the top into a few branches, externally of a blackiſh colour, and furniſhed with numerous fibres.

FOLIA ovata, breviſſime petiolata, ſupra terram expanſa, interioribus ſenſim minoribus, quinquenervia, ſubrugoſa, utrinque pubeſcentia, integerrima.

LEAVES ovate, ſtanding on very ſhort foot-ſtalks, expanded on the ground, the innermoſt gradually ſmalleſt, having five ribs, ſomewhat wrinkly, downy on both ſides, and entire at the edges.

SCAPI plures, teretes, infra folia prodeuntes, ſpithamæi, aut pedales, erecti, pubeſcentes, pube ſuperne erecta, adpreſſa.

FLOWERING-STEMS ſeveral, round, proceeding from below the leaves, from ſeven inches to a foot in height, upright, downy, the hairs on the upper part of it upright, and preſſed to the ſtalk.

SPICÆ florum cylindricæ, pollicares aut palmares.

SPIKES of the flowers cylindrical, from one to four inches in length.

BRACTEA, ſeu ſquamula lanceolata, concava, margine membranacea, ſingulo floſculo ſubjicitur, longitudine calycis.

FLORAL-LEAF, a floral-leaf or lanceolate ſmall hollow ſcale, membranous at the edge, and of the length of the calyx, is placed under each floret.

CALYX: PERIANTHIUM quadripartitum, erectum, perſiſtens; laciniis ovatis, acutiuſculis, membranaceis, nervo viridi inſignitis. *fig.* 1.

CALYX: a PERIANTHIUM deeply divided into four ſegments, erect and permanent; the ſegments ovate, a little pointed, membranous, and marked with a green rib. *fig.* 1.

COROLLA monopetala, perſiſtens, tabeſcens. *Tubus* cylindraceus, baſi globoſus. *Limbus* quadripartitus, depreſſus, laciniis ovatis, acutis. *fig.* 2.

COROLLA monopetalous, permanent, withered. *Tube* cylindrical, with a globular baſe. *Limb* divided into four ſegments, which are preſſed downwards, ovate and pointed. *fig.* 2.

STAMINA: FILAMENTA quatuor, capillaria, erecto-patentia, calyce triplo longiora, purpuraſcentia. ANTHERÆ albæ, incumbentes, una extremitate bifidâ, altera mucronatâ. *fig.* 3.

STAMINA: four FILAMENTS very ſlender, ſomewhat ſpreading, thrice the length of the calyx, of a purpliſh colour. ANTHERÆ white, laying acroſs the filaments, one end bifid, the other pointed. *fig.* 3.

PISTILLUM: GERMEN ovatum. STYLUS filiformis, piloſus, ſtaminibus brevior. STIGMA ſimplex. *fig.* 4.

PISTILLUM: GERMEN ovate. STYLE thread-ſhaped, hairy, ſhorter than the ſtamina. STIGMA ſimple. *fig.* 4.

PERICARPIUM: CAPSULA ovalis, circumſciſſa, diſperma. *fig.* 6.

SEED-VESSEL: an oval CAPSULE, dividing horizontally in the middle, and containing two ſeeds. *fig.* 6.

SEMINA bina, hinc convexa, inde plano concava. *fig.* 7.

SEEDS two together, convex on one ſide, and plano-concave on the other. *fig.* 7.

This ſpecies of Plantain has a large root when fully grown, which penetrates deep into the earth, and being ſupplied with numerous lateral fibres, it ſupports itſelf in the moſt ſcorching ſeaſons, when the plants around it are frequently burnt up. It is alſo one of thoſe plants which are not deſtroyed by repeated mowing, as moſt lawns and graſs plats ſufficiently teſtify.

It may be diſtinguiſhed from the common Plantain by the leaves being ſmaller, and hoary, ſtanding on ſhorter foot-ſtalks, lying cloſe to the ground, and having no notches on the edges; by its ſpikes being ſhorter, its filaments longer, its antheræ whiter and more ſhowy, and, if any other difference were wanting, we might add, that its capſules, inſtead of many, contain only two ſeeds, as in the *lanceolata.*

About *London* it is not ſo common as either the *lanceolata* or *major*; but where the ſoil is chalky no plant occurs more frequently. It flowers from *June* to *Auguſt.*

Sheep, Goats, and Swine, eat it; Kine and Horſes refuſe it. *Lin. Pan. Suec.*

ASPERULA ODORATA. WOODRUFF.

ASPERULA *Lin. Gen. Pl.* TETRANDRIA MONOGYNIA.

Cor. 1-petala, infundibuliformis. *Semina* 2, globosa.

Raii Syn. Gen. 12. HERBÆ STELLATÆ.

ASPERULA *odorata* foliis octonis lanceolatis, florum fasciculis pedunculatis. *Lin. Syst. Vegetab.* p. 125. *Sp. Pl.* p. 150.

ASPERULA caule erecto, foliis octonis; petiolis ramosis erectis, seminibus hirsutis. *Haller. Hist.* n. 728.

GALIUM odoratum. *Scopoli Fl. Carn.* n. 158.

ASPERULA seu Rubeola montana odora. *Bauh. Pin.* 334.

ASPERULA. *Ger. emac.* 966.

ASPERULA aut Aspergula odorata. *Parkins.* 563. *Raii Syn.* p. 225. Woodroof or Woodruffe. *Hudson Fl. Angl. ed.* 2. p. 66. *Lightfoot Fl. Scot.* p. 115. *Oeder Fl. Dan.* t. 562.

RADIX perennis, tenuis, articulatus, flavescens, paulo infra terram repens, et plurimas fibrillas dimittens.

CAULIS erectus, spithamæus, plerumque simplex, tetragonus, quadrisulcatus, glaber.

FOLIA plerumque octona, verticillata, lanceolata, mucronata, glabra, spinulis ciliata. *fig.* 1.

CORYMBUS terminalis, nudus, erectus.

CALYX nullus.

COROLLA monopetala, alba, infundibuliformis. *Tubus* brevis, germini insidens. *Limbus* quadripartitus, tubo longior, laciniis lanceolatis, patentibus, crassiusculis. *fig.* 2.

STAMINA: FILAMENTA quatuor, ad apicem tubi, brevissima, alba. ANTHERÆ albidæ, longitudine filamentorum, oblongæ, sublineares, incumbentes. *fig.* 3.

PISTILLUM: GERMEN inferum, viride, subrotundum, utrinque compressum, obsolete didymum, hispidum. STYLUS filiformis, albus, bifidus, antheris brevior. STIGMATA duo, globosa, inæqualia. *fig.* 4, 5, 6.

NECTARIUM: *Glandula* parva basin styli cingens.

PERICARPIUM: *Baccæ* duæ, siccæ, globosæ, coalitæ, hispidæ. *fig.* 7.

SEMINA solitaria, subrotunda, magna. *fig.* 8.

ROOT perennial, slender, jointed, of a yellowish colour, creeping a little below the surface of the earth, and sending down numerous small fibres.

STALK upright, about a span in height, for the most part perfectly simple, four-cornered, with a groove on each side, and smooth.

LEAVES growing generally eight together in a whirl, lanceolate, terminating in a small point, smooth and edged with small spines. *fig.* 1.

CORYMBUS terminal, naked, and upright.

CALYX wanting.

COROLLA monopetalous, white, funnel-shaped. *Tube* short, sitting on the germen. *Limb* divided into four segments, longer than the tube, segments lanceolate, spreading, thickish. *fig.* 2.

STAMINA: four FILAMENTS at the top of the tube, very short and white. ANTHERÆ whitish, the length of the filaments, oblong, somewhat linear and incumbent. *fig.* 3.

PISTILLUM: GERMEN placed beneath the corolla, of a green colour, roundish, flattened on both sides, obscurely double, and hispid. STYLE filiform, white, bifid, shorter than the antheræ. STIGMATA two, globular and unequal. *fig.* 4, 5, 6.

NECTARY: a small *Gland* surrounding the base of the style.

SEED-VESSEL: two, dry, round, hispid berries united together. *fig.* 7.

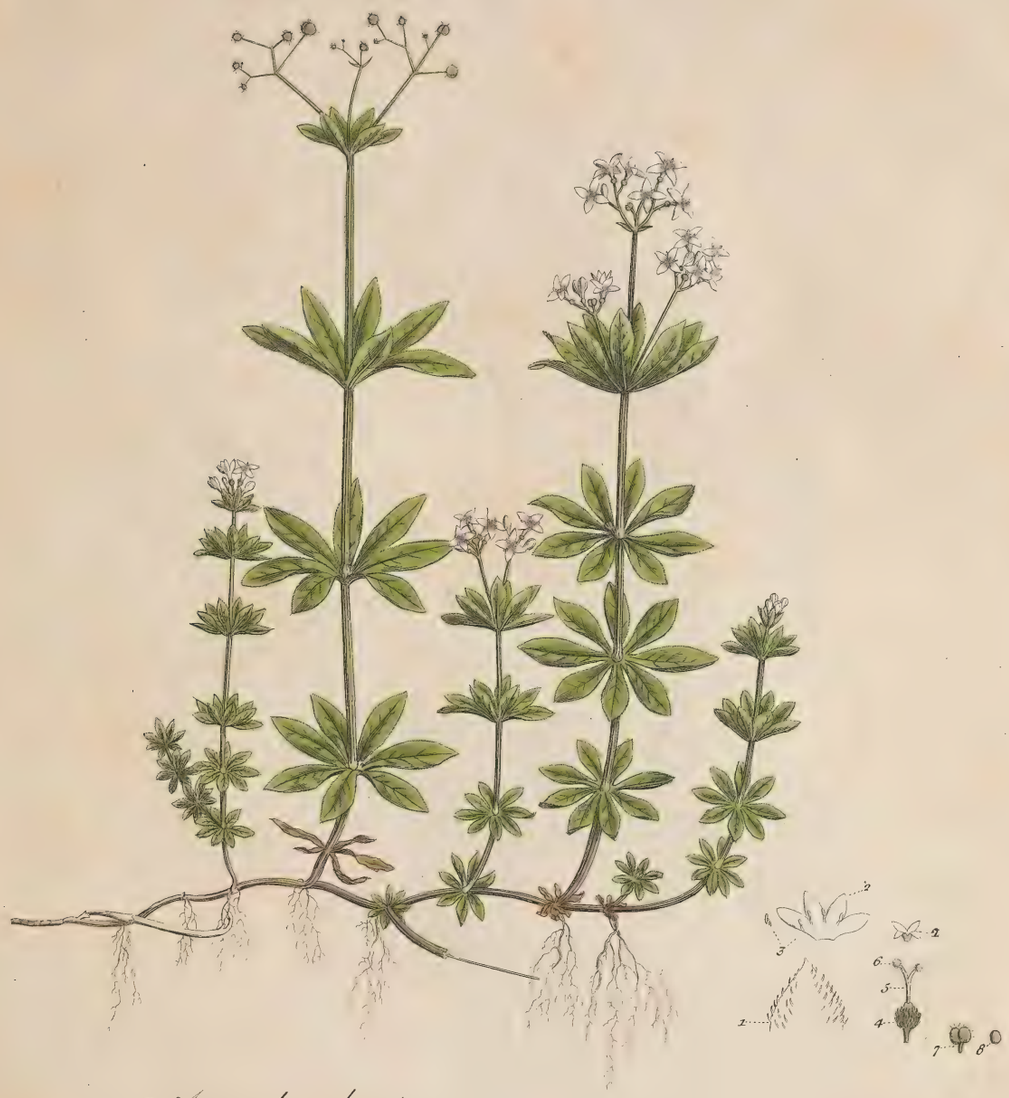
SEEDS single, large and roundish. *fig.* 8.

The flowers of *Woodruff* have an agreeable smell, and the whole plant, when dried, diffuses an odour like that of the *sweet-scented Vernal-grass*. Kept among cloaths, it not only imparts to them an agreeable perfume, but, according to LINNÆUS, preserves them from insects.

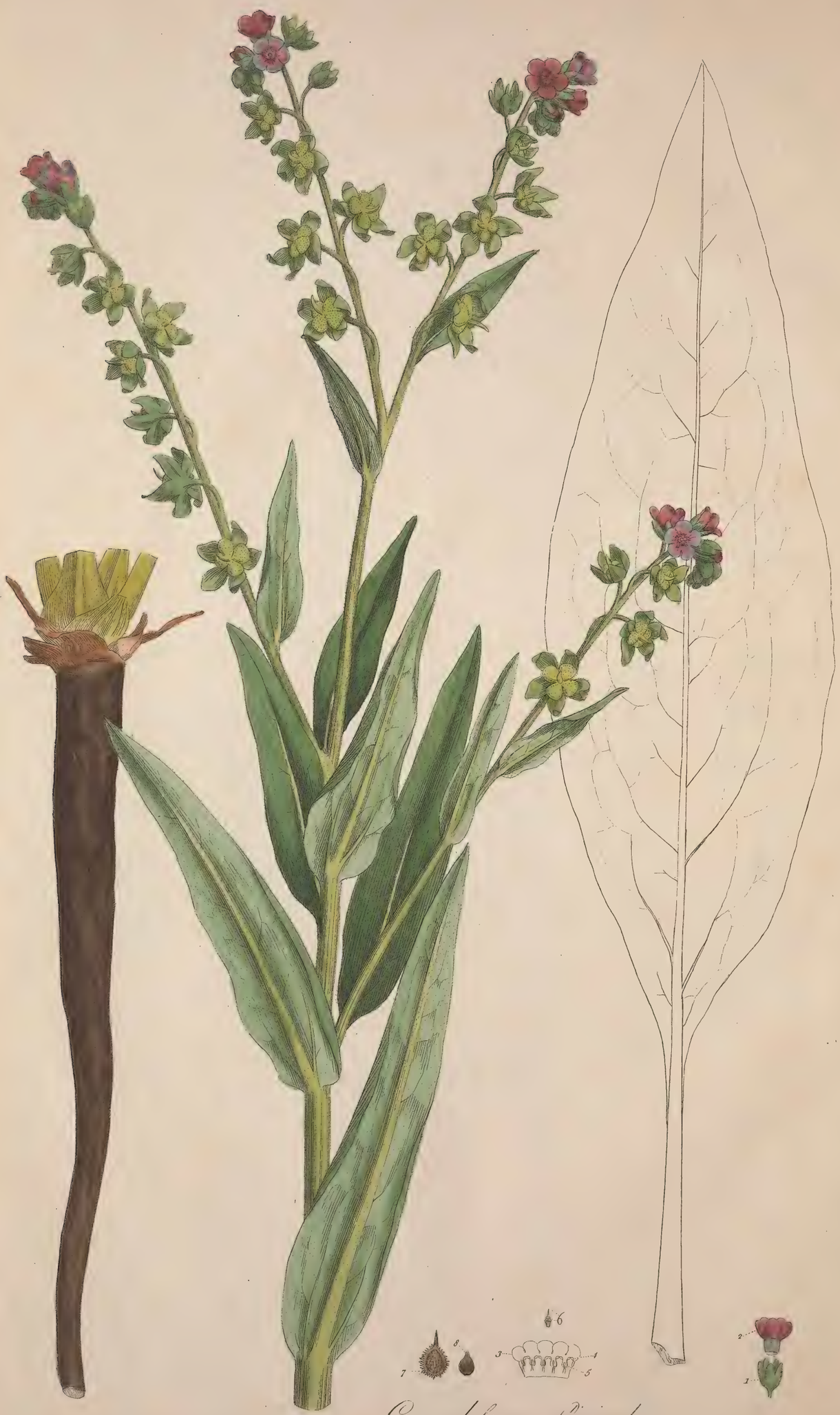
RAY informs us, that it gives its flavour to vinous liquors; and that the Germans use it much for that purpose.

As a medicinal plant, it is supposed to attenuate viscid humours, and strengthen the tone of the Bowels, whence it is recommended in obstructions of the liver and biliary ducts, and by some in Epilepsies and Palsies: modern practice has nevertheless rejected it.

It is common in the woods about *London*, especially *Charlton Wood*; and flowers in *May* and *June*.



Asperula odorata.



Cynoglossum officinale.

CYNOGLOSSUM OFFICINALE. HOUNDSTONGUE.

CYNOGLOSSUM *Lin. Gen. Pl.* PENTANDRIA MONOGYNIA.

Cor. infundibuliformis, fauce clausa fornicibus. *Stamina* depressa interiore tantum latere stylo affixa.

Raii Syn. Gen. 13. HERBÆ ASPERIFOLIÆ.

CYNOGLOSSUM *officinale* staminibus corolla brevioribus, foliis lato lanceolatis tomentosis sessilibus. *Lin. Syst. Vegetab.* p. 157. *Sp. Pl.* p. 192. *Fl. Suec.* n. 58.

CYNOGLOSSUM foliis ellipticis, lanceolatis, sericeis, caule folioso. *Haller. Hist.* n. 587.

CYNOGLOSSUM officinale. *Scopoli Fl. Carniol.* 191.

CYNOGLOSSUM majus vulgare. *Bauhin. Pin.* 257. *Ger. emac.* 804. *Parkins.* 511. Great Houndstongue. *Raii Syn. ed.* 3. p. 226. *Hudson Fl. Angl. ed.* 2. p. 80. *Lightfoot Fl. Scot.* p. 133.

RADIX biennis, crassitie digiti seu pollicis, pedalis et ultra, fusiformis, foris nigricans, intus albida.

CAULIS bi seu tripedalis, erectus, sulcato-angulatus, villosus, foliosissimus, superne ramosus; *Rami* plurimi, suberecti, villosi.

FOLIA radicalia magna, pedalia et ultra, petiolata, ovata, acuta, sericea hirsutie incana, venosa, caulina, saltem superiora sessilia, conferta, sparsa, erecta, lanceolata, basi latiora.

FLORES primo sordide rubentes, demum cærulescentes, racemosi, secundi.

PEDUNCULI teretes, alterni, pubescentes.

CALYX: PERIANTHIUM quinquepartitum, foliolis ovato-lanceolatis, erectis, pubescentibus, obtusiusculis, interne nitidis. *fig.* 1.

COROLLA: monopetala, infundibuliformis; *Tubus* cylindraceus, crassus, pallidus, calyce duplo brevior; *Limbus* concavus, quinquefidus, laciniis rotundatis. *fig.* 2, 3.

NECTARIUM: *Squamæ* quinque, purpureæ, antice concaviusculæ, vertice gibbæ, obtusæ, margini tubi insertæ, limbo duplo breviores, conniventes. *fig.* 4. *Faux* corollæ perforata.

STAMINA: FILAMENTA quinque, brevissima; ANTHERÆ oblongæ, virides, sub squamis nectareis reconditæ. *fig.* 5.

PISTILLUM: GERMINA quatuor, e luteo-virescentia, glabra; STYLUS subulatus longitudine staminum, persistens; STIGMA obtusum, emarginatum. *fig.* 6.

PERICARPIUM: CAPSULA quatuor depressæ, subrotundæ, scabræ, non dehiscentes, apice affixæ. *fig.* 7.

SEMINA solitaria, subovata, gibba, acuminata, glabra. *fig.* 8.

ROOT biennial, the thickness of the finger or thumb, a foot or more in length, tapering, blackish on the outside, and whitish within.

STALK two or three feet in height; upright, grooved or angular, villous, very leafy, branched at top; *Branches* numerous, nearly upright and villous.

LEAVES proceeding from the root large, a foot or more in length, standing on footstalks; ovate, pointed, covered with a silky down which gives them a greyish colour, veiny; those of the stalk at least the uppermost ones sessile, numerous, placed irregularly on the stalk, upright, lanceolate, and broadest at the base.

FLOWERS at first of a dull red colour, afterwards becoming blueish, growing in racemi or long bunches, and hanging all one way.

RACEMI nearly upright, and generally naked.

FLOWER-STALKS round, alternate, and downy.

CALYX: PERIANTHIUM deeply divided into five segments, the leaves ovato-lanceolate, upright, downy, bluntish, shining on the inside. *fig.* 1.

COROLLA monopetalous, funnel-shaped, *Tube* cylindrical, thick, of a pale colour, half the length of the calyx. LIMB concave, divided into five roundish segments. *fig.* 2, 3.

NECTARY: five purple *Scales*, anteriorly hollow, gibbous at top, blunt, inserted into the edge of the tube, half the length of the limb, closing together. *fig.* 4. *Mouth* of the corolla perforated.

STAMINA: five FILAMENTS, very short. ANTHERÆ oblong, green, hid under the scaly nectaries. *fig.* 5.

PISTILLUM: GERMINA four, of a yellowish green colour, smooth. STYLE tapering, the length of the stamina, permanent. STIGMA blunt and nicked. *fig.* 6.

SEED-VESSEL: four flat CAPSULES of a roundish shape, somewhat prickly, not opening, fixed by their points. *fig.* 7.

SEEDS single, somewhat ovate, gibbous, pointed and smooth. *fig.* 8.

The leaves of this plant are in shape thought to resemble a Dog's-tongue, whence its name.

It grows wild by road sides, and in uncultivated places; and is particularly common about *Charlton*, and in the road to *Lewisham*.

It flowers in *June* and *July*, and ripens its seeds in *August* and *September*.

The whole plant has a disagreeable smell, much resembling that of mice. Its effects are said to be narcotic; and an instance is related in the *Hist. Oxon.* 3. 450*, in which the leaves boiled by mistake for those of Comfrey, disordered a whole family, and proved fatal to one. BARON HALLER quotes Dr. BLAIR as describing a case somewhat similar; but in that instance the plant used was not the *Cynoglossum*, but the *Pulmonaria maritima* †; a plant one would not suspect of being poisonous.

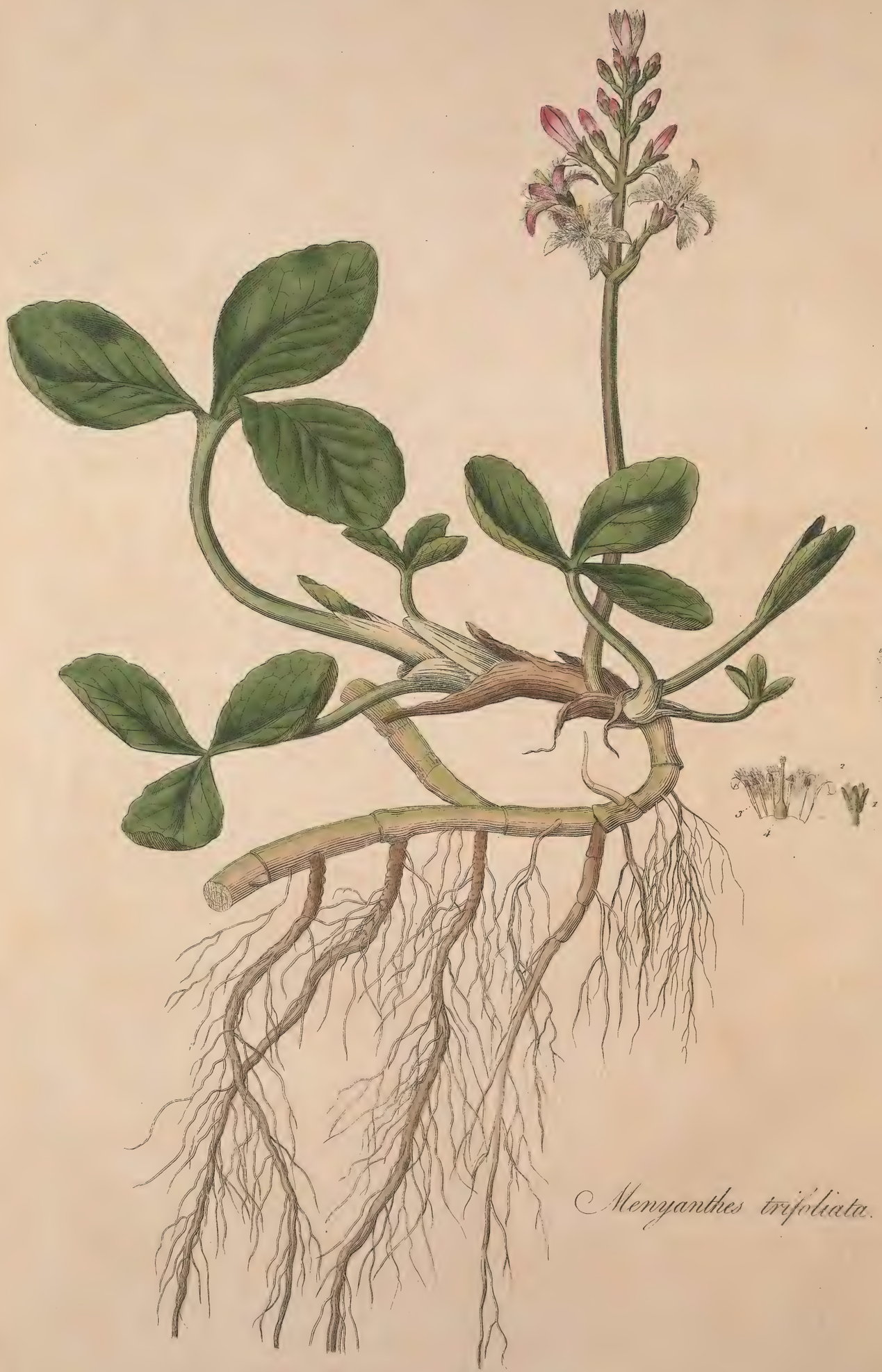
Houndstongue has been used in medicine both internally and externally; but the present practice takes no notice of it in any intention.

Cattle in general dislike it; but the Goat, who with impunity will eat Deadly Nightshade and Tobacco, is said sometimes to crop this nauseous plant; it is the natural food of the caterpillar of the scarlet tyger-moth (*Phalæna Dommula*) which may be found on it in April and May.

The *Cynoglossum minus folio virente Ger. emac.* 805, is considered by LINNÆUS merely as a variety of this plant, and described by RAY as growing in the *London* road between *Kelvedon* and *Witham* in *Essex*, but more plentifully about *Braxsted* by the way sides. It has also been observed in some shady lanes about *Worcester* by Mr. *Pitts*; at *Southend*, by *Eltham*, plentifully, Mr. *J. Sherard*; by the road side, about a mile beyond *Waltham-abbey*, towards *Harlow*, Mr. *Newton*; At *Norbury* in *Surrey*, a mile from *Leatherhead*, plentifully. *Merr. Pin.*

* "Mulier quædam Oxoniensis, et maritus cum liberis, et quotquot erant istius familiæ, folia Cynoglossi (pro tenellis Symphyti foliis collecta) cocta, "libere comedebant; et prandio mox omnes ægrè se habebant, et non multo post vomitus molestus insequebatur, deinde stupore et somno correpti "sunt, nec post horas fere 40 penitus excitati; unus autem mortuus est."

† Blair's Miscellaneous Observations, p. 55.


Menyanthes trifoliata.

MENYANTHES TRIFOLIATA. BUCKBEAN.

MENYANTHES *Lin. Gen. Pl.* PENTANDRIA MONOGYNIA.

Corolla hirsuta. *Stigma* 2-fidum. *Caps.* 1-locularis.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI, FLORE MONOPETALO.

MENYANTHES *trifoliata* foliis ternatis. *Lin. Syst. Vegetab.* p. 164. *Sp. Pl.* 208. *Fl. Suec.* n. 173. *Fl. Lappon.* p. 50.

MENYANTHES foliis ternatis. *Haller Hist.* n. 633.

MENYANTHES *trifoliata*. *Scopoli Fl. Carn.* n. 212.

TRIFOLIUM palustre. *Bauh. Pin.* 327.

TRIFOLIUM paludosum. *Ger. emac.* 1194. *Parkins.* 1212.

TRIFOLIUM fibrinum *Tabern. et Germanorum. Raii Syn.* p. 285. Marsh-Trefoil, Buckbeans. *Hudson Fl. Angl. ed.* 2. p. 85. *Lightfoot Fl. Scot.* p. 137. *Oeder Fl. Dan.* 541.

RADIX perennis, repens, longa, geniculata, fibrosa.
CAULIS procumbens, variæ longitudinis pro ratione loci, vaginis tectus.

FOLIA petiolata, ternata, ovata, obtusa, utrinque glabra, venosa, margine repanda.

PETIOLI teretes, striati, basi vaginati.

SCAPUS simplex, nudus, e vaginis foliorum natus, erectus, teres, glaber, foliis longior.

THYRSUS terminalis, subpyramidalis, nudus.
BRACTEÆ ovatæ, acutiusculæ, concavæ.

CALYX: PERIANTHIUM monophyllum, quinque partitum, basi rugosum, laciniis erectis, oblongis, obtusis, lævibus, margine coloratis. *fig.* 1.

COROLLA monopetala, campanulato-infundibuliformis, extus rosea, intus alba; *Tubus* crassus, calyce longior, quinque-sulcatus; *Limbus* quinque-partitus, laciniis ovato-lanceolatis, acutiusculis, reflexo-patentibus, intus barbatis, apicibus nudis, barbâ longitudine calycis, filamentosa, alba. *fig.* 2.

STAMINA: FILAMENTA quinque, subulata, alba, corollæ tubo adnata; ANTHERÆ purpurascentes, sagittatæ, apicibus incurvis; POLLEN flavum. *fig.* 3.
PISTILLUM: GERMEN ovatum, viride, nitidum; STYLUS cylindricus, superne paululum incrassatus, staminibus duplo longior; STIGMA bilabiatum, flavum, villosum. *fig.* 4.

ROOT perennial, creeping, long, jointed and fibrous.
STALK procumbent, various in its length, according to its situation, covered by the sheaths of the leaves.

LEAVES standing on foot-stalks, growing three together, ovate, obtuse, smooth on both sides, veiny, the edge waved or serpentine.

LEAF-STALKS round, striated, forming a sheath at the bottom.

SCAPUS, or flowering stem, simple, naked, arising from the sheaths of the leaves, upright, round, smooth, longer than the leaves.

THYRSUS terminal, somewhat pyramidal, naked.
FLORAL-LEAVES ovate, somewhat pointed and hollow.

CALYX: a PERIANTHIUM of one leaf, deeply divided into five segments, at bottom wrinkly, the segments upright, oblong, obtuse, smooth, and coloured on the edge. *fig.* 1.

COROLLA monopetalous, betwixt bell and funnel-shaped, externally of a rose colour, internally white; *Tube* thick, longer than the calyx, having five grooves; *Limb* divided into five segments, which are narrow and pointed, spreading and turned back, bearded on the inside, the tips naked, beard the length of the calyx, thready and white. *fig.* 2.

STAMINA: five FILAMENTS, tapering, white, growing to the tube of the corolla; ANTHERÆ purplish, arrow-shaped, the tips bending in; POLLEN yellow. *fig.* 3.

PISTILLUM: GERMEN ovate, green, shining; STYLE cylindrical, above a little thickened, twice the length of the stamina; STIGMA composed of two lips, green and villous. *fig.* 4.

PARKINSON informs us, that in his time this plant was generally called by the name of *Marsh-trefoil*, and sometimes *Marsh-claver*; it is now generally known by the name of *Buckbean*, whether this be a corruption of the compound word *Bog-bean*, or of the low Dutch *Boex boonen*, hoc est *Phaseolum hircinum*, or whether it be an original English word we shall not presume to determine, it being a point on which the learned themselves are not agreed; but there is one point in which all who have seen the Buckbean in perfection will at once agree, viz. that it is one of the most beautiful plants this country can boast, nor does it suffer when compared with the *Kalmia's*, the *Rhododendron's*, and the *Erica's* of foreign climes, which are purchased at an extravagant price, and kept up with much pains and expence, while this delicate native, which might be procured without any expence, and cultivated without any trouble, blossoms unseen, and wastes its beauty in the desart air.

It grows abundantly in most boggy meadows, it will also flourish in ponds and lakes, and may be found in *Battersea Meadows*, particularly about a hundred yards distant from the *Red House* towards *Chelsea*, also plentifully in the marshes about the island of *St. Helena*, near *Rotherhithe*, and no where in greater plenty than in the marshes about *Staines*, in many of which it is the principal plant. It flowers in May and June.

To

To ſuch as wiſh to have this plant flower with them in perfection, I would recommend the following mode of cultivation: collect the roots of the plant either in ſpring or autumn, put them in a large pot (having a hole at the bottom) filled with bog earth, immerſe the pot about two-thirds of its depth in water, in which it ſhould continue; the advantage of this method is, that when the plant is coming into flower it may be brought into any room and placed in a pan of water, where it will continue to bloſſom for two or three weeks. A ſingle root which I treated in this manner, planted in the ſpring, produced the enſuing May eight flowering ſtems, many of which had fifteen or ſixteen bloſſoms on them.

Linnæus, in his invaluable *Flora Lapponica*, has ſeveral curious obſervations on the Buckbean, he informs us that the inhabitants of *ſome parts of Lapland*, and alſo of *Weſtrobothnia*, draw out the roots, which grow plentifully in the rivulets, and for want of other fodder give them to their cattle, who conſume them entirely; alſo that, in times of ſevere ſcarcity, the miſerable inhabitants mix the powder of the dried roots with a ſmall quantity of meal and convert them into bread, which, he obſerves, is very bitter and extremely nauſeous; that it was a general practice with the peaſants of *Weſtrogothia*, in brewing, to ſubſtitute the bitter leaves of this plant for the hop, and that they were equally efficacious in preventing the beer from becoming ſour;—he concludes his remarks by obſerving, that Bartholin, Simon Pauli, and others, have exclaimed much on the ſcurvy of the northern regions, ariſing from cold, and of the profuſion of antiſcorbutic plants to be met with in thoſe countries, among which they enumerate the Buckbean as a principal one; Linnæus however aſſerts, that out of the great number of Laplanders he had ſeen not one was affected with that diſeaſe, although they lived in the coldeſt habitable climate, and uſed no vegetable for their ordinary food, not even bread. On the contrary, he had obſerved the ſcurvy to be one of the moſt common diſeaſes of thoſe who inhabited the countries adjacent.

Many phyſicians have a high opinion of its medical virtues.

" It is of ſubtle penetrating parts, a good *diuretic* and *antiſcorbutic*, whence it is alſo of great uſe to people " afflicted with *rheumatic pains*. An *infuſion* of the dried leaves may either be drank like tea, or they may be in- " fuſed in white wine. It is a very intenſe *bitter*, and at firſt not very agreeable. *Dr. Deering Cat. Stirp.*

" Marſh-trefoil is an efficacious aperient and deobſtruent, promotes the fluid ſecretions, and, if liberally taken, " gently looſens the belly. It has of late gained great reputation in ſcorbutic and ſcrophulous diſorders; and its " good effects in theſe caſes have been warranted by experience; inveterate cutaneous diſeaſes have been removed " by an infuſion of the leaves drank to the quantity of a pint a day, at proper intervals, and continued ſome " weeks." *Lewis's Diſp.* p. 242.

It is alſo extolled for its efficacy in removing a variety of other diſeaſes, as the periodical head-ach, aſthma, protracted intermittents, jaundice, dropſy, wandering gout, worms, &c.—but we forbear ſaying more of it on this head, leaſt its real virtues ſhould be called in queſtion.

Dr. Tancred Robinson aſſerts, that ſheep are cured of the rot by being driven to feed in marſhes where this plant abounds; this, if true, would prove a moſt valuable diſcovery.

SYMPHYTUM OFFICINALE. COMFREY.

SYMPHYTUM *Lin. Gen. Pl.* PENTANDRIA MONOGYNIA.

Corollæ limbus tubulato ventricosus: fauce clausa radiis subulatis.

Raii Syn. Gen. 13. HERBÆ ASPERIFOLIÆ.

SYMPHYTUM *officinale* foliis ovato-lanceolatis decurrentibus. *Lin. Syst. Vegetab.* p. 158. *Sp. Pl.* 195. *Fl. Suec.* n. 165.

SYMPHYTUM *Haller. Hist.* n. 600.

SYMPHYTUM *Scopoli Fl. Carn.* n. 195.

SYMPHYTUM Consolida major. *Bauh. pin.* 259.

CONSOLIDA major. *Gerard emac.* 806.

SYMPHYTUM majus vulgare. *Parkinson* 523. *Raii Syn.* p. 230. Comfrey. *Hudson. Fl. Angl. ed.* 2. p. 81. *Lightfoot Fl. Scot.* p. 134.

RADIX perennis, magna, ramosa, extus nigricans, intus alba, subdulcenti-insipida, succo tenaci glutinoso abundans.

CAULIS bipedalis, erectus, ramosus, teres, subangulatus, scaber; pube rigida, recurva.

FOLIA alterna, inferne petiolata, superne sessilia, decurrentia, ovata, acuta, spithamæa, etiam pedalia, parum rugosa, venosa, utrinque scabra, margine subundulata, ciliata.

FLORES ex albo-lutescentes, raro purpurei, cernui, racemosi, racemis plerumque geminis, involutis, multifloris.

PEDUNCULI racemorum & florum teretes, hirsuti.

CALYX: PERIANTHIUM monophyllum, villosum, profunde quinquefidum: laciniis lanceolatis acutis, carinatis, erectis. *fig.* 1.

COROLLA infundibuliformis, ex luteo-alba, decidua; *Tubus* crassus, longitudine calycis, apice extus notatus punctis quinque depressis, *fig.* 2; *limbus* ovatus, e tubo sensim ampliato, minutim quinquefidus, laciniis brevibus, rotundatis, revolutis; *faux* clausa: squamis nectareis quinque lanceolatis, acutis, margine crassis, serrulato-dentatis, conniventibus, corollâ brevioribus. *fig.* 4, 5.

STAMINA: FILAMENTA quinque, lanceolata, alba, breviuscula; ANTHERÆ oblongæ, apice et basi bifidæ, lutescentes, erectæ, sub squamis nectareis occultatæ. *fig.* 3.

PISTILLUM: GERMEN quadripartitum: lobis subrotundis, obtusis, viridibus; STYLUS subulatus, albus, inter lobos germinis surgens, corollâ paulo longior, apice obliquus; STIGMA parvum, obtusum. *fig.* 6.

SEMINA quatuor in fundo calycis, majuscula, angulata, nigricantia, nitida. *fig.* 7.

ROOT perennial, large, branched, on the outside blackish, white within, maukish, abounding with a slimy juice.

STALK about two feet high, upright, branched, round, yet slightly angular, rough; the hairs rigid and bending backwards.

LEAVES alternate, the lower ones standing on footstalks, the upper ones sessile, decurrent, ovate, pointed, seven inches, or even a foot in length, somewhat wrinkly, veined, rough on both sides, the edges slightly waved, and fringed with hairs.

FLOWERS of a yellowish white colour, rarely purple, drooping, placed on racemi or branches, which usually grow two together, turn spirally inwards, and support many flowers.

PEDUNCLES both of the racemi and flowers, round and very hairy.

CALYX: a PERIANTHIUM of one leaf, hairy, deeply divided into five segments, which are lanceolate, keel'd and upright. *fig.* 1.

COROLLA funnel-shaped, of a yellowish white colour, deciduous; the *tube* thick, the length of the calyx, marked externally at the top with five small depressions; *fig.* 2. the *limb* ovate from the gradual widening of the tube, divided into five short roundish segments, which are rolled back; the *mouth* closed with five long and pointed nectaries, thick at the edge, with numerous teeth-like points, closing at top, shorter than the corolla. *fig.* 4, 5.

STAMINA: five, lanceolate, white, shortish FILAMENTS; ANTHERÆ oblong, bifid both at top and at bottom, of a yellowish colour, upright, hid by the nectaries. *fig.* 3.

PISTILLUM: GERMEN divided into four lobes, which are roundish, blunt and green; STYLE tapering, white, arising from the middle betwixt the lobes, a little longer than the corolla, with a small obliquity at top; STIGMA small and blunt. *fig.* 6.

SEEDS four, in the bottom of the calyx, largish, angular, blackish and shining. *fig.* 7.

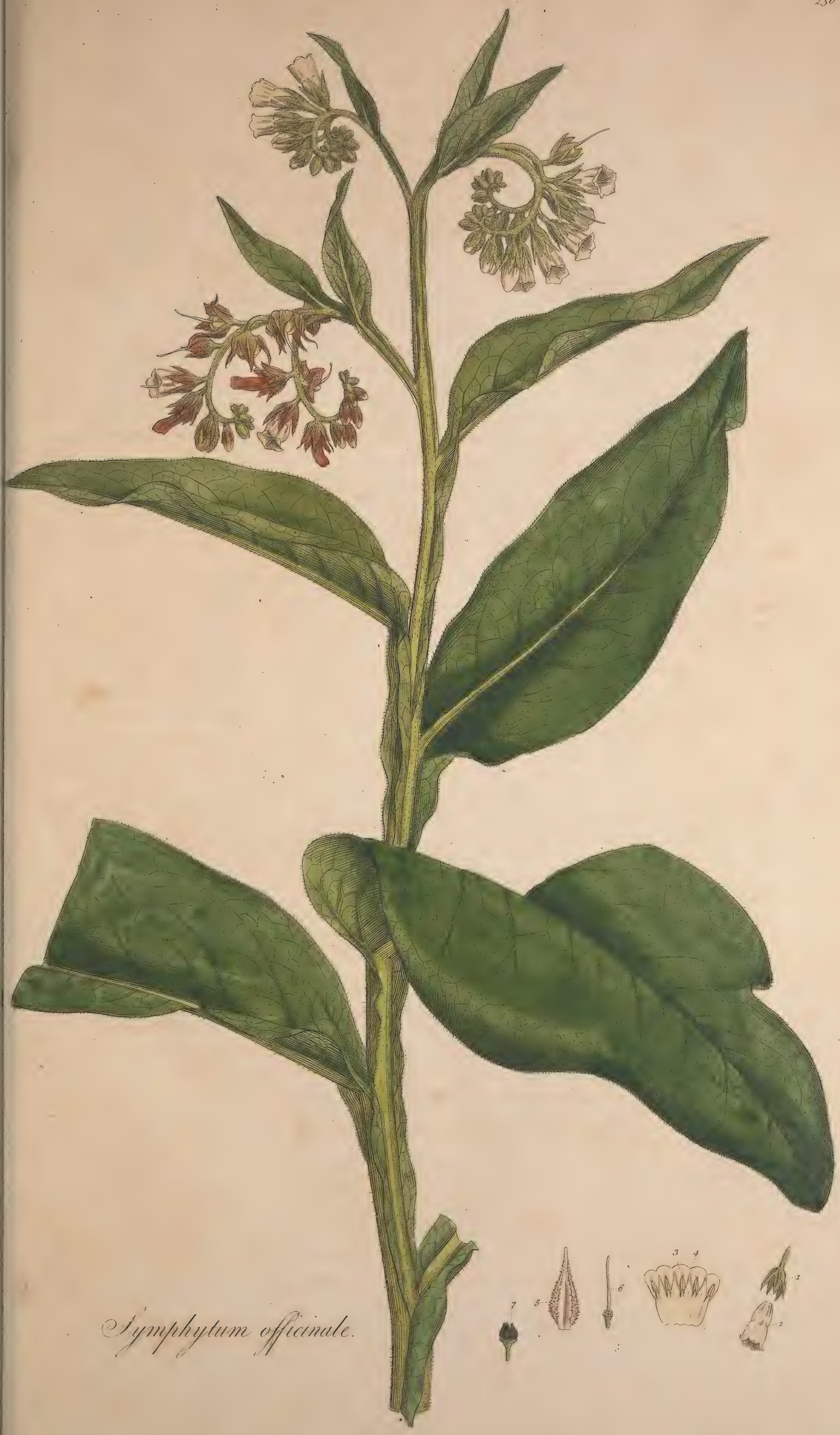
The *Comfrey* is a very common plant by river sides, on the edges of wet ditches, and in other moist situations; it flowers from June to September.

Its blossoms are for the most part of a yellowish white colour, but in some parts of *England*, and abroad, they are more commonly purple.

As a medicinal plant the *Comfrey* has been held in high estimation, its consolidating virtues have however been carried to a ridiculous excess; the roots, which are full of a glutinous juice, agree in quality with the roots of Marsh-mallow, and hence are recommended, internally, in spittings of blood, purgings, fluxes, and ulcers of the bladder; externally, by way of poultice to fresh wounds, fractured bones, bad ulcers, bruises, gouty swellings, &c.

A decoction of the powdered root, prepared in a particular manner, yields a fine scarlet colour. HELLOT *teinture*, p. 357.

It is generally left untouched by cattle. I know of no plant, that on being repeatedly cut down, produces such a quantity of herbage.



Symphytum officinale.

VINCA MAJOR. GREAT PERIWINKLE.

VINCA *Lin. Gen. Pl.* PENTANDRIA MONOGYNIA.

Contorta. *Folliculi* 2, erecti, *Semina* nuda.

Raii. Syn. Gen. 17. HERBÆ MULTISILIQUÆ SEU CORNICULATÆ.

VINCA major caulibus erectis, foliis ovatis, floribus pedunculatis. *Lin. Syſt. Vegetab.* p. 304.

PERVINCA caulibus erectis, foliis ovato-lanceolatis ciliatis, petiolis unifloris. *Haller. hiſt.* n. 573.

PERVINCA major. *Scopoli Fl. Carn.* n. 174.

CLEMATIS daphnoides major. *Bauh. pin.* 302.

CLEMATIS daphnoides s. Pervinca major. *Ger. emac.* 894.

CLEMATIS daphnoides latifolia, ſ. Pervinca major. *Parkins.* 380. *Raii Syn.* p. 268. The greater Periwinkle. *Hudſon Fl. Angl. ed.* p. 91.

RADIX perennis, fibroſa, fibris albidis ſeu fuſcis.

CAULES florigeri erecti, bipedales et ultra, teretes, lateribus alterne ſubcompreſſis, glabri, rubro maculati, cauliculi etiam ſunt ſteriles qui humi repent aut plantas vicinas ſcandent.

FOLIA oppoſita, petiolata, ovata, glaberrima, minutim ciliata, remota, ſempervirentia.

PEDUNCULI foliis longiores, erecti, teretes, glabri, filiformes, uniflori.

FLORES ampli, pallide cærulei.

CALYX: PERIANTHIUM quinquepartitum, laciniis ſublinearibus, ciliatis, longitudine fere tubi corollæ. *fig.* 1.

COROLLA monopetala, hypocrateriformis, tubus inferne cylindraceus, ſuperne latior, lineis quinque inſculptus, ore pentagono, albido, limbus horizontalis, quinquepartitus, laciniis extrorſum latioribus, oblique truncatis. *fig.* 2.

STAMINA: FILAMENTA quinque breviſſima, inflexa, retroflexa; ANTHERÆ biloculares, introrſum dehiſcentes, membranâ piloſâ incurva terminatæ. *fig.* 3.

PISTILLUM. GERMINA duo, compreſſa glandulis duabus nitidis liquorem melleum copioſe effundentibus; STYLUS utrique unus communis, ad baſin ſenſim gracileſcens; STIGMATA duo, inferius orbiculatum, planum, ſuperius albiſſimum, piloſum, membranis antherarum obtecta. *fig.* 4.

ROOT perennial and fibrous, the fibrous whitiſh or of a brown colour.

STALKS producing the flowers upright, two feet high and upwards, round, the ſides alternately ſomewhat flattened, ſmooth, dotted with red, there are alſo other ſtalks producing no flowers which creep on the ground or climb the neighbouring plants.

LEAVES oppoſite, ſtanding on footſtalks, ovate, ſmooth, ſhining, finely edged with hairs, remote from each other, and evergreen.

FLOWER-STALKS longer than the leaves, upright, round, ſmooth, filiform, each ſupporting one flower.

FLOWERS large, of a pale blue colour.

CALYX: a PERIANTHIUM divided into five ſegments, the ſegments ſomewhat linear, ciliated, almoſt the length of the tube of the corolla. *fig.* 1.

COROLLA monopetalous, ſalver-ſhaped, the tube below, cylindrical, above broader, having five grooves, the mouth whitiſh, five cornered, the limb horizontal, divided into five ſegments which are externally broadeſt, and obliquely cut off. *fig.* 2.

STAMINA: five FILAMENTS very ſhort, firſt bent in, and afterwards bent back; ANTHERÆ bilocular, opening inwardly, terminated by a hairy membrane bent in at top. *fig.* 3.

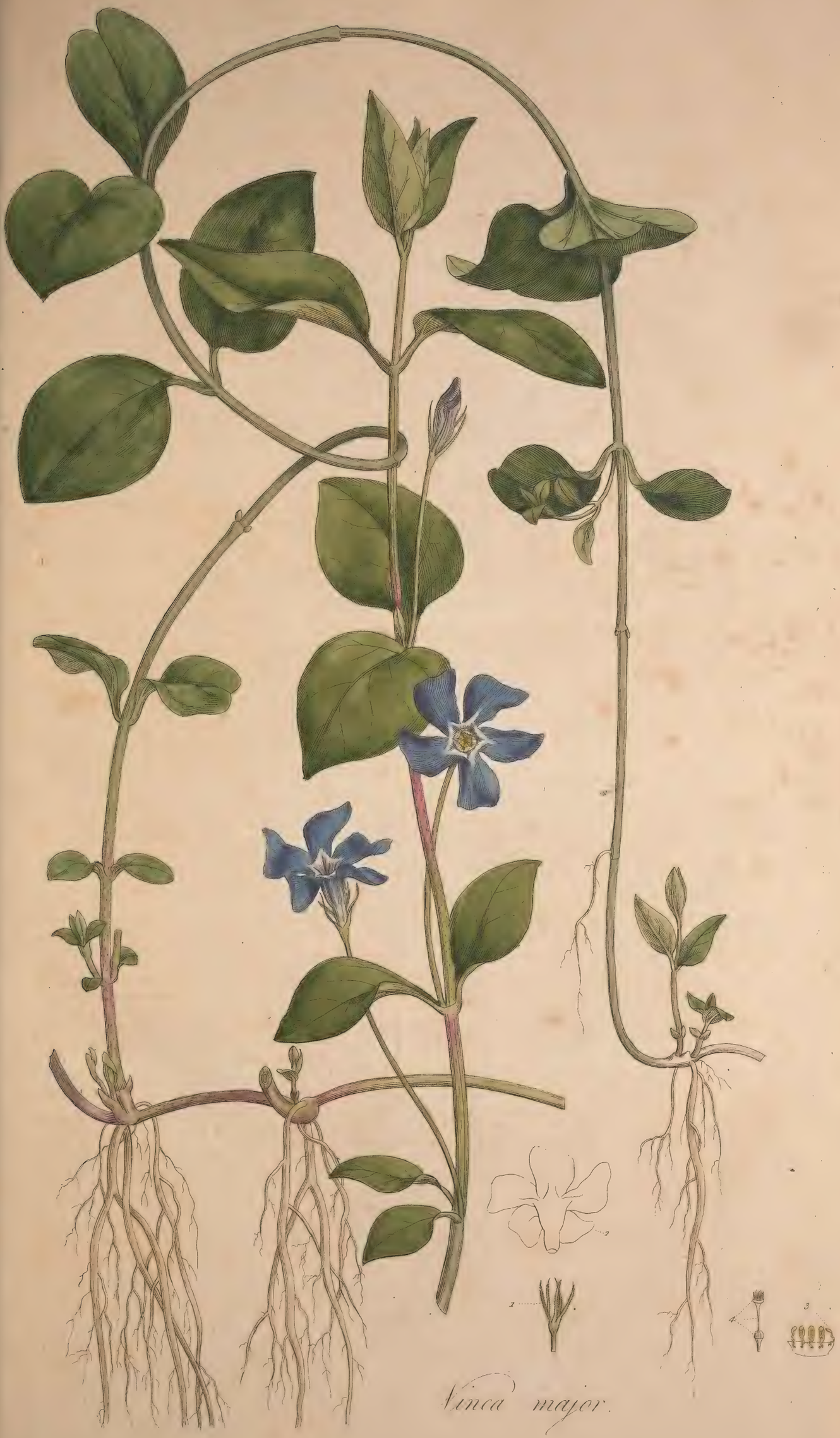
PISTILLUM: GERMINA two, preſſed by two ſhining glands which pour forth plentifully a ſweet liquor; STYLE one common to both, gradually tapering to the baſe; STIGMATA two, the lowermoſt round and flat, the uppermoſt very hairy, covered by the membrane of the antheræ. *fig.* 4.

In the *Syſtema Vegetabilium* of LINNÆUS, the laſt of his works publiſhed under his direction, this plant is ſuſpected to be a variety of the *Vinca minor*, a ſuſpicion for which there appears to be no grounds, and which is contrary to the united opinion of Botaniſts both antient and modern; the *minor* it is true has many varieties, but they relate to the colour of the bloſſoms, and leaves, and the multiplication of the former merely, no alteration is produced in the general habit of the plant, not even by long continued culture; HALLER, in his ſpecific character of the *major*, obſerves, that the leaves are finely edged with hairs, ſo far as our obſervation extends this is conſtant, and may ſerve, if any difficulty of diſtinguiſhing them ſhould ariſe, to ſettle it.

The *major*, like the *minor*, is common enough with us in gardens, but rarely met with wild, yet I have noticed it in ſeveral places, particularly under Lord Stormont's Park pales, on the left hand ſide of the road, betwixt Wandſworth and Putney-Common, and in a field near Beckenham, in Kent, where it was certainly in a wild ſtate.

It flowers in May and June.

It is regarded only as an ornamental plant, but ſhould be introduced into the garden with caution, as it encreaſes very much, and is apt to over-run and injure others.



Vinca major.

SAMOLUS VALERANDI. ROUND-LEAVED WATER-PIMPERNEL.

SAMOLUS *Lin. Gen. Pl.* PENTANDRIA MONOGYNIA.

Cor. hypocrateriformis. *Stamina* munita ſquamulis corollæ. *Capſ.* unilocularis.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

SAMOLUS *Valerandi. Lin. Syſt. Vegetab.* p. 177. *Sp. Pl.* p. 243. *Fl. Suec.* n. 192.

SAMOLUS. *Haller Hiſt.* n. 707.

ANAGALLIS aquatica, rotundo folio non crenato. *Bauhin. Pin.* 252.

SAMOLUS Valerandi. *Bauh. Hiſt.* 3. p. 791.

ALSINE aquatica, foliis rotundis becabungæ. *Moriſ. Hiſt.* 2. p. 323. ſ. 3. t. 24. f. 28.

ANAGALLIS aquatica rotundifolia. *Ger. emac.* 620.

ANAGALLIS aquatica tertia Lobelii folio ſubrotundo non crenato. *Parkins*, p. 1237. *Raii Syn.* 283. Round-leaved Water-Pimpernel. *Hudſon. Fl. Angl.* ed. 2. p. 94. *Lightfoot Fl. Scot.* p. 142. *Oeder Fl. Dan. icon.* 198.

RADIX perennis, fibroſa, alba.
CAULIS dodrantalis, aut pedalis, erectus, rigidulus, teres, glaber, plerumque ramoſus.
FOLIA alterna, petiolata, ovata, obtuſa, integerrima, nitida, venis paucis, remotis, notata.

PETIOLI breves, lati.
FLORES parvi, albi, ſpicati.
PEDUNCULI plurimi, ſparſi, ſuberecti, uniflori, teretes, bractæâ lanceolatâ medio inſtructi.

CALYX: PERIANTHIUM quinque-partitum, ſuperum, baſi obtuſum, laciniis erectis, perſiſtentibus. *fig.* 1.
COROLLA monopetala, hypocrateriformis. *Tubus* breviſſimus, longitudine calycis, patulus. *Limbus* planus, quinque-partitus, obtuſus. *Squamulæ* quinque, breviſſimæ, ad baſin ſinus limbi, conniventes, *fig.* 2, 3.

STAMINA: FILAMENTA quinque, brevia, infra laciniam corollæ ſingula. ANTHERÆ conniventes, luteæ, intra tubum corollæ. *fig.* 4.

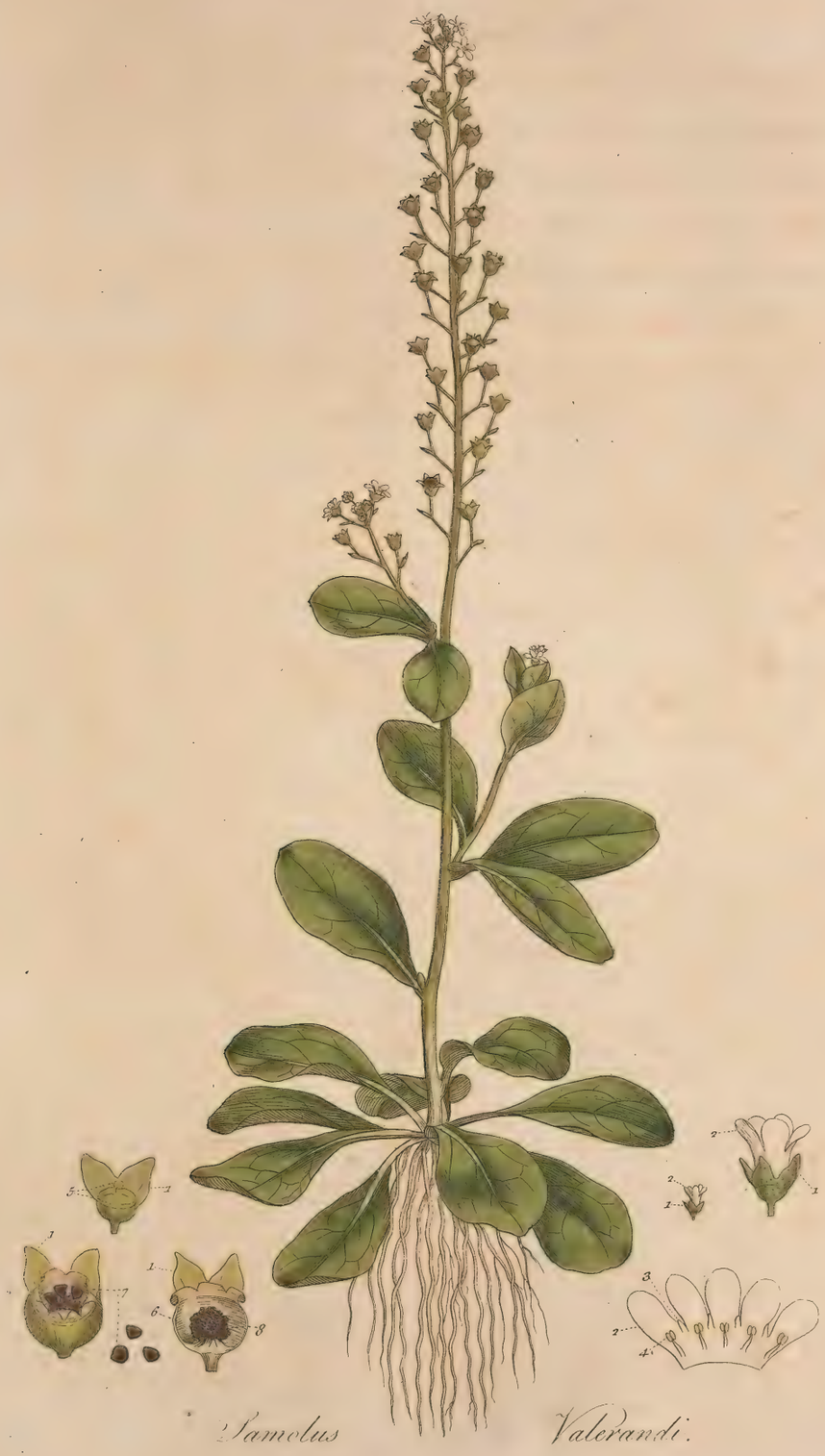
PISTILLUM: GERMEN inferum. STYLUS filiformis, longitudine fere ſtaminum. STIGMA capitatum. *fig.* 5.
PERICARPIUM: *Capſula* ſubrotunda, calyce cincta, unilocularis, ore quinquedentato, dentibus reflexis. *fig.* 6.
SEMINA plurima, exigua, nigra. *Receptaculum* globoſum, magnum. *fig.* 7, 8.

ROOT perennial, fibrous, and white.
STALK a ſpan or a foot in height, upright, ſomewhat rigid, round, ſmooth, and generally branched.
LEAVES alternate, ſtanding on foot-ſtalks, ovate, obtuſe, perfectly entire, ſhining, marked with few veins, and thoſe diſtant.
LEAF-STALKS ſhort, and broad.
FLOWERS ſmall, white, growing in ſpikes.
FLOWER-STALKS numerous, placed in no regular order, nearly upright, each ſupporting one flower, round, having a ſmall pointed floral-leaf growing from the middle of each.
CALYX: a PERIANTHIUM deeply divided into five ſegments, placed above the germen, blunt at the baſe, the ſegments upright and permanent. *fig.* 1.
COROLLA monopetalous, ſalver-ſhaped. *Tube* very ſhort, the length of the calyx, open. *Limb* flat, deeply divided into five ſegments, which are obtuſe; five very ſhort *Scales* which cloſe inward, are ſituated at the mouth of this tube. *fig.* 2, 3.
STAMINA: five ſhort FILAMENTS placed beneath each ſegment of the corolla. ANTHERÆ cloſing together, of a yellow colour, within the tube of the corolla. *fig.* 4.
PISTILLUM: GERMEN beneath the calyx. STYLE thread-ſhaped, nearly the length of the ſtamina. STIGMA forming a little head. *fig.* 5.
SEED-VESSEL: a roundiſh *Capſule*, covered by the calyx, of one cavity, the mouth having five teeth, which turn back. *fig.* 6.
SEEDS numerous, ſmall and black. *Receptacle* round and large. *fig.* 7, 8.

Of this genus there is at preſent only one known ſpecies, and that an inhabitant of every quarter of the globe: nevertheleſs, it is found but ſparingly with us; but may with certainty be met with on the edges of the wet ditches about *Woolwich*, *Charlton*, and *Greenwich*, more particularly in the road leading from *New-croſs* Turnpike to the *Iſland of St. Helena*, *Rotherhithe*.

It flowers in *July*.

No particular uſes are attributed to it.



Samolus Valerandi.

CAMPANULA ROTUNDIFOLIA. HEATH BELL-FLOWER.

CAMPANULA *Lin. Gen. Pl.* PENTANDRIA MONOGYNIA.

Cor. campanulata, fundo clauſo valvis ſtaminiferis. *Stigma* trifidum. *Caps.* infera, poris lateralibus dehiſcens.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

CAMPANULA *rotundifolia* foliis radicalibus reniformibus, caulinis linearibus. *Lin. Syſt. Vegetab.* p. 173. *Sp. Plant.* p. 232. *Fl. Suec.* n. 184.

CAMPANULA foliis ſerratis, radicalibus cordatis, caulinis lanceolatis. *Haller. Hiſt.* 701.

CAMPANULA *rotundifolia.* *Scopoli Fl. Carn.* n. 124.

CAMPANULA *minor* rotundifolia vulgaris. *Bauhin pin.* 93.

CAMPANULA rotundifolia. *Ger. emac.* 452.

CAMPANULA minor ſylveſtris rotundifolia. *Parkinſon* 651. *Raii Syn.* p. 277. The leſſer round-leaved Bell-flower. *Hudſon. Fl. Angl. ed.* 2. p. 95. *Lightfoot Fl. Scot.* p. 141.

RADIX alba, craſſiuſcula, modice fibroſa, ſubdulcis, repens.

CAULES ex una radice plures, pedales et ultra, ſub-erecti, debiles, flexuoſi, teretes, glabri, ſolidi, lacteſcentes, ramoſi.

FOLIA radicalia cordato-reniformia, petiolata, dentato-ſerrata, caulina prope baſin lanceolata, dentata, ſumma linearia, integerrima.

RAMI floriferi, patuli, ſimplices ſeu ramoſi, ſubnudi.

FLORES perfecte campanulati, cærulei, parum nutantes.

CALYX: PERIANTHIUM quinquepartitum, erectum, glabrum, ſulcatum, perſiſtens, laciniis linearibus. *fig.* 1.

COROLLA monopetala, campanulata, limbo quinque-fido, laciniis acutis, patentibus. *fig.* 2.

STAMINA: FILAMENTA quinque, capillaria, breviſſima, inſerta valvularum nectarii apicibus; ANTHERÆ filamentis longiores, compreſſæ, primo purpuraſcentes, dein fuſcæ. *fig.* 3, 4, 5.

PISTILLUM: GERMEN inferum, ſulcatum; STYLUS filiformis; STIGMA tripartitum, oblongum, craſſiuſculum, externe villoſum, laciniis revolutis. *fig.* 6, 7, 8.

NECTARIUM in fundo corollæ, conſtructum valvulis quinque, acutis, conniventibus, receptaculum tegentibus. *fig.* 5.

ROOT white, thickiſh, moderately fibrous, ſweetiſh, and creeping.

STALKS; from the ſame root ſeveral, a foot or more in height, ſomewhat upright, but weak and crooked, round, ſmooth, ſolid, milky, and branched.

LEAVES of the root ſomewhat heart or kidney ſhaped, ſtanding on footſtalks, toothed, or ſawed, thoſe of the ſtalk near the baſe lanceolate and toothed, near the ſummit linear and entire.

FLOWER-BRANCHES ſpreading, ſimple or branched, almoſt naked.

FLOWERS perfectly bell-ſhaped, of a blue colour, and drooping a little.

CALYX: a PERIANTHIUM divided into five ſegments, upright, ſmooth, grooved, permanent, the ſegments linear. *fig.* 1.

COROLLA monopetalous, bell-ſhaped, divided into five ſegments at the brim, which are pointed and ſpreading. *fig.* 2.

STAMINA: five very fine, ſhort FILAMENTS inſerted into the tips of the valves of the nectary; ANTHERÆ longer than the filaments, flatten'd, at firſt purpliſh, afterwards brown. *fig.* 3, 4, 5.

PISTILLUM: GERMEN beneath the calyx, grooved; STYLE thread-ſhaped; STIGMA oblong, thickiſh, externally villous, divided into three ſegments which are rolled back. *fig.* 6, 7, 8.

NECTARY in the bottom of the corolla, formed of five pointed valves cloſing and covering the receptacle. *fig.* 5.

When the *Campanula rotundifolia* grows among herbage, its radical leaves, which are of a roundiſh figure, at leaſt compared with moſt of the plants of the ſame genus, are ſeldom obſerved, unleſs particularly ſought for, while thoſe of the ſtalk are ſeen by every one to be linear; hence the name of *rotundifolia* to moſt beginners appears abſurd. LINNÆUS in giving it this name has followed the antient Botaniſts, as will appear from conſulting the ſynonyms.

This plant, as well as the *Epilobium anguſtifolium*, points out to the ſtudent the neceſſity of attending to the following botanic axiom, *thoſe bloſſoms which are on the point of expanſion ſhew the ſtructure of the ſtamina to the moſt advantage, as thoſe which are overblown do that of the ſtigma.*

Subject to the ſame variation in point of ſize with all other plants, it may be found from * two inches to a yard in height, its radical leaves in certain ſituations are found without any notches, in which caſe it is more truly *rotundifolia*; its bloſſoms alſo vary in their colour, being ſometimes found white and ſometimes purple.

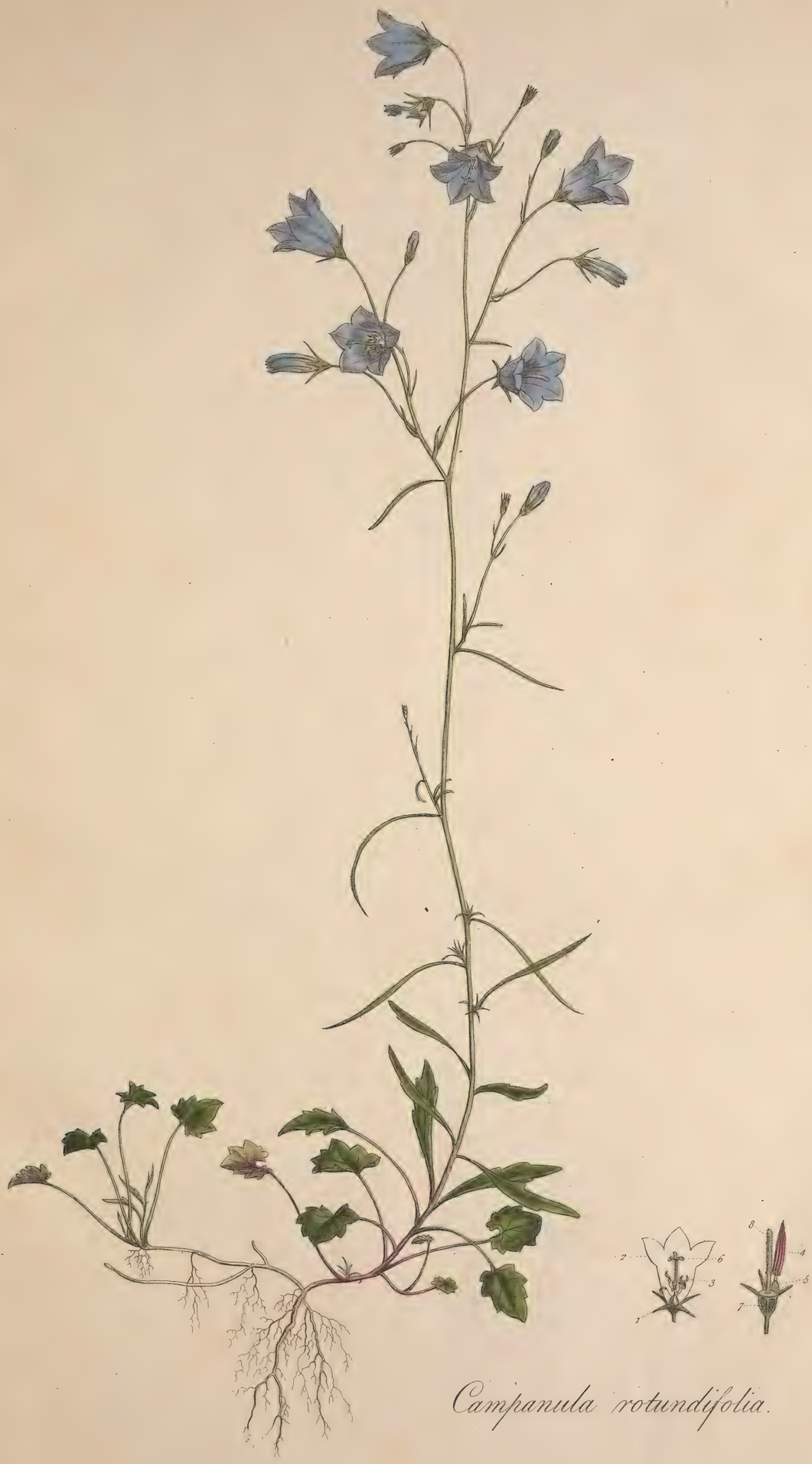
The ſtalks and branches, when broken, give out a milky juice, which has a diſagreeable ſmell.

It grows plentifully on heaths, and by the road ſides in barren hilly ſituations, and flowers from June to September.

Having a perennial and a creeping root it is eaſily cultivated in the Garden.

LINNÆUS ſays a green pigment is prepared from the flowers, but does not inform us in what manner.

* Mr. *Lightfoot* found it of that height in *Scotland.*



Campanula rotundifolia.

CHIRONIA CENTAURIUM. CENTAURY.

CHIRONIA *Lin. Gen. Pl.* PENTANDRIA MONOGYNIA.

Cor. rotata. *Piſtillum* declinatum. *Stamina* tubo corollæ inſidentia. *Antheræ* demum ſpirales. *Pericarp.* 2-loculare

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

CHIRONIA *Centaurium.*

GENTIANA *Centaurium* corollis quinquefidis infundibuliformibus, caule dichotomo, piſtillo ſimplici. *Lin. Syſt. Vegetab.* p. 122. *Sp. Plant.* p. 332. *Fl. Suec.* n. 232.

GENTIANA caule dichotomo; floribus infundibuliformibus, ſtriatis, quinquefidis. *Haller. Hiſt.* n. 648.

GENTIANA *Centaurium.* *Scopoli Fl. Carn.* n. 293.

CENTAURIUM minus *Bauh. Pin.* 278.

CENTAURIUM minus vulgare. *Parkins.* 272.

CENTAURIUM parvum. *Gerard. emac.* 547. *Raii Syn.* p. 286. Small Purple Centory. *Hudſon Fl. Angl.* ed. 2. p. 102. *Lightfoot Fl. Scot. p.* 152.

RADIX annua, fibroſa, lignoſa, flaveſcens.

CAULIS ſpithamæus, et ultra, erectus, plerumque, ſimplex, glaber, anguloſus.

FOLIA oppoſita, ſeſſilia, glabra, radicalia oblonga, apice obtuſa, baſi anguſtata, caulina ovato-lanceolata, erecta, trinervia, ſuperioribus ſæpe incurvis.

FLORES roſei, corymboſi, erecti, ſeſſiles.

CALYX: PERIANTHIUM monophyllum, quinquefidum, erectum, corollæ ſubagglutinatum, perſiſtens, laciniis ſubulatis, ſubtriangularibus, membranâ connexis. *fig.* 1, 2. *auct.*

COROLLA monopetala, infundibuliformis, *tubus* cylindraceus, ſtriatus, tenuiſſimus, calyce duplo longior, *limbus* quinquepartitus, roſeus, laciniis ovatis, patentibus. *fig.* 3.

STAMINA: FILAMENTA quinque, alba, filiformia, ex apice tubi enata. ANTHERÆ oblongæ, incumbentes, flavæ, demum ſpiraliter contortæ. *fig.* 4, 5, 6.

PISTILLUM: GERMEN oblongum, tubum corollæ implens. STYLUS albus, filiformis, germine dimidio brevior, declinatus, aliquando bifidus. STIGMA craſſum, bilobum, villoſum, *fig.* 7, 8, 9.

PERICARPIUM: CAPSULA oblonga, acuta, nitida, tubo corollæ obtecta, bilocularis, bipartibilis.

SEMINA numeroſa, parva, ſubrotunda, flaveſcentia.

ROOT annual, fibrous, woody, and of a yellowiſh colour.

STALK about ſeven inches high or more, upright, generally ſimple, ſmooth, and angular.

LEAVES oppoſite, ſeſſile, ſmooth, thoſe of the root oblong, blunt at the point and narrowed at the baſe; thoſe of the ſtalk narrow, pointed, upright, three-ribbed, the uppermoſt often bent inward.

FLOWERS roſe-coloured, growing in a corymbus, upright, and ſeſſile.

CALYX: a PERIANTHIUM of one leaf, divided into five ſegments, upright, ſlightly glued to the corolla, permanent, the ſegments tapering to a point, ſomewhat triangular, connected by a membrane. *fig.* 1, 2. *magnified.*

COROLLA monopetalous, funnel-ſhaped, the *tube* cylyndrical, ſtriated, extremely thin, twice the length of the calyx, *limb* divided into five ſegments, of a roſe-colour, the ſegments ovate and ſpreading. *fig.* 3.

STAMINA: five FILAMENTS, white, thread-ſhaped, ſpringing from the top of the tube. ANTHERÆ oblong, incumbent, of a yellow colour, finally twiſted. *fig.* 4, 5, 6.

PISTILLUM: GERMEN oblong, filling the tube of the corolla. STYLE white, of equal thickneſs throughout, half the length of the germen, inclining to one ſide, ſometimes bifid. STIGMA thick, compoſed of two lips and villous. *fig.* 7, 8, 9.

SEED-VESSEL: a CAPSULE, of an oblong ſhape, pointed, ſhining, covered by the tube of the corolla, diviſible into two parts, with a cavity in each.

SEEDS numerous, ſmall, roundiſh, of a yellowiſh colour.

Thoſe who have been accuſtomed to conſider this well-known plant as a *Gentiana*, will be ſtartled at ſeeing it here firſt announced as a *Chironia*; but when they come attentively to examine its parts of fructification, they will wonder how they could ſo readily acquieſce in joining it to a genus with which its ſtructure is wholly irreconcileable. It agrees perfectly with LINNÆUS's character of the genus *Chironia*, the eſſence of which conſiſts in its *twiſted Antheræ*; and it is worthy of obſervation, that the bloſſoms of two of the *Chironia's*, not unfrequently met with in the gardens of the curious, are of the ſame colour as the Centaury. Theſe facts have induced me to add a new genus to the Engliſh Catalogue, whereby this plant fortunately aſſumes its proper name *.

The Centaury grows wild in dry and barren fields, on heaths by the ſides of hedges, and ſometimes in woods, where it uſually acquires a greater height. In the neighbourhood of *Charlton* and *Coombe Woods* it is not unfrequent, and flowers in *July* and *Auguſt*.

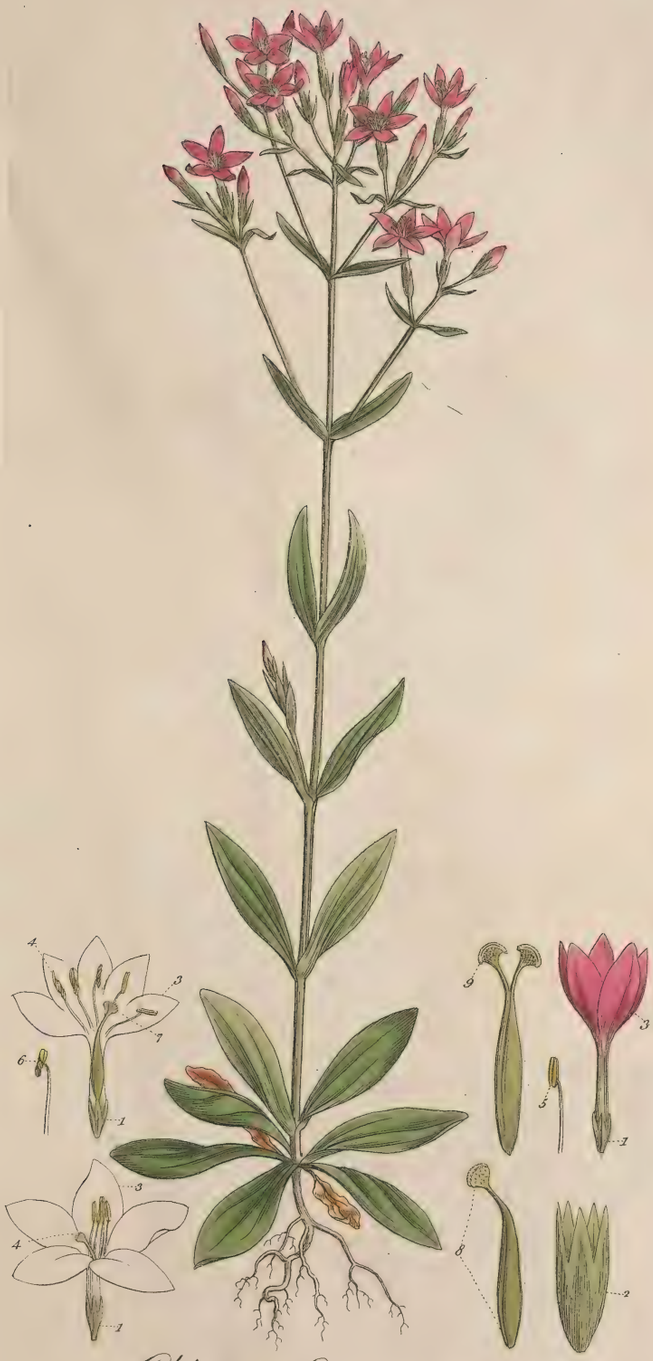
A variety, with white flowers, is not uncommon.

This herb is extremely bitter, with a diſagreeable taſte, whence, Baron HALLER obſerves, the ancients called it *fel terræ*, or *gall of the earth.* From an idea, however, that all bitters are good ſtomachic medicines, it has acquired no ſmall degree of medicinal fame, and is particularly recommended in all weakneſſes of the Stomach; alſo in the Jaundice, Green-ſickneſs, Worms, Agues, Gout, Scurvy, &c.

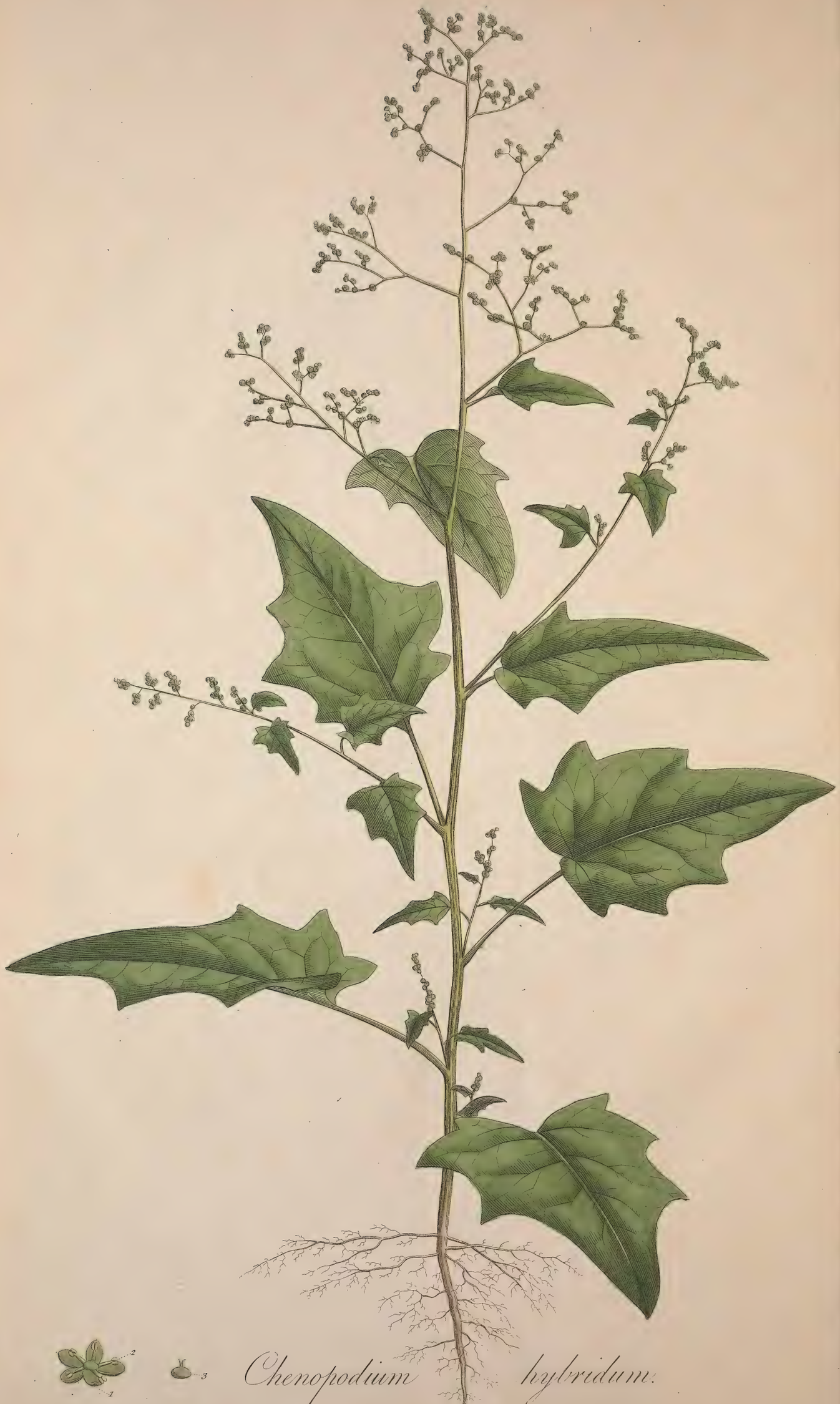
It may be given in ſubſtance to a drachm; in infuſion or decoction to two ounces; the extract to a ſcruple.

Authors have remarked, that it is a plant very difficult of cultivation.

* Centaury has it name κενταυριον or κενταυρειον from *Chiron* the Centaur, "Centaurea curatus dicitur Chiron, cum Herculis excepti hoſpitio "pertractandi arma ſagitta excidiſſet in pedem: quare aliqui *Chironion* vocant." *Plin. l.* 25. *c.* 6. *p.* 635.



Chironia Centaurium.



Chenopodium hybridum.

Chenopodium Hybridum. Thorn-apple-leaved Goosefoot.

CHENOPODIUM *Lin. Gen. Pl.* Pentandria Digynia.

Cal. 5-phyllus, 5-gonus. *Cor.* o. *Sem.* 1 lenticulare, ſuperum.

Raii Syn. Gen. 5. Herbæ flore imperfecto ſeu ſtamineo (vel apetalo potius).

CHENOPODIUM *Hybridum* foliis cordatis angulato-acuminatis, racemis ramoſis nudis. *Lin. Syſt. Veget.* p. 216. *Sp. Pl.* p. 319. *Fl. Suec.* n. 220.

CHENOPODIUM foliis glabris ſeptangulis, floribus paniculatis. *Haller. Hiſt.* n. 1583.

ATRIPLEX ſylveſtris latifolia, acutiore folio. *Bauh. Pin.* 119.

CHENOPODIUM Stramonii folio. *Vaillant, Paris* 36. *t.* 7. *f.* 2.

CHENOPODIO affinis, folio lato, laciniato, in longiſſimum mucronem procurrente, florum ramulis ſparſis. *Raii Hiſt. III.* 123.

BLITUM Aceris folio. *Pet. H. Brit.* 8. 7.

ATRIPLEX odore et folio Stramonii minori tamen. *Læl. Triumf.* apud fratrem. *Raii Syn.* p. 154. *Hudſon. Fl. Angl.* ed. 2. p. 105.

RADIX annua, ſimplex, fibroſa, fibris plurimis, capillaceis, patentibus.
CAULIS pedalis, ad bipedalem erectus, ramoſus, angulatus, glaber.
FOLIA petiolata, alterna, glabra, ſine farinâ, venoſa, ſubtriangularia, patentia, utrinque plerumque tridentata, acuminata, dentibus magnis, remotis.
PETIOLI foliis breviores, ſubrugoſi, inferne convexi, ſuperne canaliculati.
FLORES paniculati.
PANICULA ampla, ramoſiſſima nuda.
CALYX: Perianthium pentaphyllum, perſiſtens, foliolis ovatis, obtuſiuſculis, pulverulentis, margine membranaceis.
COROLLA nulla.
STAMINA: Filamenta quinque ſubulata, flaveſcentia, longitudine calycis. Antheræ didymæ, ſubrotundæ, flavæ, *fig.* 2.
PISTILLUM: Germen orbiculatum. Stylus bipartitus, brevis. Stigmata minima, ſubreflexa. *fig.* 3.
SEMEN e nigro caſtaneum orbiculare, depreſſum, intra calycem.

ROOT annual, ſimple and fibrous, fibres numerous, capillary, and ſpreading.
STALK from one to two feet high, upright, branched, angular, and perfectly ſmooth.
LEAVES ſtanding on foot-ſtalks, alternate, ſmooth, without any meal, veiny, ſomewhat triangular, ſpreading, furniſhed with three teeth on each ſide, and running out to a long point, the teeth large, and diſtant from each other.
LEAF-STALKS ſhorter than the leaves, ſomewhat wrinkled, convex on the under, and hollow on the upper ſide.
FLOWERS growing in a panicle.
PANICLE large, very much branched and naked.
CALYX: Perianthium of five leaves and permanent, leaves ovate, ſomewhat obtuſe, mealy, membranous at the edge.
COROLLA wanting.
STAMINA: Filaments five, tapering, yellowiſh, the length of the calyx. Antheræ double, roundiſh, and yellow, *fig.* 2.
PISTILLUM: Germen round, but ſomewhat flattened. Style ſhort, bipartite. Stigmata very ſmall, turned ſomewhat back. *fig.* 3.
SEED of a dark cheſnut colour, orbicular, flattened, contained within the calyx.

Linnæus, when he beſtowed on this *Chenopodium* the name *Hybridum*, had an idea, as may be learned from his *Flora Suecica* *, that it was a ſpurious plant produced from the *viride*: repeated obſervations would probably have taught him, that this opinion was too haſtily adopted, as the *hybridum* has certainly as great pretenſions to be conſidered as an original ſpecies, as the *viride*, the *album*, or any other. Indeed it is one of thoſe *Chenopodiums* which varies the leaſt of any; and, beſides the form of its leaves, which reſemble thoſe of the Thorn-apple, and its peculiarly branched and naked panicle of flowers, it has a ſtrong and diſagreeable ſmell, which ſome have compared to that of the Thorn-apple: Alſo ſown in the garden it produces invariably the likeneſs of the original plant.

Of all the *Engliſh* plants of this genus, and we have them all (the maritimum excepted) growing wild about *London*, the environs of which are in many places peculiarly favourable to their growth, this is by far the ſcarceſt. I have hitherto diſcovered it in one place only, and that ſparingly, *viz.* in *Batterſea Fields*, betwixt the *Windmill Meadow* and the road leading to *Chelſea Bridge* adjoining the gardener's ground. It flowers in *Auguſt*.

It is mentioned, in the third edition of Mr. Ray's *Synopſis*, to have been found by Mr. Sherard on the banks of ſome watery pits beyond *Ely*, and by Mr. Dale about *Colcheſter*. Mr. Hudson deſcribes it as growing plentifully about *North-fleet*; and Mr. Lightfoot enumerates it among his *Scottiſh* plants.

Some authors ſuſpect it to be poiſonous. Tragus, in particular, mentions it as a plant fatal to ſwine.

* Habet multa communia cum præcedente (viride) ut forte olim ab eodem ortum ſit, quod racemorum ſtructura indicat. *Fl. Suec.* n. 220. p. 80.

Bunium Bulbocastanum. Earth-nut.

BUNIUM *Lin. Gen. Pl.* Pentandria Digynia.

Corolla uniformis. *Umbella* conferta. *Fructus* ovatus.

Raii Syn. Gen. 11. Umbelliferæ herbæ.

BUNIUM *Bulbocastanum. Lin. Syst. Vegetab.* p. 229. *Sp. Pl.* p. 349.

BULBOCASTANUM. *Haller Hist.* n. 783.

BULBOCASTANUM. *I. B.* III. 2. 30.

BULBOCASTANUM majus folio apii. *Bauhin. Pin.* 162.

BULBOCASTANUM majus et minus. *Ger. emac.* 1065.

NUCULA terrestris major. *Parkinf.* 893. *Raii Syn.* p. 209. Earth-nut, Kipper-nut, Pig-nut. *Hudson. Fl. Angl. ed.* 2. p. 122. *Lightfoot Fl. Scot.* p. 156. *Oeder. Fl. Dan.* t. 220.

RADIX perennis, tuberosa, extus castanei coloris, intus alba, solida, fibras tum ab imo tum a lateribus promens tenues, gustu subdulci grato, profunde in terra delitescente.

CAULIS pedalis, ad bipedalem, erectus, teres, firmulus, crassitie pennæ coracis, substriatus, glaber, penitus viridis, ramosus.

FOLIA radicalia longe petiolata, caulina sessilia, omnibus tenuissime divisis, fœniculi modo, saturate viridibus, marginibus foliorum ad lentem aculeato-ciliatis, *fig.* 7. *auct.* *Spatha* brevis, sulcatus, lævis, margine membranaceâ, albidâ.

UMBELLÆ plures, *universalis* multiplex radiis septem ad duodecim, *partialis* brevissima, conferta, radiis circiter duodecim.

INVOLUCRUM *universale* polyphyllum, lineare, breve, sæpe nullum; *partiale* setaceum, longitudine umbellulæ, aliquando nullum. *Perianthium proprium* vix manifestum,

COROLLA universalis uniformis, flosculi plerique fertiles; *propria* Petalis quinque, inflexo-cordatis æqualibus. *fig.* 2.

STAMINA: Filamenta quinque alba, subulata, corolla longiora, decidua. Antheræ simplices, flavescentes. *fig.* 3.

PISTILLUM: Germen oblongum, inferum, viride. Styli duo albi, suberecti. Stigmata obtusa. *fig.* 4, 5.

SEMINA duo, oblongo-ovata, hinc convexa inde plana, glabra, subaromatica. *fig.* 6, 7.

ROOT perennial, tuberous, on the outside of a chesnut colour, within white, solid, putting forth slender fibres from the sides as well as the bottom, of an agreeable sweetish taste, lying deep in the ground.

STALK from one to two feet high, upright, round, stiffish, the thickness of a crow-quill, slightly striated, smooth, throughout of a green colour, and branched.

LEAVES from the root standing on long foot-stalks, those of the stalk sessile, all of them very finely divided like fennel, the small leaves edged with prickly hairs, *fig.* 1. *magn.* *Sheath* short, grooved, smooth, the edge membranous and whitish.

UMBELLS several, the *general* one composed of many rays from seven to twelve; the *partial* one very short, the rays about twelve and close.

INVOLUCRUM: the *general* one composed of many leaves, linear, short, often wanting; the *partial* one setaceous, the length of the small umbel, often wanting. *Partial Perianthium* scarcely manifest.

COROLLA: general Corolla uniform, most of the flowers fertile; individual one composed of five Petals, heart-shaped, bent in at top, and equal. *fig.* 2.

STAMINA: five Filaments of a white colour, tapering, longer than the corolla, deciduous. Antheræ simple and yellowish. *fig.* 3.

PISTILLUM: Germen oblong, beneath the corolla, of a green colour. Styles two, white, nearly upright. Stigmata blunt. *fig.* 4, 5.

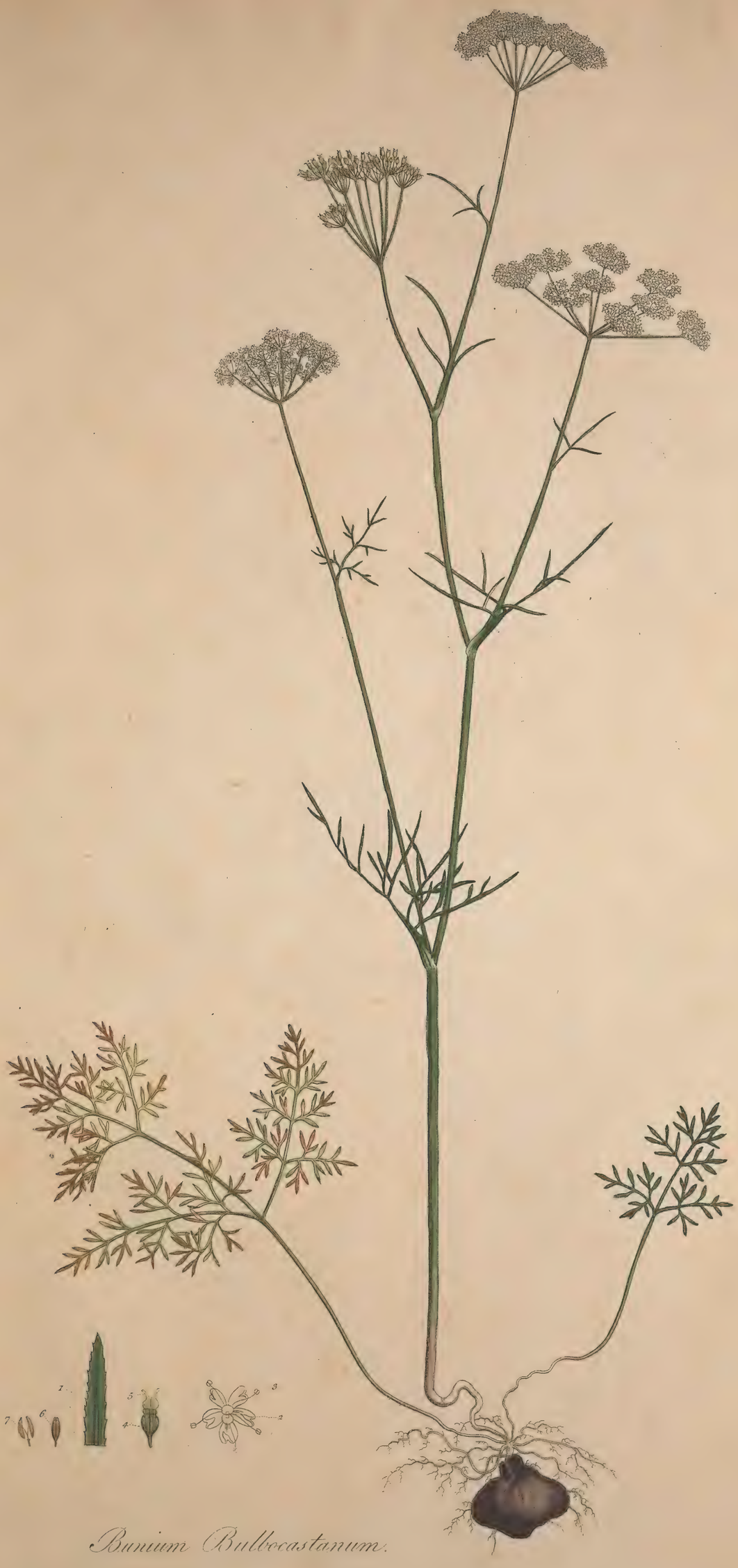
SEEDS two, of an oblong-ovate shape, convex on one side and flat on the other, smooth, and somewhat aromatic. *fig.* 6, 7.

Children are frequently in the practice of digging up and eating the knobby roots of this plant, which, by some, are supposed to resemble the chesnut in its taste, whence its name of *Bulbocastanum*. Pigs also seek for it with avidity, from which circumstance it has also obtained the name of *Pig-nut*.

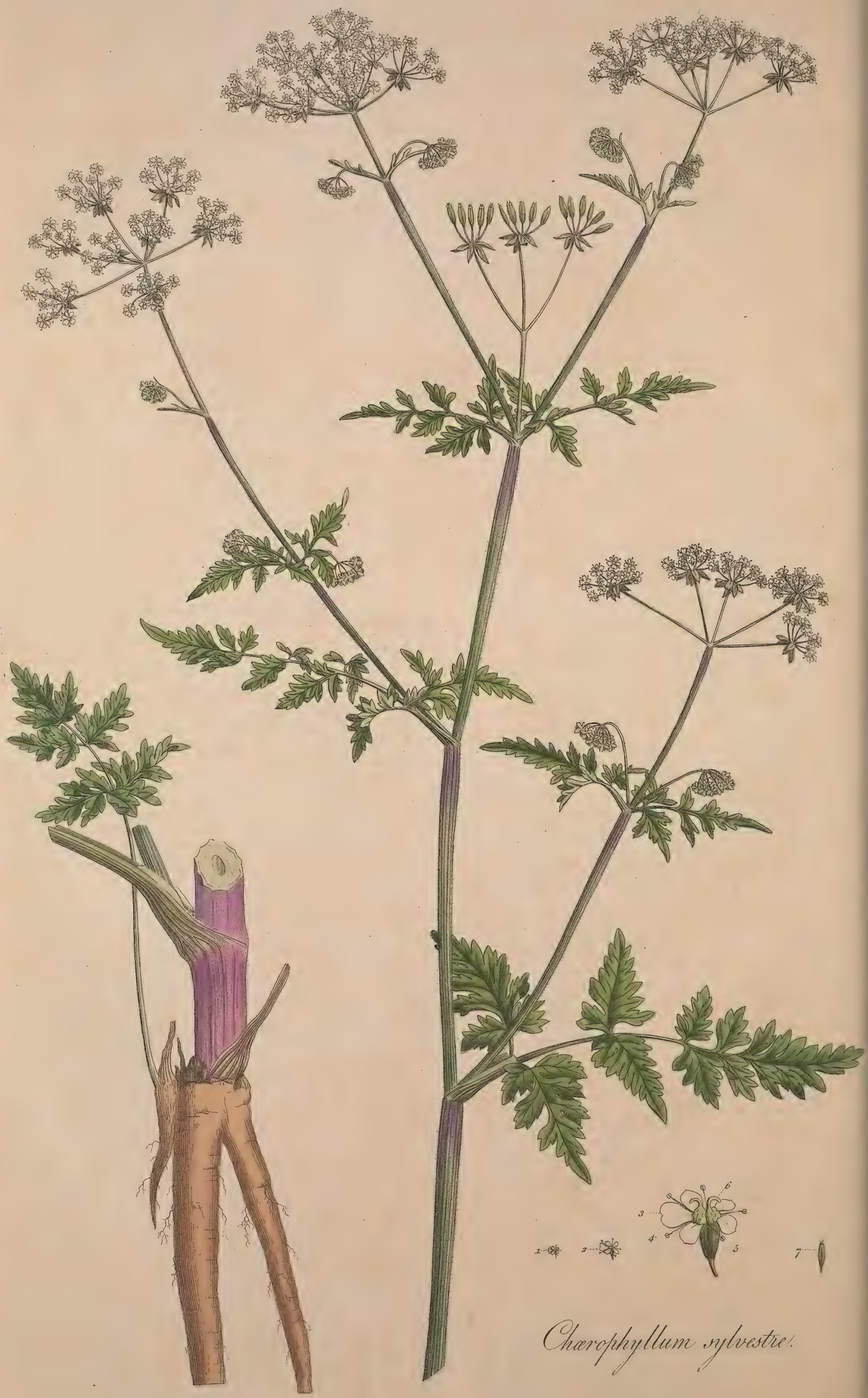
Few of our Umbelliferi have the characteristic marks which distinguish the Bunium; the principal of which are its knobbed root, and finely divided fennel-like leaves. The one which approaches the nearest to it is the *Oenanthe fistulosa*, especially when growing on ditch banks, where it is frequently thrown when the ditches are cleansed, or when it is cultivated in gardens; the roots, in such situations, are so similar to those of the Bunium, as to deceive even good judges. The radical leaves of the plant are also finely divided; it would be no wonder, therefore, if they should be mistaken for the Earth-nut.

A paper was published, about a year ago, in one of the Magazines, the *London*, if I mistake not, in which the roots of the *Oenanthe crocata*, well known for their poisonous effects, were said to have been eaten for those of this plant. We suspect, however, from various circumstances, that they were the roots of the *Oenanthe fistulosa*. It is our intention to make a more minute enquiry into this matter, and give our reasons more at large for this suspicion, when we figure that species.

The Earth-nut with us grows chiefly in woods, pastures, and orchards, and flowers in *June*.



Bunium Bulbocastanum.



Chærophyllum sylvestre.

CHÆROPHYLLUM SYLVESTRE. COMMON COW-PARSLEY.

CHÆROPHYLLUM. *Lin. Gen. Pl.* PENTANDRIA DIGYNIA.
Involucr. reflexum, concavum. *Petala* inflexo-cordata. *Fructus* oblongus, lævis.
Raii Syn. Gen. 11. UMBELLIFERÆ HERBÆ.
CHÆROPHYLLUM *sylvestre* caule lævi striato, geniculis tumidiusculis. *Lin. Syst. Vegetab.* p. 238. *Sp. Pl.* p. 369. *Fl. Suec.* n. 257.
CEREFOLIUM foliis acute dentatis triplicato-pinnatis, glabris, nervis hirsutis. *Haller Hist.* n. 748.
CHÆROPHYLLUM *sylvestre.* *Scopoli Fl. Carn.* n. 366.
MYRRHIS sylvestris seminibus lævibus. *Bauhin. Pin.* 170.
CICUTARIA vulgaris. *Dod. Pempt.* 701.
MYRRHIS sylvestris. *Parkinson*, 935.
CICUTARIA alba Lugdunensis. *Ger. emac.* 1038. *Ràii Syn.* p. 207. Wild Chervil. *Hudson. Fl. Angl.* p. 124. *Lightfoot Fl. Scot.* p. 167.

RADIX perennis, crassitie digiti intermedii, ad basin sæpius ramosa, extus pallide fusca, intus albida, succum vix lacteum fundens.

CAULIS bipedalis et ultra, erectus, crassitie digiti minimi, fistulosus, sulcatus, plerumque villosus, et sæpius purpurascens, ramosus, geniculatus, geniculis paululum incrassatis; rami suberecti, minus pubescentes.

FOLIA radicalia multiplicato-pinnata, sæpe amplissima; Costæ hirsutæ, fistulosæ, dorso acute angulatæ, antice canaliculatæ, ortæque ex vagina brevi striataque, pinnulæ lanceolatæ, acutæ, serrato-incisæ, plerumque hirsutæ; caulina et ramea successive minora minusque divisa, cæterum similia, superiora sæpe opposita aut terna cum totidem ramis axillaribus.

UMBELLÆ planiusculæ, nec densæ, nec plantæ ratione amplæ, ante anthesin nutantes, radiis compositæ a septem ad octodecim, gracilibus, teretibus et glabris.

INVOLUCRUM universale nullum, partiale pentaphyllum et ultra, foliolis acuminato-ovatis, concavis, glabris, ad oras subciliatis, umbellulis duplo brevioribus, tandem reflexis.

FLORES inodori, pauci steriles.

COROLLA: PETALA plana, et obverse ovata, albida, centralium flosculorum subæqualia, exteriorum vero extimum majus, et subcordato emarginatum. *fig.* 1, 2, 3.

STAMINA: FILAMENTA quinque albida, brevia et caduca. ANTHERÆ subrotundæ, didymæ, flavescentes. *fig.* 4.

PISTILLUM: GERMEN inferum, turbinatum, utrinque compressiusculum, lucidum; glandula nectarifera coronatum. STYLI duo, albi, parviusculi. STIGMATA simplicia. *fig.* 5, 6.

SEMINA duo, oblonga, antice sulcata, cæterum teretia, lævia, nitida, nigricantia, inodora, sapore vix ullo. *fig.* 7.

ROOT perennial, the thickness of the middle finger, most commonly branching out from the base, externally of a pale-brown colour, internally whitish, full of a juice which can scarcely be called milky.

STALK two feet high and upwards, upright, the thickness of the little finger, hollow, grooved, generally villous, and most commonly purplish, branched, jointed, joints somewhat thickened; branches nearly upright, less hoary than the stalk.

LEAVES next the root many times pinnated, often very large; the Ribs hirsute, fistulous, forming a sharp angle on the back, hollow in front, and arising from a short striated sheath, the small pinnæ lanceolate, pointed, deeply and irregularly serrated, generally hirsute, the leaves of the stalk and branches successively smaller, and less divided, in other respects similar, the upper ones often opposite or growing three together, with as many axillary branches.

UMBELLS flattish, neither thick nor large for the size of the plant, drooping before the expansion of the flowers, composed of seven to eighteen radii, which are slender, round, and smooth.

INVOLUCRUM the general one wanting, the partial one composed of five leaves or more, which are ovate, pointed, hollow, smooth, somewhat hairy on the edges, twice as short as the small umbells, finally turned back.

FLOWERS scentless, a few of them barren.

COROLLA: PETALS flat, inversely ovate, whitish, those of the central flowers nearly equal, but the outermost of the outer ones largest, somewhat heart-shaped and nicked. *fig.* 1, 2, 3.

STAMINA: FILAMENTS five, whitish, short, and deciduous. ANTHERÆ nearly round, double, and yellowish. *fig.* 4.

PISTILLUM: GERMEN placed beneath the corolla, broadest at top, flattish on both sides, shining, crowned with a nectariferous gland. STYLES two, white and small. STIGMATA simple. *fig.* 5, 6.

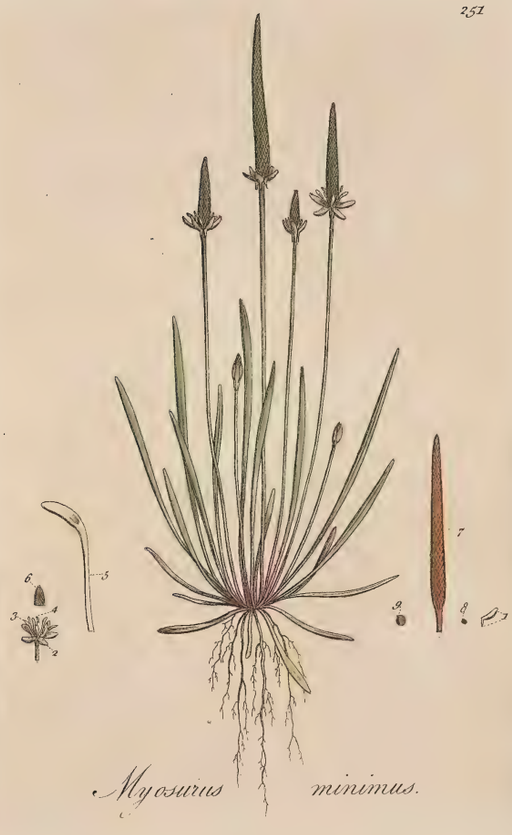
SEEDS two oblong, with a groove in the fore-part, round, smooth, shining, blackish, without scent, and almost tasteless. *fig.* 7.

In many parts of the kingdom this plant is well known by the name of *Cow-parsley*, a term we adopt in preference to *Cow-weed*, or *wild Chervil*; the former being applicable to the *Cow-parsnep* also, and the latter more properly belonging to the *Scandix Cerefolium* and *odorata*.

LINNÆUS's specific character of this *Chærophyllum* is only applicable to the upper part of the plant: the lower part of the stalk, by which it is most obviously distinguished, is strongly grooved, and covered with numerous short hairs.

It is one of the most common, as well as the earliest in blossom, of our *umbelliferi*, flowering in warm situations in *April*, and generally with us in *May*. It grows chiefly in orchards, pastures, and under hedges. In sheltered situations it produces a large crop of early foliage; hence it has been recommended by some writers on agriculture as worthy the attention of the Farmer, more especially as cows are said to be fond of it. To rabbits it is a luxurious treat, as those who keep them pretty generally know. In time of scarcity the young leaves, in some parts of the kingdom, are used as a pot-herb: the *boiled roots* are said to have a poisonous quality, perhaps without any foundation.

LINNÆUS remarks, in his *Flora Suecica*, that its presence indicates a fertile soil; and that its flowers are capable of communicating a yellow dye to woollen cloth.



Myosurus minimus.

MYOSURUS MINIMUS. MOUSE-TAIL.

MYOSURUS *Lin. Gen. Pl.* PENTANDRIA POLYGYNIA.

Cal. 5-phyllus, basi adnatus. *Nectaria* 5 subulata, petaliformia. *Sem.* numerosa.

Raii Syn. Gen. 15. HERBÆ SEMINE NUDO POLYSPERMÆ.

MYOSURUS *minimus. Lin. Syst. Vegetab.* p. 254. *Sp. Pl.* p. 407. *Fl. Suec.* n. 276.

MYOSURUS. *Haller. Hist.* n. 1159.

HOLOSTEO adfinis Cauda muris. *Bauh. Pin.* 190.

CAUDA MURINA. *Dod. Pempt.* 112.

RANUNCULUS gramineo folio, flore caudato, seminibus in capitulum spicatum congestis. *Tournefort Inst.* 293.

MYOSUROS. *Dillen. Nov. Gen.* p. 108. t. 4.

HOLOSTEUM Loniceri, Cauda muris vocatum. *Park.* 500.

CAUDA MURIS. *Gerard. emac.* 426. *Raii Syn.* 251. Mouse-tail. *Lightfoot Fl. Scot.* p. 179. *Hudson Fl. Angl.* ed. 2. p. 136.

RADIX annua, fibrosa.

FOLIA, omnia radicalia, viginti circiter in plantâ mediæ magnitudinis, erecta, longitudine inæquali, linearia, superne latiora, compressa, utrinque obsolete canaliculata, glabra, subcarnosa, obtusa, e flavo-viridia, basi rubicunda.

SCAPI quatuor, quinque, aut plures, uniflori, erecti, bipollicares et ultra, foliis longiores, teretes, superne paulo crassiores, glabri.

CALYX: PERIANTHIUM pentaphyllum, foliolis oblongis, obtusis, concavis, herbaceis, patentibus. *Unguibus* postice elongatis, appressis, acuminatis. *fig.* 1, 2.

COROLLA: PETALA quinque, calyce breviora, minutissima, flavescentia, unguiculata, limbo patente, basi subtubulosa. *fig.* 3. auct. 5.

STAMINA: FILAMENTA quinque, vel plura, longitudine fere calycis, receptaculo inserta, filiformia, alba, erecta. ANTHERÆ oblongæ, lutescentes. *fig.* 4.

PISTILLUM: GERMINA numerosa, receptaculo in formam conico-oblongam insidentia. STYLI nulli. STIGMATA minima, simplicia. *fig.* 6.

PERICARPIUM nullum. *Receptaculum* longissimum, styliforme, seminibus imbricatim dispositis tectum. *fig.* 7.

SEMINA numerosa, compressa, mucronata. *fig.* 8, 9.

ROOT annual and fibrous.

LEAVES, all of them radical, about twenty in a plant of a middling size, upright, of unequal length, linear, broadest at top, and flattened, faintly channeled on each side, smooth, somewhat fleshy, blunt, of a yellowish green colour, and reddish at the base.

FLOWERING-STEMS four, five, or more, each supporting one flower, upright, two inches or more in length, longer than the leaves, round, smooth, and a little thickest at the top.

CALYX: a PERIANTHIUM of five leaves, the leaves oblong, obtuse, hollow, herbaceous, spreading. *Claws* lengthened out behind, pressed to the flowering stem, and tapering to a point. *fig.* 1, 2.

COROLLA: five PETALS, shorter than the calyx, very minute, of a yellowish colour, clawed, the limb spreading, somewhat tubular at its base. *fig.* 3. magn. 5.

STAMINA: FILAMENTS five or more, almost the length of the calyx, fixed to the receptacle, thread-shaped, white, upright. ANTHERÆ oblong and yellowish. *fig.* 4.

PISTILLUM: GERMINA numerous, sitting on a receptacle, of an oblong, conic shape. STYLES none. STIGMATA very small and simple. *fig.* 6.

SEED-VESSEL none. *Receptacle* very long, style-shaped, covered with seeds, laying one over another. *fig.* 7.

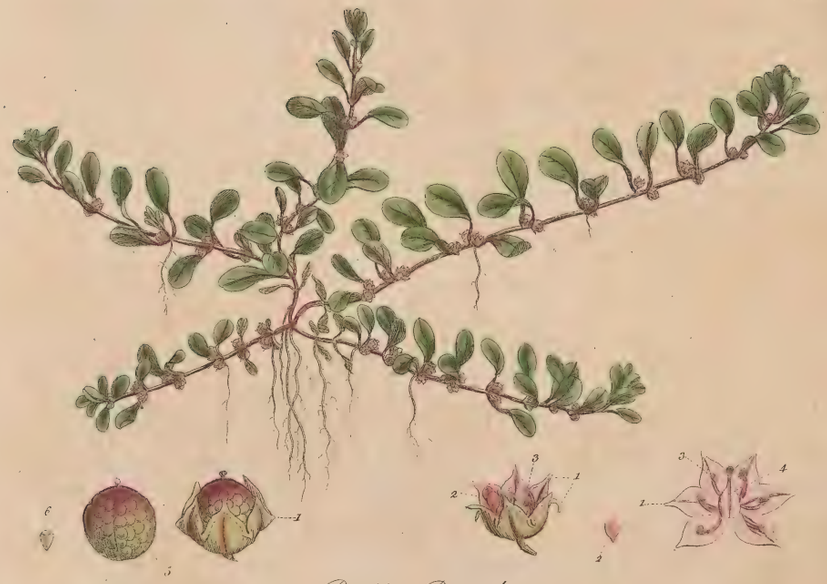
SEEDS numerous, flat, and pointed. *fig.* 8, 9.

Some of the early Botanists gave to this plant the name of *Mouse-tail*, more from the general appearance of the plant than any particular attention to generic character. TOURNEFORT afterwards arranged it with the *Ranunculi*, DILLENIUS, not satisfied with such arrangement, made a distinct genus of it; which has been adopted by LINNÆUS.

The structure of the whole fructification is singular, and deserving the attention of the young Botanist; in particular, he should be careful to distinguish the Corolla from the Stamina.

This delicate little annual grows in corn and clover-fields, and by path-sides, especially where water has been apt to stagnate. It is found about *Islington*, *Paddington*, and *Pancrass*; but with more certainty in the fields about *Dulwich*, especially on the right-hand-side of *Lordship-lane*, near *Dulwich Wood*.

It flowers in *May* and *June*, and ripens it seed in *July* and *August*.



Peplis Portula.

PEPLIS PORTULA. WATER PURSLANE.

PEPLIS *Lin. Gen. Pl.* HEXANDRIA MONOGYNIA.

Perianth. campanulatum: ore 12-fido. *Petala* 6, calyci inserta. *Caps.* 2-locularis.

Raii Syn. Gen. 25. HERBÆ HEXAPETALÆ ET POLYPETALÆ VASCULIFERÆ.

PEPLIS *Portula* floribus apetalis. *Lin. Syst. Vegetab.* p. 283. *Sp. Pl.* p. 474. *Fl. Suec.* n. 311.

PEPLIS petalis senis, sæpissime apetala. *Haller. Hist.* n. 856.

ALSINE palustris minor serpyllifolia. *Bauh. pin.* 120.

ANAGALLIS Serpyllifolia aquatica. *I. B.* III. p. 372.

GLAUX aquatica folio subrotundo. *Loesel.* p. 106. *ic.* 20.

GLAUX altera subrotundo folio. *Boccone* t. 84. *Vaillant. Bot. par.* t. 15. f. 5.

GLAUCOIDES palustre portulacæ folio, purpureo flore. *Michel.* p. 21. t. 18.

PORTULA. *Dillen. Nov. Pl. Gen.* p. 133. t. 7.

ALSINE rotundifolia s. Portulaca aquatica. *Ger. em.* 614.

ALSINE aquatica minor folio oblongo s. Portulaca aquatica. *Park.* 1260. *Raii Syn.* p. 368. Water Purslane. *Hudson. Fl. Angl. ed.* p. 147. *Lightfoot Fl. Scot.* p. 187.

RADIX annua, fibrosa.
CAULIS palmaris et ultra, tetragonus, repens, ramosus, lævis, rubicundus, geniculatus.
FOLIA opposita, subrotunda, petiolata, integerrima, glabra, nervo medio rubicundo.

FLORES oppositi, axillares, sessiles, minimi.

CALYX: PERIANTHIUM monophyllum, campanulatum, persistens, maximum, ore duodecimfido, denticulis alternis minoribus, reflexis. *fig.* 1.

COROLLA: PETALA raro sex, ovata, minutissima, rosea, calycis fauci inserta. *fig.* 2.

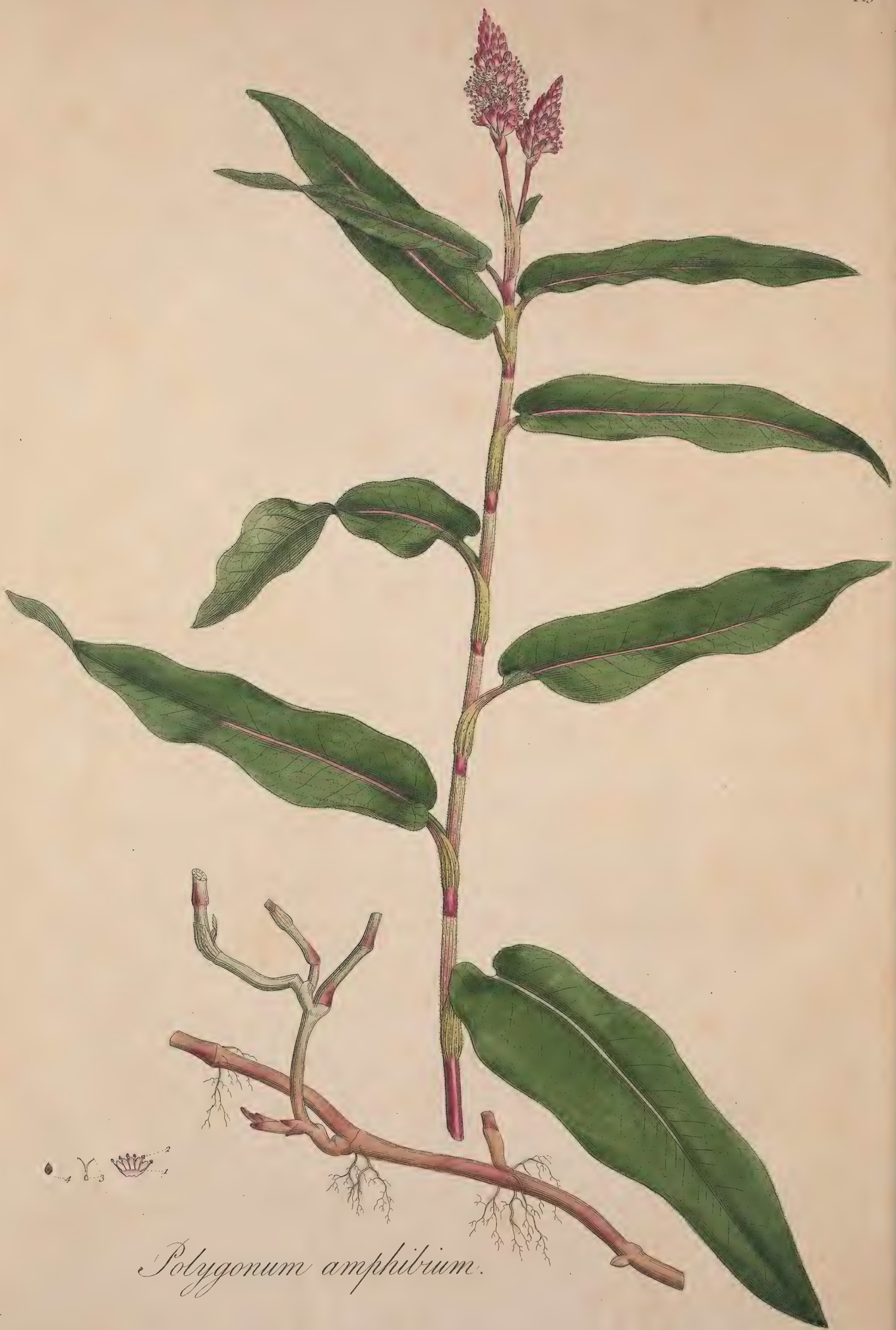
STAMINA: FILAMENTA sex, subulata, brevia. ANTHERÆ subrotundæ. *fig.* 3.
PISTILLUM: GERMEN ovatum. STYLUS brevissimus. STIGMA orbiculatum. *fig.* 4.
PERICARPIUM: CAPSULA subrotunda, bilocularis, tenuissima, pellucida. *fig.* 5.
SEMINA plurima, minima, albida, angulata. *fig.* 6.

ROOT annual and fibrous.
STALK a hand's breadth or more in length, square, creeping, branched, smooth and red.
LEAVES opposite, roundish, standing on foot-stalks, perfectly entire, smooth and shining, the mid-rib reddish.
FLOWERS opposite, in the alæ of the leaves, sessile and very small.
CALYX: a PERIANTHIUM of one leaf, bell-shaped, permanent, very large (in proportion to the petals), the mouth cut into five segments, of which the alternate ones are least and turned back. *fig.* 1.
COROLLA: PETALS seldom so many as six, ovate, very small, rose-coloured, inserted into the mouth of the calyx. *fig.* 2.
STAMINA: six FILAMENTS, tapering and short. ANTHERÆ roundish. *fig.* 3.
PISTILLUM: GERMEN ovate. STYLE very short. STIGMA round. *fig.* 4.
SEED-VESSEL: a roundish CAPSULE of two cavities, extremely thin and pellucid. *fig.* 5.
SEEDS numerous, very minute, whitish and angular.

The numerous synonyms prefixed to the description of this plant shew in what a variety of lights it has been viewed by different Botanists. Those of early times called it *Alsine*, as they did almost every plant whose parts of fructification were small, and which bore the most distant similitude to Chick-weed.

MICHELI and DILLENIUS in their respective *Nova Genera* wrought much reformation in these minute plants; and if they did not arrive at the ultimatum of description and figure, they paved the way to it.

The *Peplis Portula* is a very common plant in pools of water that are apt to be dried up in the summer, particularly on heaths. It flowers from June to August. Its petals are very minute, and frequently fall short of their proper number.



Polygonum amphibium.

POLYGONUM AMPHIBIUM. AMPHIBIOUS PERSICARIA.

POLYGONUM *Lin. Gen. Pl.* OCTANDRIA TRIGYNIA.

Cal. o. *Cor.* 5-partita, calycina. *Sem.* 1. angulatum.

Raii Syn. Gen. 5. HERBÆ FLORE IMPERFECTO SEU STAMINEO VEL APETALO POTIUS.

POLYGONUM *amphibium*, floribus pentandris ſemidigynis, ſpica ovata. *Lin. Syſt. Vegetab.* p. 312. *Sp. Pl.* 517. *Fl. Suec.* n. 341.

POLYGONUM foliis ovato lanceolatis ciliatis, ſpicis ovatis. *Haller Hiſt.* n. 1565.

POTAMOGETON ſalicis folio. *Bauh. pin.* 193.

FONTALIS major longifolia. *Parkinſ.* 1254.

POTAMOGITON anguſtifolium. *Ger. emac.* 821.

PERSICARIA ſalicis folio perennis. *Raii Syn.* Perennial Willow-leaved Arſmart, commonly called narrow-leaved Pondweed. *Hudſon Fl. Angl. ed.* 2. p. 169. *Lightfoot Fl. Scot.* p. 207. *Oeder Fl. Dan.* t. 282. *Threlkeld Syn. Stirp. Hibern.*

RADIX perennis, repens, craſſitie culmi triticei majoris, e rubro-fuſca, ex hortis ſive agris difficillime eruta.

CAULIS ſeſquipedalis et ultra, adſcendens, plerumque ſimplex, teres, fiſtuloſus, ſæpius ruber, geniculis tumidiuſculis.

FOLIA petiolata, cordato-lanceolata, hirſutula, ciliata, rigidula, ſaturate viridia, ſæpe maculata, ſubundulata, alterna, patentia.

STIPULÆ longæ, muticæ, hirſutæ, vaginantes, caulem arcte cingentes.

PEDUNCULI ſolitarii, ſeu gemini, hirſuti, rubri, ad unum latus compreſſo-ſulcati, vix terminales.

SPICÆ ruberrimæ, primo pyramidales, demum ovatæ.

CALYX: PERIANTHIUM pedicellatum, quinque-partitum, coloratum, perſiſtens, laciniis ovatis, obtuſis. *fig.* 1.

COROLLA nulla.

STAMINA: FILAMENTA quinque, aut ſex, fundo calycis inſerta, ſubulata, alba, calyce longiora; ANTHERÆ didymæ; POLLEN album, globoſum. *fig.* 2.

PISTILLUM: GERMEN ſubovatum, rubrum; STYLUS ad medium uſque diviſus; STIGMATA duo, rotunda. *fig.* 3.

SEMEN ovatum, utrinque compreſſum, acutum, nitidum, e nigro caſtaneum. *fig.* 4.

ROOT perennial, creeping, the thickneſs of a large wheaten ſtraw, of a reddiſh brown colour, with the greateſt difficulty rooted out of gardens or fields.

STALK a foot and a half or more in length, bending upward, generally ſimple, round, hollow, moſt commonly of a red colour, the joints a little ſwelled.

LEAVES ſtanding on footſtalks, lanceolate, with a heart-ſhaped baſe, ſlightly hirſute, edged with hairs, harſh to the touch, of a deep green colour, often ſpotted, ſomewhat waved, alternate, and ſpreading.

STIPULÆ long, not fringed with hairs at the extremity, hirſute, forming a ſheath, which cloſely ſurrounds the ſtalk.

FLOWER-STALKS growing ſingly, or two together, hirſute, red, on one ſide flattened, and ſlightly grooved, not properly terminal.

SPIKES of the flowers of a bright red colour, at firſt pyramidal, afterwards ovate.

CALYX: a PERIANTHIUM on a footſtalk, divided into five ſegments, coloured and permanent, the ſegments ovate and obtuſe. *fig.* 1.

COROLLA wanting.

STAMINA: five FILAMENTS inſerted into the bottom of the calyx, tapering, white, longer than the calyx; ANTHERÆ double; POLLEN white and globular. *fig.* 2.

PISTILLUM: GERMEN ſomewhat ovate, and of a red colour; STYLE divided as far as the middle; STIGMATA two, round. *fig.* 3.

SEED ovate, flattened on each ſide, pointed, gloſſy, of a dark cheſnut colour. *fig.* 4.

The ſpecies of *Polygonum* here figured acquires the name of *amphibium* from its growing both on land and in water; in ponds its leaves uſually float, whence the antient botaniſts, regardleſs of its fructification, improperly called it a *Pondweed*, thus CASPAR BAUHINE gives it the name of *Potamogeton ſalicis folio*; RAY very properly corrects this error, and calls it *Perſicaria Salicis folio perennis.*

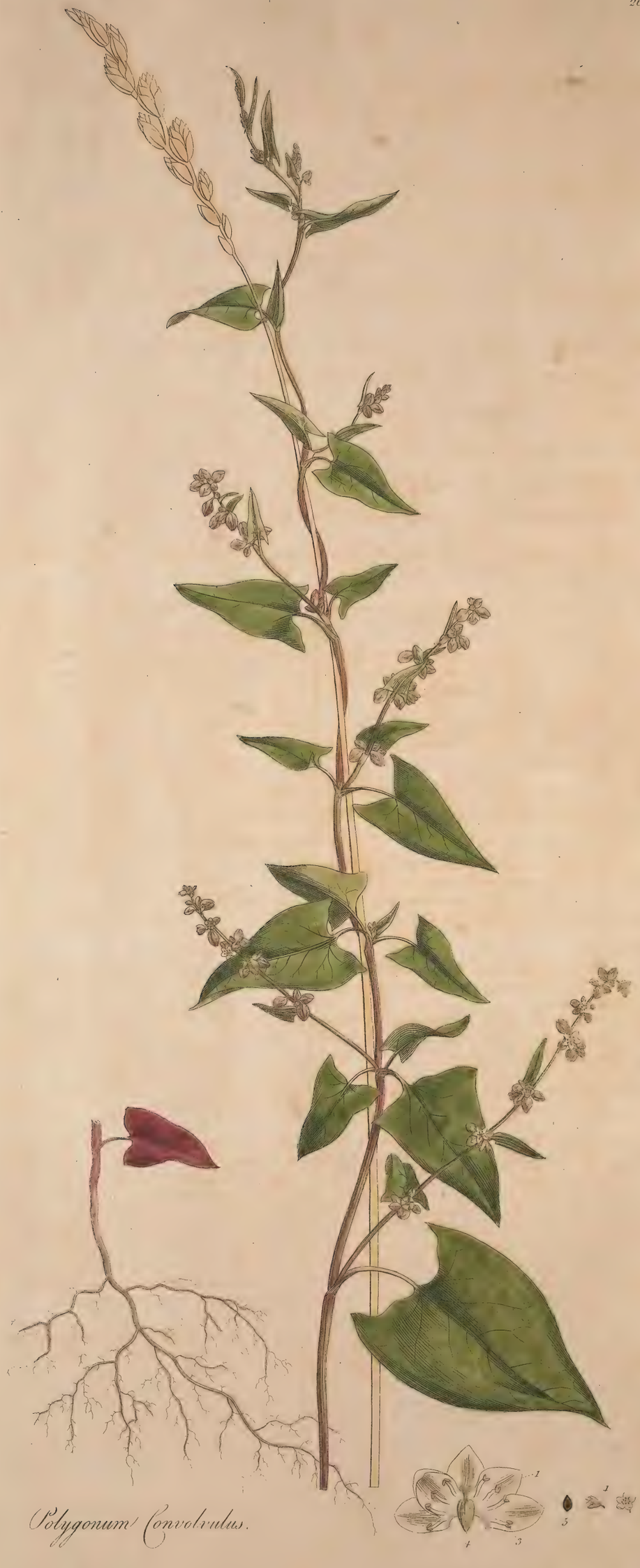
Of the *Perſicaria* diviſion of the genus *Polygonum Linnæi*, this is the only one that has a perennial root, a character which at once diſtinguiſhes it as a ſpecies, beſides this it has many peculiarities, the leaves are heart-ſhaped at the baſe, with the edges fringed with hairs, they are alſo harſher to the touch than any of the other Perſicaria's, eſpecially when the plant grows out of the water, its ſtipulæ more cloſely ſurround the ſtalk, which has generally two ſpikes of flowers at its extremity, neither of which are perfectly terminal, theſe ſpikes are more pyramidal when young, and of a brighter red colour than any of the ſpecies related to it; when it grows in the water the whole plant becomes ſmoother and is more diſpoſed to bloſſom; botaniſts have alſo obſerved that the ſtamina, which when the plant grows on land are longer, are here ſhorter than the corolla*.

As a weed few plants are more pernicious, Batterſea Fields, in which this plant abounds, bear ſufficient teſtimony to the truth of this aſſertion, as its roots not only creep, but penetrate ſo deep into the earth that they are ſeldom or never eradicated; in the drier part of the fields it ſeldom flowers, but in certain ſpots, where the water has ſettled in wet ſeaſons, it flowers abundantly in September.

From its bloſſoming thus rarely in arable land it fortunately is a more local plant than many of the ſame genus, the ſeeds of which are either ſown or introduced with manure.

To atone for its miſchievous effects on land, it contributes highly to ornament ponds, rivers, and pieces of water; thoſe who wiſh to cultivate it for this purpoſe need only plant the roots near the water's edge, the plants will quickly find their way into the water, where they muſt be ſecured from water-fowl, who are fond of its ſeeds.

* This is by no means conſtant.



Polygonum Convolvulus.

Polygonum Convolvulus. Climbing Buck-wheat.

POLYGONUM *Lin. Gen. Pl.* Octandria Trigynia.

Cal. o. *Cor.* 5-partita, calycina. *Sem.* 1. angulatum.

Raii Syn. Gen. 5. Herbæ flore imperfecto seu stamineo vel apetalo potius.

POLYGONUM *Convolvulus* foliis cordatis, caule volubili angulato, floribus obtusatis. *Lin. Syst. Vegetab.* p. 313. *Sp. Pl.* p. 522. *Fl. Suec.* n. 344.

POLYGONUM caule volubili, foliis sagittatis. *Haller. Hist.* n. 1561.

POLYGONUM *Convolvulus.* *Scopoli Fl. Carn.* n. 469.

CONVOLVULUS minor semine triangulo. *Bauh. Pin.* 295.

HELXINE semine triangulo. *IB.* II. 157.

VOLUBILIS nigra. *Ger. emac.* 863.

CONVOLVULUS minor Atriplicis folio. *Park.* 171.

FEGOPYRUM scandens sylvestre. *Raii Syn.* p. 144. Black Bind-weed. *Hudson Fl. Angl.* ed. 2. p. 171. *Lightfoot Fl. Scot.* 208.

RADIX annua, fibrosa, fusca.
CAULIS volubilis, tortus, ramosus, ramis alternis, fulcro destitutus, procumbens, pedalis, id nactus circa calamos et fruticulos scandit sæpe ad altitudinem usque humanam.
FOLIA petiolata, sagittata, glabra, integerrima, inferne solitaria, superne bina et terna, inferioribus frequenter coloratis.

STIPULÆ parvæ, vaginantes, muticæ.
FLORES racemosi, pedunculati, in fasciculos pendulos dispositi.
RACEMI longi, alterni.
CALYX: Perianthium quinquepartitum, persistens, laciniis tribus exterioribus majoribus, carinatis, viridibus, margine membranaceis, interioribus petaliformibus, coloratis. *fig.* 1.

COROLLA nulla.
STAMINA: Filamenta octo, fundo calycis inserta, brevissima, subulata. Antheræ purpureæ, didymæ. *fig.* 3.
PISTILLUM: Germen viride, triquetrum. Stylus brevissimus, staminibus paulo brevior. Stigma capitatum, trilobum. *fig.* 4.

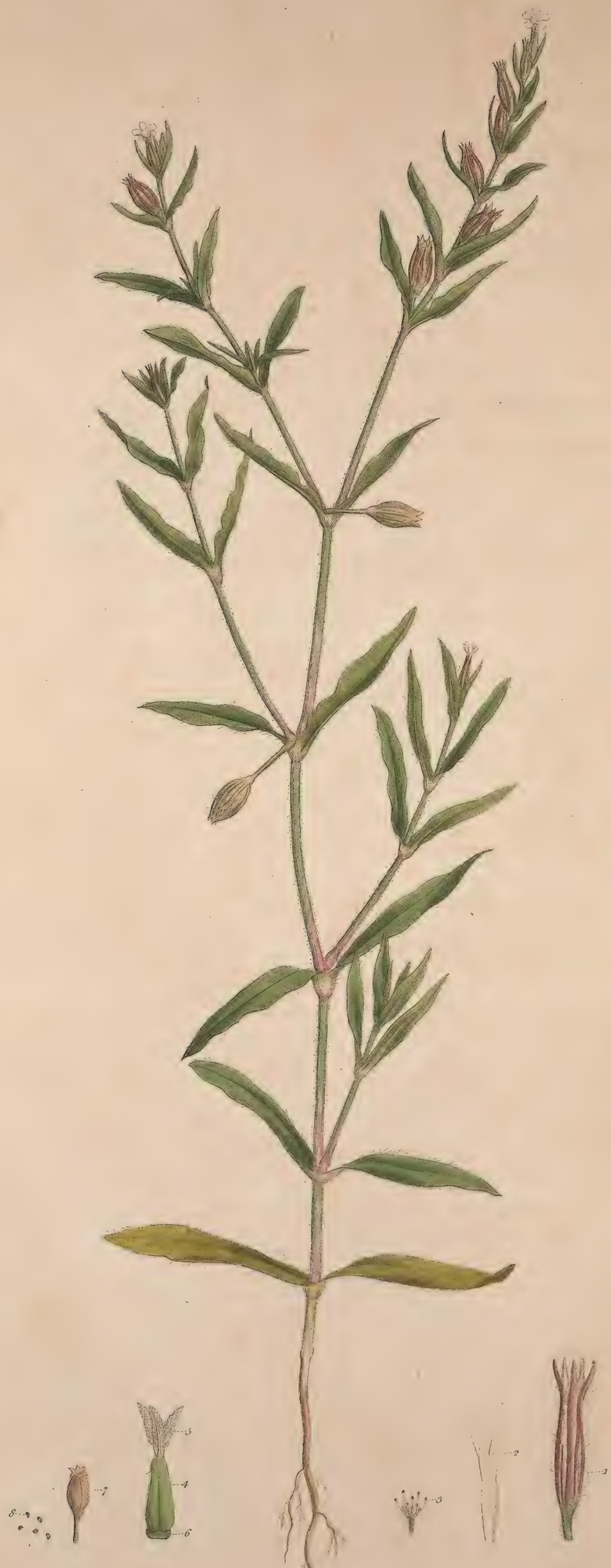
PERICARPIUM nullum, calyx semen continens.
SEMEN unicum, trigonum, nigerrimum. *fig.* 5.

ROOT annual, fibrous, of a brown colour.
STALK twining, twisted, branched, branches alternate, when destitute of support, procumbent and about a foot in length, when growing about corn or shrubs often reaching the height of six feet.
LEAVES standing on foot-stalks, arrow-shaped, smooth, perfectly entire, on the lower part of the stalk standing singly, on the upper part two and three together, the lowermost often coloured.
STIPULÆ small, forming a sheath round the stalk.
FLOWERS growing in racemi, standing on foot-stalks, and disposed in pendulous clusters.
FLOWER-BRANCHES long, and alternate.
CALYX: a Perianthium divided into five segments, and permanent, the three outermost segments larger, keeled, green and membranous on the edge, the innermost petal-like and coloured. *fig.* 1.
COROLLA none.
STAMINA: eight Filaments fixed into the bottom of the calyx, very short and tapering. Antheræ purple, formed of two lobes. *fig.* 3.
PISTILLUM: Germen green, three-cornered. Style very short, not quite so long as the stamina. Stigma forming a little head, composed of three lobes. *fig.* 4.
SEED-VESSEL none, the calyx containing the seed.
SEED a single one, three-cornered, very black. *fig.* 5.

Some of the ancient Botanists, inattentive to the fructification, arrange this plant with the *Convolvuli* or *Bind-weeds.* Ray calls it *Fegopyrum scandens sylvestre*, but retains the old *English* name of *Black Bind-weed.* Linnæus classes it with the *Polygonum*, or *Knot-grass*, in which genus he also includes the *Bistorta*, the *Persicaria*, and the *Fagopyrum*; he could not, perhaps, scientifically have made more genera of them; yet nature, in all our *English* plants at least, keeps up a strong distinction between them, and as the old established names of *Bistort*, *Persicaria* or *Arsmart*, *Knot-grass*, and *Buck-wheat*, have no tendency in them to mislead, we have thought it better, in the present instance, to continue their use, than to adopt the new-fangled names of *Buck-wheat Knot-grass*, or *Binding Snake-weed.* In its fructification this plant is very similar to the Buck-wheat; but differs in having a twining stalk, with which it frequently twists round other plants, and proves injurious to them, especially in gardens and cultivated fields, where it often grows extremely rampant; in poor land it is an humble plant.

It flowers in *July* and *August.*

Its seeds afford excellent food for small birds. One year I observed its foliage, together with that of the Passion Flower, very much eaten by the *Ear-wig*, a well known enemy to certain flowers, and no less destructive to Caterpillars, and which, like the *Cock-roach*, is principally active under the veil of night.



Silene anglica.

SILENE ANGLICA. ENGLISH CATCHFLY.

SILENE *Lin. Gen. Pl.* DECANDRIA TRIGYNIA.

Cal. ventricosus. *Petala* 5-unguiculata: coronata ad faucem. *Caps.* 3-locularis.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

SILENE *anglica* hirsuta petalis emarginatis, floribus erectis, fructibus reflexis pedunculatis alternis. *Lin. Syst. Vegetab.* p. 350. *Sp. Pl.* 594.

SILENE *anglica* hirsuta petalis subintegerrimis, floribus subspicatis pedunculatis alternis erectis, fructibus divaricato-reflexis. *Hudson Fl. Angl.* ed. 2. p. 187.

VISCAGO cerastii foliis vasculis pendulis Anglica. *Dill. Elth.* 417. *t.* 309. *f.* 398.

LYCHNIS sylvestris hirsuta annua, flore minore albo. *Vaill. Paris.* 121. *t.* 16. *f.* 12.

LYCHNIS sylvestris flore albo minimo. *Raii Syn.* p. 339. Small Corn Campion, with a very small white flower.

RADIX annua, simplex.

CAULIS plerumque pedalis, et ultra, erectus, teres, hirsutus, viscidus, articulatus, geniculis tumidis, ramosus, in horto culta ramosior, debiliorque evadit, et geniculi magis intumescunt.

RAMI alterni, cauli similes.

FOLIA opposita, connata, lanceolata, subundulata, integerrima, hirsutula, subviscida, punctis prominulis asperula, ad basin pilis longis ciliata.

FLORES albidi, minimi, axillares, subspicati, pedunculati.

PEDUNCULI variæ longitudinis unguiculares et pollicares, teretes, superne incrassati, viscidi, primo erecti, dein reflexi, demum seminibus maturis suberecti.

CALYX: PERIANTHIUM monophyllum, tubulosum, quinquedentatum, dentibus apice rubris, oblongum, sulcis decem profunde exaratum, pilosum, viscidum, persistens. *fig.* 1.

COROLLA: PETALA quinque. *Ungues* angusti, longitudine calycis. *Lamina* integra seu emarginata, lateribus sæpe involutis, squamula ad basin laminæ bifida, erecta. *fig.* 2.

STAMINA: FILAMENTA decem, subulata, alba, ad lentem hirsuta. ANTHERÆ oblongæ, bilobæ, purpureæ. POLLEN album. *fig.* 3.

PISTILLUM: GERMEN viride, nitidum, subconicum; STYLI tres, albi, erecti, villosi, germine breviores. *fig.* 4, 5. Glandula nectarifera ad basin germinis. *fig.* 6.

PERICARPIUM: CAPSULA ovata, calyce tecta, trilocularis, apice sexfariam dehiscens. *fig.* 7.

SEMINA plurima, nigricantia, reniformia, ad lentem aspera. *fig.* 8.

ROOT annual and simple.

STALK about a foot or more in height, upright, round, hirsute, viscid, jointed, the joints swelled, branched; cultivated in the garden, it becomes more branched, weaker, and the joints more swelled.

BRANCHES alternate, like the stalk.

LEAVES opposite, connate, lanceolate, somewhat waved, entire, slightly hairy, and somewhat viscid, roughish, with little prominent points, at the base edged with longer hairs.

FLOWERS whitish, very small, growing from the alæ of the leaves, forming a kind of spike, standing on foot-stalks.

FLOWER-STALKS of various lengths, from half an inch to an inch, round, thickened upwards, viscid, at first upright, afterwards turned downwards, finally, when the seeds are upright, becoming nearly upright.

CALYX: a PERIANTHIUM of one leaf, tubular, having five teeth, which are red at the tips, oblong, marked with ten deep grooves, hairy, viscid, and permanent. *fig.* 1.

COROLLA: five PETALS. *Claws* narrow, the length of the calyx. *Lamina* entire, or nicked, the sides often rolled in, the scale at the base of the lamina bifid and upright. *fig.* 2.

STAMINA: ten FILAMENTS, tapering, white, hairy when magnified. ANTHERÆ oblong, formed of two lobes and purple. POLLEN white. *fig.* 3.

PISTILLUM: GERMEN green, shining, somewhat conical. STYLES three, white, upright, villous, shorter than the germen. *fig.* 4, 5. A nectariferous Gland at the base of the germen. *fig.* 6.

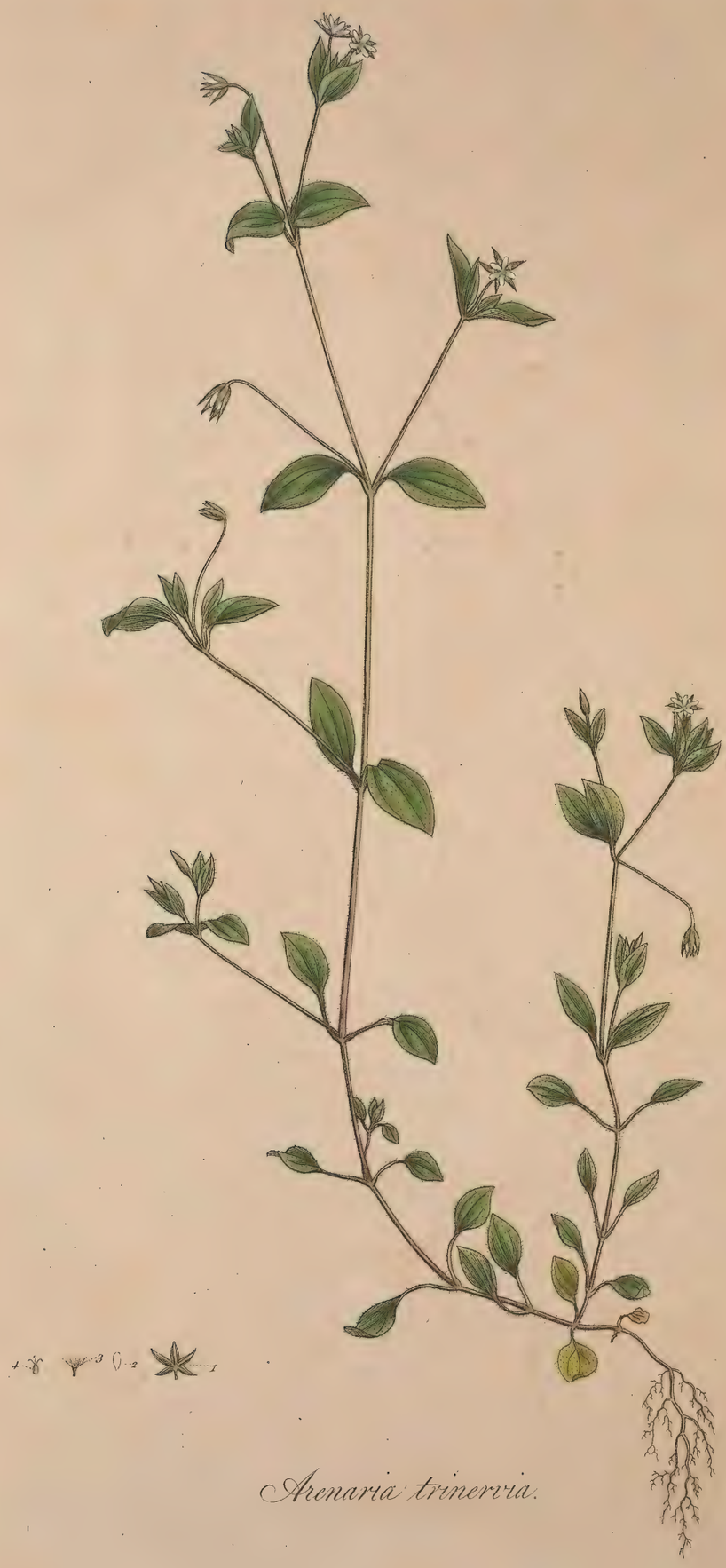
SEED-VESSEL: an ovate CAPSULE, covered by the calyx, of three cavities, opening at top, with six teeth. *fig.* 7.

SEEDS numerous, blackish, kidney-shaped, rough when viewed with a magnifier. *fig.* 8.

The present, though not a shewy plant, may be numbered among the more rare ones in the neighbourhood of London, as well as in many other parts of *Great Britain*; nor does it appear to be common throughout *Europe*: yet, in particular spots, it is found in great plenty, as in the corn-fields about *Coombe Wood*. I have also seen it growing in great abundance in the corn-fields near *Newport*, in the *Isle of Wight*.

It flowers in *July*.

DILLENIUS gives a figure of it in his *Hortus Elthamensis*, which is too diminutive: his character of *vascula pendula* is not too much to be depended on, since it frequently happens that they are not so.



Arenaria trinervia.

Arenaria trinervia. Plantain-leaved Chickweed.

ARENARIA *Lin. Gen. Pl.* Decandria Trigynia.

Cal. 5-phyllus, patens. *Petala* 5, integra. *Capſ.* 1 locularis, polyſperma.

Raii Syn. Gen. 24. Herbæ pentapetalæ vasculiferæ.

ARENARIA *trinervia* foliis ovatis acutis petiolatis nervoſis. *Lin. Syſt. Vegetab.* p. 353. *Sp. Pl.* p. 605. *Fl. Suec.* n. 397.

ALSINE foliis ovato-lanceolatis, trinerviis. *Haller. Hiſt.* n. 878.

ALSINE *Plantaginis folio. I. B.* III. 364. *Raii Syn.* p. 349. Plantain-leaved Chickweed. *Hudſon Fl. Angl. ed.* 2. p. 191. *Lightfoot Fl. Scot.* p. 230. *Oeder Fl. Dan.* t. 429.

RADIX annua, tenuiſſima, fibroſa, albida.
CAULES plures, ſpithamæi, pedales, et ultra, debiles, teretes, undique pubeſcentes, geniculati, ramoſiſſimi.
FOLIA oppoſita, ovata, acuta, pallide viridia, trinervia, integerrima, margine nerviſque minutim ciliatis, ſupremis ſeſſilibus, inferioribus petiolatis, crebrioribus, minoribus.

PETIOLI ſubalati, marginibus piloſis.
FLORES alterni, ſolitarii, e dichotomia caulis.

PEDUNCULI teretes, pubeſcentes, primo erecti, demum horizontaliter extenſi, apice ſubinflexo, et paululum incraſſato.
CALYX: Perianthium pentaphyllum, foliis ovato-acuminatis, carinatis, pubeſcentibus, corolla longioribus. *fig.* 1.
COROLLA: Petala quinque, parva, alba, obovata, integra. *fig.* 2.
STAMINA: Filamenta decem, longitudine corollæ, alba, filiformia. Antheræ minutæ, flavæ. *fig.* 3.
PISTILLUM: Germen ovatum. Styli tres, longitudine germinis. Stigmata obtuſiuſcula. *fig.* 4.
PERICARPIUM: *Capſula* ſubconica, tecta, unilocularis.
SEMINA plurima, ſubreniformia, planiuſcula, *glaberrima, nigra.*

ROOT annual, very ſlender, fibrous, and whitiſh.
STALKS ſeveral, a ſpan, a foot or more in length, weak, downy, all round jointed, and very much branched.
LEAVES oppoſite, ovate, pointed, of a pale green colour, three-rib'd, entire, the edge and ribs finely fringed with hairs, the uppermoſt ſeſſile, the lowermoſt ſtanding on foot-ſtalks, more numerous and ſmaller.
LEAF-STALKS ſomewhat winged, the edges hairy.
FLOWERS alternate, ſolitary, proceeding from the forking of the ſtalk.
FLOWER-STALKS round, downy, at firſt erect, finally horizontally extended, the tip ſomewhat bent in, and a little thickened.
CALYX: a Perianthium of five leaves, which are ovate, running out to a point, keeled, downy, longer than the corolla. *fig.* 1.
COROLLA: five Petals, ſmall, white, inverſely ovate and entire. *fig.* 2.
STAMINA: ten Filaments, the length of the corolla, white, filiform. Antheræ very ſmall, and yellow. *fig.* 3.
PISTILLUM: Germen ovate. Styles three, the length of the germen. Stigmata bluntiſh. *fig.* 4.
SEED-VESSEL: a *Capſule* of a ſhape ſomewhat conic, covered by the calyx, and having one cavity.
SEEDS numerous, ſomewhat kidney-ſhaped, flattiſh, very ſmooth, and black.

There exiſts a conſiderable ſimilarity betwixt the preſent plant and the common Chickweed; the attentive obſerver will, however, find them to differ very materially.

As a principal part of the profeſſed deſign of this work is to remove, as much as poſſible, every difficulty attending an inveſtigation of the Britiſh plants, we ſhall point out thoſe differences which have appeared to us the moſt ſtriking in comparing the two together. The common Chickweed, as its name imports, is found almoſt every where, as well in expoſed as in ſhady ſituations; this, on the contrary, is found with us only in woods, and on the ſhady banks ſurrounding them, and, compared with the other, may be conſidered rather as a ſcarce plant. The common Chickweed flowers in *March* and *April*; this produces its bloſſoms in *May* and *June*. The common Chickweed has a row of hairs running down each ſide of the ſtalk; this is uniformly covered with very ſhort hairs, ſcarcely diſcernible. The former has a procumbent ſtalk; this grows erect. In the former the leaves are not diſtinguiſhed by any veins or ribs; this, on the contrary, has three ſtrong ones, which give them ſomewhat the appearance of thoſe of Plantain, whence its name. In the former the petals are bifid; in this they are entire. The ſeeds alſo afford another very ſtriking difference: in the common Chickweed they are brown and rough; while thoſe of the *trinervia* are black, perfectly ſmooth, and ſhining.

We know of no particular uſe to which this diminutive plant is applicable.

ARENARIA SERPYLLIFOLIA. THYME-LEAVED CHICKWEED.

ARENARIA *Lin. Gen. Pl.* DECANDRIA TRIGYNIA.

Cal. 5-phyllus, patens. *Petala* 5 integra. *Capſ.* 1-locularis, polyſperma.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

ARENARIA *ſerpyllifolia* foliis ſubovatis acutis ſeſſilibus, corollis calyce brevioribus. *Lin. Syſt. Vegetab.* p. 353. *Sp. Pl.* p. 606. *Fl. Suec.* n. 398.

STELLARIA *ſerpyllifolia.* *Scopoli. Fl. Carn.* n. 544.

ALSINE foliis ovato-lanceolatis, ſubhirſutis, petalis calyce brevioribus. *Haller Hiſt.* n. 875.

ALSINE minor multicaulis. *Bauh Pin.* 250.

ALSINE minima. *Ger. emac.* 612. *Raii Syn.* 349. The leaſt Chick-weed. *Hudſon. Fl. Angl.* p. 191. *Lightfoot Fl. Scot.* p. 230.

RADIX annua, fibroſa, albida.

CAULES plerumque plures, palmares, ſuberecti, teretes, pubeſcentes, geniculati, ut plurimum ſimplices, apice dichotomi, ramis bifidis.

FOLIA oppoſita, ovata, acuta, ſeſſilia, rigidula, hirſutula, ad lentem ciliata, nervo medio ſubtus conſpicuo, inferioribus crebrioribus.

FLORES albi, pedunculati.

PEDUNCULI teretes, foliis longiores, uniflori, e dichotomia caulis, ad unum latus inclinati, ſuberecti.

CALYX: PERIANTHIUM pentaphyllum, foliolis lanceolatis, acuminatis, hirſutulis, carinatis. *fig.* 1.

COROLLA: PETALA quinque, alba, ovata, obtuſa, calyce duplo fere breviora. *fig.* 2.

STAMINA: FILAMENTA decem alba, capillaria, longitudine corollæ. ANTHERÆ ſubrotundæ, albæ, *fig.* 3.

PISTILLUM: GERMEN viride, ſubrotundum. STYLI tres, albi, filiformes reflexi. STIGMATA ſimplicia. *fig.* 4.

PERICARPIUM: *Capſula* ovata, ſubventricoſa, tecta, unilocularis, apice quinquefariam ſeu ſex fariam dehiſcens. *fig.* 5.

SEMINA plurima, minima, reniformia, ad lentem lineis inſculptis pulchre reticulata. *fig.* 6.

ROOT annual, fibrous, and whitiſh.

STALKS for the moſt part numerous, about four inches high, nearly upright, round, downy, jointed, for the moſt part ſimple, dichotomous at top, branches bifid.

LEAVES oppoſite, ovate, pointed, ſeſſile, a little rigid and ſlightly hirſute, viſibly ciliated when magnified, the mid-rib conſpicuous on the under ſide, the lowermoſt leaves growing thickeſt together.

FLOWERS white, ſtanding on foot-ſtalks.

FLOWER-STALKS round, longer than the leaves, ſupporting one flower, proceeding from the forking of the ſtalk, inclined to one ſide, and nearly upright.

CALYX: a PERIANTHIUM of five leaves, which are lanceolate, tapering to a point, ſomewhat hairy and keeled. *fig.* 1.

COROLLA: five petals, of a white colour, ovate, obtuſe, about half the length of the calyx. *fig.* 2.

STAMINA: ten FILAMENTS, white, very fine, the length of the corolla. ANTHERÆ roundiſh and white. *fig.* 3.

PISTILLUM: GERMEN green, roundiſh. STYLES three, white, filiform and reflexed. STIGMATA ſimple. *fig.* 4.

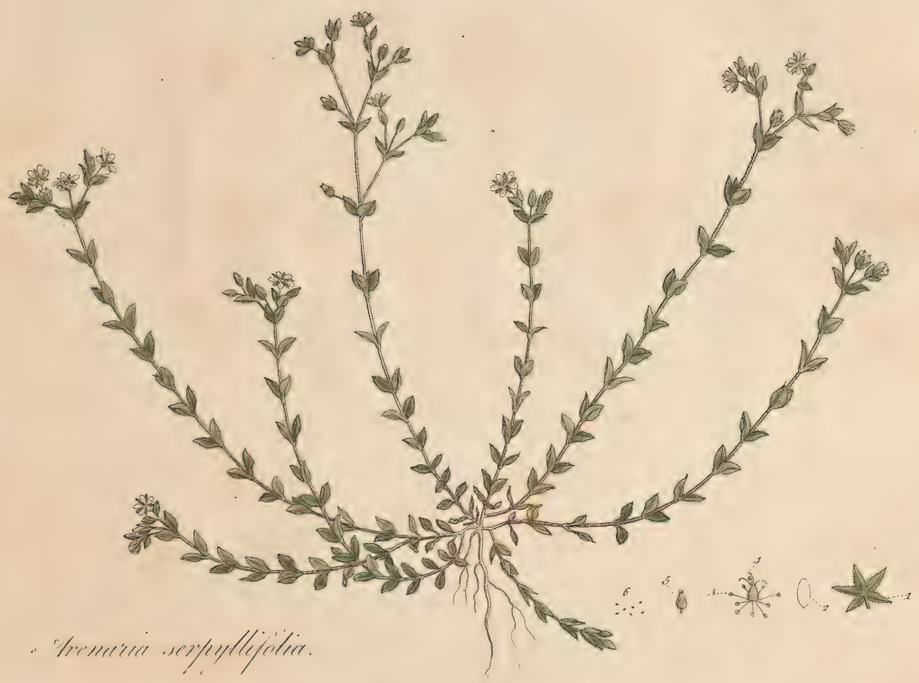
SEED-VESSEL: an ovate *Capſule*, ſomewhat bellying out at bottom, covered by the calyx, of one cavity, opening at top, with five or ſix teeth. *fig.* 5.

SEEDS numerous, very ſmall, kidney-ſhaped, beautifully reticulated with impreſſed lines, viſible when magnified. *fig.* 6.

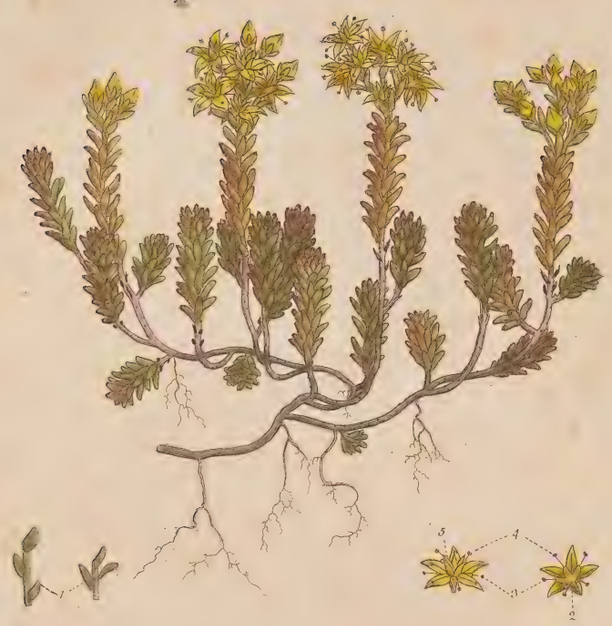
This plant, one of the leaſt of the genus *Arenaria*, is very common on walls, among rubbiſh, and in dry and barren places. It flowers in *June*.

There is a neatneſs in it ſufficient to recommend it as an ornamental plant for walls, rocks, &c. on which it will grow moſt readily.

The rigidity of its ſtalks, and thyme-like form of its leaves, readily diſtinguiſh it from all its congeners.



Arenaria serpyllifolia.



Sedum sexangulare ?

SEDUM SEXANGULARE. INSIPID STONECROP.

SEDUM *Lin. Gen. Pl.* DECANDRIA PENTAGYNIA.

Cal. 5 fidus. *Cor.* 5 petala. *Squamæ* nectariferæ 5 ad basin germinis. *Caps.* 5.

Raii Syn. Gen. 17. HERBÆ MULTISILIQUÆ SEU CORNICULATÆ.

SEDUM *sexangulare* foliis subovatis adnato sessilibus gibbis erectiusculis sexfariam imbricatis. *Lin. Syst. Vegetab.* p. 359. *Spec. Plant.* p. 620. *Fl. Suecic. n.* 404.

SEDUM foliis teretibus, ternatis; caulibus simplicibus trifidis. *Haller. hist. n.* 965.

SEDUM *sexangulare. Scopoli Fl. Carn. n.* 558.

SEMPERVIVUM minus vermiculatum insipidum. *Bauhin. pin.* 284.

SEDUM minimum luteum non acre. *Bauhin. hist.* 3. p. 695. *Hudson Fl. Angl. ed.* 1. p. 172.

RADIX perennis, fibrosa.

CAULES basi repentes, floriferi erecti, tripollicares et ultra, teretes, glabri, punctati, inferne nudi, rubentes.

FOLIA oblonga, carnosa, teretiuscula, obtusa, erecto-patentia, sexfariam imbricata, presertim ante florescentiam, rigidula, adnato-sessilia, inferne rubentia, superne caulibus saltem floriferis e flavo viridia, insipida.

CYMA plerumque trifida, floribus in singulo ramulo tribus ad quinque, sessilibus.

CALYX: PERIANTHIUM quinquepartitum, laciniis obtusis, carnosis, basi tenuioribus.

COROLLA: PETALA quinque, flava, lanceolata, acuminata, calyce duplo longiora, patentia. *fig.* 2.

STAMINA: FILAMENTA decem, subulata, longitudine corollæ; ANTHERÆ subrotundæ, flavescentes. *fig.* 3. 4.

PISTILLUM: GERMINA quinque, erecta, oblonga, desinentia in STYLOS tenuiores; STIGMATA simplicia. *fig.* 5.

ROOT perennial and fibrous.

STALKS creeping at the base, those which produce flowers about three inches or more in height, round, smooth, dotted, below naked and of a reddish colour.

LEAVES oblong, fleshy, roundish, obtuse upright, but bending a little outward, placed one over another in six rows, especially before the blossoms open, somewhat rigid, sessile, as if stuck to the stalk, those on the lower part of the stem of a reddish colour, on the upper part yellowish, at least on the flowering stalks, insipid.

CYMA generally divided into three branches, on each of which are placed from three to five flowers, without footstalks.

CALYX: a PERIANTHIUM divided into five segments, which are obtuse, fleshy, and slenderer at the base.

COROLLA: five yellow PETALS, lance-shaped, acuminated spreading, twice the length of the calyx. *fig.* 2.

STAMINA: ten FILAMENTS, tapering, the length of the corolla; ANTHERÆ roundish, and of a yellowish colour. *fig.* 3. 4.

PISTILLUM: GERMINA five, upright, oblong, terminating in slender STYLES: STIGMATA simple. *fig.* 5.

In DILLENIUS's edition of *Ray's Synopsis* this plant is omitted, and not considered even as a variety of the *Sedum acre.* Mr. HUDSON, in the first edition of his *Flora Anglica*, introduced it as a distinct species, in which he followed the opinion of LINNÆUS; in his last edition, without assigning any reason, he makes it a variety of the *Sedum acre*; HALLER, however, and SCOPOLI confirm LINNÆUS's opinion, and on such authority we surely may differ from Mr. HUDSON.

The constant want of that biting taste which gives the name of *Wall Pepper* to the *Sedum acre*, has been considered by many of our English Botanists sufficient to constitute this a distinct species; for though acrid plants may sometimes become mild, as in the *Hydropiper*, yet instances of that kind very rarely occur, but it is not in its taste alone that the *sexangulare* differs from the *acre*, in its leaves we shall find a satisfactory difference, on comparing these together as they grow on the flowering stems of both plants, we find those of the *acre* short, broad at the base, and at a considerable distance asunder, *vid. fig.* 1. while those of the *sexangulare* are nearly of the same thickness throughout, longer, and more numerous, *vid. fig.* 1. we may also add, that they are in general much redder, in the young shoots of the *sexangulare* the leaves form six rows or angles, which are sometimes straight and sometimes oblique; no traces of which are visible in the *acre*; another circumstance which adds some weight to the foregoing is, that the *acre* flowers a fortnight sooner than the *sexangulare*; the parts of the fructification afford little or no difference, indeed a great sameness in this respect runs through the whole genus.

We find this plant growing plentifully on Greenwich-park-wall, the south side, near the western corner.

It flowers about the latter end of June.

SPERGULA NODOSA. KNOTTED SPURREY.

SPERGULA *Lin. Gen. Pl.* DECANDRIA PENTAGYNIA.

Cal. 5-phyllus. *Petala* 5 integra. *Capſ.* ovata, 1-locularis, 5-valvis.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

SPERGULA *nodoſa* foliis oppoſitis ſubulatis lævibus caulibus ſimplicibus. *Lin. Syſt. Vegetab.* p. 363. *Sp. Pl.* p. 630.

ALSINE foliis ſuperioribus faſciculatis. *Haller. Hiſt.* n. 871.

STELLARIA *nodoſa.* *Scopoli Fl. Carn.* n. 545.

ALSINE nodoſa Germanica. *Bauh. Pin.* p. 251.

ALSINE paluſtris, ericæ folio, polygonoides, articulis crebioribus, flore albo pulchello. *Pluk. alm.* 23. *t.* 7. *fig.* 4.

SAXIFRAGA paluſtris Anglica. *Park.* 427.
ALSINE paluſtris foliis tenuiſſimis, ſeu Saxifraga paluſtris Anglica. *Ger. emac.* 567. 568. *Raii Syn.* p. 350. Engliſh Marſh-Saxifrage. *Hudſon Fl. Angl. ed.* 2. p. 203. *Lightfoot Fl. Scot.* p. 244.

RADIX perennis, fibroſa.

CAULES ex una radice plures, palmares et ultra, nunc procumbentes, nunc aſcendentes, poſt floreſcentiam ſæpe repentes, ſimplices ſeu ramoſi, teretes, tenues, glabri, parce piloſi, pilis ad lentem globuliferis, crebris geniculis intercepti, geniculis tumidis.

FOLIA *radicalia* plurima, cæſpitoſa, læte virentia, linearia, acuta, uncialia, ſubcarnoſa, glabra, caulina inferiora paulo breviora, connata, ſuperiora breviſſima, teretiuſcula, faſciculata, ex alis prolifera.

FLORES albi, delicatuli, in ſummis caulibus et ramulis, majores quam pro plantulæ modo.

PEDUNCULI erecti, ſemipollicares.

CALYX: PERIANTHIUM pentaphyllum, foliolis oblongis, concavis, ſubpiloſis, pilis ut in caule. *fig.* 1.

COROLLA: PETALA quinque, alba, calyce duplo longiora, ovato-rotundata, integerrima. *fig.* 2.

STAMINA: FILAMENTA decem, ſubulata, alba, corollâ breviora. ANTHERÆ concolores, incumbentes, primo bilobæ, lobis oblongis, parallelis. *fig.* 3.

PISTILLUM: GERMEN turbinatum. STYLI quinque, filiformes, villoſuli, reflexi. STIGMATA ſimplicia, *fig.* 4.

PERICARPIUM: CAPSULA parva, ovata, calyce tecta, unilocularis, quinquevalvis.

SEMINA plurima, minima, nigricantia.

ROOT perennial and fibrous.

STALKS ſeveral from one root, four inches or more in length, ſometimes procumbent, ſometimes nearly upright, after flowering often creeping, ſimple or branched, round, ſlender, ſmooth, ſparingly haired, the hairs appearing globular at top when magnified, having numerous joints which are [illegible]ed.

LEAVES next the root numerous, forming a turf, of a beautiful dark green colour, linear, pointed, about an inch in length, ſomewhat fleſhy, ſmooth, the lowermoſt ſtalk-leaves a little longer than the radical ones, joined together at bottom, the uppermoſt ſtalk-leaves very ſhort, from their alæ producing ſmall tufts of leaves, the rudiments of branches.

FLOWERS white, and delicate, ſitting on the tops of the ſtalks and branches, large in proportion to the ſize of the plant.

FLOWER-STALKS upright, about half an inch in length.

CALYX: PERIANTHIUM compoſed of five leaves, which are oblong, hollow, ſlightly hairy, the hairs like thoſe on the ſtalk. *fig.* 1.

COROLLA compoſed of five white petals, twice the length of the calyx, of a roundiſh egg-ſhape, perfectly entire. *fig.* 2.

STAMINA: ten FILAMENTS tapering, white, ſhorter than the corolla. ANTHERÆ of the ſame colour, lying acroſs the filament, at firſt compoſed of two oblong lobes parallel to each other. *fig.* 3.

PISTILLUM: GERMEN broad at bottom, narrow at top. STYLES five, filiform, ſlightly villous and reflexed. STIGMATA ſimple. *fig.* 4.

SEED-VESSEL: a ſmall ovate CAPSULE covered with the calyx, of one cavity and five valves.

SEEDS numerous, very minute, of a blackiſh colour.

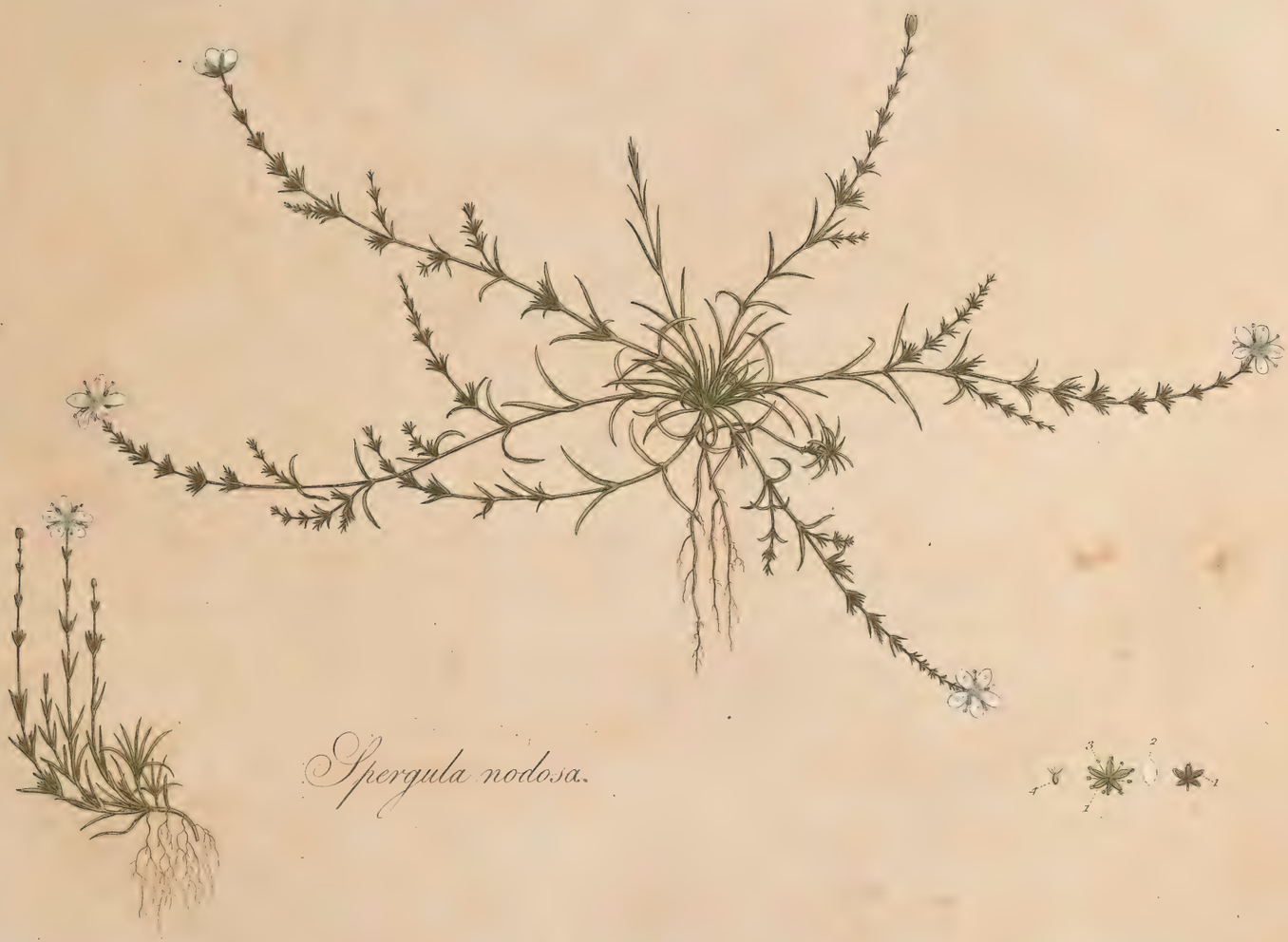
The *Spergula nodoſa* recommends itſelf to our notice by the beauty of its verdure, and the delicacy of its bloſſoms; the largeneſs and whiteneſs of which, joined to its place of growth, ſerve alſo to diſtinguiſh it from thoſe plants which may have ſome reſemblance to it in their foliage.

It grows in moiſt ſituations, frequently among herbage, and ſometimes out of Walls, Rocks, and Stones.

I have obſerved it growing out of the wall by the *Thames* ſide, in ſeveral places betwixt *Lambeth* and *Putney*.

I have alſo found it on *Hounſlow Heath* with the *Sagina procumbens* and *Centunculus minimus*. It flowers in *July* and *Auguſt*.

About *London* it is a ſcarce plant; but in the north of England it is very common on the borders of rivulets, and grows generally more upright than with us: a ſmall ſpecimen of it, in this ſtate, is repreſented on the plate.


Spergula nodosa.
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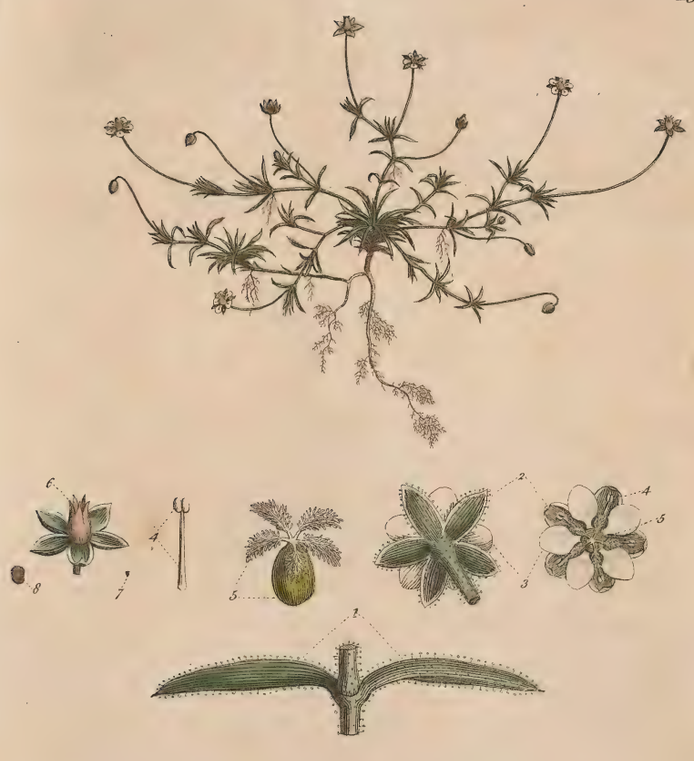


Spergula saginoides.

SPERGULA SAGINOIDES. PEARLWORT SPURREY.

SPERGULA *Lin. Gen. Pl.* DECANDRIA PENTAGYNIA.

Cal. 5 phyllus. *Petala* 5, integra. *Capſ.* ovata, 1-locularis, 5-valvis.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

SPERGULA *ſaginoides* foliis oppoſitis linearibus lævibus, pedunculis ſolitariis longiſſimis, caule repente. *Lin. Syſt. Vegetab.* p. 363. *Sp. Pl.* 631.

ALSINE tenuifolia pediculis florum longiſſimis. *Vaillant Botan. Paris*, p. 8. a. 11.

SPERGULA *laricina* foliis oppoſitis ſubulatis ciliatis faſciculatis, floribus pentandris. *Hudſon Fl. Angl. ed.* 2. p. 203.

SPERGULA *laricina*. *Lightfoot Fl. Scot.* p. 224.

SAXIFRAGA graminea puſilla foliis brevioribus craſſioribus et ſucculentioribus. *Raii Syn.* p. 345?

RADIX perennis, fibroſa.

CAULES ex una radice plures, pollicares aut bipollicares, baſi procumbentes, et ut plurimum repentes, ramoſi, teretes, pilis brevibus glanduliferis vix conſpicuis veſtiti.

FOLIA radicalia ſemipollicaria, linearia, acuta, mucrone albido terminata, ſaturate viridia, glabra, ſubcarnoſa, ſuperne nuda, inferne et ad oras piloſa, pilis glanduliferis; caulina breviora, connata, planiuſcula, ſubſecunda. *fig.* 1.

PEDUNCULI ſuberecti, ſimplices, pollicares et ultra, teretes, ex fuſco purpuraſcentes, apice nutantes.

FLORES albi, pulchelli.

CALYX: PERIANTHIUM pentaphyllum, perſiſtens, foliolis ovato-oblongis, concavis, obtuſis, viſcidulis, margine membranaceis. *fig.* 2.

COROLLA: PETALA quinque, alba, longitudine calycis, ſubrotunda, integerrima, patentia. *fig.* 3.

STAMINA: FILAMENTA quinque ad decem, ſæpius vero quinque, ſubulata, longitudine germinis; ANTHERÆ parvæ, luteæ. *fig.* 4.

PISTILLUM: GERMEN obovatum; STYLI plerumque quinque, filiformia, villoſa, reflexa; STIGMATA ſimplicia. *fig.* 5.

PERICARPIUM: CAPSULA uni-locularis, quinque-valvis, calyci inſidens.

SEMINA plurima, minima, fuſca, ad lentem punctata. *fig.* 7, 8.

ROOT perennial and fibrous.

STALKS, ſeveral ariſe from one root, an inch or two in length, procumbent, and generally creeping at bottom, branched, round, covered with ſhort glandular hairs, ſcarcely viſible.

LEAVES next the root about half an inch in length, linear, ſharp and terminated by a whitiſh point or briſtle, of a deep green colour, ſomewhat ſhining, and rather fleſhy, on the upper ſide ſmooth, on the under ſide, and at the edge, hairy, the hairs terminated by little glands, thoſe of the ſtalk ſhorter, growing together at the baſe, flattiſh, and tending ſomewhat one way. *fig.* 1.

FLOWER-STALKS ſomewhat upright, ſimple, an inch or more in length, round, of a browniſh purple colour, nodding at top.

FLOWERS white and pretty.

CALYX: a PERIANTHIUM of five leaves, permanent, the leaves oval, hollow, obtuſe, ſomewhat viſcid, the edge membranous. *fig.* 2.

COROLLA: five white PETALS, the length of the calyx, of a roundiſh ſhape, entire at the edge and ſpreading. *fig.* 3.

STAMINA: FILAMENTS from five to ten, but moſt commonly five, tapering, the length of the germen; ANTHERÆ ſmall and yellow. *fig.* 4.

PISTILLUM: GERMEN inverſely ovate; STYLES generally five, thread-ſhaped, villous and turned back; STIGMATA ſimple. *fig.* 5.

SEED-VESSEL: a CAPSULE of one cavity, and three valves ſitting on the calyx. *fig.* 6.

SEEDS numerous, very ſmall and brown, appearing dotted when magnified. *fig.* 7, 8.

We are led to conſider this plant as the *Spergula ſaginoides* of LINNÆUS, from its according exactly with a minute deſcription given of it by VAILLANT in his *Botanicon Pariſienſe* *, to which the former refers, and ſurely no name was ever more aptly applied, for did not its conſpicuous petals proclaim it, it might for ever have paſſed for the *Sagina procumbens*; theſe lead us to the plant, and examination proves it to be a *Spergula*, inconſtant indeed like many other plants in the number of its ſtamina.

In its generic character this ſpecies of *Spergula* differs in number only from the *Sagina procumbens*, it agrees particularly with it in the form of its capſules, ſize, and ſhape of its ſeeds, but two obvious ſpecific characters at once diſtinguiſh them, theſe are the ſize of the petals, and the peculiar hairineſs of the whole plant; in the *Sagina procumbens* the petals are very ſmall, being much ſhorter than the calyx, whence they are inconſpicuous; in the *Spergula* they are of the ſame length as the calyx, and, when expanded, become very conſpicuous; the *Sagina procumbens* (which muſt not be confounded with the *apetala* LINNÆI) is ſmooth, while the *Spergula* has its ſtalks, leaves, peduncles and calyx covered with ſhort hairs, having little *globules* at their extremities, and which are very diſtinguiſhable when magnified.

It is not uncommon on *Putney Heath*, and in ſimilar ſituations about *Coomb Wood*, *Surry*; Dr. GOODENOUGH diſcovered it plentifully on *Bagſhot Heath*, eſpecially on ſome banks thrown up on *Potnell Warren*, near the great Bog at *Virginia Water*; Mr. LIGHTFOOT ſhewed it me ſeveral years ago on *Uxbridge Moor*; and Mr. HUDSON mentions it as growing about *Cobham* and *Eſher* in *Surry*. It flowers from June to Auguſt.

* Cette plante a le port & les feuilles de l' *Alſine minima flore fugaci. J. R. H.* mais elle s'eleve plus haut. Les tiges et les pedicules des fleurs ſont ordinairement brunes. Sa fleur n'a qu' environ 2 lignes de diamêtre. Elle eſt a 5 petales blancs, entiers ronds, qui ne debordent point le calice & qui ſont oppoſé a ſes cantons. Le piſtile eſt un petit bouton tirant ſur l'ovale, vert pâle, ſurmonté de 5 ſtiles blancs, courts diſpoſez en etoile, & entouré de 10 Etamines blanches ainſy que leurs ſommets. Ces Etamines n'ont pas une ligne de long. Le calice eſt parſemé de petits poils tres coufts. Il eſt decoupé en etoil a 5 parties egales. Cette plante ne s'eleve que depuis 2 juſqu'a 4 pouces, elle pouſſe ordinairement pluſieurs tiges de ſa racine, leſquelles ſe couchent d'abord ſur la terre, & ſont droites dans le reſt de leur longuer. Ses feuilles ſont liſſes, vertes, roides, dures et reſemblent aſſez bien a celles du Knawel ou de l' *Alſine minima flore fugaci.* Elle commence a fleurir vers la fin de May & continue en Juin & Juillet. Elle ſe trouve dans les friches qui ſont au de la St. Leger entre la foreſt et le Village de St. Lucien le long du chemin. Elle n'a que le gouſt d'herbe. Son fruit s'ouvre ordinairement en 4 & quelquefois 5 lobes de la pointe vers la baſe & contient dans ſa cavité pluſieurs ſemences noiraſtre tres menues. *Botan. Par. p.* 8, 9.

EUPHORBIA EXIGUA. SMALL SPURGE.

EUPHORBIA *Lin. Gen. Pl.* DODECANDRIA TRIGYNIA.

Cor. 4 f. 5-petala, calyci infidens. *Cal.* 1-phyllus, ventricofus. *Capf.* 3-cocca.

Raii Syn. Gen. 22. HERBÆ VASCULIFERÆ, FLORE TETRAPETALO ANOMALÆ.

EUPHORBIA *exigua* umbella trifida : dichotoma : involucellis lanceolatis, foliis linearibus. *Lin. Syft. Vegetab.* p. 375. *Sp. Pl.* p. 654.

TITHYMALUS foliis linearibus, ftipulis lanceolatis ariftatis. *Haller Hift.* n. 1048.

TITHYMALUS five Efula exigua. *Bauh. Pin.* p. 295.

ESULA exigua Tragi. *Ger. emac.* 502.

TITHYMALUS leptophyllus. *Parkinf.* 193. *Raii Syn.* 313. Dwarf Spurge, or fmall annual Spurge. *Hudfon Fl. Angl. ed.* 2. p. 208. *Lightfoot Fl. Scot.* p. 250.

RADIX annua, fimplex, paucis fibrillis inftructa.
CAULIS erectus, ramofus, foliofiffimus, femipedalis.

RAMI plerumque inferiorem partem caulis tantummodo occupant, oppofiti, fuberecti.
FOLIA plurima, appreffa, linearia, obtufiufcula.

UMBELLA trifida, interdum quadrifida, rarius quinquefida, dichotoma.
STIPULÆ *Umbellæ* lanceolato-lineares.

——— *Umbellulæ* ovato-oblongæ, acuminatæ, oppofitæ, fæpe inæquales.

CALYX glabra, perfiftens. *fig.* 1. *auct.*
COROLLA nulla.
NECTARIA quatuor, *corniculata*, fufca. *fig.* 2, 3.

STAMINA plerumque duo vifibilia ; ANTHERÆ didymæ. *fig.* 4.
PISTILLUM : GERMEN fubrotundum, petiolatum, nutans ; STYLI tres ; STIGMA bifidum. *fig.* 5, 6.

PERICARPIUM : CAPSULA tricocca, trilocularis.

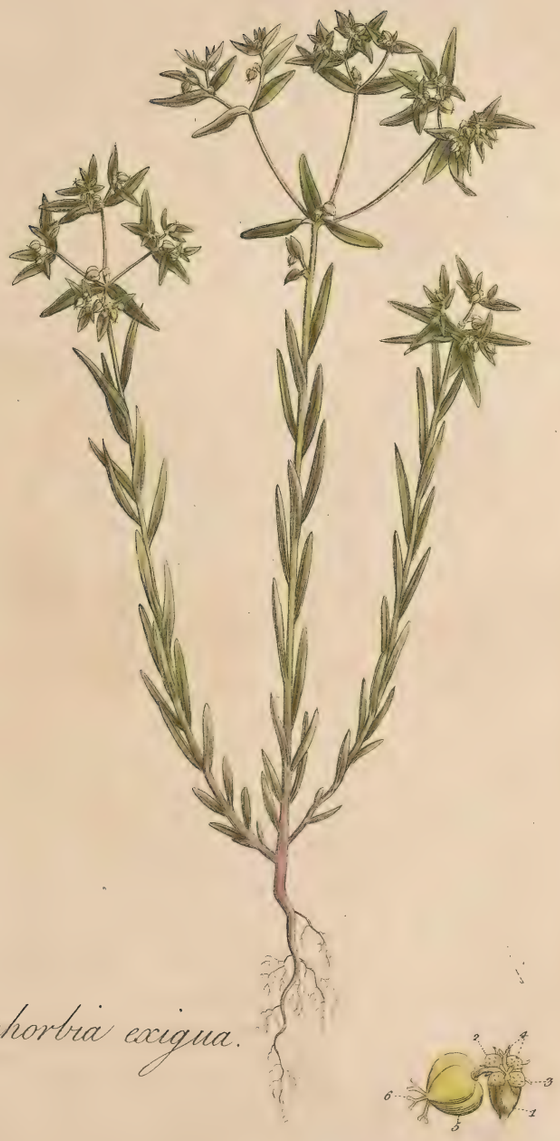
SEMEN unicum in fingulo loculamento, nigrum, rugofum.

ROOT annual, fimple, furnifhed with few fibres.
STALK upright, branched, very leafy, about fix inches high.
BRANCHES generally occupy the lower part of the ftalk only, are oppofite and nearly upright.
LEAVES numerous, preffed to the ftalk, linear, and fomewhat obtufe.
UMBELL dividing into three branches, fometimes four, rarely five, thofe forked.
STIPULÆ of the *general Umbell* of a fhape betwixt lanceolate and linear.
——— of the *partial Umbell*, of an oblong, ovate fhape, running out to a point, oppofite, and often irregular.
CALYX fmooth, and permanent. *fig.* 1. *magnified.*
COROLLA wanting.
NECTARIES four, of a brownifh colour, each furnifhed with two little horns. *fig.* 2, 3.
STAMINA generally about two vifible ; ANTHERÆ double. *fig.* 4.
PISTILLUM : GERMEN roundifh, ftanding on a footftalk, and drooping ; STYLES three ; STIGMA bifid. *fig.* 5, 6.
SEED-VESSEL, a Capfule with three prominent fides, and three cavities.
SEED : a fingle one in each cavity, black, and wrinkled.

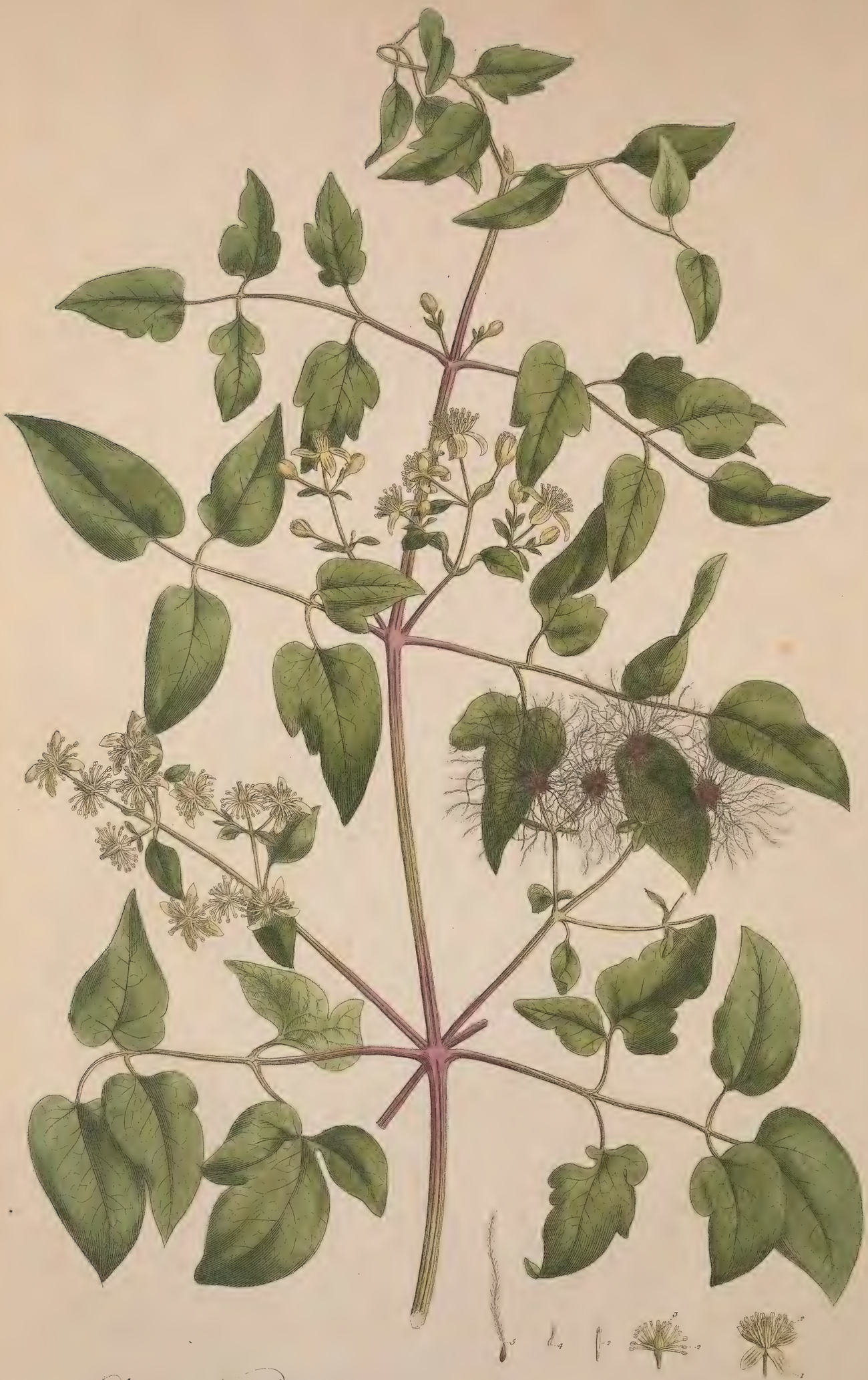
This fmall and delicate fpecies of Spurge is often found in Corn-fields about *London*, efpecially on the *Surry* fide of the *Thames*, nor is it uncommon in many other parts of *England*.

It flowers in *July* and *Auguft*.

The *Tithymalus fegetum longifolius* of RAY, confidered by Profeffor MARTYN in his *Plant. Cantab.* as the *fegetalis* of LINNÆUS, has by fome been thought to be no other than a large fpecimen of this plant ; Mr. HUDSON makes it a variety of the *platyphyllos* ; fuppofing fuch a plant as the *fegetalis* to exift, it cannot be a variety of the *exigua* becaufe it has rough Capfules, and its leaves are by far too narrow for the *platyphyllos*, vid. JACQUIN *Fl. Auftr. V.* 3. & 4. who figures them both, and confiders them as diftinct fpecies.



Euphorbia exigua.



Clematis Vitalba.

CLEMATIS VITALBA. TRAVELLER'S JOY.

CLEMATIS *Lin. Gen. Pl.* POLYANDRIA PENTAGYNIA.

Cal. 0. *Petala* 4. rarius 5. *Sem.* caudata.

Raii Syn. Gen. 15. HERBÆ SEMINE NUDO POLYSPERMÆ.

CLEMATIS *Vitalba* foliis pinnatis: foliolis cordatis ſcandentibus. *Lin. Syſt. Vegetab.* p. 426. *Spec. Pl.* 766.

CLEMATIS caule ſcandente, foliis pinnatis, ovato lanceolatis, petalis coriaceis. *Haller Hiſt.* n. 1142.

CLEMATIS *Vitalba. Scopoli Fl. Carn.* p. 669.

CLEMATIS ſylveſtris latifolia. *Baub. Pin.* 300.

CLEMATIS latifolia ſeu Atragene quibuſdam. *J. B.* II. 125.

CLEMATIS ſylveſtris latifolia ſeu Viorna. *Parkinſ.* 380.

VIORNA *Ger. emac.* 886. *Raii Syn.* 258. Great Wild Climber, or Traveller's Joy. *Hudſon Fl. Angl. ed.* 2. p. 238.

CAULES plurimi, perennantes, ope petiolorum, frutices arboreſque vicinos, ſcandentes; junioribus hirſutulis, flexilibus, purpureis, nodis incraſſatis; per ætatem craſſitie digiti ſeu pollicis, profunde ſulcatis, exalbidis, fruticoſis.

FOLIA pinnata, oppoſita, patentia; pinnis duorum parium cum impari, remotis, cordatis, ſubacuminatis, integris, ſerratis, lobatiſve, e viridi flaveſcentibus, nitidulis, ſubtus venoſis.

PETIOLI contorti, vicem cirrhi ſupplentes.

RACEMI florales ex foliorum alis, conjugati, folioſi, ramoſi, trifidi, dichotomi.

FLORES pallide ſulphurei, odorati.

CALYX nullus.

COROLLA: PETALA quatuor, cruciata, oblonga, ſubemarginata, patentia, ſubrevoluta, villoſa, ſuperne pallide ſulphurea, inferne vireſcentia. *fig.* 1.

STAMINA: FILAMENTA plurima, filiformia, ſubcompreſſa, alba, longitudine corollæ, erecta; ANTHERÆ oblongæ, albidæ. *fig.* 2.

PISTILLUM: GERMINA plurima, minima, ſubrotunda, compreſſa, deſinentia in tot STYLOS ſubulatos, ſericeos, longitudine ſtaminum; STIGMATA ſimplicia. *fig.* 3.

SEMINA plurima, nuda, ſubrotunda, compreſſa, caudata. *fig.* 4.

STALKS numerous, perennial, by means of the leaf-ſtalks climbing the adjoining ſhrubs and trees, the younger ones ſlightly hirſute, flexible, purple; the joints enlarged; by age attaining the thickneſs of the finger or thumb, deeply grooved, of a whitiſh colour and ſhrubby.

LEAVES pinnated, oppoſite, ſpreading, the pinnæ conſiſting of two pair with an odd one, heart-ſhaped, remote from each other, and running out to a point, either entire, ſerrated, or lobed; of a yellowiſh green colour, ſomewhat ſhining, and veiny on the under ſide.

LEAF-STALKS twiſted, anſwering the purpoſe of a tendril.

FLOWERING-BRANCHES proceeding from the alæ of the leaves, in pairs, leafy, branched, dividing firſt into three, and then into two ſmaller branches.

FLOWERS of a pale ſulphur colour, and ſweet-ſcented.

CALYX none.

COROLLA: four PETALS croſs-ſhaped, oblong, ſlightly nicked at the end, ſpreading, ſomewhat rolled back, villous, on the upper ſide of a pale ſulphur colour, underneath greeniſh. *fig.* 1.

STAMINA: FILAMENTS numerous, filiform, ſomewhat flattened, white, the length of the corolla, upright; ANTHERÆ oblong, whitiſh. *fig.* 2.

PISTILLUM: GERMINA numerous, very minute, roundiſh, flattened, terminating in as many tapering, ſilky STYLES, the length of the ſtamina; STIGMATA ſimple. *fig.* 3.

SEEDS numerous, naked, roundiſh, flatten'd, and terminated by a long feathered tail. *fig.* 4.

The *Clematis** *Vitalba*† is a very common plant in the more ſouthern parts of *Europe*; it delights in a ſituation that is elevated, and in a ſoil that is chalky, hence it is found more plentifully in ſome counties than in others; it is not frequent very near *London*, but abounds in the hedges around *Croydon*, and may be found, though more ſparingly, about *Charlton*, alſo on the left hand ſide of the road leading from New-Croſs Turnpike to *Lewiſham*; near the ſpot where the *Dipſacus piloſus* grows: it flowers in *Auguſt*, and ornaments the hedges with its large branches of downy ſeeds‡ till the approach of winter.

Being a Climber, handſome both in its foliage and ſeeds, and rapid in its growth, it is often made uſe of for Arbours and Bowers in Gardens and Pleaſure-Grounds; for this purpoſe young plants ſhould be choſen raiſed from ſeeds. This quality, which is an uſeful one under proper reſtrictions, often becomes a noxious one in hedges, where it is apt to ſuffocate and deſtroy thoſe trees and ſhrubs which are planted for defence.

School-boys often dry the ſtems, when about the thickneſs of the finger, and draw ſmoke through them inſtead of cane. The Farmer alſo uſes the green ſtalks to faſten his gates with, &c.

HALLER quotes ſeveral authorities to ſhew the *Clematis* poſſeſſed of conſiderable acrimony, ſufficient even to raiſe bliſters on the ſkin, for which purpoſe it has ſometimes been employed medicinally. A plant of the ſame genus, viz. *Flammula Jovis (Clematis recta Linnæi)* has been introduced into the laſt edition of the *Edinburgh* Diſpenſatory, on the authority of Dr. STORCK, who recommends the leaves to be externally applied, in ſordid, ichorous, fungous, and cancerous ulcers, and caries of the bones; and preparations of them to be taken internally in the head-ach, nocturnal pains of the bones, venereal diſeaſe, itch and melancholy.

* So called from κλημα, *ſarmentum*, a vine twig.

† Quaſi *Vitis alba*, or white Vine.

‡ Hence in ſome parts of *England* the plant is called *Old Man's beard*.

RANUNCULUS REPENS. CREEPING CROWFOOT.

RANUNCULUS *Lin. Gen. Pl.* POLYANDRIA POLYGYNIA.

Cal. 5-phyllus. *Petala* 5 intra ungues poro mellifero. *Sem.* nuda.

Raii Syn. Gen. 15. HERBÆ SEMINE NUDO POLYSPERMÆ.

RANUNCULUS *repens* calycibus patulis, pedunculis ſulcatis, ſtolonibus repentibus, foliis compoſitis. *Lin. Syſt. Vegetab.* p. 430. *Fl. Suec.* n. 505. *Sp. Pl.* 779.

RANUNCULUS caule repente radicato, foliis ſemitrilobatis, lobis petiolatis. *Haller. Hiſt.* 1173.

RANUNCULUS repens. *Scopoli Fl. Carn.* n. 689.

RANUNCULUS pratenſis repens hirſutus. *Bauh. pin.* 179.

RANUNCULUS pratenſis repens. *Parkinſ.* 329.

RANUNCULUS pratenſis etiamque hortenſis. *Ger. emac.* 951. *Raii Syn.* p. 247. Common creeping Crowfoot, or Butter-cups. *Hudſon Fl. Angl. ed.* 2. p. 240. *Lightfoot Fl. Scot.* p. 292.

RADIX plurimis fibris albentibus conſtat.
CAULES ex una radice plerumque plures, pedales et ultra, variæ magnitudinis, pro ratione loci, teretiuſculi, hirſuti, repentes.

PETIOLI longi, hirſuti, ad baſin dilatati.
FOLIA plerumque utrinque hirſuta (etiam glabra occurrunt) maculis albis ſubinde notata, trilobata, lobis petiolatis, bi et tripartitis, lobulis acute dentatis.

RAMI floriferi erecti, ſæpius biflori.

PEDUNCNLI pubeſcentes, ſtriati.
CALYX: PERIANTHIUM pentaphyllum, foliolis ovatis, concavis, patentibus, piloſis, flaveſcentibus, margine membranaceis, deciduis. *fig.* 1.
COROLLA: PETALA quinque, obcordata, patentia, flava, interne nitida. *fig.* 2.
NECTARIUM: *Squamula* parva, rotundata, ad baſin cujuſvis petali. *fig.* 3.
STAMINA: FILAMENTA plurima, ultra triginta, receptaculo inſerta, apice paululum dilatata; ANTHERÆ olongo-lineares, compreſſæ, incurvatæ, flavæ. *fig.* 4.
PISTILLUM: GERMINA plurima, in capitulum collecta, compreſſa, erecta; STYLIS brevibus, acuminatis, apice reflexis terminati; STIGMATA ſimplicia. *fig.* 5.
SEMEN compreſſum, læve, mucronatum. *fig.* 6.

ROOT conſiſts of numerous whitiſh fibres.
STALKS generally ſeveral from one root, a foot or more in length, varying in ſize according to the place of growth, roundiſh, beſet with rough hairs, and creeping.
LEAF-STALKS long, hairy and dilated at the baſe.
LEAVES generally hairy on both ſides (ſometimes they are found ſmooth and ſhining) frequently marked with white ſpots, compoſed of three lobes, or ſmaller leaves which have footſtalks, theſe are divided into two or three ſegments, and ſharply notched.
FLOWER-BRANCHES upright, generally ſupporting two flowers.
FLOWER-STALKS downy and ſtriated.
CALYX: a PERIANTHIUM of five leaves, which are ovate, concave, ſpreading, hairy, yellowiſh, membranous at the edge, and deciduous. *fig.* 1.
COROLLA: five PETALS, inverſely heart-ſhaped, ſpreading, yellow, ſhining on the inſide. *fig.* 2.
NECTARY a ſmall roundiſh *Scale* at the baſe of each petal. *fig.* 3.
STAMINA: FILAMENTS numerous, upwards of thirty, inſerted into the receptacle, dilated a little at top; ANTHERÆ oblong and ſomewhat linear, flattened, bent inward, and yellow. *fig.* 4.
PISTILLUM: GERMINA numerous, collected into a little head, flattened and upright; terminated by ſhort, pointed STYLES, which turn back at top, STIGMATA ſimple. *fig.* 5.
SEED flat, ſmooth, with a ſmall point. *fig.* 6.

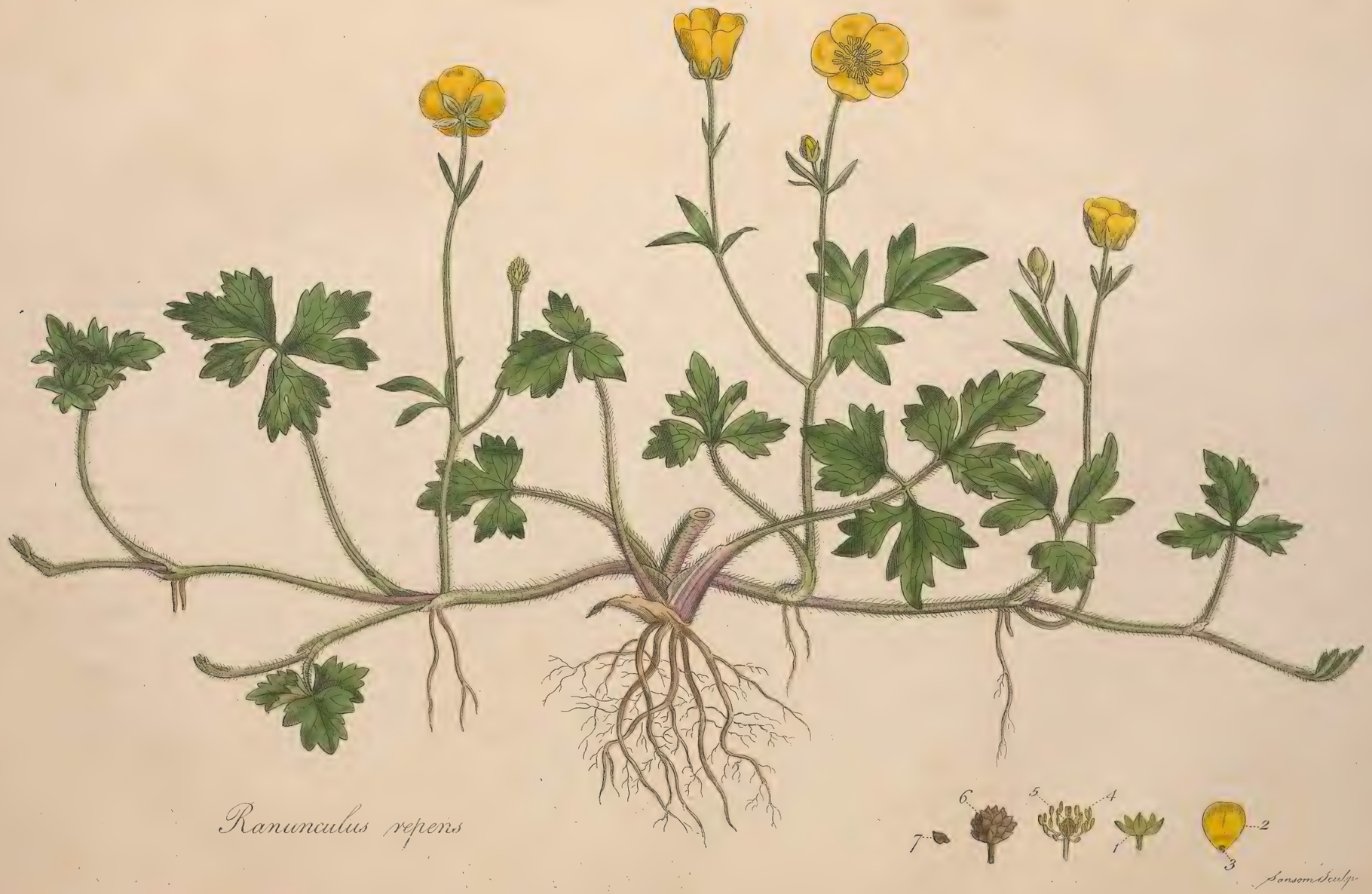
The *Ranunculus bulboſus* is a very noxious plant in dry paſtures, as the *acris* is in the moiſt, and ſome of the beſt meadows about town; but where the *repens* abounds, it is more miſchievous than either of thoſe, and it is a plant ſo general in its growth, that few meadows or paſtures are entirely free from it; it differs from the other two Crowfoots, in having ſtalks which run along the ground, and at every joint ſending forth roots, and being a plant that will thrive in almoſt any ſoil, it is very apt to become the principal plant of the paſturage, to the great detriment of the farmer, as cattle in general have the greateſt averſion to the Crowfoots.

From the aſtoniſhing diverſity of ſoil and ſituation in which this plant is found, the varieties which it aſſumes are almoſt endleſs; by the Thames ſide it will grow three or four feet high, with a ſtem nearly as large as one's thumb; in barren, gravelly fields, it is entirely procumbent, with a ſtalk not larger than a ſmall wheat ſtraw, but in all its various ſtates I have ever found it to have a creeping ſtalk, and this is a character which it does not loſe by cultivation. HALLER, miſled by his pupil WILLICH*, who ſince has retracted his error, ſuſpected it to be a variety of the *bulboſus*, but the *bulboſus* was never known to creep, this does wherever its ſtalk can touch the ground.

Its principal time of flowering is in the month of June, but it may be found in bloſſom during moſt of the remaining ſummer months.

Like the *acris* and *bulboſus* it is ſometimes found double, but more rarely.

* XXXV *Ranunculum bulboſum* non in *repentem* mutari, ut in *Obſervationibus Botanicis* a. 1747. p. 4. ſcripſeram, nuperiores obſervationes docuerunt. Utraque planta diverſitates ſuas conſtantes retinet, ab ILL. LINNÆO nominibus ſpecificis optime expreſſas. *Obſervat. de plant. quibuſd. Cotting.* 1762.


Ranunculus repens
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Sansom delp.

RANUNCULUS HEDERACEUS. IVY-LEAVED CROWFOOT.

RANUNCULUS *Lin. Gen. Pl.* POLYANDRIA POLYGYNIA.

Cal. 5-phyllus. *Petala* 5 intra ungues poro mellifero. *Sem.* nuda.

Raii Syn. Gen. 15. HERBÆ SEMINE NUDO POLYSPERMÆ.

RANUNCULUS *hederaceus* foliis ſubrotundis trilobis integerrimis, caule repente. *Lin. Syſt. Vegetab.* p. 431. *Spec. Pl.* p. 781.

RANUNCULUS aquaticus hederaceus luteus. *Bauh. Pin.* 180.

RANUNCULUS hederaceus rivulorum ſe extendens, atra macula notatus. *I. B. III.* 782.

RANUNCULI aquatilis varietas altera. *Ger. emac.* 830.

RANUNCULUS hederaceus aquaticus. *Park.* 1216.

RANUNCULUS aquatilis hederaceus albus. *Raii Syn.* p. 249. *Hudſon Fl. Angl.* p. 243. *Lightfoot Fl. Scot.* p. 294. *Oeder Fl. Dan. ic.* 219.

RADICES plurimi, ſimplices, albidi, in limum profunde demiſſi.

CAULES plurimi, teretes, ſolidi, geniculati, craſſiuſculi, repentes, late diffuſi.

FOLIA petiolata, plerumque quinquelobata, ſubcarnoſa, nitida, avenia.

PETIOLI ad baſin vagina magna, membranacea inſtructi.

PEDUNCULI axillares, petiolis breviores, uniflori, primo erecti, peractâ floreſcentiâ verſus terram recurvati.

FLORES parvi albi.

CALYX: PERIANTHIUM pentaphyllum, foliolis ovatis, margine membranaceis, flaveſcentibus. *fig.* 1.

COROLLA: petala quinque alba, oblonga, obtuſiuſcula, calyce longiora. *fig.* 2.

NECTARIUM: *Porus* nudus prope baſin cujuſvis petali. *fig.* 3.

STAMINA: FILAMENTA quinque ad decem. ANTHERÆ oblongæ, flavæ. *fig.* 4.

SEMINA plurima, obtuſa, *fig.* 5. in capitula ſubrotunda, viciæ vulgaris magnitudine fere, denſe ſtipata.

ROOTS numerous, ſimple, whitiſh, penetrating deeply into the mud.

STALKS numerous, round, ſolid, jointed, thickiſh, creeping, ſpreading wide.

LEAVES ſtanding on foot-ſtalks, generally divided into five lobes, ſomewhat fleſhy, ſhining, and veinleſs.

LEAF-STALKS at the baſe furniſhed with a large membranous ſheath.

FLOWER-STALKS proceeding from the alæ of the the leaves ſhorter than the leaf-ſtalks, ſupporting one bloſſom, at firſt upright, after the flowering is over, turned back towards the ground.

FLOWERS ſmall and white.

CALYX: a PERIANTHIUM of five leaves, which are ovate, membranous and yellowiſh at the edges. *fig.* 1.

COROLLA: five white PETALS of an oblong ſhape, ſomewhat obtuſe, and larger than the calyx. *fig.* 2.

NECTARY: a naked pore at the baſe of each petal. *fig.* 3.

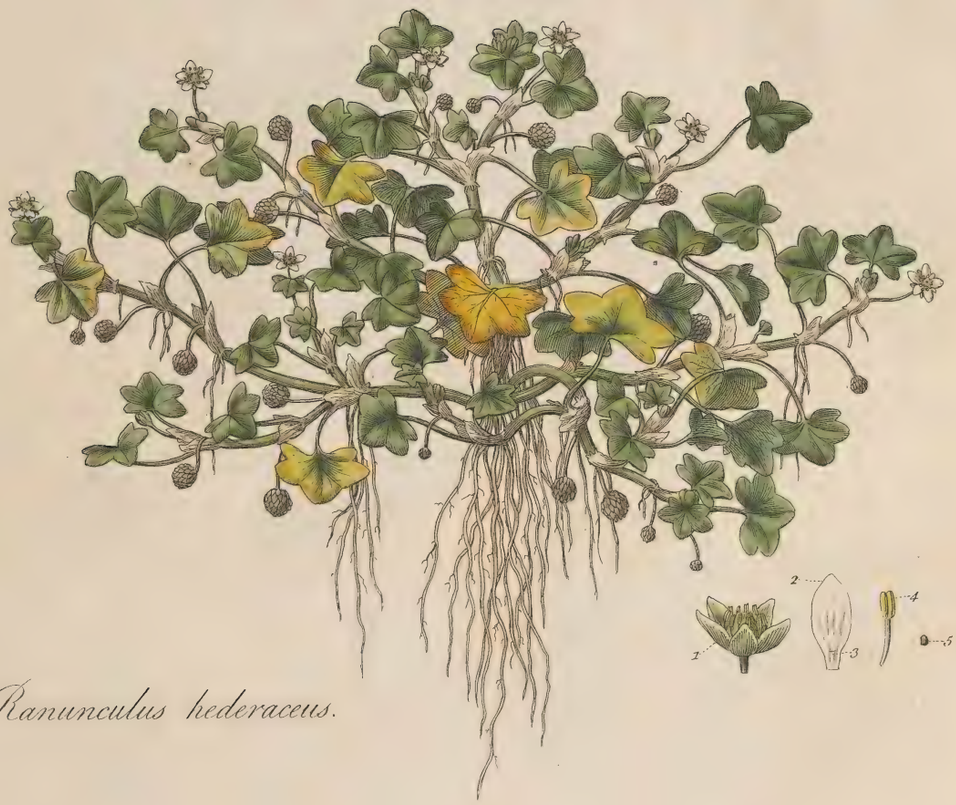
STAMINA: FILAMENTS from five to ten. ANTHERÆ oblong and yellow. *fig.* 4.

SEEDS numerous, blunt, *fig.* 5. crouded together in roundiſh heads, about the ſize of the common tare.

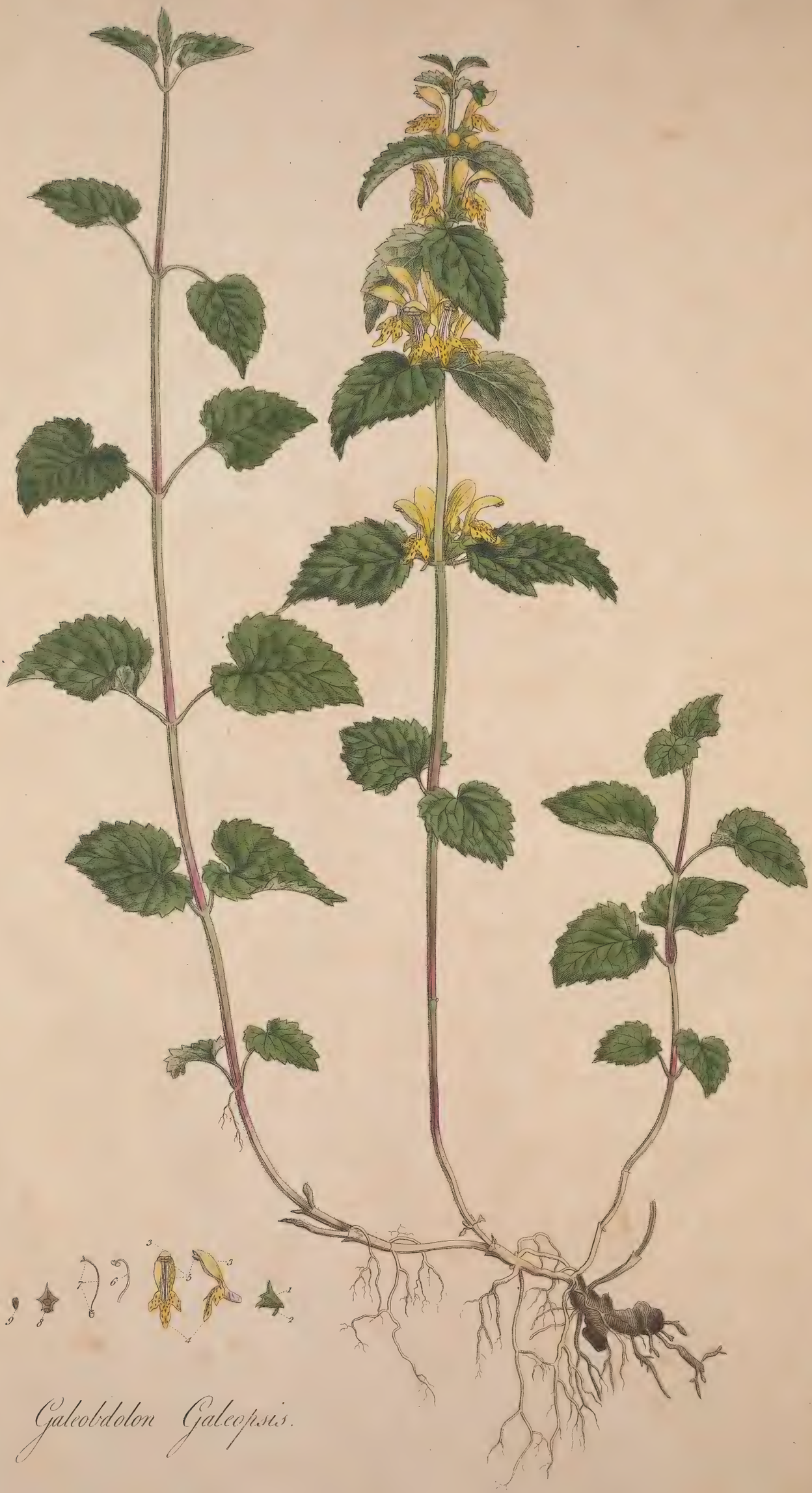
Neither LINNÆUS, HALLER, nor SCOPOLI, mention this plant in their reſpective Flora's. OEDER figures it in the *Flora Danica:* the plant he gives us appears as if it had grown in water of ſome depth; with us it is moſt commonly found ſpreading widely on the mud of ſlow ſhallow rivulets, eſpecially where the ſoil is ſandy.

It flowers during moſt of the ſummer months.

We ſometimes meet with the leaves having a dark ſpot in the middle of each, and in ſome ſituations the bloſſoms are much larger than in others.



Ranunculus hederaceus.



Galeobdolon Galeopsis.

GALEOBDOLON GALEOPSIS. YELLOW ARCHANGEL.

GALEOBDOLON *Hudſon Fl. Angl.* DIDYNAMIA GYMNOSPERMIA.

Raii Syn. Gen. 24. SUFFRUTICES ET HERBÆ VERTICILLATÆ.

GALEOBDOLON *luteum.* *Hudſon. Fl. Angl. ed.* 2. p. 258.

GALEOPSIS *Galeobdolon* verticillis ſexfloris; involucro tetraphyllo. *Lin. Syſt. Vegetab.* p. 446. *Spec. Pl.* p. 810.

CARDIACA foliis petiolatis, cordatis, verticillis foliofis. *Haller. Hiſt.* 275.

LEONURUS *Galeobdolon.* *Scopoli Fl. Carn.* n. 705.

LAMIUM folio oblongo luteum. *Bauh. Pin.* 231. Lamium luteum. *Ger. emac.* 671. *Parkins* 606. *Raii Syn.* p. 240. Yellow Archangel or Dead Nettle.

GALEOPSIS *Galeobdolon.* *Lightfoot Fl. Scot.* p. 310.

RADIX perennis, inæqualis, fibras plurimas, majuſculas, in terram demittens.

CAULES plures, tetragoni, hirſutuli, *floriferi* ſuberecti, pedales ſeu bipedales, *ſteriles* peractâ floreſcentiâ, in longum extenduntur, et poſtea humi repent.

FOLIA oppoſita, petiolata, hirſutula, inæqualiter ſerrata, venoſa, inferioribus cordatis, ſuperioribus ovatis, acutis, ſeſſilibus.

FLORES verticillati, lutei.

VERTICILLI ſex, decem aut duodecim flori.

CALYX: *Involucrum* verticillis ſubjectum, foliolis tot quot floribus, linearibus, acutis, rigidulis, ad lentem ciliatis, *fig.* 2.

CALYX: PERIANTHIUM monophyllum, ſubcampanulatum, quinquedentatum, hirſutulum, lineis decem elevatis notatum, alternis obſoletis, dentibus ſubæqualibus, acuminatis, ſuperiore erecto, diſtanti, duobus inferioribus reflexo-patulis. *fig.* 1.

COROLLA monopetala, ringens; *tubus* calyce paulo longior, intus purpureus et piloſus; *labium ſuperius* erectum, longum, fornicatum, villoſum, villiſque ciliatum; *inferius* trifidum, laciniis inæqualibus, maculatis, mediâ productiore. *fig.* 3, 4.

STAMINA: FILAMENTA quatuor, ſubulata, flava, ſub labio ſuperiore. ANTHERÆ bilobæ, purpuraſcentes. POLLEN albidum. *fig.* 5, 6.

PISTILLUM: GERMEN quadripartitum. STYLUS filiformis, purpureus. STIGMA bifidum, acutum. *fig.* 7.

SEMINA quatuor, e fuſco nigricantia, nitidula, triquetra, apice truncata in fundo calycis. *fig.* 9.

ROOT perennial, irregular, ſending down ſeveral largiſh fibres.

STALKS ſeveral, four-cornered, ſomewhat hirſute; thoſe producing flowers nearly upright, a foot or two feet high; thoſe deſtitute of bloſſoms, after the flowering is over, are extended to a great length, and afterwards creep on the ground.

LEAVES oppoſite, ſtanding on foot-ſtalks, ſlightly hirſute, unevenly ſerrated, and veiny; the lower ones heart-ſhaped, the upper ones ovate, pointed, and ſeſſile.

FLOWERS growing in whirls, of a yellow colour.

WHIRLS containing from ſix to ten or twelve flowers.

CALYX: an *Involucrum* placed under the whirls, compoſed of as many leaves as there are flowers, the leaves linear, pointed, ſomewhat rigid, when magnified fringed at the edge. *fig.* 2.

CALYX: a PERIANTHIUM of one leaf, ſomewhat bell-ſhaped, having five teeth, ſlightly hirſute, marked with ten elevated lines, alternately fainteſt, the teeth nearly equal, having long points, the uppermoſt upright, and at a diſtance from the reſt; the two lowermoſt ſpreading open and turned ſomewhat back. *fig.* 1.

COROLLA monopetalous and ringent; *tube* a little longer than the calyx, purple and hairy within; *upper lip* upright, long, arched, villous, and edged with woolly hairs; the lowermoſt divided into three unequal ſegments which are ſpotted, the middle one longeſt. *fig.* 3, 4.

STAMINA: four FILAMENTS tapering, of a yellow colour, under the upper lip. ANTHERÆ compoſed of two lobes and purpliſh. POLLEN whitiſh. *fig.* 5, 6.

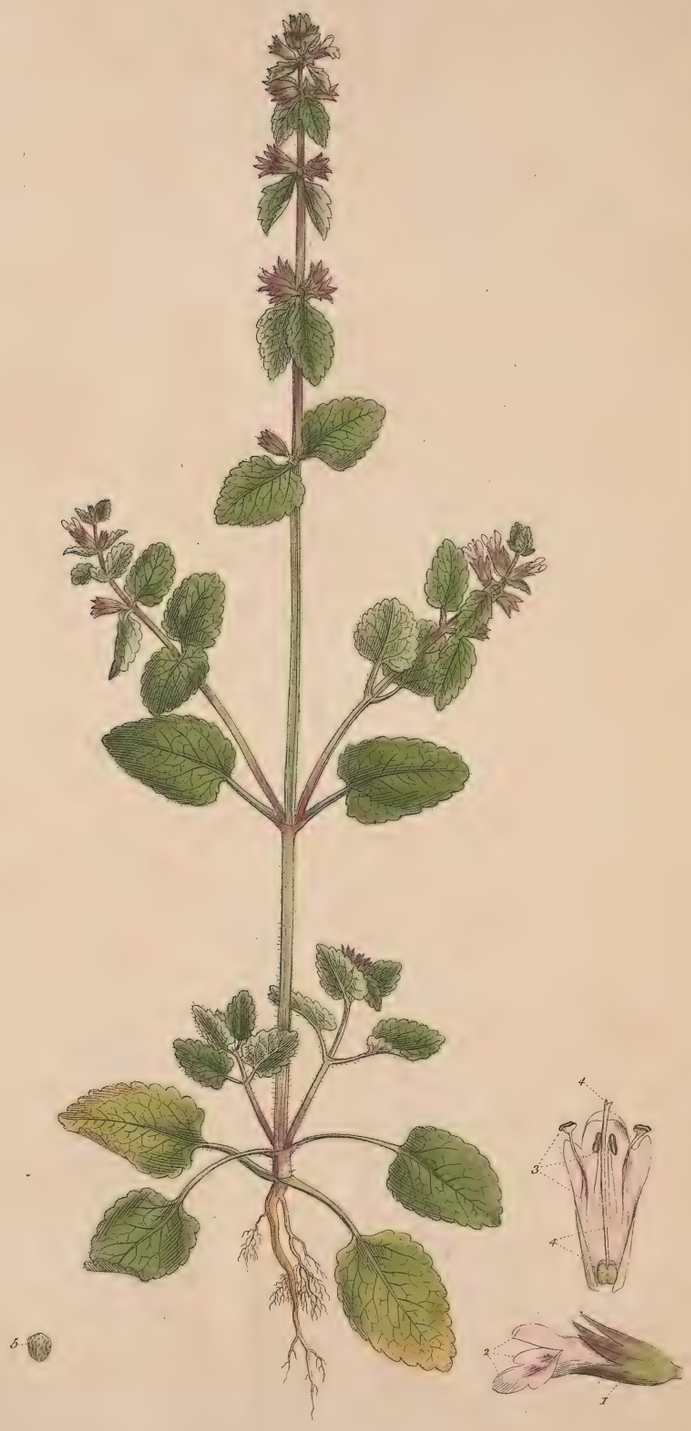
PISTILLUM: GERMEN divided into four parts. STYLE filiform and purple. STIGMA bifid and pointed. *fig.* 7.

SEEDS four, of a browniſh black colour, ſomewhat ſhining, three cornered, cut off at top, remaining in the bottom of the calyx. *fig.* 9.

LINNÆUS, though he enumerates this plant with the *Galeopſis* tribe, ſeems to think it not perfectly reconcileable with the reſt. HALLER and SCOPOLI diſagree in their opinions reſpecting it; the one conſidering it as a *Cardiaca*, the other as a *Leonurus*. Mr. HUDSON, whom we have followed in this inſtance, in the laſt edition of his *Flora Anglica*, makes a ſeparate genus of it under the name of *Galeobdolon*; we adopt the trivial name of *Galeopſis* inſtead *luteum*, with a view of making as little innovation as poſſible in names.

It is always found in woods and ſhady places. In ſome parts of *England* it is frequent, but not in others: we find it tolerably plentiful in *Charlton*, and ſome other Woods about town, flowering in *May* and *June*.

The foliage is ſometimes variegated, in which ſtate I have obſerved it make a beautiful appearance in a garden. In cultivating this, as well as all other plants, attention ſhould be paid to their natural place of growth.



Stachys arvensis.

STACHYS ARVENSIS. CORN STACHYS.

STACHYS *Lin. Gen. Pl.* DIDYNAMIA GYMNOSPERMIA.

Corollæ lab. ſuper. fornicatum, lab. inferius lateribus reflexum: intermedia majore emarginata. *Stamina* deflorata verſus latera reflexa.

Raii Syn. Gen. 14. SUFFRUTICES ET HERBÆ VERTICILLATÆ.

STACHYS *arvenſis* verticillis ſexfloris, foliis obtuſis nudiuſculis, corollis longitudine calycis, caule debili. *Lin. Syſt. Vegetab.* p. 448. *Sp. Pl.* p. 814.

GLECOMA *arvenſis*. *Lin. Fl. Suec.* n. 512. *Hudſon Fl. Angl.* ed. 1. p. 224. upright Ground-ivy.

TRIXAGO foliis ovatis, cordatis, rotunde dentatis, hirſutis. *Haller. Hiſt.* n. 231.

SIDERITIS alſines trixaginis folio. *B. Pin.* 233.

SIDERITIS hederulæ folio. *Park.* 587.

SIDERITIS humilis lato obtuſo folio. *Gerard. emac.* 699.

STACHYS arvenſis minima. *Riv. Irr. Mon. icon. Raii Syn.* p. 242. *Hudſon Fl. Angl. ed.* 2. p. 260. Corn Stachys. *Lightfoot Fl. Scot. p.* 314. petty Iron-wort or All-heal. *Oeder Fl. Dan. t.* 587.

RADIX annua, fibroſa.

CAULIS ſpithamæus ſeu pedalis, inter ſegetes, ubi nobiſcum ſæpius invenitur, erectus (procumbens ſeu debilis rarius obſervatur) ramoſus, tetragonus, hirſutus. *Rami* alterni, oppoſiti.

FOLIA oppoſita, petiolata, ovato-cordata, obtuſa, venoſa, hirſuta, obtuſe ſerrata, ſumma ſeſſilia.

FLORES parvi, carnei, verticillati, ſpicati.

VERTICILLI circiter ſexflori.

CALYX: PERIANTHIUM quinque-dentatum, perſiſtens, patens, hirſutum. *fig.* 1.

COROLLA ringens, parva, calyce paulo longior, pallide purpurea, labio ſuperiore breviore, obtuſo, integro, inferiore trifido, laciniis lateralibus brevioribus, media majori, rotundata. *fig.* 2.

STAMINA: FILAMENTA quatuor, quorum duo breviora, inferne alba, ſuperne purpurea; ANTHERÆ nigricantes; POLLEN flavum. *fig.* 3.

PISTILLUM: GERMEN quadripartitum, viride. STYLUS longitudine ſtaminum. STIGMA bifidum, acutum. *fig.* 4.

SEMINA quatuor intra calycem, vireſcentia, nigro punctata. *fig.* 5.

ROOT annual and fibrous.

STALK a ſpan or a foot in height, among the corn where it is generally found with us upright, (it is more rarely found weak or procumbent), branched, four cornered, hirſute. *Branches* alternately oppoſite.

LEAVES oppoſite, ſtanding on foot-ſtalks, ovate, with an heart-ſhaped baſe, obtuſe, veiny, hirſute, bluntly ſerrated, the uppermoſt ones ſeſſile.

FLOWERS ſmall, fleſh-coloured, growing in whirls, and forming a ſpike.

WHIRLS containing ſix flowers in each.

CALYX: PERIANTHIUM with five teeth, permanent, projecting horizontally, and hairy. *fig.* 1.

COROLLA ringent, ſmall, a little longer than the calyx, of a pale purple colour, the upper lip ſhort, blunt, and entire; the lower one divided into three ſegments, of which the two ſide ones are the ſhorteſt, the middle one large and roundiſh. *fig.* 2.

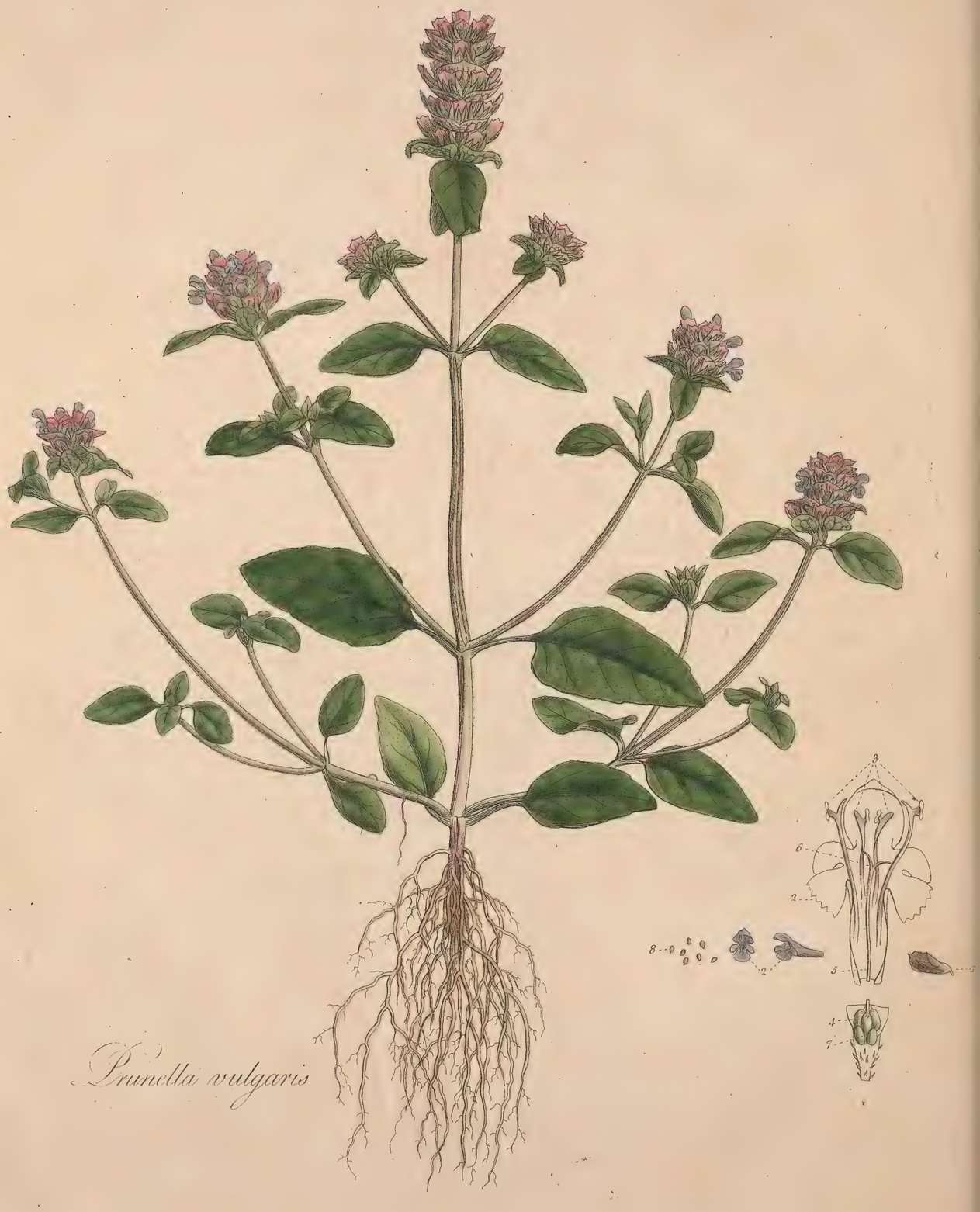
STAMINA: four FILAMENTS, two of which are ſhorter than the reſt, white below, and purple above; ANTHERÆ blackiſh; POLLEN yellow. *fig.* 3.

PISTILLUM: GERMEN divided into four parts, of a green colour. STYLE the length of the ſtamina. STIGMA bifid and pointed. *fig.* 4.

SEEDS four within the calyx, of a greeniſh colour, dotted with black. *fig.* 5.

Botaniſts, both ancient and modern, ſeem to have been at a loſs with what genus of plants they ſhould claſs this ſmall inhabitant of our Corn-fields. At various times, and by various authors, it has been called a *Sideritis*, a *Lamium*, a *Marrubiaſtrum*, a *Glechoma*, a *Stachys*, and a *Trixago*. It appears neither to poſſeſs the ſtriking characters of any other genus, nor to afford ſufficient diſtinction to form a genus by itſelf. As a ſpecies, however, there is no difficulty about it; its place of growth, the ſmallneſs of its flowers, and form of its leaves, obviouſly diſtinguiſh it from any other Engliſh plant.

It is not uncommon in the Corn-fields about the *Oak of Honour* and *Coomb* Woods, and elſewhere about London; it flowers in *June*, *July*, and *Auguſt*.



Prunella vulgaris

PRUNELLA VULGARIS. SELF-HEAL.

PRUNELLA *Lin. Gen. Pl.* DIDYNAMIA GYMNOSPERMIA.

Filamenta bifurca: altero apice antherifero. *Stigma* bifidum.

Raii Syn. Gen. 14. SUFFRUTICES ET HERBÆ VERTICILLATÆ.

PRUNELLA *vulgaris* foliis omnibus ovato-oblongis ferratis petiolatis. *Lin. Syst. Vegetab.* p. 458. *Sp. Pl.* 837. *Fl. Suec.* 540.

BRUNELLA foliis ovatis oblongis calycibus superne truncatis. *Haller. Hist.* n. 277.

BRUNELLA *vulgaris*. *Scopoli Fl. Carn.* 715.

PRUNELLA major folio non dissecto. *Bauh. pin.* 260.

PRUNELLA *Gerard. emac.* 631.

PRUNELLA vulgaris. *Parkins.* 1680. *Raii Syn.* p. 238. Common Self-heal. *Hudson. Fl. Angl. ed.* 2. p. 264. *Lightfoot Flor. Scot.* p. 321.

RADIX annua, fibrosissima.

CAULIS dodrantalis, pedalis et ultra, erectus, ad basin usque ramosus, geniculatus, geniculis inferioribus radicantibus, subquadratus, utrinque canaliculatus, hirsutus, purpurascens.

RAMI cauli similes, adscendentes, alterne oppositi, inferioribus longioribus.

FOLIA opposita, petiolata, ovata, plana, patentia, punctis prominulis scabriuscula, obsolete dentata potius quam serrata.

PETIOLI superne canaliculati, marginibus hirsutis.

SPICÆ terminales, sessiles, subcylindricæ, pollicares, truncatæ, e floribus verticillatis breviter pedicellatis et bractæis constantes.

BRACTEÆ cordatæ, latæ, acuminatæ, subdiaphanæ, venosæ, ciliatæ, subtus hirsutæ, supra glabræ.

VERTICILLI sexflori.

CALYX: PERIANTHIUM tubulatum, bractæis paulo longius, biangulatum, supra glabrum, trinerveum, subtus striatum, angulis ciliatis, bilabiatum; labio superiore depresso-plano, truncato, crenato, minutim tridentato, lateribus planis, inferiore angustiore, bifido, laciniis acuminatis. *fig.* 1.

COROLLA violacea, caduca, monopetala, ringens, pars tubulosa calyce paulo longior, labium superius concavum, integrum, superne villosum, inferius trifidum, laciniis lateralibus integris, deflexis, intermedia erecta, rotundata, denticulata. *fig.* 2.

STAMINA: FILAMENTA quatuor, subulata, violacea, bifurca, quorum duo breviora; ANTHERÆ bilobæ, lobis divergentibus, furcâ interiore insidentes. *fig.* 3.

PISTILLUM: GERMEN quadripartitum, glandulâ crenatâ cinctum; STYLUS filiformis, longitudine staminum; STIGMA bifidum, acutum. *fig.* 4, 5, 6, 7.

SEMINA quatuor, ovata, parva, obtuse angulata, glabra, fusca, mucrone albo terminata. *fig.* 8.

ROOT annual, and exceedingly fibrous.

STALK from half a foot, to a foot or more in height, upright, branched quite down to the bottom, jointed, the lowermost joints sending down roots, somewhat square, with a deep groove on each side, rough and purplish.

BRANCHES like the stalk, bending upward, alternately opposite, the lower ones longest.

LEAVES opposite, standing on footstalks, ovate, flat, spreading, rough with little prominent points, faintly indented on the edge, rather than sawed.

LEAF-STALKS hollow above, and hairy on the edges.

SPIKES terminal, sessile, somewhat cylindrical, about an inch in length, as if cut off at top, composed of floral leaves and flowers standing on short footstalks.

FLORAL-LEAVES heartshaped, broad and pointed, somewhat transparent, veiny, edged with hairs, hirsute on the under side, smooth and shining above.

WHIRLS six flowers in each.

CALYX: a tubular PERIANTHIUM, somewhat longer than the floral-leaves, angular on each side, smooth above, with three faint ribs, striated below, the angles edged with hairs, composed of two lips, the uppermost of which is flat, and somewhat depressed, cut off at top, terminated by three small teeth, the sides flat, the lower lip narrower, bifid, the segments long and pointed. *fig.* 1.

COROLLA of a violet colour, easily falling, monopetalous and ringent, the tubular part a little longer than the calyx, the upper lip hollow, entire, and villous above, the lower lip divided into three segments, of which the side-ones are entire and bend downward, the middle one upright, round, and finely toothed. *fig.* 2.

STAMINA: four FILAMENTS, tapering, of a violet colour, forked at top, of which two are longer than the others; ANTHERÆ composed of two lobes, which diverge and sit on the inner fork. *fig.* 3.

PISTILLUM: GERMEN divided into four parts, surrounded by a notched gland; STYLE filiform, the length of the stamina; STIGMA bifid and pointed. *fig.* 4, 5, 6, 7.

SEEDS four, ovate, small, obtusely angular, smooth, brown, and terminated by a white point. *fig.* 8.

In many of the natural classes of plants, the several *genera* approximate so much, that it is difficult to find out a character which shall obviously distinguish them; such a character is however afforded in the present plant. If the filaments are examined, each of them will be found forked at the extremity, and the anthera sustained on the innermost division of the fork; besides this curious and uncommon structure, the middle segment of the lower lip is finely toothed. This is noticed by TOURNEFORT in his figures of this genus, but the former wholly omitted. It did not however escape the penetrating LINNÆUS, who considers it as the essential character of the *Prunella*; nor is the calyx in this plant undeserving of our attention, whether we consider its structure, or the singular manner in which it closes up to preserve the seeds.

The *Self-heal* has an herbaceous roughish taste, and hence stands recommended in alvine fluxes; it has been principally celebrated as a vulnerary, whence its name, and in gargarisms for apthæ, and inflammations of the fauces. *Lewis's Disp.* p. 205.

It grows very commonly in meadows and pastures, and flowers in June and July. Its blossoms, which are usually of a violet colour, are sometimes found white, and sometimes red.

According to LINNÆUS's experiments, kine, goats, and sheep, eat it; but horses refuse it.

SCUTELLARIA MINOR. SMALL HOODED WILLOW HERB.

SCUTELLARIA *Lin. Gen. Pl.* DIDYNAMIA GYMNOSPERMIA.

Calyx ore integro: post florescentiam clausô, operculato.

Raii Syn. Gen. 14. SUFFRUTICES ET HERBÆ VERTICILLATÆ.

SCUTELLARIA *minor* foliis cordato-ovatis subintegerrimis, floribus axillaribus. *Lin. Syst. Vegetab.* p. 457. *Sp. Plant.* p. 835.

CASSIDA palustris minima flore purpurascente. *Tourn. Hist.* p. 410.

LYSIMACHIA galericulata minor. *Raii Hist.* 572. *Syn.* 244. The lesser-hooded Loosestrife.

GRATIOLA latifolia. *Gerard. emac.* 585.

GRATIOLA latifolia seu nostras minor *Parkins.* 221. *Hudson. Fl. Angl. ed.* 2. p. 265. *Lightfoot Fl. Scot.* p. 320.

RADIX perennis, repens, alba.

CAULIS erectus, palmaris, sesquipalmaris, et ultra, simplex, seu ramosus, in horto ramosissimus evadit, tetragonus, rigidulus, subhirsutus, basi purpurascens.

FOLIA opposita, subsecunda, brevissime petiolata, cordato-ovata, obtusa, subintegerrima, in opacis glabra, in apricis hirsuta, et subinde rubentia.

FLORES parvi, carnei, axillares, bini, pedunculati, pedunculis calyce longioribus.

CALYX: PERIANTHIUM monophyllum, brevissimum, hirsutum, ore bilabiato, integro, squamula incumbente operculi instar clausili. *fig.* 1.

COROLLA monopetala, ringens, labium superius trifidum, superne villosum, laciniis subæqualibus, intermedia concavâ emarginatâ, lateralibus remotiusculis, nec intermediæ subjectis sicut in galericulata. *fig.* 2. inferius latius, emarginatum, punctis et lineolis rubris pulchre variegatum. *fig.* 3.

STAMINA: FILAMENTA quatuor, alba, sub labio superiore recondita, quorum duo longiora. ANTHERÆ minimæ, albæ, ad lentem hirsutulæ. *fig.* 4.

PISTILLUM: GERMEN quadripartitum. STYLUS albus, longitudine staminum, superne paululum incrassatus. STIGMA simplex, incurvatum, acuminatum. *fig.* 5.

PERICARPIUM nullum, calyx continens

SEMINA quatuor, subrotunda, ad lentem aspera. *fig.* 6.

NECTARIUM glandula aurantiaca ad basin germinis. *fig.* 7.

ROOT perennial, creeping, and white.

STALK upright, a hand's breadth, six inches, or more in height, simple or branched, in the garden becoming very much so, four-cornered, somewhat rigid and hirsute, purplish at the base.

LEAVES opposite, with a tendency to grow one way, standing on very short foot-stalks, heart-shaped, ovate, obtuse, almost entire on the edges, in shady situations smooth, in exposed ones hirsute, and sometimes reddish.

FLOWERS small, of a pale red colour, growing by pairs in the alæ of the leaves, standing on foot-stalks longer than the calyx.

CALYX: a PERIANTHIUM of one leaf, very short, hirsute, the mouth composed of two lips and entire, with a small scale like a lid resting on it. *fig.* 1.

COROLLA monopetalous, and ringent, the upper lip trifid, and villous above, the segments nearly equal, the intermediate one hollow and nicked, the side ones somewhat distant from each other, not placed under the intermediate one as in the galericulata. *fig.* 2. the lower lip broader, with a single notch, and prettily variegated with red lines and dots. *fig.* 3.

STAMINA: four FILAMENTS, of a white colour, hid under the upper lip, two of which are longer than the other two. ANTHERÆ very minute, white, and slightly hirsute, when magnified. *fig.* 4.

PISTILLUM: GERMEN divided into four parts. STYLE white, the length of the stamina, thickened a little above. STIGMA simple, a little hooked, and pointed. *fig.* 5.

SEED-VESSEL none, the calyx containing four seeds.

SEEDS of a roundish shape, appearing rough when magnified. *fig.* 6.

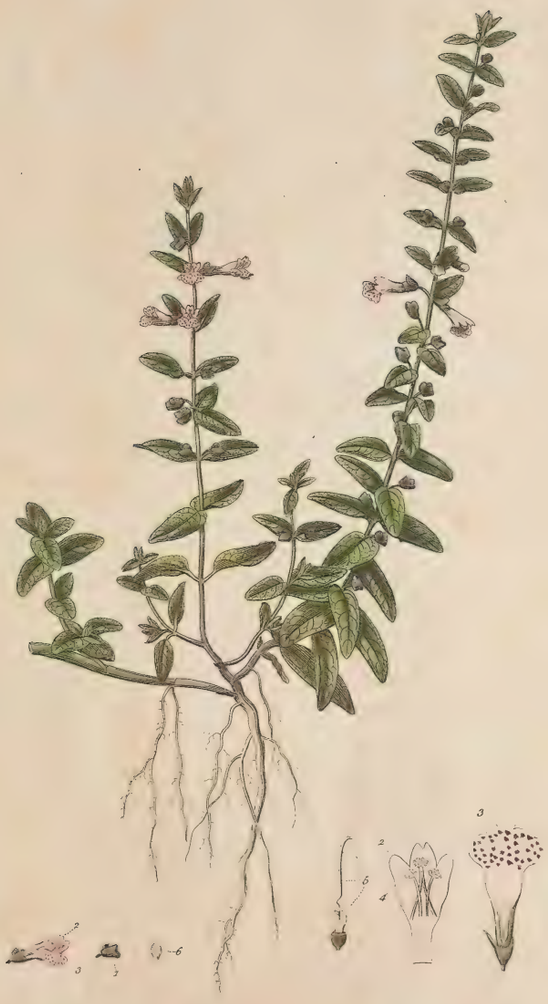
NECTARY: an orange-coloured gland at the base of the germen. *fig.* 7.

GERARD, our countryman, appears to have been the discoverer of this species, to which he gives the names of *Gratiola latifolia.* PARKINSON, who considered it as a plant peculiar to this country, adds to them the epithet of *nostras.* TOURNEFORT, afterwards enumerating the plants growing about *Paris,* mentions it as growing with them in several places; nevertheless it is not common throughout Europe. Indeed LINNÆUS, in his *Species Plantarum,* expressly says, *habitat in Anglia.* GERARD's referring a plant to another genus, so obviously similar in its parts of fructification to what was then called *Lysimachia galericulata* shews, that little attention was paid to those parts at that time; nor was he very fortunate in applying to the leaves of so small a plant the name of *latifolia.*

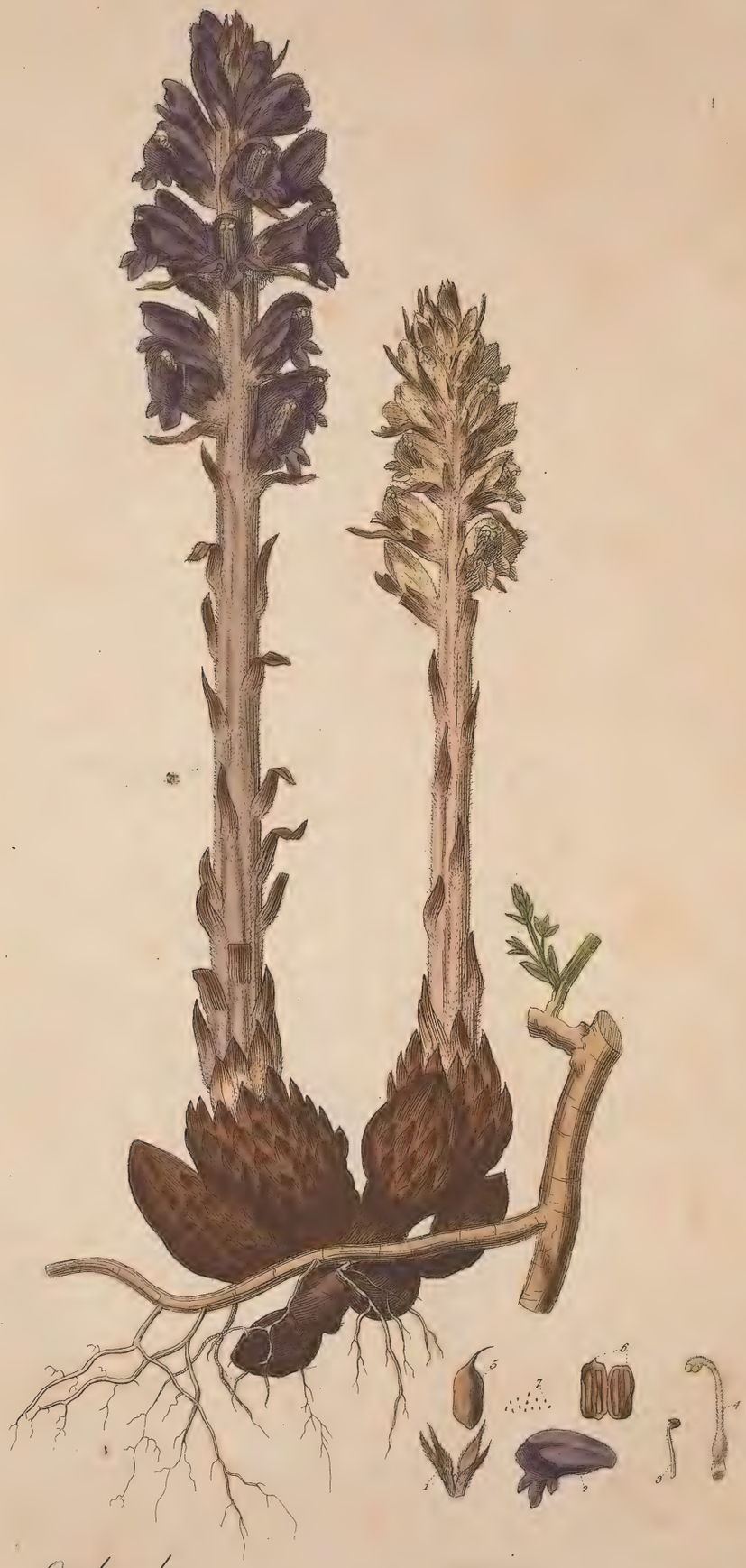
Had LINNÆUS frequently seen and cultivated this plant, as we have had opportunity of doing, he would have expressed no doubt of its being too nearly related to the *galericulata* and *hastifolia.* Vid. *Spec. Plant.*

In the time of old GERARD, this species was found on *Hampstead Heath,* and on some of the boggy parts of that Heath it still exists; but is more plentifully met with in similar situations, on *Putney* and *Shirley* Commons.

It flowers in July, August, and September. On *Shirley* Common we have seen it much larger than the specimen figured; and this summer found a single plant which had blue flowers.



Scutellaria minor.



Orobanche *major.*

OROBANCHE MAJOR. COMMON BROOM-RAPE.

OROBANCHE *Lin. Gen. Pl.* DIDYNAMIA ANGIOSPERMIA.

Cal. bifidus. *Cor.* ringens. *Caps.* unilocularis, bivalvis, polyſperma. *Glandula* ſub baſi germinis.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

OROBANCHE *major* caule ſimpliciſſimo pubeſcente, ſtaminibus ſubexſertis. *Lin. Syſt. Vegetab.* p. 497. *Spec. Pl.* p. 882. *Fl. Suec.* n. 561.

OROBANCHE caule ſimplici, ſtipulâ unica, calyce quadrifido. *Haller. Hiſt.* 295.

OROBANCHE *major*. *Scopoli Fl. Carn.* n. 782.

OROBANCHE major Garyophyllum olens. *Bauh. pin.* 87.

RAPUM Geniſtæ *Ger. emac.* 1311. *Parkinſ.* 229. *Raii Syn.* p. *288. Broom-rape. *Hudſon. Fl. Angl. ed.* 2. p. 266. *Lightfoot Flor. Scot.* p. 332.

RADIX Spartii ſcoparii radicibus plerumque adnaſcitur.

CAULIS pedalis ad ſeſquipedalem, erectus, ſimplex, fiſtuloſus, teretiuſculus, ſulcato-ſtriatus, villoſus, purpuraſcens, ſquamis ſparſis, marcidis, tectus, ad baſin bulboſus, bulbo ſquamoſo.

FLORES ſpicati, ſeſſiles, purpuraſcentes plerumque, aliquando etiam flaveſcentes, ſpica primo acuta, dein ſubcylindrica.

CALYX: PERIANTHIUM monophyllum, erectum, quadrifidum, poſtice ad baſin uſque diviſum, et antice magis profunde quam ad latera, villoſum, albeſcens, laciniis ſeu dentibus ſubæqualibus, ferrugineis. *fig.* 1.

COROLLA: monopetala, ringens, plerumque purpuraſcens, ad ferrugineum colorem accedens, perſiſtens; *tubus* inclinatus, amplus, ventricoſus; *faux* hians; *labium ſuperius* concavum, obſolete trifidum, ſubcarinatum, externe viſcidum; *labium inferius* trifidum, lacinulâ mediâ productiore, concava. *fig.* 2.

STAMINA: FILAMENTA quatuor, ſubulata, alba, ſub labio ſuperiore recondita, quorum duo longiora; ANTHERÆ leviter cohærentes, ſtramineæ, didymæ, ovatæ, mucronibus terminatæ. *fig.* 3.

PISTILLUM: GERMEN oblongum, baſi antice tribus glandulis, protuberantibus, flavis, melleum liquorem copioſe fundentibus, notatum; STYLUS pubeſcens, ſtaminibus paulo longior, purpuraſcens, apice inflexus; STIGMA ſemibifidum, obtuſum, craſſiuſculum, flavum. *fig.* 4.

PERICARPIUM: CAPSULA ovato-oblonga, acuminata, unilocularis, bivalvis. *fig.* 5.

SEMINA numeroſa, minima; *receptacula* quatuor, linearia, lateralia, adnata. *fig.* 6, 7.

ROOT generally grows to the roots of the common Broom.

STALK from a foot to a foot and a half in height, upright, ſimple, hollow, roundiſh, ſomewhat channeled, villous, of a purpliſh colour, covered with withered ſquamæ, bulbous at bottom, the bulb ſquamous.

FLOWERS growing in ſpikes, ſeſſile, for the moſt part purpliſh, ſometimes alſo yellowiſh, the ſpike is at firſt pointed, and then becomes cylindrical.

CALYX: a PERIANTHIUM of one leaf, upright, divided into four ſegments, poſteriorly quite down to the baſe, and anteriorly more deeply that at the ſides; villous, whitiſh, the ſegments or teeth nearly equal, and ferruginous. *fig.* 1.

COROLLA monopetalous, ringent, generally purpliſh, approaching to the colour of ruſty iron; *tube* bending downward, large, bellying out; *mouth* gaping; *upper-lip* hollow, obſoletely trifid, ſomewhat keeled, and externally viſcid; the lower lip trifid and hollow, the middle ſegment the longeſt. *fig.* 2.

STAMINA: four FILAMENTS, tapering, white, hid under the upper lip, two of which are longer than the reſt; ANTHERÆ ſlightly cohering, of a ſtraw colour, double, ovate, each cavity terminating in a point. *fig.* 3.

PISTILLUM: GERMEN oblong, marked anteriorly at the baſe with three protuberant yellow glands, which pour forth plentifully a ſweet liquor; STYLE downy, a little longer than the ſtamina, purpliſh, bent down at top; STIGMA half-divided, obtuſe, thickiſh, and yellow. *fig.* 4.

SEED-VESSEL an ovate, oblong *capſule*, terminating in a point, of one cavity and two valves. *fig.* 5.

SEEDS numerous and very ſmall; *receptacles* four, linear, growing to the ſides of the capſule. *fig.* 6, 7.

The literal Engliſh tranſlation of the Greek word *Orobanche* is *Strangle-tare**: this term has been given by DIOSCORIDES to one plant, and by THEOPHRASTUS to another; ours is undoubtedly the *Orobanche* of DIOSCORIDES, (as it accords with his deſcription †), and alſo of PLINY. The *Orobanche* of THEOPHRASTUS muſt have been ſome

* ΟΡΟΒΑΓΧΗ, *Ervangina Gazæ, quòd ὄροβον ἄγχει, ervum ſtrangulet, dicitur.*

† "Orobanche cauliculus eſt ſeſquipedalis, et interdum major, ſubruber, hirſutus, tener, ſine folio, pinguis: flore ſubalbido, aut in luteum vergente: radice digiti craſſitudine, et cum ariditate flaccefcit caulis, fiſtuloſa. Hanc inter quædam legumina naſci conſtat, et ea ſtrangulare, unde Orobanche ſibi cognomentum uſurpavit. Eſtur, ut olus, cruda, et in patinis, aſparagi modo, decocta. Legumentis addita, concoctionem accelerare creditur." *Matth. ex Dioſc.*

climbing

climbing plant, as is evident from his words, which are thus quoted by MATTHIOLUS, " Ervum necat amplexu " complexuque suo," whereas the *Orobanche* of DIOSCORIDES, according to the same author, by its presence only, " suâ tantum presentiâ," destroys the Legumina, Corn, Hemp, and Flax which grow near it, and from which property of choaking and devouring the neighbouring plants, MATTHIOLUS says they called it in some parts of Italy the *Wolf plant*; its pernicious effects in this respect are confirmed by a later Italian writer MICHELI, who mentions its being proscribed in Tuscany by public edict.

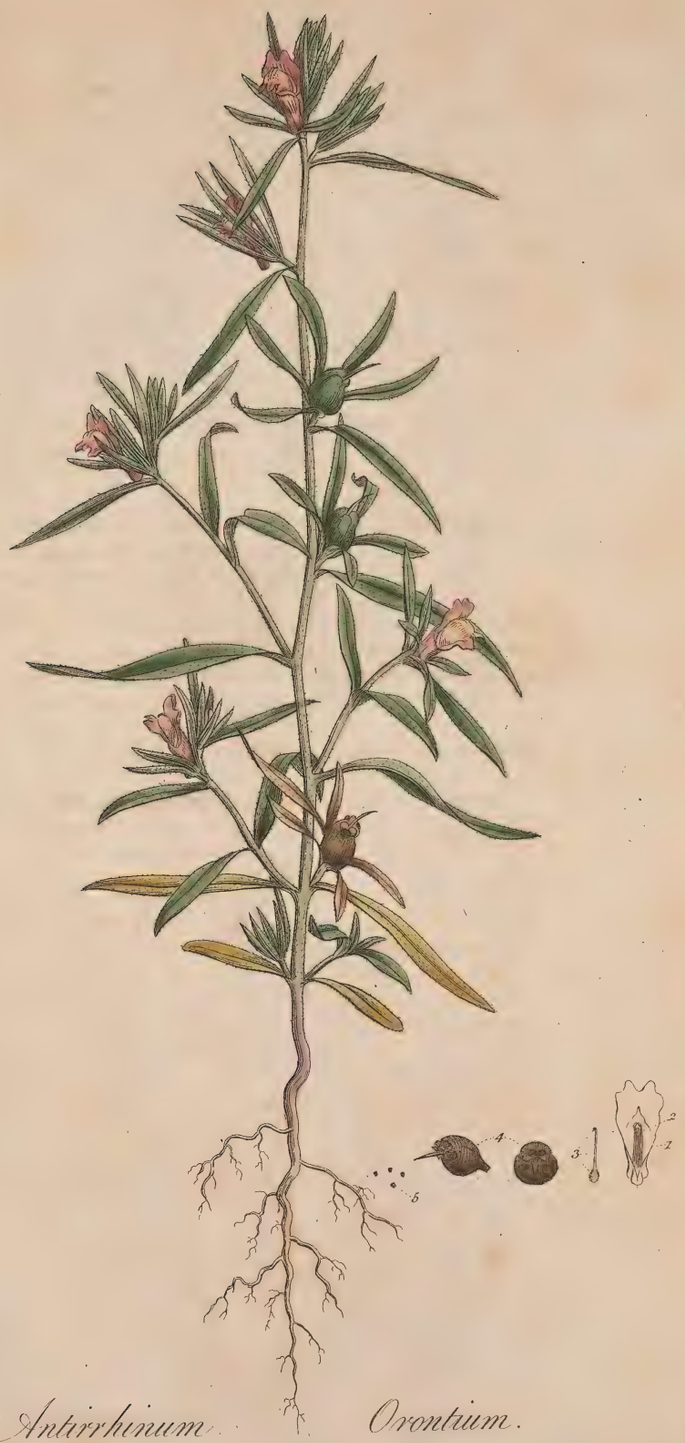
The most remarkable circumstance in the œconomy of this plant, is its growing from the roots of others; CASPAR BAUHINE asserts, that it is always attached to the fibres *(fibris)* of some plant near it; several of my botanic friends are of opinion that it is not parasitical in all situations, especially in corn-fields, but they have not confirmed their opinions by actual and repeated examinations, which are still wanting. The plants from the roots of which CASP. BAUHINE observed it to grow were the *Spartium Scoparium*, common Broom, *Genista tinctoria*, Woodwaxen, *Hieracium subaudum*, shrubby Hawkweed, *Trifolium*, Trefoil, (no particular species is mentioned), and *Orobus tuberosus*, Wood Pea; all of these (one excepted) are leguminous plants, to which it is observed to have the strongest attachment; I have met with it but rarely about London, excepting one spot, in which it might be said truly to abound; this was a small, hilly, barren field, covered partly with furze and broom, on the left-hand side of the road, within about two miles of Kingston, Surry, about half a mile beyond the Robin Hood and Turnpike, in which field the Botanist will find several other rare plants. I have also seen it on Hampstead Heath, and on the borders of Charlton Wood; in these several situations it grew either out of the roots of Broom or Furze, but chiefly the former. My late gardener ROBERT SQUIBB once brought me out of Surry a very strong plant of *Orobanche*, which had grown in a corn field on the root of the *Centaurea Scabiosa:* I planted both roots in my garden, in the situation they were found; the *Knapweed* grew, but the *Broom-rape* died. Several persons have informed me of their having found it to be parasitical on the roots of *Clover*, in particular Dr. GOODENOUGH and Mr. RUGGLES of Cobham; Mr. THOMAS WHITE once related to me his having observed a small Orobanche growing on walls, &c. in Pembrokeshire, and that the decayed floor of an old castle in particular was almost covered with it; he also noticed, that in some of the western counties this plant was so common as to give the mowers cause of complaint.

The *Orobanche* appears to vary in size according to the size of the root it grows on, the stem being sometimes almost as thick as one's thumb, and at other times not much larger than a wheat-straw; the flowers vary much in their colour, but are mostly dead-purple or yellowish.

The seed of this plant is remarkably small, hence it will be extremely difficult to shew its vegetation by experiment, more especially as it requires a very particular soil and situation, yet no one can doubt but the plant is propagated thereby; it must first vegetate on the earth, then the radicle, which is sent downward, finding a proper root, attaches itself to it, quits its parent earth, and becomes parasitical.

It has a faint smell of cloves, and is said to be a strong astringent and useful vulnerary.

LINNÆUS remarks that *Sweden* is too cold for it to flourish with them.



Antirrhinum Orontium.

ANTIRRHINUM ORONTIUM. SMALL SNAPDRAGON.

ANTIRRHINUM *Lin. Gen. Pl.* DIDYNAMIA ANGIOSPERMIA.

Cal. 5-phyllus. *Corollæ* basis deorsum prominens, nectarifera. *Capsula* 2-locularis.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

ANTIRRHINUM *Orontium* corollis ecaudatis, floribus subspicatis, calycibus corolla longioribus. *Lin. Syst. Vegetab.* p. 466. *Sp. Pl.* p. 860. *Fl. Suec.* n. 559.

ANTIRRHINUM foliis ellipticis obtusis, floribus sparsis, calycibus subulatis longissimis, calcare brevissima. *Haller. Hist.* n. 334.

ANTIRRHINUM *Orontium*. *Scopoli Fl. Carn.* n. 774.

ANTIRRHINUM angustifolium sylvestre. *Bauh. Hist.* III. 464.

ANTIRRHINUM arvense majus. *Bauh. pin.* 212.

ANTIRRHINUM sylvestre medium. *Parkinf.* 1334. *Raii Syn.* p. *283. The lesser wild Calf's Snout or Snapdragon. *Hudson. Fl. Angl. ed.* 2. p. 274.

RADIX annua, simplex, rigida, albida, fibrosa, fibris paucis, patentibus.

CAULIS spithamæus, aut pedalis, simplex seu ramosus, erectus, teres, pilosus, pilis patentibus, subviscidis.

FOLIA ima opposita, subconnata, superiora alterna, lineari-lanceolata, carinata, deflexa, integerrima, hirsutula.

FLORES pauci, axillares, sessiles, rubelli, vix spicati, nisi in speciminibus majoribus.

CALYX: PERIANTHIUM quinque-partitum, persistens, laciniis linearibus, carinatis, hirsutis, longitudine corollæ, superiore longiore.

COROLLA monopetala, rosea, venis saturatioribus striata, inferne et superne pubescens; *labium* superius bifidum, lateribus reflexum, inferius trifidum, laciniis deflexis, intermedia minore, *Nectarium* brevissimum, obtusum. *fig.* 1.

STAMINA: FILAMENTA quatuor, filiformia, purpurascentia, glabra, quorum duo breviora; ANTHERÆ flavæ, bilobæ, conniventes. *fig.* 2.

PISTILLUM: GERMEN subrotundum, villosum; STYLUS subulatus, villosus, apice paululum inclinatus; STIGMA obtusum, flavum. *fig.* 3.

PERICARPIUM: CAPSULA pedunculata, erecta, hirsuta, apice triforaminosa, bilocularis. *fig.* 4.

SEMINA plurima, nigricantia, angulata. *fig.* 5.

ROOT annual, simple, stiff, whitish, fibrous, fibres few and spreading.

STALK from a span to a foot in height, simple or branched, upright, round, hairy, the hairs spreading and somewhat viscid.

LEAVES of a shape betwixt linear and lanceolate, keeled, turning downward, entire at the edge, slightly hairy, the lowermost opposite, slightly uniting at the base, the uppermost alternate.

FLOWERS few, growing from the alæ of the leaves, sessile, of a bright red colour, scarcely forming a spike, unless in large specimens.

CALYX: a PERIANTHIUM deeply divided into five segments, and permanent; the segments linear, keeled, hairy, the length of the corolla, the uppermost segment longest.

COROLLA monopetalous, rose coloured, striped with veins of the same colour but deeper, both above and below slightly hairy, the upper lip bifid, the sides turning back, the lower lip trifid, the segments turning down, the middle one the smallest; *Nectary* very short and blunt. *fig.* 1.

STAMINA: four FILAMENTS, thread-shaped, purplish, smooth, two of which are shorter than the others; ANTHERÆ yellow, closing together, composed of two lobes. *fig.* 2.

PISTILLUM: GERMEN roundish, and villous; STYLE tapering, villous, bending a little downward at top; STIGMA blunt and yellow. *fig.* 3.

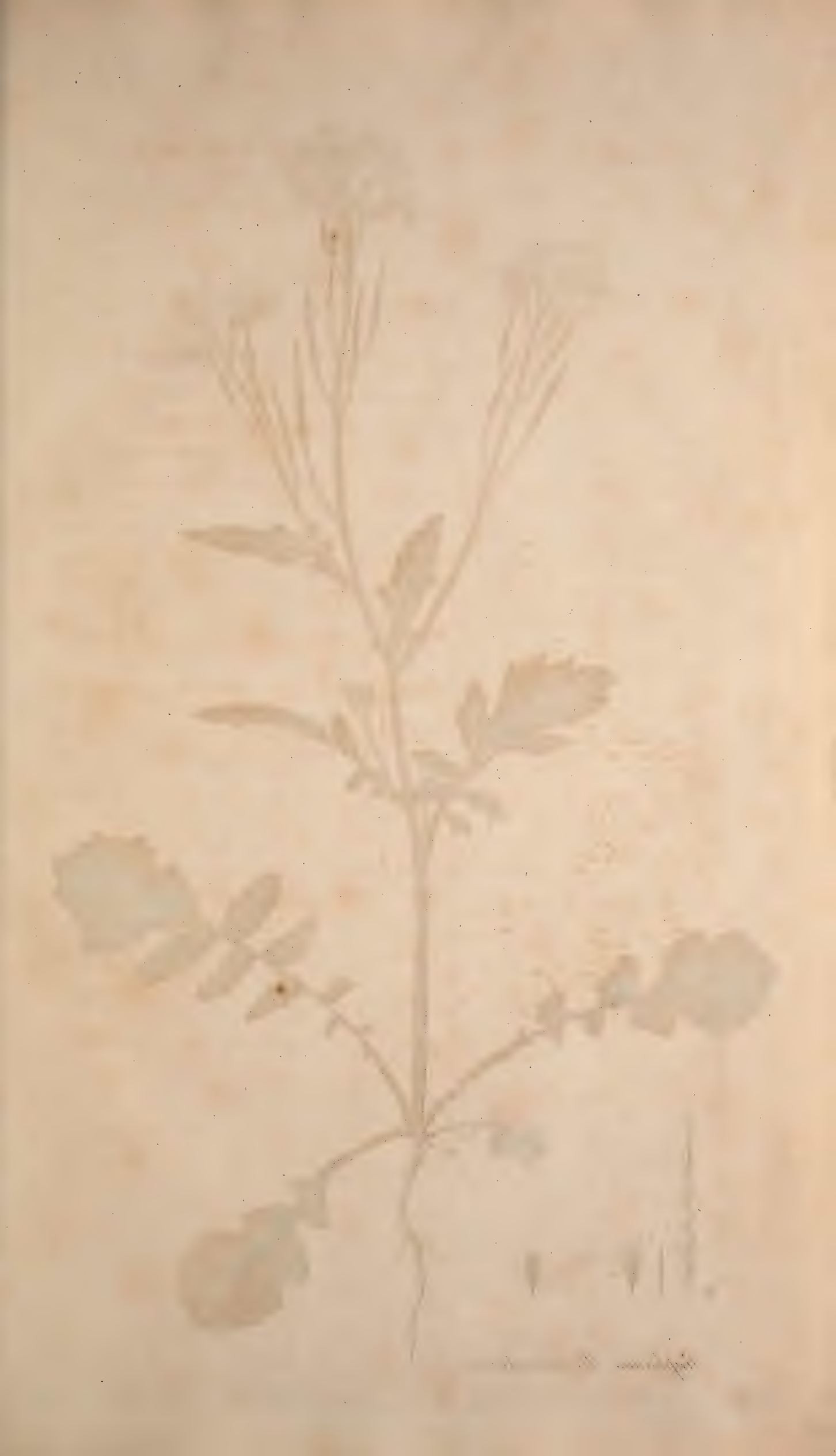
SEED-VESSEL: a CAPSULE standing on a footstalk, upright, hairy, having two cavities and three apertures at top. *fig.* 4.

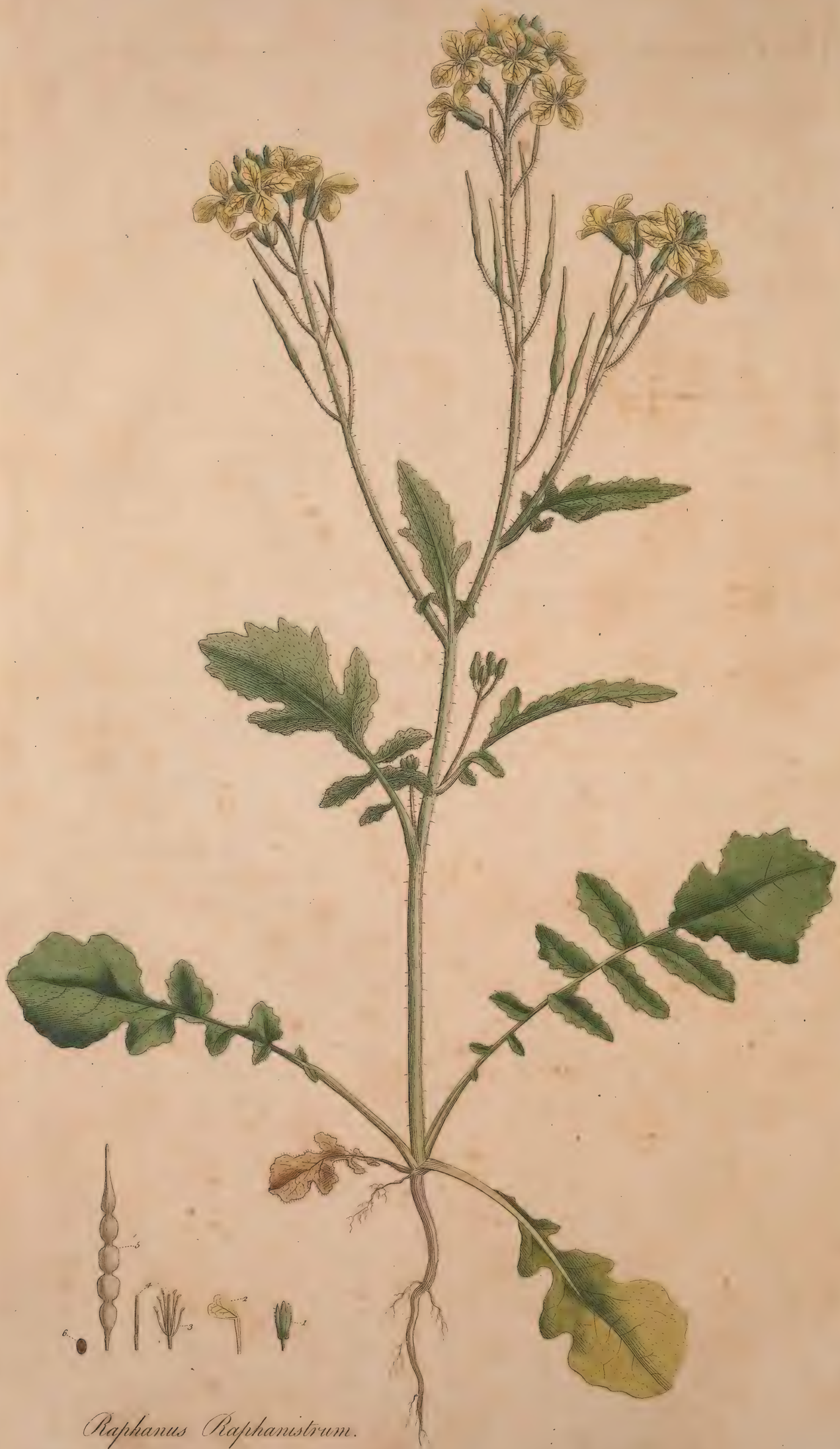
SEEDS numerous, blackish and angular. *fig.* 5.

This species of *Antirrhinum* is distinguished from all the others, the *majus* excepted, by having no spur to the corolla, and from the *majus* by being an annual, and having long, pointed leaves to the calyx, which in that plant are short and obtuse.

It grows in tolerable plenty in Battersea Corn-fields, where it flowers in July and August.

The seed-vessel, when fully ripe, is a curious representation of the skull of a Quadruped.





Raphanus Raphanistrum.

RAPHANUS RAPHANISTRUM. WILD RADISH.

RAPHANUS *Lin. Gen. Pl.* TETRADYNAMIA SILIQUOSA.

Cal. clausus. *Siliqua* torosa, subarticulata, teres. *Glandulæ* melliferæ 2 inter stamina breviora et pistillum, totidem inter stamina longiora et calycem.

Raii Syn. Gen. 21. HERBÆ TETRAPETALÆ SILIQUOSÆ ET SILICULOSÆ.

RAPHANUS *Raphanistrum* siliquis teretibus articulatis lævibus unilocularibus. *Lin. Syst. Veget.* p. 504. *Sp. Pl.* 935. *Fl. Suec.* n. 612. *Haller. Hist.* n. 468.

RAPHANISTRUM segetum, flore luteo vel pallido. *Tournef. Inst.* 240.

RAPISTRUM flore luteo, siliqua glabra articulata. *Raii Syn.* p. 296.

RAPHANUS sylvestris. *Ger. emac.* 246. *Hudson Fl. Angl.* p. 289. *Lightfoot Fl. Scot.* p. 362.

RADIX annua, simplex, fibrosa, pallide fusca.

CAULIS pedalis ad sesquipedalem, erectus, teres, solidus, hispidus, glaucus, ad basin usque plerumque ramosus, ramis sæpe longitudine caulis, ad basin purpureis.

FOLIA petiolata, pinnatifida, alterna, scabra, inferioribus pinnarum quatuor aut quinque parium, superioribus duarum triumve, omnibus obtusiuscule serratis seu dentatis, dentibus apice purpureis.

FLORES pedunculati, lutei, albi, seu carnei, venis nigricantibus picti.

CALYX: PERIANTHIUM tetraphyllum, erectum, hispidulum, foliolis oblongis, parallelis, conniventibus, deciduis, basi gibbis. *fig.* 1.

COROLLA tetrapetala, cruciformis: petala alba sive lutea vel purpurascentia, venosa: venis nigricantibus, obcordata, integra, patentia, sensim in ungues calyce paulo longiores attenuata. *fig.* 2.

STAMINA: FILAMENTA sex, subulata, erecta; quorum duo opposita longitudine calycis, quatuor vero unguibus longiora. ANTHERÆ oblongæ, erectæ, sagittatæ. *fig.* 3.

PISTILLUM: GERMEN oblongum, ventricosum, attenuatum, longitudine staminum. STYLUS vix ullus. STIGMA capitatum, integrum. *fig.* 4.

PERICARPIUM: *Siliqua* teres, articulata, articulis tribus ad sex et ultra, sulcatis, unilocularibus, monospermis, geniculis attenuatis, apice rostrata, rostro lineari compresso, glabra. *fig.* 5.

SEMINA subrotunda, ferruginea, glaberrima, magnitudine seminum Raphani sativi. *fig.* 6.

ROOT annual, simple, fibrous, and of a pale brown colour.

STALK from a foot to a foot and a half in height, upright, round, solid, hispid, glaucous, generally branched quite down to the bottom, branches often as long as the stalk, and purple at bottom.

LEAVES standing on foot-stalks, pinnatifid, alternate, rough, the lowermost consisting of four or five pair of pinnæ, the uppermost of two or three, all of them obtusely serrated or toothed, the teeth purple at the tips.

FLOWERS standing on foot-stalks, yellow, white or flesh-coloured, painted with blackish veins.

CALYX: a PERIANTHIUM of four leaves, upright, a little hispid, the leaves oblong, parallel, closing together, deciduous, gibbous at the base. *fig.* 1.

COROLLA composed of four petals, which are white, yellow, or purplish, veined (the veins blackish) inversely heart-shaped, entire, spreading, terminating gradually in claws, a little longer than the calyx. *fig.* 2.

STAMINA: six FILAMENTS, tapering, upright; of which two opposite ones are of the length of the calyx, and four of the length of the claws of the corolla. ANTHERÆ oblong, upright, arrow-shaped *fig.* 3.

PISTILLUM: GERMEN oblong, bellying out a little, tapering, the length of the stamina. STYLE scarce any. STIGMA forming a little head, and entire. *fig.* 4.

SEED-VESSEL a round jointed *Pod*, composed of three, six, or more joints, which are grooved, of one cavity, containing a single seed, the joints cut in, the apex terminating in a linear, flat, smooth beak. *fig.* 5.

SEEDS roundish, ferrugineous, very smooth, the size of the common garden Radish. *fig.* 6.

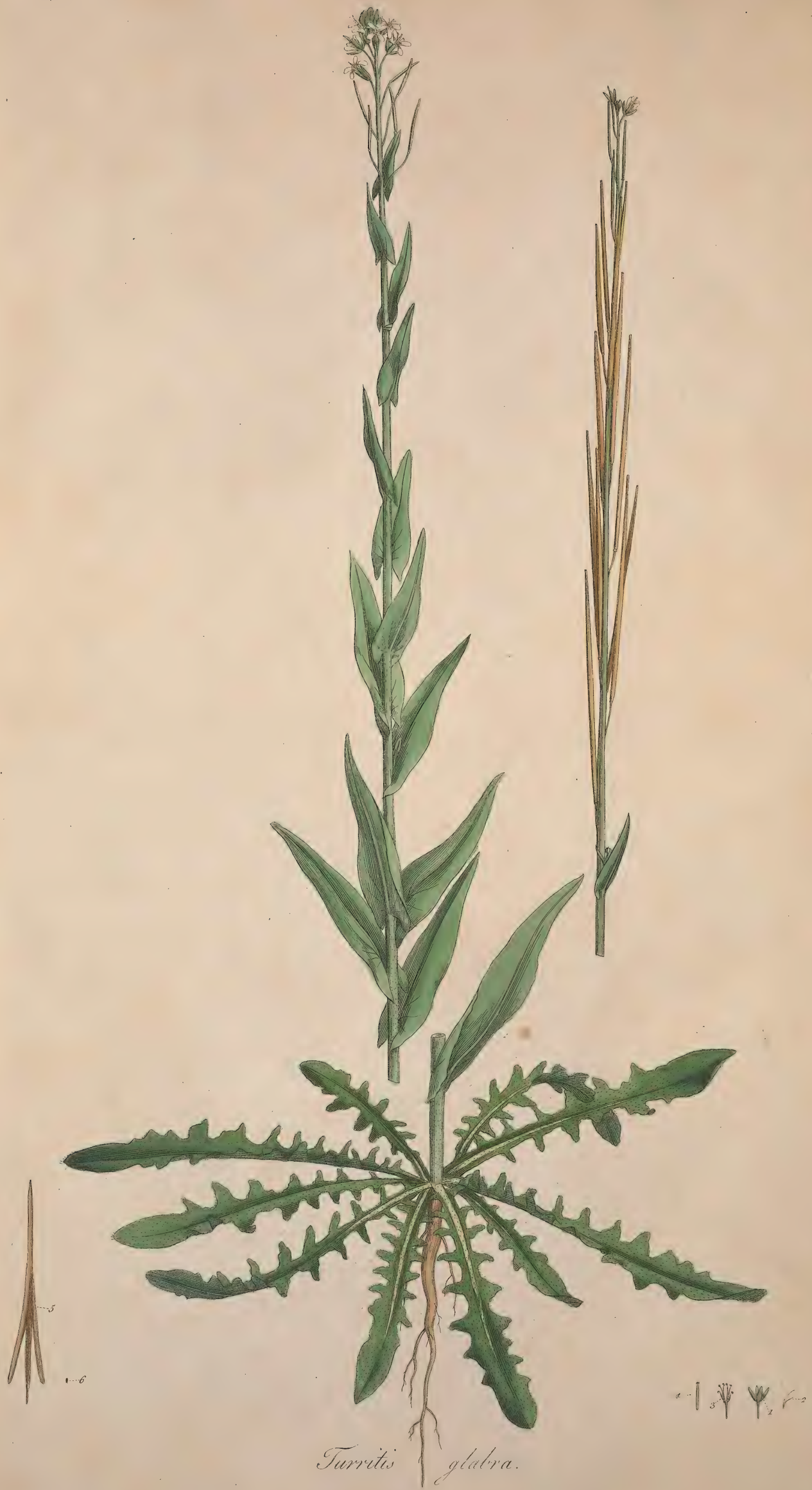
The present plant, in the colour of its blossom, is one of the most variable we are acquainted with, being found with white, pale-red, and yellow flowers: as the yellow is the most predominant with us, we have figured that variety.

Though the blossoms vary so widely as to colour, they are all in general striped with purplish veins; a character which contributes with several others to distinguish it from the *Sinapis Arvensis*, or *Charlock*, to which it bears no small resemblance; some of the most striking differences between these two plants we shall here enumerate.

The Charlock usually grows one third taller than the Radish. The stalks, which in the Charlock are finely grooved, hirsute, and commonly of a deep red colour, in the Radish are smooth, yet hispid, and usually glaucous. The Charlock has often an unbranched stem; the Radish is more frequently branched quite down to the bottom; besides, the calyx is upright and close in the Radish; in the Charlock it is spreading. The flowers of the Charlock also are smaller, and always yellow.

It is a common and noxious inhabitant of Corn-fields, and flowers in *July* and *August*.

LINNÆUS has given a particular paper on this plant in the *Amœnitates Academicæ*, in which he endeavours to prove, that an epidemic spasmodic disease, common in some parts of *Sweden*, is owing to the seeds of this plant being ground with the corn and eaten by the inhabitants.



Turritis glabra.

TURRITIS GLABRA. SMOOTH TOWER-MUSTARD.

TURRITIS *Lin. Gen. Pl.* TETRADYNAMIA SILIQUOSA.

Siliqua longiſſima, angulata. *Cal.* connivens, erectus. *Cor.* erecta.

Raii Syn. Gen. 21. HERBÆ TETRAPETALÆ, SILIQUOSÆ ET SILICULOSÆ.

TURRITIS *glabra* foliis radicalibus dentatis hiſpidis, caulinis integerrimis amplexicaulibus glabris. *Lin. Syſt. Vegetab.* p. 502. *Sp. Pl.* p. 930. *Haller. Hiſt.* n. 455.

TURRITIS *glabra.* *Scopoli Fl. Carn.* n. 839.

BRASSICA ſylveſtris foliis circa radicem cichoraceis. *Bauh. Pin.* 112.

TURRITIS foliis inferioribus cichoraceis, cæteris perfoliatis. *J. R. H.*

BRASSICA ſylveſtris ramoſa tota penè glabra. *Bauh. Pin.* 112.

TURRITIS vulgatior. *Bauh. Hiſt.* II. 836.

TURRITIS *Ger. emac.* 272. *Parkins* 852. *Raii Syn.* p. 293. Tower-Muſtard. *Hudſon Fl. Angl.* ed. 2. p. 291.

RADIX biennis, ſimplex, alba, ſublignoſa, alte in terram, deſcendens, paucis fibrillis capillata.

CAULIS pedalis ad tripedalem, erectus, plerumque ſimplex, firmus, teres, ſolidus, prope terram hirſutus, ſupernè glaber.

FOLIA radicalia pallide viridia, hirſuta, ad margines ſinuata, tres quatuorve uncias longa, caulina glauca, glabra, integerrima, amplexicaulia, erecta, ſagittata.

FLORES in ſummis caulibus parvi, ex albo luteſcentes.

CALYX: PERIANTHIUM tetraphyllum, foliolis ovato-oblongis, erectis, deciduis. *fig.* 1.

COROLLA: tetrapetala, cruciformis. *Petala* ovato-oblonga, obtuſa, integra, unguibus erectis. *fig.* 2.

STAMINA: FILAMENTA ſex, ſubulata, alba, quorum duo breviora. ANTHERÆ ſimplices, flavæ. *fig.* 3.

PISTILLUM: GERMEN longitudine floris, teres, ſubcompreſſum. STYLUS nullus. STIGMA obtuſum. *fig.* 4.

PERICARPIUM: *Siliquæ* plurimæ, pedicellatæ, erectæ, duos vel tres digitos longæ, caulem fere occultantes, teretiuſculæ, ſubcompreſſæ, obſolete quadrangulæ. *fig.* 5.

SEMINA parva, numeroſiſſima, ovata, planiuſcula, rufa. *fig.* 6.

ROOT biennial, ſimple, white, ſomewhat woody, penetrating deeply into the earth, furniſhed with few fibres.

STALK from one to three feet in height, upright, generally ſimple, firm, round, ſolid, near the ground hirſute, above ſmooth.

LEAVES next the root, of a pale green colour, ſtrongly hairy, jagged on each ſide, three or four inches in length, thoſe of the ſtalk glaucous, perfectly ſmooth and entire, embracing the ſtalk, upright, and arrow-ſhaped.

FLOWERS on the top of the ſtalks, ſmall, of a whitiſh yellow colour.

CALYX: a PERIANTHIUM of four leaves, the leaves of an ovate oblong ſhape, upright and deciduous. *fig.* 1.

COROLLA tetrapetalous and croſs-ſhaped. *Petals* of an ovate-oblong ſhape, obtuſe, entire, claws upright. *fig.* 2.

STAMINA: ſix FILAMENTS, tapering, white, two of which are ſhorter than the others. ANTHERÆ ſimple, and yellow. *fig.* 3.

PISTILLUM: GERMEN the length of the flower, round, a little flattened. STYLE none. STIGMA blunt. *fig.* 4.

SEED-VESSEL: *Pods* numerous, ſtanding on footſtalks, upright, two or three fingers breadth in length, almoſt hiding the ſtalk, roundiſh, ſomewhat flattened, faintly quadrangular. *fig.* 5.

SEEDS ſmall, very numerous, ovate, flattiſh, of a reddiſh brown colour. *fig.* 6.

The term *glabra* is only proper when applied to the upper part of this plant, the radical leaves, which generally decay as the plant approaches to maturity, being hairy, like many other plants of the ſame family.

It is found but rarely near *London.* Hitherto I have only noticed it in one ſpot, *viz.* in the lane which leads down by *Charlton* Church, and there but ſparingly; further on in *Kent* it is much more common, as well as in many other parts of *England.* It uſually grows on banks near hedges, and flowers in *June* and *July.*

It varies ſo much in ſize, that the old Botaniſts make two ſpecies of it.

CARDAMINE HIRSUTA. HAIRY LADIES-SMOCK.

CARDAMINE *Lin. Gen. Pl.* TETRADYNAMIA SILIQUOSA.

Siliqua elastice dissiliens valvulis revolutis. *Stigma* integrum. *Cal.* subhians.

Raii Syn. Gen. 21. HERBÆ TETRAPETALÆ SILIQUOSÆ ET SILICULOSÆ.

CARDAMINE foliis pinnatis, floribus tetrandris. *Lin. Syst. Vegetab.* p. 497. *Sp. Pl.* p. 915. *Fl. Suec.* n. 587.

CARDAMINE foliis pinnatis hirsutis, pinnis subrotundis, staminibus quaternis. *Haller Hist.* 472.

CARDAMINE *hirsuta*. *Scopoli Fl. Carn.* n. 817. t. 38.

NASTURTIUM aquaticum minus. *Bauh. Pin.* 104.

CARDAMINE impatiens altera hirsutior. *Raii Syn.* p. 300. The lesser hairy, impatient Cuckow-flower or Ladies-smock.

CARDAMINE foliis pinnatis, foliolis radicalibus subrotundo-cordatis; caulinis ovatis dentatis petiolatis. *Hudson. Fl. Angl. ed.* 2. p. 295. *Lightfoot Fl. Scot.* p. 348.

RADIX annua, fibrosa, fibris albidis.

CAULIS spithamæus, et ultra pro ratione loci, in fossis humidis reperitur etiam sesquipedalis, solidus, erectus, flexuosus, sulcato-angulosus, prope basin purpureus, et sæpius hirsutissimus, superne fere glaber, ramosus, ramosissimus etiam occurrit.

FOLIA radicalia plurima, in orbem posita, pinnata, foliolis petiolatis, rotundato-angulatis, plerumque quinque lobatis, hirsutis, punctis prominulis scabriusculis, lobis inæqualibus, nunc obtusis, nunc acutis; caulina angustiora et magis profunde incusa, lobis paucioribus.

FLORES parvi, albi, primo vere tantum, tetrandri.

CALYX: PERIANTHIUM tetraphyllum, foliolis ovato-oblongis, obtusis, concavis, deciduis, pilis paucis albidis instructis. *fig.* 1.

COROLLA: PETALA quatuor, alba, calyce duplo fere longiora, patentia, integerrima, obtusa. *fig.* 2.

STAMINA: FILAMENTA plerumque sex, quorum duo breviora, alba. ANTHERÆ minimæ, lutescentes. *fig.* 3.

PISTILLUM: GERMEN oblongum, tenue, staminibus paulo brevior. STIGMA capitatum. *fig.* 4.

PERICARPIUM: *Siliqua* erecta, uncialis, subcompressa, bivalvis, elastice dissiliens, valvulis revolutis *fig.* 5.

SEMINA duodecim circiter, suborbiculata, compressa, glabra, e flavo fusca *fig.* 6.

ROOT annual and fibrous, the fibres whitish.

STALK about a span high, or more, according to the situation in which it grows; in wet ditches it is sometimes found even a foot and a half in height, solid, upright, crooked, grooved or angular, purple near the base, and most commonly very hairy, above nearly smooth, branched, sometimes very much so.

LEAVES next the root numerous, forming a circle, pinnated, the small leaves standing on footstalks, round yet angular, generally divided into five lobes, hirsute, roughish with little prominent points, the lobes unequal, sometimes blunt and sometimes pointed; those of the stalk narrower, and more deeply indented, with fewer lobes.

FLOWERS small, and white, early in the spring, having only four stamina.

CALYX: a PERIANTHIUM of four leaves, of an ovate, oblong shape, obtuse, hollow, deciduous, furnished with a few white hairs. *fig.* 1.

COROLLA: four white PETALS, almost twice the length of the calyx, spreading, entire and obtuse. *fig.* 2.

STAMINA: for the most part six FILAMENTS, of which two are shorter than the rest, of a white colour. ANTHERÆ very small and yellowish. *fig.* 3.

PISTILLUM: GERMEN oblong, slender, a little shorter than the stamina. STIGMA forming a small head. *fig.* 4.

SEED-VESSEL: an upright *Pod*, about an inch in length, somewhat flattened, of two valves, which burst with an elastic force, and roll back. *fig.* 5.

SEEDS about twelve in number, nearly round and flattened, smooth, and of a yellowish-brown colour. *fig.* 6.

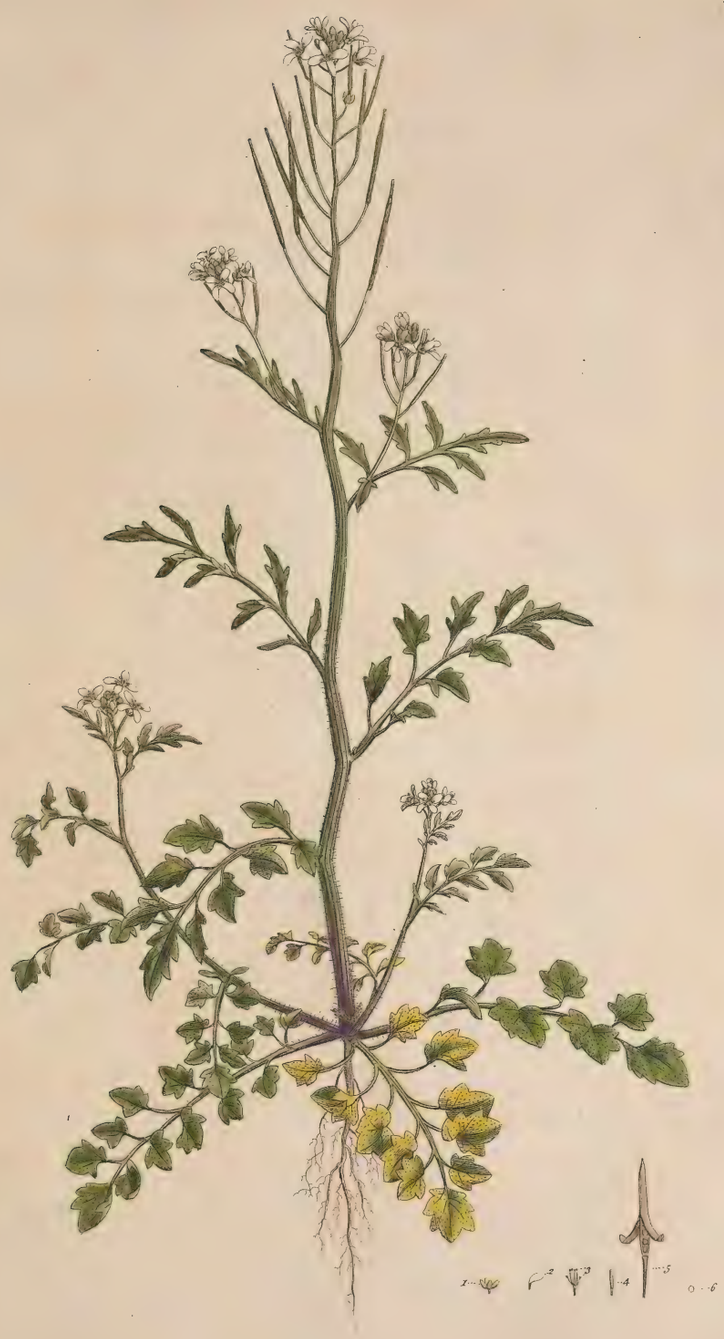
We were inclined to believe with our ingenious friend Mr. LIGHTFOOT, that the *Cardamine hirsuta* and *parviflora* were distinct species; but repeated observation and culture have convinced us, that they are both the same, varying only in size, in hairiness, and in the number of their stamina.

In wet situations, where the soil is luxuriant, it grows a foot or two in height, and loses in a great degree its hairiness; in exposed places it seldom reaches more than six or eight inches, and is generally much more hairy, and, when it grows singly, much more branched. The same plant, early in the spring, when the weather is cold, has only four stamina; as the sumer advances, it has constantly six. The lobes of the radical leaves vary much in shape, and are frequently much rounder than the figure represents.

This species is by no means general about *London*, but abounds in particular places; as by *Chelsea* water-works, in wet ditches about *Hampstead*, *Highgate*, and elsewhere.

It flowers in *April* and *May*. In the garden, if the situation in which it is sown be shady, and the season not uncommonly dry, it continues flowering and seeding during the whole of the summer.

According to Mr. LIGHTFOOT, the young leaves are a good ingredient in a sallad, and may easily be obtained in the spring, when Mustard and Cress are not to be had.



Cardamine hirsuta.

GERANIUM PRATENSE. CROWFOOT CRANESBILL.

GERANIUM *Lin. Gen. Pl.* MONADELPHIA DECANDRIA.

Monogyna. *Stigmat.* 5. *Fructus* roſtratus, 5-coccus.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

GERANIUM *pratenſe* pedunculis bifloris, foliis ſubpeltatis multipartitis rugoſis acutis, petalis integris. *Lin. Syſt. Veget.* p. 514. *Sp. Pl.* p. 954. *Fl. Suec.* n. 968.

GERANIUM caule erecto, foliis rugoſis hirſutis multilobis, lobis trifidis, lobulis ſemipinnatis, floribus umbellatis. *Haller. Hiſt.* n. 931.

GERANIUM *pratenſe Scopoli Fl. Carn.* n. 852.

GERANIUM batrachoides, Gratia Dei Germanorum. *Bauh. Pin.* 318.

GERANIUM Batrachoides. *Ger. emac.* 922.

GERANIUM Batrachoides flore cæruleo. *Park.* 704. *Raii Syn.* ed. 3. p. 360. Crowfoot Craneſbill. *Hudſon Fl. Angl.* ed. 2. p. 302. *Lightfoot Fl. Scot.* p. 368.

RADIX perennis, craſſitie digiti minimi aut major, horizontalis, rugoſa, e rubro fuſca, intus flaveſcens, fibris majuſculis profunde penetrantibus inſtructa.

CAULIS pedalis ad tripedalem, erectus, ramoſus, tereti-uſculus, pubeſcens, baſi ruberrimus, ſubangulosus.

FOLIA hirſutula, radicalia longiſſime petiolata, ſuprema ſubſeſſilia, omnibus multipartitis, venoſis, ſubtus pallidioribus, lacinis multifidis, inciſis.

PETIOLI teretes, pubeſcentes.

STIPULÆ ad baſin foliorum utrinque binæ, ovato acuminatæ, primo rubicundæ, dein marceſcentes, ad baſin pedunculorum quinæ, lanceolatæ.

PEDUNCULI gemini, piloſiſſimi, viſcoſi, primo nutantes, demum erecti.

FLORES magni, ſpecioſi, e purpureo cærulei.

CALYX: PERIANTHIUM pentaphyllum, perſiſtens, foliolis ovatis, acutis, concavis, margine membranaceis. *fig.* 1.

COROLLA: PETALA quinque, ſubintegerrima, venoſa, baſi utrinque hirſutula. *fig.* 2.

STAMINA: FILAMENTA decem ſubulata, ſuperne purpuraſcentia, inferne lata, albida; ANTHERÆ oblongæ, cæruleæ, incumbentes. *fig.* 3.

PISTILLUM: GERMEN pentagonum, viſcoſum, viride; STYLUS filiformis, rubicundus, ſtaminibus longior; STIGMA quinquefidum, laciniis linearibus, reflexis. *fig.* 4.

SEMEN oblongum, læve, ex arillo elaſtice diſſiliens. *fig.* 5, 6.

ROOT perennial, the thickneſs of the little finger, or larger, horizontal, wrinkled, of a reddiſh brown colour, yellowiſh within, furniſhed with largiſh fibres, which penetrate to a great depth.

STALK from one to three feet in height, upright, branched, roundiſh, downy, very red, and ſomewhat angular at the bottom.

LEAVES ſomewhat hirſute, thoſe next the root, ſtanding on very long footſtalks, the uppermoſt ones nearly ſeſſile, all of them deeply divided into many ſegments, veiny and paler underneath, the ſegments jagged.

LEAF-STALKS round and downy.

STIPULÆ at the baſe of the leaves two on each ſide, ovate and pointed, at firſt reddiſh, afterwards withering, thoſe at the baſe of the peduncles five in number, and lanceolate.

FLOWER-STALKS growing two together, very hairy, clammy, at firſt drooping, laſtly upright.

FLOWERS large, ſhowy, of a purpliſh blue colour.

CALYX: a PERIANTHIUM of five leaves and permanent, the leaves ovate, pointed, concave, bearded, clammy, ribbed and membranous at the edge. *fig.* 1.

COROLLA: five PETALS, nearly entire, veiny, hairy on each ſide the baſe. *fig.* 2.

STAMINA: ten FILAMENTS, tapering, purpliſh above, below broad and whitiſh; ANTHERÆ oblong, blue and incumbent. *fig.* 3.

PISTILLUM: GERMEN pentagonal, clammy, of a green colour; STYLE filiform, reddiſh, longer than the ſtamina; STIGMA divided into five ſegments, which are linear and turned back. *fig.* 4.

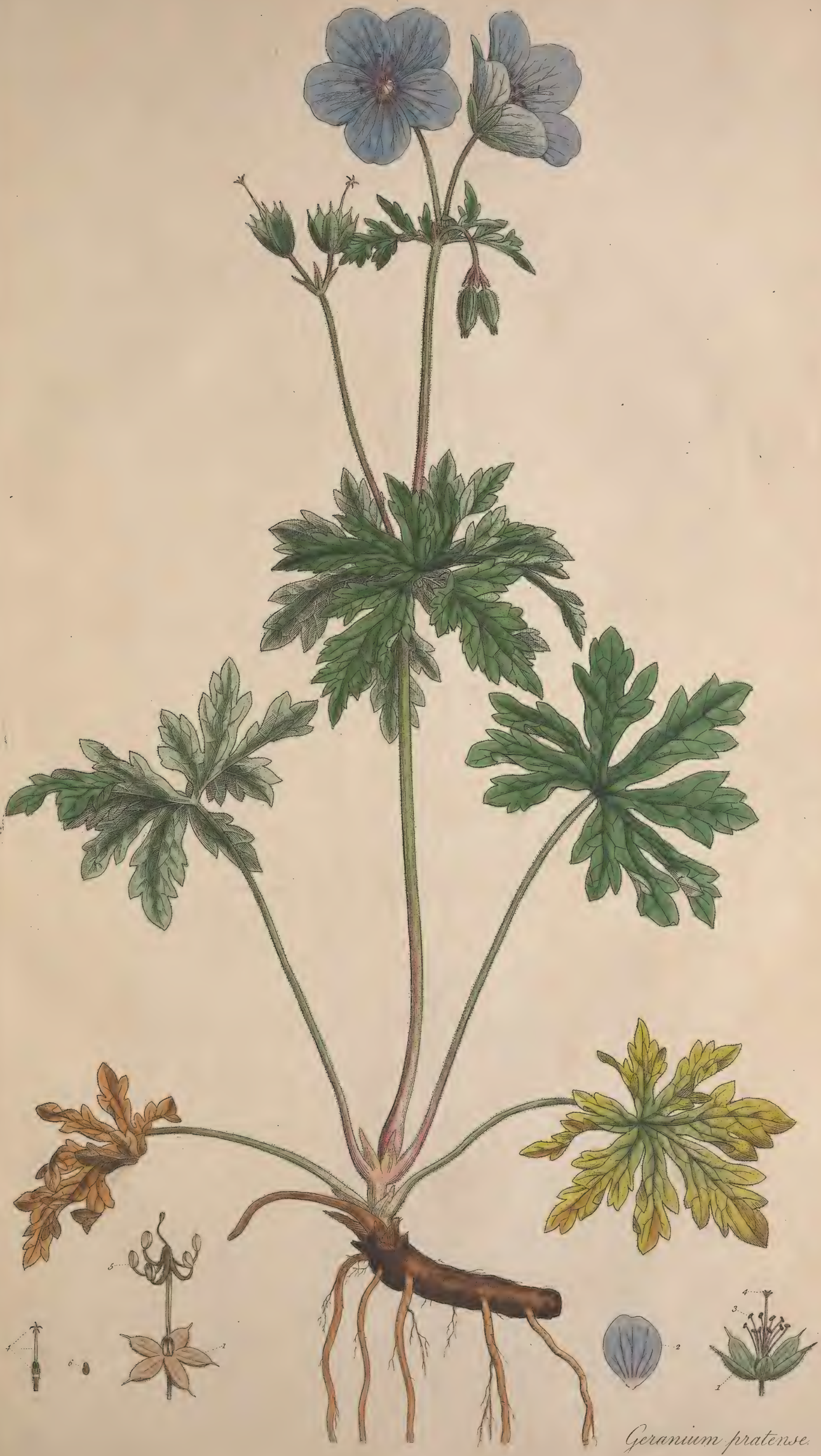
SEED oblong, ſmooth, thrown from the ſeed-covering with conſiderable elaſticity. *fig.* 5, 6.

This is by far the moſt ſhowy of the Craneſbills growing wild with us, and in that reſpect is exceeded by none of the Engliſh ones except the *Sanguineum*. Its leaves are large, and ſomewhat like thoſe of the Meadow Crowfoots, whence its name.

Its beauty has long ſince recommended it to the notice of the curious in flowers, in the gardens of which we find it not only as it commonly occurs, but alſo with white, purple, and ſtriped bloſſoms.

It loves a moiſt ſituation, as it naturally grows wild in meadows, which it ornaments with its bloſſoms in July and Auguſt. Near London it is found in tolerable abundance in the meadows about Batterſea, and in the vicinity of the *Thames* both above and below bridge; in many parts of *Yorkſhire*, particularly about *Settle*, it is almoſt as common as the Mallow is with us, not only in meadows, but every where under their ſtone walls.

The bloſſoms are much reſorted to by various ſpecies of flies, particularly thoſe of the Genus *Empis*.



Geranium pratense.

MALVA MOSCHATA. MUSK MALLOW.

MALVA *Lin. Gen. Pl.* MONADELPHIA POLYANDRIA.
Cal. duplex: exterior triphyllus. *Arilli* plurimi, monospermi.
Raii Syn. Gen. 15. HERBÆ SEMINE NUDO POLYSPERMÆ.
MALVA *moschata* caule erecto, foliis radicalibus reniformibus incisis; caulinis quinquepartitis pinnato-multifidis. *Lin. Syst. Vegetab.* p. 523. *Spec. Pl.* p. 971. *Fl. Suec.* n. 629.
MALVA foliis radicalibus reniformibus, incisis, caulinis quinquepartitis pinnatis, pinnis dentatis. *Haller. Hist.* n. 1072.
MALVA *Moschata*. *Scopoli Fl. Carn.* n. 861.
MALVA montana sive Alcea rotundifolia laciniata. *Col. Ecphr.* 1. p. 148. t. 147.
ALCEA folio rotundo laciniato. *Bauh. Pin.* 316.
ALCEA tenuifolia crispa. I. B. II. *App.* 1067. *Raii Syn.* p. 253. *Hudson. Fl. Angl. ed.* 2. p. 308. *Lightfoot Fl. Scot.* p. 376.

RADIX perennis, albida, sublignosa, difficillime eruta.

CAULIS: ex una radice caules nascuntur plurimi, bipedales, suberecti, ramosi, teretes, fistulosi, hirsuti, punctis purpureis prominulis adspersi, e quibus pili prodeunt.

FOLIA alterna, petiolata, inferiora plerumque sex partita, laciniis pinnatifidis, multifido-laciniatis, hirsutulis, apice subacutis, superiora brevius petiolata, in pauciores et tenuiores lacinias divisa.

STIPULÆ utrinque binæ, erectæ, lanceolatæ, hirsutæ, marginæ undulatæ.

FLORES magni, speciosi, carnei.

PEDUNCULI unciales, teretes, pilosi.

CALYX: PERIANTHIUM duplex, inferius triphyllum, foliolis lanceolatis, superius quinquefidum, ovato-acutum, sæpe laciniatum, punctatum, hirsutum, margine serrato glandulosum. *fig.* 1.

COROLLA: PETALA quinque, subtriangularia, carnea, venis saturatioribus ramosis notata, apice subtruncata, erosa, basi albida, margine utrinque ciliata. *fig.* 2.

STAMINA: FILAMENTA plurima, in tubum cylindraceum, albidum, pilosum coalita, superne libera, reflexa. ANTHERÆ primum reniformes, carneæ, dein purpureæ, demum cærulescentes. POLLEN album, globosum. *fig.* 3.

PISTILLUM: GERMINA plurima, in orbem disposita, flavescentia; STYLI plurimi, ruberrimi, filiformes, ad unum latus pilosi, polline plerumque obducti. STIGMATA simplicia. *fig.* 5.

ROOT perennial, whitish, somewhat woody, and with difficulty pulled up.

STALK: from one root arise several stalks, about two feet high, nearly upright, branched, round, hollow, hirsute, sprinkled with purple prominent points, from which the hairs issue.

LEAVES alternate, standing on foot-stalks, the lower ones generally deeply divided into six segments, which are pinnatifid and sub-divided into many others, slightly hirsute, and pointed at the tips, the upper ones standing on shorter foot-stalks, and divided into fewer and narrower segments.

STIPULÆ two on each side, upright, lanceolate, hirsute, waved on the edge.

FLOWERS large, showy, and flesh-coloured.

FLOWER-STALKS an inch in length, round and hairy.

CALYX: a double PERIANTHIUM, the lowermost composed of three lanceolate leaves, the uppermost divided into five segments, ovate and pointed, often jagged, dotted, hirsute, the edge serrated with small glands. *fig.* 1.

COROLLA: five PETALS, somewhat triangular, flesh-coloured, marked with branched veins of a deeper colour, somewhat truncated with a piece bit out at top, at bottom whitish, with the edge fringed on each side with hairs. *fig.* 2.

STAMINA: FILAMENTS numerous, forming a whitish hairy cylindrical tube, loose at top, and bending back. ANTHERÆ at first kidney-shaped and flesh-coloured, then purple, and lastly blueish. POLLEN white and globular. *fig.* 3.

PISTILLUM: GERMINA numerous, circularly disposed, of a yellowish colour. STYLES numerous, of a bright red colour, thread-shaped, hairy on one side, and generally covered with pollen. STIGMATA simple. *fig.* 5.

The plant here figured has been, and is still, considered by most English Botanists as the *Vervain Mallow*: there is little doubt but it is the plant which RAY considered as the *Alcea vulgaris major* of C. BAUHINE, in which idea he was most probably mistaken, as it accords better with the *Alcea rotundifolia laciniata* of that author. Be this as it may, it certainly is not the *Malva Alcea* of LINNÆUS, which Mr. HUDSON makes a native of this country; and which, he says, grows wild in *Warwickshire*, *Leicestershire*, and *Nottinghamshire*.

At the same time that LINNÆUS has very properly made two distinct species of these plants, he has been rather unfortunate in the parts he has selected for their discrimination.

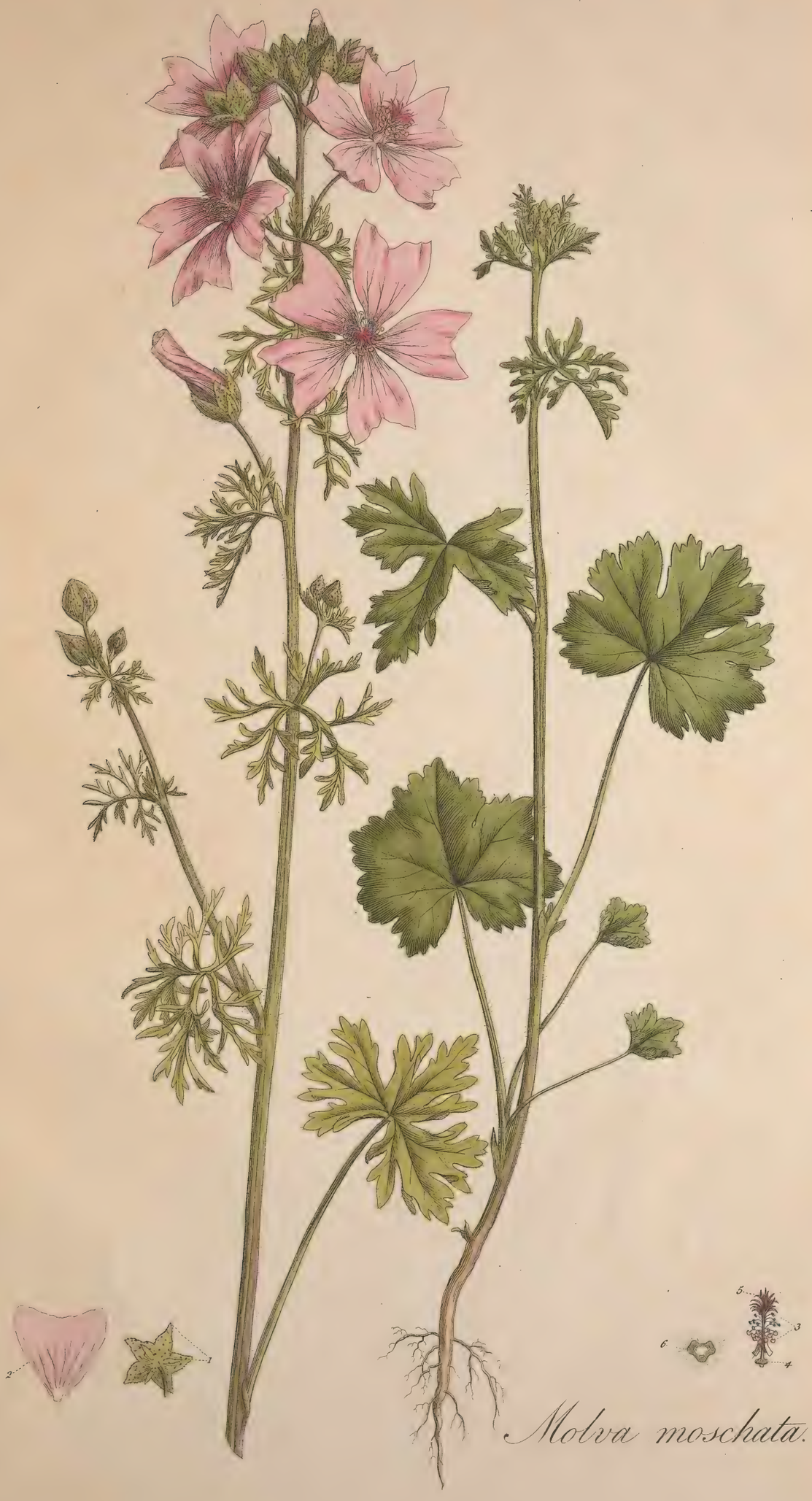
Taking for granted that Mr. HUDSON has good authority for what he asserts (although the counties he specifies are not particularly mentioned by RAY) it appears, that the *Moschata* is a general, the *Alcea* a local plant; the former I have found in most of the counties I have visited, and Mr. LIGHTFOOT mentions it as growing in Scotland; the latter I have never seen wild, but have occasionally observed it in some of the gardens about London; and last year, having an opportunity of cultivating it in my own, I was agreeably surprized, to find that it afforded many obvious and satisfactory distinctions, the most striking of which I shall enumerate, for the gratification of the English Botanist.

The *Malva Alcea* grew to nearly twice the height of the *Moschata*, whence it agrees with BAUHINE's name of *major*. It was in every respect a stronger plant, and harsher to the touch; the leaves of the stalk were much less jagged; the flowers in both were pretty similar, both in shape, size, and colour; but the calyces differed remarkably. In the *Moschata* the lowermost set of leaves were lanceolate, sometimes almost linear; in the *Alcea* they were ovate; added to this, the calyx of the *Alcea*, near its base, had a large protuberant annulus or ring, which was entirely wanting in the *Moschata*. These characters of the calyx alone will, it is presumed, ever be found sufficient to distinguish the two plants when in flower; besides these, the *Moschata* drawn through the hand has the peculiar property of communicating a strong smell of musk, whence its name.

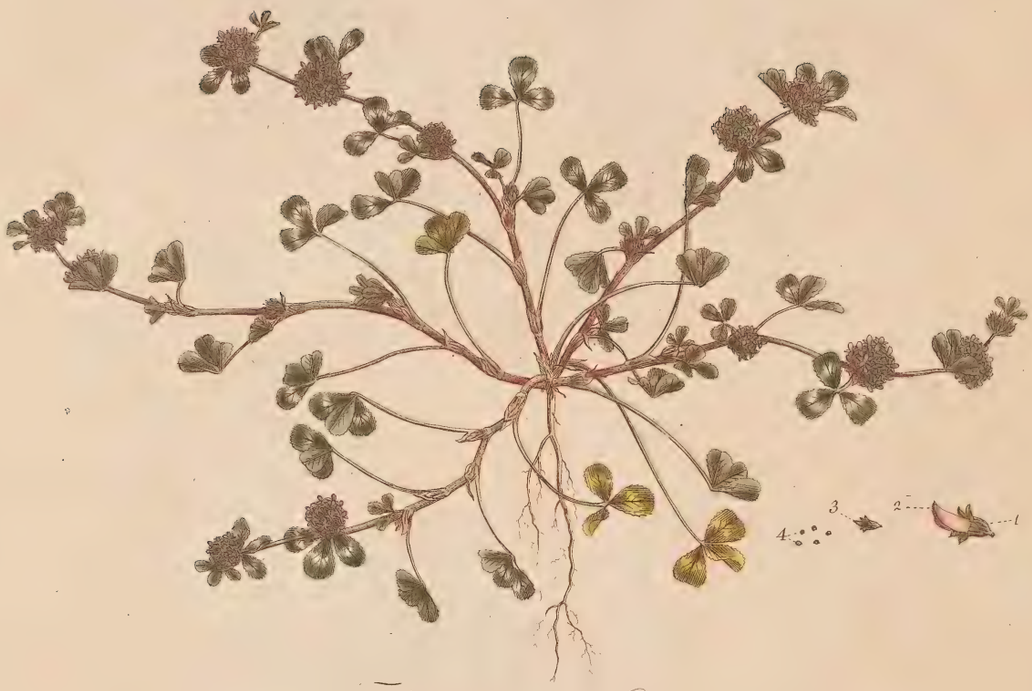
From this relation those Botanists, resident in the counties above mentioned, will be better enabled to judge whether they have the true *Malva Alcea* or not.

The *Moschata* grows very plentifully in the neighbourhood of *Coomb Wood*, and flowers in *June* and *July*.

No particular virtues or uses are attributed to this species; but its beauty entitles it to a place in the garden. Bees resort much to it.



Molva moschata.



Trifolium Glomeratum

TRIFOLIUM GLOMERATUM. ROUND-HEADED TREFOIL.

TRIFOLIUM *Lin. Gen. Pl.* DIADELPHIA DECANDRIA.

Flores ſubcapitati. *Legumen* vix calyce longius, non dehiſcens, deciduum.

Raii Syn. Gen. 23. HERBÆ FLORE PAPILIONACEO SEU LEGUMINOSÆ.

TRIFOLIUM *glomeratum* capitulis ſeſſilibus hemiſphæricis rigidis, calycibus ſtriatis patulis æqualibus. *Lin. Syſt. Vegetab.* p. 573. *Sp. Plant.* p. 1084.

TRIFOLIUM arvenſe ſupinum verticillatum. *Barr. ic.* 882.

TRIFOLIUM parvum rectum, flore glomerato cum unguiculis. *J. B.* II. 378.

TRIFOLIUM cum glomerulis ad caulium nodos rotundis. *Raii Syn. ed.* 3. p. 329. Knotted Trefoil, with round heads. *Hudſon. Fl. Angl. ed.* 2. p. 327.

RADIX annua, ſimplex, fibroſa.
CAULES plures, palmares, procumbentes, teretes, purpuraſcentes, glabri, ramoſi, geniculati, geniculis tumidiuſculis.
STIPULÆ caulinæ membranaceæ, acuminatæ, ramulorum apice ſæpius recurvis.
FOLIA glabra, viridia, macula alba ſæpius notata, minute ſerrata.
FLORES glomerati, rubelli, axillares, capitulis ſeſſilibus, hemiſphæricis.

CALYX: PERIANTHIUM quinquedentatum, perſiſtens, læve, ſtriis decem coloratis notatum, dentibus ovato-acuminatis, patulis. *fig.* 1.

COROLLA longitudine calycis; *vexillum* ſurſum curvatum; *alæ* vexillo duplo breviores, apice paululum ſecedentes; *carina* longitudine fere alarum. *fig.* 2.
PERICARPIUM: LEGUMEN membranaceum, diſpermum, intra calycem. *fig.* 3.
SEMINA minima, flaveſcentia. *fig.* 4.

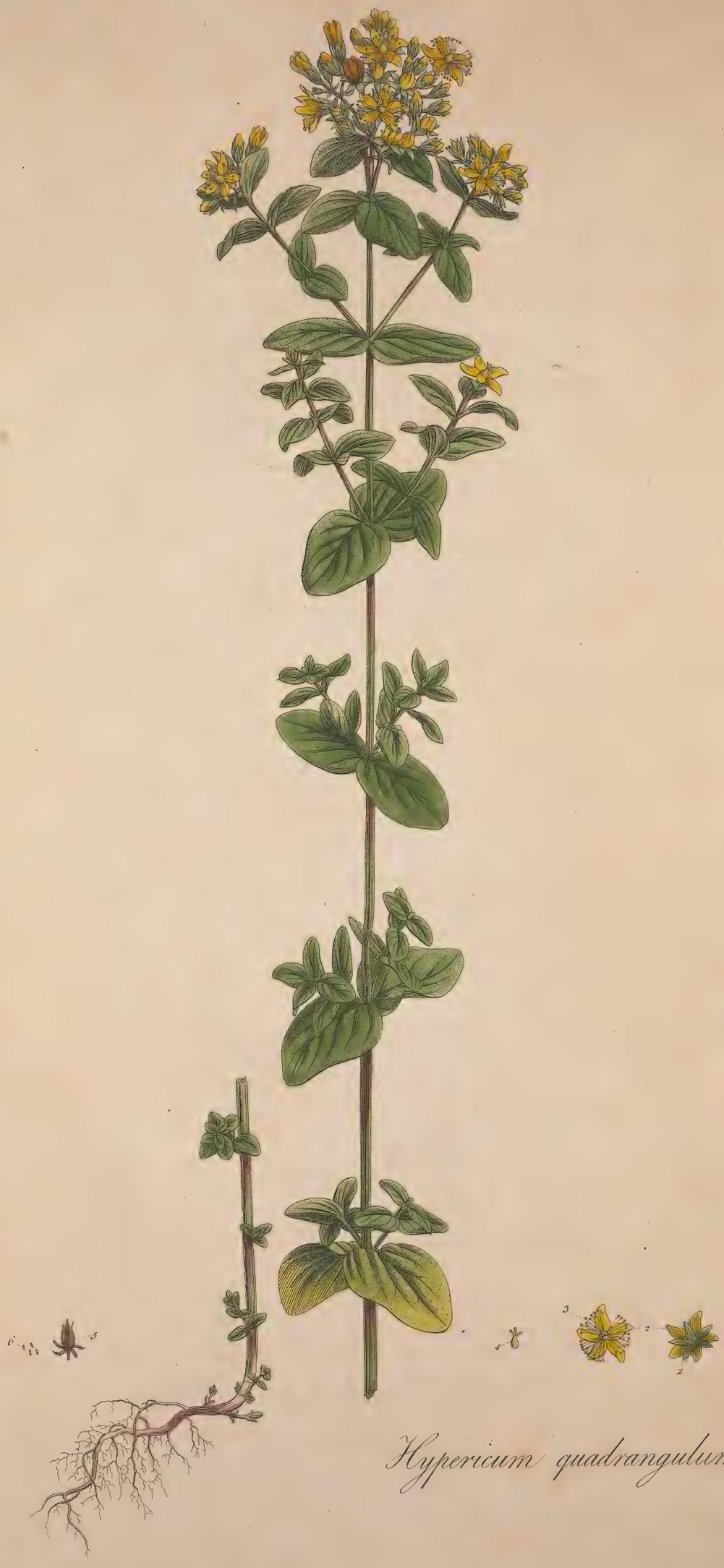
ROOT annual, ſimple and fibrous.
STALKS ſeveral from the ſame root, four or ſix inches in length, procumbent, round, purpliſh, ſmooth, branched and jointed; the joints a little ſwelled.
STIPULÆ of the ſtalk membranous and pointed, thoſe of the branches often bent back at top.
LEAVES ſmooth, green, often marked with a white ſpot, the edge finely ſawed.
FLOWERS cluſtered, of a pink colour, growing in the alæ of the leaves, the little heads ſeſſile, and almoſt globular.
CALYX: a PERIANTHIUM having five teeth, permanent, ſmooth, marked with ten coloured ſtreaks, the teeth broad, pointed, and ſpreading. *fig.* 1.
COROLLA the length of the calyx; *ſtandard* bent upwards; *wings* about half as long as the ſtandard, ſeparating a little at their extremities; *keel* almoſt the length of the wings. *fig.* 2.
SEED-VESSEL: a membranous POD, containing two ſeeds within the calyx. *fig.* 3.
SEEDS very minute, and yellowiſh. *fig.* 4.

The bloſſoms of this ſpecies of *Trefoil* grow in little round balls or cluſters from the alæ of the leaves, and hence it has received its name of *glomeratum*.

It may be diſtinguiſhed from the *ſtriatum*, to which it bears ſome affinity, by being in every part ſmooth, in having its balls much rounder, and the teeth of the calyx ſpreading backward; its bloſſoms alſo are of a brighter red colour.

Not being a plant which ſtrikes the eye much at a diſtance, it is probably often overlooked; with us, however, it is certainly ſcarce. Mr. RAY found it about *Saxmundham* in *Suffolk*; Mr. DOODY about *Blackheath*, and near *Greenhithe*; Mr. HUDSON in the *Iſle of Shepey*; Mr. ROSE about *Norwich*, and Dr. GOODENOUGH on *Hanwell Heath*. I have found it on *Blackheath* for ſeveral years, yet not plentifully; it is fond of a gravelly ſituation, with ſome degree of moiſture; hence it muſt be looked for in the depreſſed parts of the heath. The plants growing near it were the *Trifolium ſtriatum*, *ornithopodioides*, and *Sagina procumbens*; and at no great diſtance *Callitriche autumnalis*, *Montia fontana*, and *Peplis Portula*.

It flowers in June.



Hypericum quadrangulum

Hypericum quadrangulum. Square-stalked St. John's Wort.

HYPERICUM *Lin. Gen. Pl.* Polyadelphia Polyandria.

Cal. 5-partitus, *Petala* 5, *Filamenta* multa in 5 phalanges basi connata. *Capsula.*

Raii Syn. Gen. 24. Herbæ Pentapetalæ Vasculiferæ.

HYPERICUM *quadrangulum* floribus trigynis, caule quadrato herbacea. *Lin. Syst. Vegetab. p.* 584. *Sp. Pl. p.* 1104. *Fl. Suec.* n. 670.

HYPERICUM caule quadrangulari, foliis ovatis perforatis punctatis. *Haller. Hist.* n. 1038.

HYPERICUM *quadrangulum. Scopoli Fl. Carn.* n. 943.

HYPERICUM vulgare minus caule quadrangulo foliis non perforatis. *Bauh. pin.* 272.

HYPERICUM Ascyron dictum caule quadrangulo. *Bauh. Hist.* 3. p. 382.

ASCYRON *Dod. pempt.* 78. *Ger. emac.* 542. *vulgare Parkinson* 575. *Raii Syn.* p. 344. St. Peter's Wort. *Hudson. Fl. Angl. ed.* 2. p. 334. *Lightfoot Fl. Scot.* p. 416.

RADIX perennis, subrepens, fibrosa.
CAULIS pedalis ad sesquipedalem, erectus, ramosus, glaber, rubescens, quadratus, quatuor membranulis, seu alis in secundum longitudinem productis.
FOLIA opposita, sessilia, ovata, obtusa, lævia, saturate viridia, subtus pallidiora, septemnervia, per totam superficiem punctis minutis diaphanis adspersa, margine glandulis nigris subtus præsertim punctata.

RAMI cauli similes, decussatim oppositi.
FLORES lutei, parvi, in summitatibus ramulorum dense paniculati.
RAMULI paniculæ sanguinei.
PEDUNCULI brevissimi.
CALYX: Perianthium quinquepartitum, laciniis lanceolatis, patentibus, nervosis, integerrimis, nudis. *fig.* 1.
COROLLA: Petala quinque, lutea, lineata, glandulis paucis nigris ad oras punctata. *fig.* 2.
STAMINA: Filamenta plurima, in fasciculos vix divisa; Antheræ subrotundæ, flavæ, glandulâ nigrâ notatæ. *fig.* 3.
PISTILLUM: Germen obovatum; Styli tres, patentes, subulati; Stigmata minima, capitata. *fig.* 4.
PERICARPIUM: Capsula fusca, trilocularis, trivalvis. *fig.* 5.
SEMINA plurima, minima, oblonga, nitidiuscula. *fig.* 6.

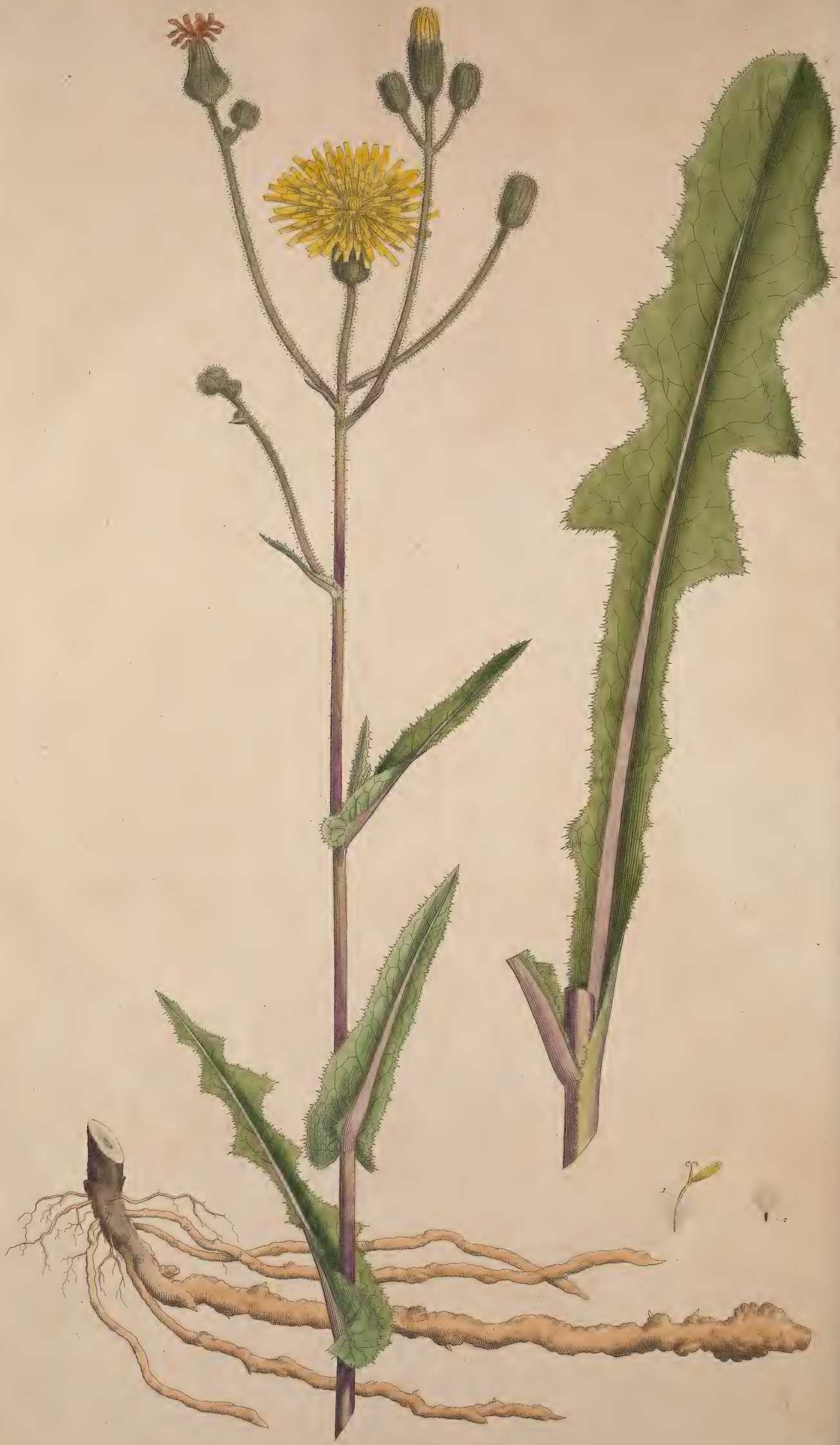
ROOT perennial, somewhat creeping and fibrous.
STALK from a foot to a foot and a half in height, upright, branched, smooth, reddish, square from having four little membranes or wings which run down the stalk.
LEAVES opposite, sessile, ovate, obtuse, smooth, of a deep green colour, paler underneath, strongly marked with seven ribs, the whole surface covered with small transparent dots, and the edge, especially on the under side, dotted with black glands.
BRANCHES like the stalk, alternately opposite.
FLOWERS of a yellow colour, small, growing on the tops of the branches in close panicles.
BRANCHES of the panicle of a deep red or blood colour.
FLOWER-STALKS very short.
CALYX: a Perianthium deeply divided into five segments, which are lanceolate, spreading, rib'd, entire, and free from glands. *fig.* 1.
COROLLA: five yellow Petals, finely grooved, dotted on the edge with a few small black glands. *fig.* 2.
STAMINA: Filaments numerous, scarcely divided into bodies or bundles; Antheræ roundish, yellow, marked with a black gland. *fig.* 3.
PISTILLUM: Germen inversely ovate; Styles three, spreading, tapering; Stigmata very small, forming little heads. *fig.* 4.
SEED-VESSEL: a brown Capsule of three cavities and three valves. *fig.* 5.
SEEDS numerous, very small, oblong, and somewhat shining. *fig.* 6.

The *Saint-John's-Worts* (at least of this country) are a genus of plants which, having strong characteristic marks, and being subject to little variation, give the Botanist no great trouble in their investigation; it is sufficient to say of this species for instance, that it has a square stalk, and it is at once distinguished from all the others.

Caspar Bauhine commits no small error when he describes the leaves of the *quadrangulum* as imperforate, the least attention will shew the transparent dots on the leaves to be fully as numerous, if not so large as those of the *perforatum*; the antient Botanists also absurdly enough distinguished this species from the others by the name of *Ascyron*, or *Saint-Peter's-Wort*, but as it has no pretensions to any generic distinction, we have dropped that name, as tending much to confuse: and while we are censuring the faults of others, we shall mention an error of our own; in describing the *Hypericum perforatum* we pointed out a little black gland visible betwixt the lobes of the antheræ, as characteristic of that species, we now find the same on the *quadrangulum* also.

This species grows very plentifully by the sides of rivulets, also in wet meadows. By the sides of the ditches in *Battersea Meadows* it is particularly common, and flowers in July.

It is seldom used in medicine, the *perforatum* supplying its place.



Sonchus arvensis.

SONCHUS ARVENSIS. CORN SOW-THISTLE.

SONCHUS *Lin. Gen. Pl.* SYNGENESIA POLYGAMIA ÆQUALIS.

Recept. nudum. *Cal.* imbricatus, ventricosus. *Pappus* pilosus.

Raii Syn. Gen. 5. HERBÆ FLORE COMPOSITO NATURÂ PLENO LACTESCENTES.

SONCHUS *arvensis* pedunculis calycibusque hispidis subumbellatis, foliis runcinatis basi cordatis. *Lin. Syst. Vegetab.* p. 594. *Spec. Pl.* 1116. *Fl. Suec.* n. 687.

SONCHUS foliis amplexicaulibus semipinnatis serratis, calycibus hispidis. *Haller. Hist.* 23.

HIERACIUM arvense. *Scopoli Fl. Carniol.* n. 974.

HIERACIUM majus folio sonchi. *Bauhin. Pin.* 126.

SONCHUS repens multis Hieracium majus. *Bauh. Hist.* 2. 170.

SONCHUS arborescens. *Ger. emac.* 294. *Raii Syn.* p. 163. Tree Sow-thistle. *Hudson Fl. Angl.* ed. 2. p. 337. *Lightfoot Fl. Scot.* 427.

RADIX *perennis*, lactiflua, *longe*, *lateque repens*, difficulter eruta.

CAULIS bi seu tripedalis et ultra, erectus, fistulosus, lactescens, subangulatus, lævis, inferne sæpe purpureus, superne ramosus.

FOLIA alterna, runcinata, *basi cordata*, amplexicaulia, lævia, nitidula, subtus pallidiora, spinis mollicellis circa margines donata.

FLORES subumbellati, *magni*, lutei.

PEDUNCULI longi, teretes, *pilis longis luteis*, *globuligeris* vestiti.

CALYX communis priusquam flosculi expanduntur cylindricus, apice truncatus, postea ventricoso-conicus, squamis plurimis, erectis, inæqualibus, carinatis, sordide viridibus, *hirsutissimis*, pilis sicut in pedunculis.

COROLLA composita, imbricata, *Corollulis* hermaphroditis, numerosis, æqualibus.

Propria monopetala, *tubus* albus, tenuis, superne pilosus, limbus luteus, longitudine fere tubi marginibus sæpe subinvolutis, quinquedentatus. *fig.* 1.

ANTHERÆ in tubum flavum, subangulatum, coalitæ.

STIGMATA duo, filiformia, reflexa.

SEMEN ovato-oblongum, badium, sulcatum, angulis ad lentem transversim rugosis, papposum, pappo simplici, sessili. *fig.* 2.

ROOT *perennial*, milky, *creeping far and wide*, with difficulty eradicated.

STALK from two to three feet high, or more, upright, hollow, milky, somewhat angular, smooth, often purple below, above branched.

LEAVES alternate, like those of Dandelion, *heart shaped at the base*, embracing the stalk, smooth, shining, paler on the under side, the edges furnished with softish prickles.

FLOWERS growing in a kind of umbel, *large* and yellow.

FLOWER-STALKS long, round, covered with long, yellow, hairs, bearing globules at their extremity.

CALYX common to all the florets, before their expansion, cylindrical and cut off at the extremity, afterwards bellying at the base and conical, the scales numerous, upright, unequal, keeled, of a dirty green colour, and extremely hairy, the hairs similar to those on the foot-stalks.

COROLLA compound and imbricated, the Florets hermaphrodite, numerous and equal.

Each Floret monopetalous, the *tube* white, slender, hairy above, the flat part yellow, almost the length of the tube, the edges frequently rolled inward, furnished with five teeth. *fig.* 1.

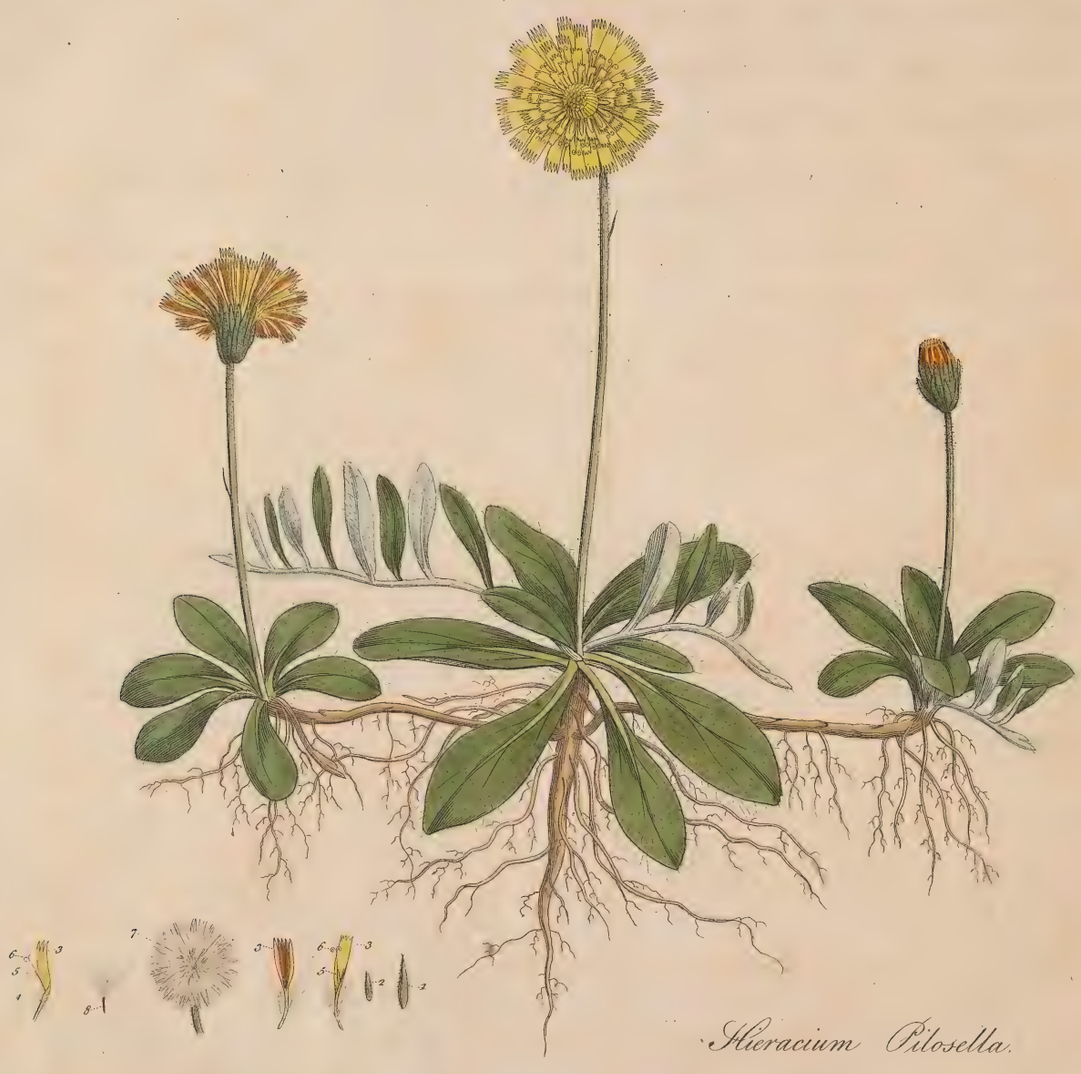
ANTHERÆ united into a yellow, and somewhat angular tube.

STIGMATA two, thread-shaped, reflexed.

SEED of an oblong egg-shape, bay colour, and grooved, the angles transversely wrinkled when magnified, downy, the down simple, and sessile. *fig.* 2.

This species of *Sonchus* is properly termed *arvensis*, being commonly found in corn fields, in which its large yellow blossoms, towering above the corn, render it a very conspicuous plant; these alone are sufficient to distinguish it from the common Sow-thistle, it has besides two other very distinct characters; the one a creeping root, whereby it becomes very noxious to the husbandman; the other, numerous yellow hairs, with little globules at their extremities, thick spread over the calyces and flower-stalks.

It blossoms in *July* and *August*; many of its seeds prove abortive.



Hieracium Pilosella.

HIERACIUM PILOSELLA. MOUSE-EAR.

HIERACIUM *Lin. Gen. Pl.* SYNGENESIA POLYGAMIA ÆQUALIS.

Recept. nudum. *Cal.* imbricatus, ovatus. *Pappus* ſimplex, ſeſſilis.

Raii Syn. Gen. 6. HERBÆ FLORE COMPOSITO NATURA PLENO LACTESCENTES.

HIERACIUM *Piloſella* foliis ovatis integerrimis tomentoſis, ſtolonibus repentibus, ſcapo unifloro. *Lin. Syſt. Vegetab.* p. 597. *Sp. Pl.* p. 1125. *Fl. Suec.* n. 697.

HIERACIUM caule unifloro, ſtolonibus reptantibus, foliis petiolatis, ovatis, longe piloſis, ſubtus tomentoſis. *Haller. Hiſt.* n. 53.

HIERACIUM *Piloſella.* *Scopoli Fl. Carniol.* n. 966.

PILOSELLA major repens hirſuta. *Bauh. Pin.* 262.

PILOSELLA minor vulgaris repens. *Parkinſon*, 690.

PILOSELLA repens. *Ger. emac.* 638. *Raii Syn.* p. 170. Common creeping Mouſe-ear. *Hudſon Fl. Angl.* p. 343. *Lightfoot Fl. Scot.* p. 436.

RADIX perennis, fibroſa, fibris pallide fuſcis.

FOLIA petiolata, ovata, ſæpe oblonga, integerrima, ſuperne virentia, ſcabriuſcula, inferne alba, tomentoſa, utrinque pilis longis obſita, e centro foliorum ad baſin caulis, oriuntur ſtolones teretes, repentes, hirſuti, foliofi, foliis utplurimum lanceolatis.

SCAPUS: ex una planta ſeu roſula exſurgit ſcapus plerumque ſolitarius, palmaris, ſpithamæus et ultra, erectus, teres, nudus, fiſtuloſus, inferne piloſus, ſuperne hirſutus, uniflorus.

FLORES pallide lutei, ſeu ſulphurei, extimis floſculis inferne purpuraſcentibus.

CALYX communis imbricatus, ſquamis pluribus, linearibus, valde inequalibus. *fig.* 1, 2. hirſutis, pilis nigricantibus, ad lentem globiferis.

COROLLA compoſita, imbricata, uniformis; *Corollulis* hermaphroditis, numeroſis, æqualibus; *propria* monopetala, *Tubus* pappo longior, albus, lanatus. *Limbus* planus, quinquedentatus longitudine tubi. *fig.* 3, 4.

STAMINA: FILAMENTA quinque capillaria, breviſſima. ANTHERÆ in tubum cylindricum, flavum coalitæ. *fig.* 5.

PISTILLUM: GERMEN oblongum. STYLUS filiformis, longitudine ſtaminum. STIGMATA duo, revoluta. *fig.* 6.

SEMEN oblongum, nigricans, ſtriatum. *Pappus* ſemine duplo longior, ſeſſilis, ſimplex, *fig.* 7, 8.

ROOT perennial, fibrous, the fibres of a pale brown colour.

LEAVES ſtanding on foot-ſtalks, ovate, often oblong, perfectly entire, on the upper ſide green and roughiſh, on the under ſide white and downy, on both ſides beſet with long hairs, from the center of the leaves, at the baſe of the ſtalk, ſpring one or more round, creeping, hirſute, leafy runners with leaves for the moſt part lanceolate.

STALK: from a ſingle plant or off-ſet ariſes generally one ſolitary ſtalk, from four to ſeven inches or more in height, upright, round, naked, hollow, below hairy, above hirſute, ſupporting a ſingle bloſſom.

FLOWERS of a pale yellow or ſulphur colour, the outermoſt florets purpliſh on the under ſide.

CALYX: the common Calyx imbricated, the ſcales numerous, linear, very unequal. *fig.* 1, 2. hirſute, the hairs blackiſh, and when magnified globular at the extremity.

COROLLA compound, imbricated and uniform, the *Florets* hermaphrodite, numerous, equal, and monopetalous. The *Tube* longer than the pappus, white and woolly. The *Limb* flat, having five teeth, the length of the tube. *fig.* 3, 4.

STAMINA: five capillary FILAMENTS, very ſhort. ANTHERÆ united in a cylindrical, yellow tube. *fig.* 5.

PISTILLUM: GERMEN oblong. STYLE filiform, the length of the ſtamina. STIGMATA two, rolled back. *fig.* 6.

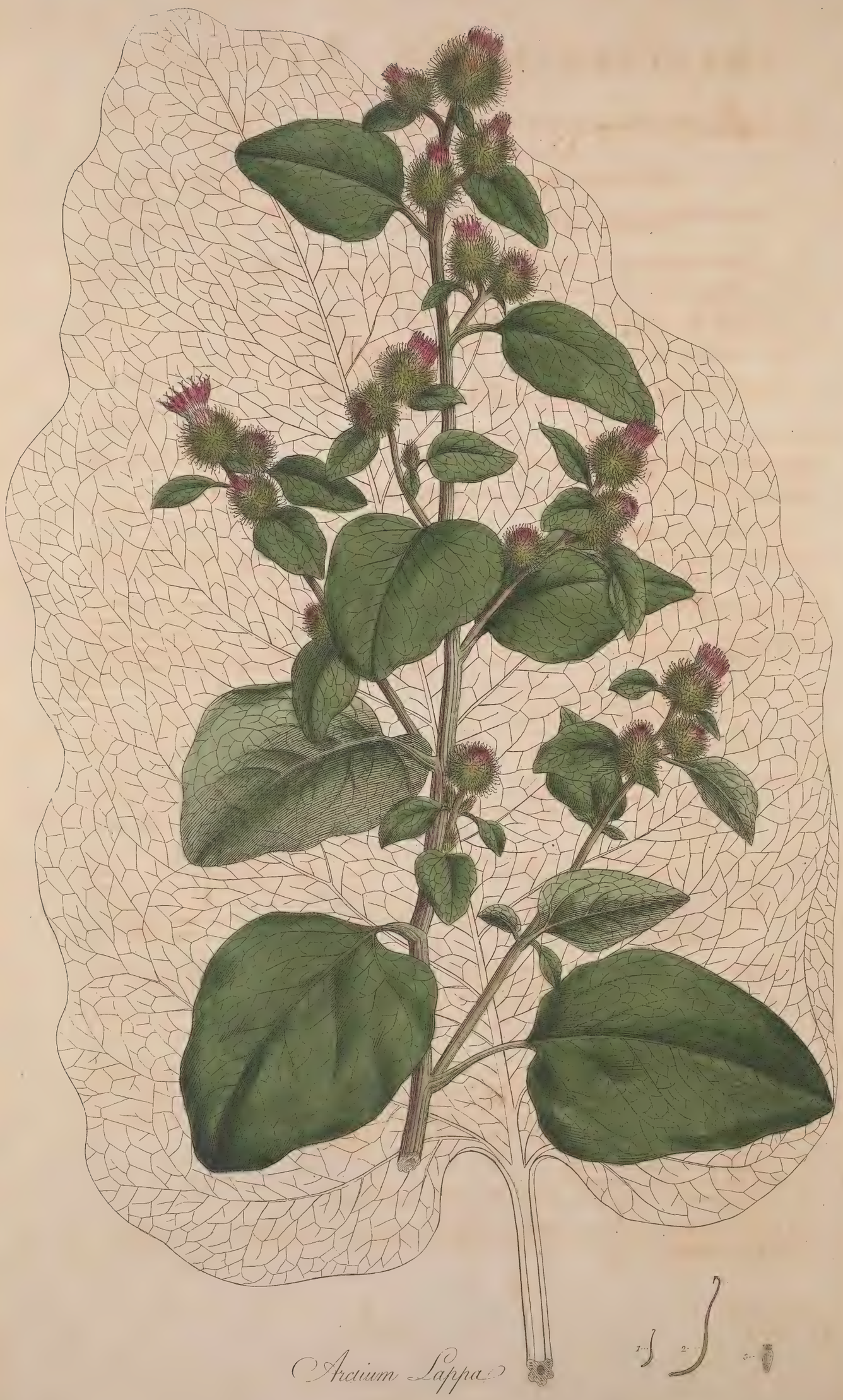
SEED oblong, blackiſh, ſtriated. *Down* twice the length of the ſeed, ſeſſile, and ſimple. *fig.* 7, 8.

The ancient botaniſts fancied ſome ſimilitude betwixt the hairy leaves of this plant and a mouſe's ear, whence its name.

Of the whole genus of Hawk-weed this is the moſt univerſally common in this country. It delights in dry and expoſed ſituations, which are frequently rendered barren by long continued drought, the ſunny bank, the lifeleſs wall, and arid heath, are often enamelled with its lively flowers, which appear in *May* and *June*, and frequently produce a ſecond crop late in the ſummer.

It has been received into the ſhops under the name of *Auricula muris*, and conſidered as poſſeſſing an aſtringent quality; but at preſent, in this reſpect, is but little regarded.

SIMON PAULI diſcovered on its roots ſmall tubercles, which he conſidered as the eggs of an unknown inſect; theſe have ſince proved to be a *Coccus (Coccus Piloſella, Lin.)* nearly related to the *Coccus polonicus*, an inſect uſed in dying. We have not heard of its having been obſerved here.



Arctium Lappa.

ARCTIUM LAPPA. BURDOCK.

ARCTIUM *Lin. Gen. Pl.* SYNGENESIA POLYGAMIA ÆQUALIS.

Cal. globosus; squamis apice hamis inflexis.

Raii Syn. Gen. 9. HERBÆ FLORE EX FLORIBUS FISTULARIBUS COMPOSITO SIVE CAPITATÆ.

ARCTIUM *Lappa* foliis cordatis inermibus petiolatis. *Lin. Syst. Vegetab.* p. 603. *Sp. Pl.* 1143. *Fl. Suec.* n. 712.

LAPPA *Haller Hist.* n. 161.

LAPPA major seu Arctium Dioscoridis. *Bauh. Pin.* 198.

PERSONATA sive Lappa major aut Bardana. *J. B.* III. 570.

BARDANA major. *Ger. emac.* 809.

BARDANA vulgaris major. *Park.* 1222. *Raii Syn.* 197. Great Burdock, Clot-burr. *Hudson. Fl. Angl. ed.* 2. p. 348. *Lightfoot Fl. Scot.* p. 197. *Oeder Fl. Dan.* t. 642.

RADIX biennis, simplex, profunde in terram descendens, foris nigricans, intus alba.

CAULIS erectus, tripedalis et ultra, crassitudine pollicis, ad basin usque ramosissimus, teres, striato-sulcatus, villosus, purpurascens.

FOLIA amplissima, petiolata, alterna, cordata, subtus albida, venosa, margine subundulatâ, crenulatâ.

PETIOLI foliis breviores, sulcato-angulati, villosi.

FLORES purpurei, pedunculati, erecti, ramulis alterne dispositi, superne in capitula laxa collecti.

CALYX communis globosus, imbricatus, glaber, filis araneosis intertextus, squamis exterioribus apice hamatis, hamis nitidis, acutissimis, subinflexis, *fig.* 1, 2. interioribus linearibus, apice vivide purpureis, simplicibus, sine hamis.

COROLLA composita, calyce longior, tubulata, *propria* infundibuliformis, tubo filiformi, albo, limbo tubuloso-campanulato, purpureo, quinque-fido, acuto, erecto.

STAMINA: FILAMENTA quinque alba, capillaria; ANTHERÆ cærulescentes, aut violaceæ, in tubum extra corollam coalitæ.

PISTILLUM: GERMEN subtriquetrum, album, incurvatum; STYLUS albus, staminibus longior, utrinque sulcatum; STIGMA bifidum.

SEMINA oblonga, basi attenuata, punctis prominentibus coronata, compressa, subangulata, reticulato-rugosa, exterioribus incurvatis. *Pappus* obsoletus, rigidulus. *fig.* 3.

ROOT biennial, simple, penetrating deeply into the earth, externally blackish, internally white.

STALK upright, three feet high and more, the thickness of one's thumb, branched quite down to the bottom, round, grooved, but not deeply, hoary and purplish.

LEAVES very large, standing on footstalks, alternate, heart-shaped, whitish underneath, veiny, the edge somewhat waved and notched.

LEAF-STALKS shorter than the leaves, angular or grooved, and hoary.

FLOWERS purple, standing on footstalks, upright, disposed alternately on the branches, and at the tops of them collected into loose heads.

CALYX common to all the florets globular, imbricated, surface shining, cobwebby, the exterior scales hooked at the extremity, hooks shining, very sharp, and somewhat bent in, *fig.* 1, 2. inner scales linear, tops of a bright purple colour, simple, without hooks.

COROLLA compound, longer than the calyx, tubular, *Florets* funnel-shaped, tube filiform, white, limb tubular, and somewhat bell-shaped, of a purple colour, divided into five upright, pointed segments.

STAMINA: five white capillary FILAMENTS; ANTHERÆ blueish, or violet coloured, united into a tube, which projects beyond the corolla.

PISTILLUM: GERMEN somewhat three-cornered, white, bending inward; STYLE white, longer than the stamina, grooved on each side; STIGMA bifid.

SEEDS oblong, tapering towards the base, crowned with small prominent points, flattened, somewhat angular, surface wrinkly, in the form of net-work, outermost seeds bending inward. *Down* obsolete, somewhat rigid. *fig.* 3.

The antient botanists divided the Burdock, which they distinguished by the several names of *Lappa* * *Personata*, and *Arctium* or *Arcium* into two principal species, viz. the *Lappa major Arcium Diosc. C. B.*; and the *Lappa major montana capitulis tomentosis sive Arctium Diosc. C. B.*; both of which are admirably figured by MATTHIOLUS on wood, as indeed are most of the medicinal plants; later botanists have made the species much more numerous; in the third edition of RAY's *Synopsis* we find no less than six species and one variety, viz.

1. *Lappa major capitulo glabro maximo.*
2. *Lappa major Arcium Dioscoridis.*
3. *Lappa major capitulis parvis glabris.*
4. *Lappa major montana capitulis tomentosis; sive Arctium Dioscoridis.*

* *Lappa* dici potest vel ἀπὸ τȣ̃ λαβεῖν prehendere vel ἀπὸ τȣ̃ λάπτειν, i. e. lambere, quod prætereuntium vestibus adhæreat. *Personata* autem dicitur, quod folia ejus prægrandia veluti larvæ aut personæ vice obtendi solita essent. Veteribus *Arction* aut *Arcion* dicta creditur, verum ratio hominis ignoratur. *Raii Hist.* p. 332.

5. *Lappa*

5. *Lappa major montana, capitulis minoribus, rotundioribus & magis tomentosis.*
6. *Lappa major ex omni parte minor, capitulis parvis elegante reticulatis.*
Lappa vulgaris major capitulis foliosis. Var.

All these are however considered by the botanists of the present day as one species, to which may be added a variety with white flowers, which often occurs.

The Burdock is a very common plant by way sides, and in waste places, and flowers in July and August.

In the size of its leaves it may sometimes dispute the palm with the Butterburr; painters often introduce them in the foregrounds of their pictures, which they are admirably well calculated to embellish.

No sort of cattle relish the foliage of this plant, but snails, slugs, and many species of caterpillars feed on it deliciously; the pith produces its particular moth, which does not appear to be described by LINNÆUS, but is most accurately figured by SEPP*, and called by Aurelians the *Mottled Orange*, the caterpillar of this moth changes into chrysalis about the beginning of August, during which month it may be found in that state by splitting the stalks of such plants as appear stinted in their growth; the moth comes out about the end of August, and is one of those whose bodies are extremely apt to become greasy, to prevent which the body should be carefully opened on the under side, and its contents taken out previous to its being placed in the cabinet. A small larva, not peculiar to this plant, feeds also betwixt the coats of the leaf.

The seeds, like those of the thistle tribe, are sought for by several of the feathered songsters, and are even recommended to fatten poultry †.

The microscope informs us, *vide fig.* 1, 2. why the burrs adhere so closely to one's cloaths, and why boys, who divert themselves by throwing them at one another, have so much difficulty in extricating them from their hair.

As a weed it is not so formidable as it appears to be, being a biennial the husbandman has only to destroy its seedlings.

The root and stalks are esculent and nutritive; the stalks for this purpose should be cut before the plant flowers, the rind peeled off, and then boiled and served up in the manner of Chardoons, or eaten raw, as a sallad, with oil and vinegar. *Lightfoot Fl. Scot.* p. 446.

The seeds have a bitterish, subacrid taste, they are recommended as very efficacious diuretics, given either in the form of emulsion or in powder to the quantity of a drachm. The roots taste sweetish, with a slight austerity and bitterishness; they are esteemed aperient, diureric and sudorific, and said to act without irritation, so as to be safely ventured on in acute disorders. Decoctions of them have of late been used in rheumatic, gouty, and other disorders, and preferred by some to those of Sarsaparilla. LEWIS's *Disp.* p. 101.

* *Nederlandsche Insecten.* t. 3.

† *Stirp. indig. Aragon.* p. 113.

CICHORIUM INTYBUS. BLUE SUCCORY.

CICHORIUM *Lin. Gen. Pl.* SYNGENESIA POLYGAMIA ÆQUALIS.
Recept. ſubpaleaceum. *Cal.* calyculatus. *Pappus* ſub-5-dentatus, obſolete piloſus.
Raii Syn. Gen. 6. HERBÆ FLORE COMPOSITO NATURA PLENO LACTESCENTES.
CICHORIUM *Intybus* floribus geminis ſeſſilibus, foliis runcinatis. *Lin. Syſt. Vegetab.* p. 602. *Sp. Pl.* p. 1142. *Fl. Suec.* n. 711.
CICHORIUM foliis pinnatis, pinnis triangularibus dentatis, floribus ſeſſilibus. *Haller Hiſt.* 1.
CICHORIUM *Intybus. Scopoli Fl. Carn.* n. 991.
CICHORIUM ſylveſtre ſive officinarum. *Bauhin Pin.* 126.
INTYBUS ſylveſtris. *Camer. epit.* 285.
CICHORIUM ſylveſtre. *Ger. emac.* 284. *Parkinſ.* 776. *Raii Syn.* p. 172. Wild Succory. *Hudſon Fl. Angl. ed.* 2. p. 348.

RADIX perennis, externe luteſcens, fuſiformi-cylindrica, etiam ramoſa, craſſitie digiti, ſpithamæa, ſæpe pedalis, deſcendens, fibrilloſa, fibrillis ſparſis, lacteſcens, lacte albo.

CAULIS pedalis, ad tripedalem, erectus, rigidus, tortuoſus, ſcabridus, plerumque ramoſiſſimus.

FOLIA radicalia plurima, taraxaci, ſubaſpera, caulina læviora, ſubamplexicaulia, alterna.

FLORES plerumque bini, ſpecioſi, ſeſſiles, e foliorum ſupremorum alis.

CALYX *communis* calyculatus, ſquamis exterioribus quinque, ovatis, acutis, ſubpatentibus, pilis glanduliferis ciliatis; interioribus octo circiter, lineari-lanceolatis, æqualibus, cylindrum anguloſum, viſcoſum, conſtituentibus. *fig.* 1, 2, 3, 4.

COROLLA compoſita, plana, uniformis, Corollulis hermaphroditis, viginti circiter, cæruleis, *Tubus* cylindricus, brevis, albus, apice dilatatus et piloſus; *Limbus* planus, quinque-dentatus, ſubtus nervoſus et villoſus. *fig.* 5.

STAMINA: FILAMENTA quinque alba, capillaria, manifeſte libera; ANTHERÆ ſaturate cæruleæ, in tubum cylindricum, angulatum coalitæ. *fig.* 6.

PISTILLUM: GERMEN ſubconicum, album, pilis breviſſimis coronatum; STYLUS filiformis, albus; STIGMATA duo, cærulea, revoluta. *fig.* 7.

SEMINA plurima, in fundo calycis, nuda, ſubpentagona, margine pilis breviſſimis ciliata. *fig.* 8. auct.

ROOT perennial, externally of a yellowiſh colour, tapering very gradually to a point, alſo branched, the thickneſs of the finger, a ſpan, and often a foot in length, ſtriking downward, furniſhed with few ſmall fibres, milky, the milk of a white colour.

STALK from one to three feet in height, upright, rigid, crooked, roughiſh to the touch, and generally very much branched.

LEAVES at the root numerous, like thoſe of Dandelion, roughiſh, thoſe of the ſtalk ſmoother, alternate, partly ſurrounding the ſtem.

FLOWERS growing generally in pairs, ſhowy, ſeſſile, ſpringing from the alæ of the uppermoſt leaves.

CALYX common to many florets, compoſed of a double ſet of ſquamæ or leaves, the outermoſt of which are five in number, ovate, pointed, ſomewhat ſpreading, edged with glandular hairs, the innermoſt about eight, narrow, equal, forming an angular, clammy cylinder. *fig.* 1, 2, 3, 4.

COROLLA compound, flat, regular, Florets hermaphrodite, abont twenty in number, of a blue colour; *Tube* cylindrical, ſhort, white, dilated at top and hairy; *Limb* flat, with five teeth at the extremity, on the under ſide rib'd and villous. *fig.* 5.

STAMINA: five FILAMENTS, of a white colour, very ſlender, manifeſtly unconnected; ANTHERÆ of a deep blue colour, forming an angular, cylindrical tube. *fig.* 6.

PISTILLUM: GERMEN ſomewhat conic, crowned with very ſhort hairs; STYLE thread-ſhaped, white; STIGMATA two, of a blue colour, and rolled back.

SEEDS numerous in the bottom of the calyx, naked, irregularly five cornered, the edge crowned with very ſhort hairs. *fig.* 8. magnified.

That beautiful plants are often noxious weeds, agriculturally conſidered, we have already noticed in the Biſtort, the field Convolvulus, the corn Poppy, and the perennial Perſicaria; the blue Succory adds another to the catalogue.

Batterſea Fields, which exhibit bad huſbandry in perfection, produce this plant moſt plentifully; it flowers in *July*, *Auguſt* and *September*; like the docks it increaſes itſelf much by ſeed, and is to be extirpated in the ſame manner.

Some botaniſts have erroneouſly ſuppoſed this ſpecies of Succory to be the Endive in its wild ſtate, but its ſtrong perennial root ſufficiently evinces the contrary. The *Cichorium Endivia*, which is an annual or biennial, and grows wild in the Corn-fields of *Spain*, together with the *Intybus**, is undoubtedly the parent of the cultivated *Endive*, it is not ſo clear which of the two is the plant celebrated by HORACE as conſtituting a part of his ſimple diet,

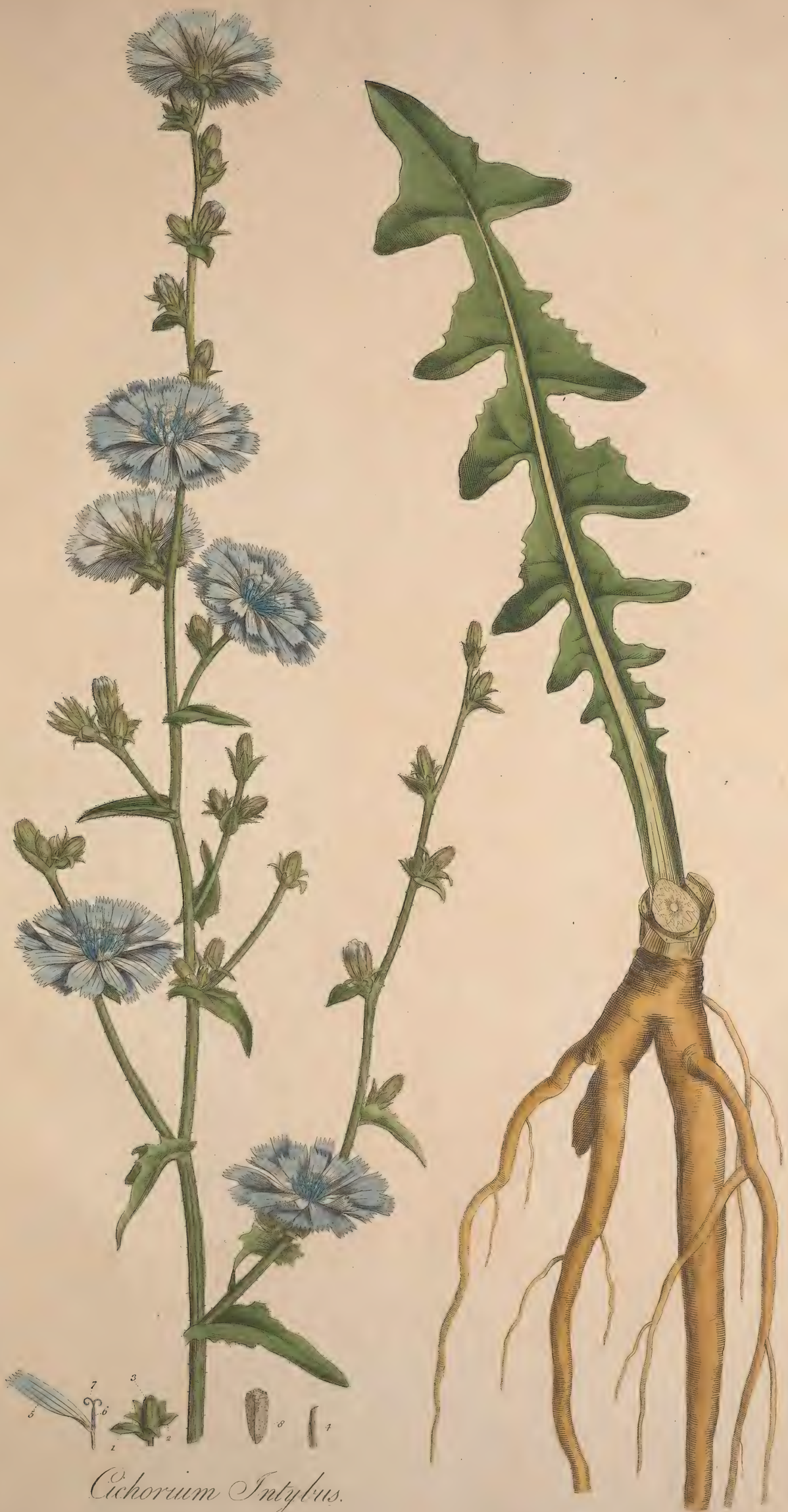
—— —— *me paſcunt Olivæ*
Me Cichorea, leveſque Malvæ.

It is not unfrequently found wild with white flowers, and it has been diſcovered that the fine blue colour of the petals is convertible into a brilliant red by the acid of Ants†; Mr. MILLER the Engraver aſſured me, that in *Germany* the boys often amuſed themſelves in producing this change of colour by placing the bloſſoms in an ant hill.

Wild Succory is an uſeful detergent, aperient, and attenuating medicine; acting without much irritation, tending rather to cool than heat the body, and at the ſame time corroborating the tone of the inteſtines. The juice taken in large quantities ſo as to keep up a diarrhæa, and continued for ſome weeks, has been found to produce excellent effects in ſcorbutic and other chronical diſorders. *Lewis's Diſp.* p. 125.

* *D'Aſſo Stirp. Arragon*, p. 113.

† *Trag. ad Brunfels.* II. p. 274.



Cichorium Intybus.

Bidens tripartita. Trifid Hemp-Agrimony.

BIDENS *Lin. Gen. Pl.* Syngenesia Polygamia Æqualis.

Recept. paleaceum. *Pappus* aristis erectis scabris. *Cal.* imbricatus. *Cor.* rarius flosculo uno alterne radiante instruitur.

Raii Syn. Gen. 8. Herbæ flore composito discoide seminibus pappo destitutis corymbiferæ dictæ.

BIDENS *tripartita* foliis trifidis, calycibus subfoliosis seminibus erectis. *Lin. Syst. Vegetab.* p. 610. *Sp. Pl.* 1165. *Fl. Suec.* 283. *Lappon.* p. 234.

BIDENS foliis petiolatis trilobatis et quinque lobatis serratis floribus circumvallatis. *Haller Hist.* n. 121.

BIDENS *tripartita.* *Scop. Fl. Carn.* n. 1090.

VERBESINA seu Cannabina aquatica flore minus pulchro, elatior et magis frequens. *J. B.* II. 1073.

CANNABINA aquatica folio tripartito diviso. *Bauh. pin.* 321.

EUPATORIUM cannabinum fœmina, *Ger. emac.* 711.

EUPATORIUM aquaticum duorum generum. *Parkinf.* p. 595. *Raii Syn.* p. 187. Water Hemp-Agrimony, with a divided Leaf. *Hudson. Fl. Angl. ed.* 2. p. 355. *Lightfoot Fl. Scot.* p. 461.

RADIX annua, simplex, fibrosa, fibris albidis.

CAULIS pedalis ad tripedalem, erectus, ramosus (ramis oppositis), teretiusculus, modice sulcatus, rubens, solidus, glaber, scabriusculus.

FOLIA opposita, petiolata, connata, glabra, tripartita, aut etiam quinque partita, laciniis profunde serratis, suprema indivisa, dentato-serrata, aut etiam integra, pilis haud infrequenter ciliata.

FLORES lutei, terminales, subnutantes.

CALYX: Foliola plura, plerumque integra, lanceolata, ciliata, flores involucri instar ambientia; squamæ calycis communis ovato lanceolatæ, integræ, lineis plurimis, nigricantibus, parallelis, pictæ, marginibus flavescentibus. *fig.* 1.

COROLLULÆ hermaphroditæ, tubulosæ, infundibuliformes, luteæ, striis quinque purpureis externe notatæ; limbo quinquefido, suberecto. *fig.* 2.

STAMINA: Filamenta quinque capillaria; Antheræ in tubum cylindricum coalitæ. *fig.* 3.

PISTILLUM: Germen subcompressum, angulatum, superne latius, aristis tribus plerumque instructum, unicâ breviore; *fig.* 3. Stylus simplex, longitudine staminum; Stigmata duo oblonga, reflexa. *fig.* 4, 5.

SEMEN oblongum, compressum, angulatum, fuscum, aristis duabus seu tribus retrorsum scabro hamatis instructum. *fig.* 6.

RECEPTACULUM paleaceum, planum, paleis lanceolato-linearibus, lineatis, deciduis. *fig.* 7.

ROOT annual, simple and fibrous, fibres whitish.

STALK from one to three feet high, upright, branched, (the branches opposite), roundish, moderately grooved, of a reddish colour, solid, smooth to appearance, but slightly rough to the touch.

LEAVES opposite, standing on footstalks, which unite at the base, smooth, divided into three, and sometimes five segments, which are deeply serrated, the uppermost leaves undivided, either indented at the edge, or entire, and not unfrequently edged with hairs.

FLOWERS yellow, terminal, drooping a little.

CALYX: several, small, lanceolate leaves, generally entire, but edged with hairs surrounding the flowers like an involucrum; the scales of the calyx common to all the florets are ovate and pointed, entire at the edge, and painted with numerous blackish lines, the edges are yellowish. *fig.* 1.

FLORETS hermaphrodite, tubular, funnel-shaped, of a yellow colour, marked externally with three purplish stripes, the limb divided into five segments, which are nearly upright. *fig.* 2.

STAMINA: five capillary Filaments; Antheræ united into a cylindrical tube. *fig.* 3.

PISTILLUM: Germen flattish, angular, broadest at top, generally furnished with three awns, of which one is shorter than the rest; *fig.* 3. Style simple, the length of the stamina; Stigmata two, oblong, turning back. *fig.* 4, 5.

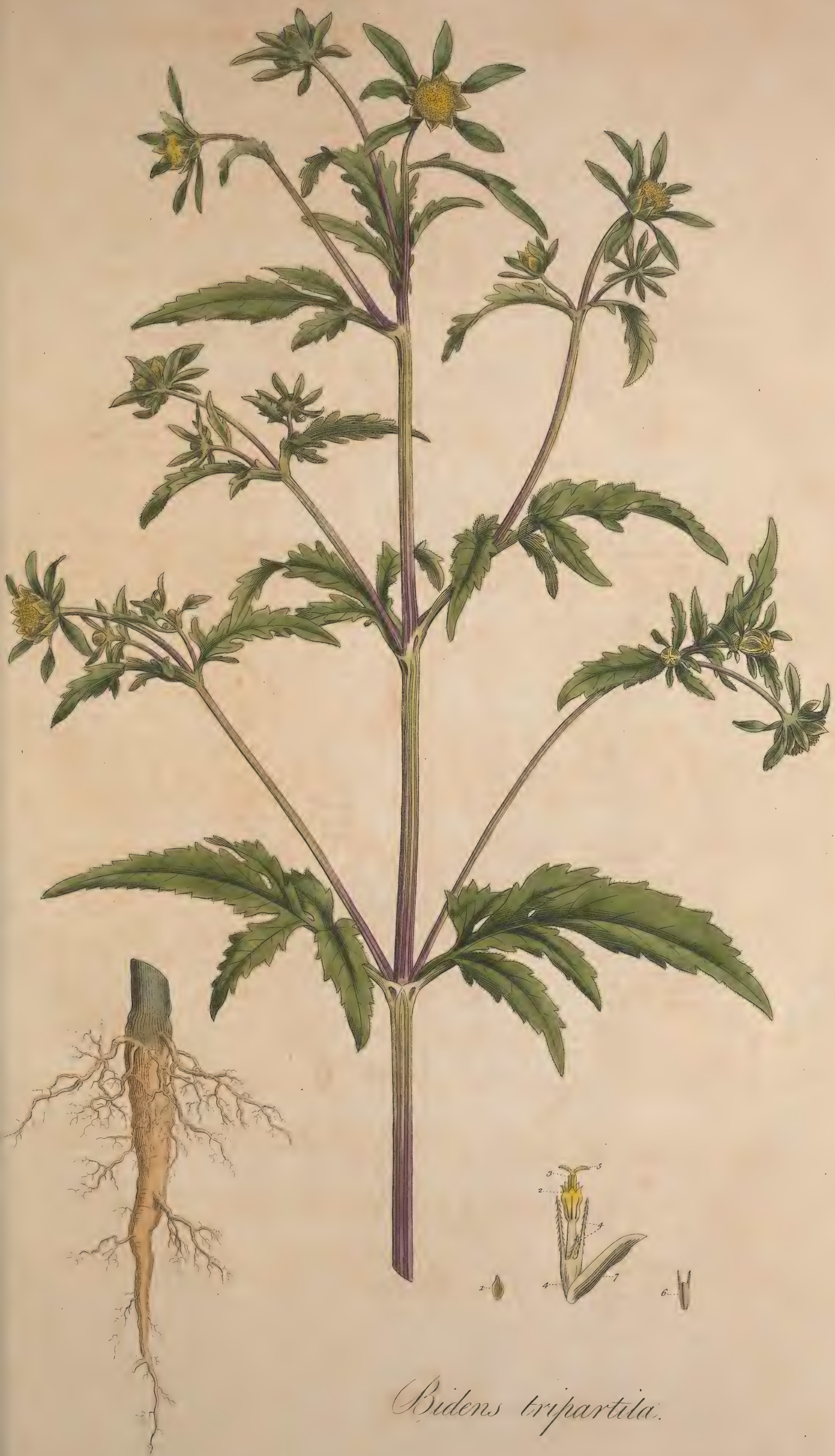
SEED oblong, flat, angular, brown, furnished with two or three awns, which are hooked or barbed downward. *fig.* 6.

RECEPTACLE chaffy and flat, scales or chaff, narrow, marked with lines and deciduous. *fig.* 7.

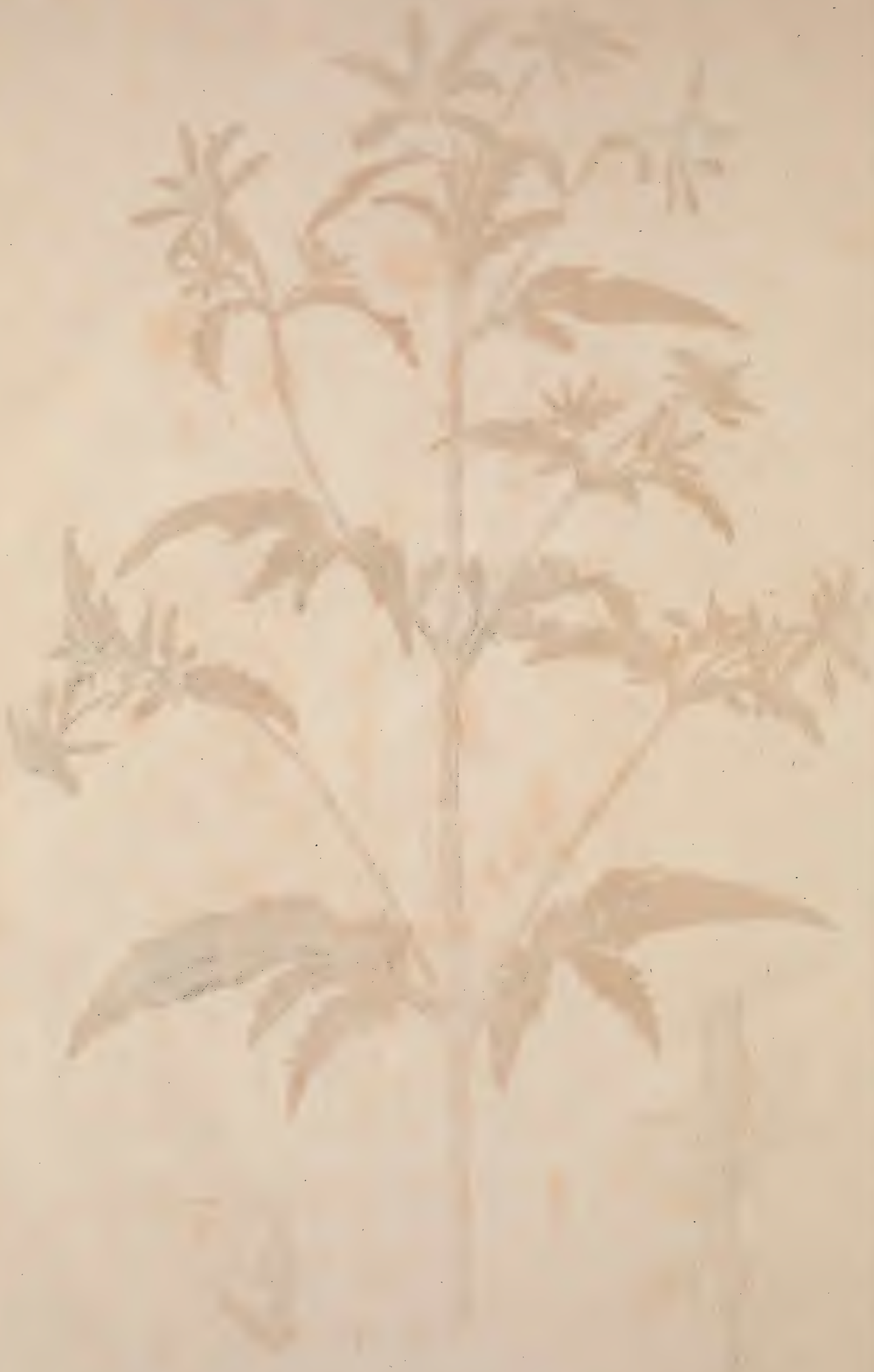
This species of *Bidens* is much more common than the *cernua*, as that is generally found in the water, this more frequently occurs on the borders of ponds, rivulets, &c. where it flowers in the months of August and September, at the close of which it ripens its seeds.

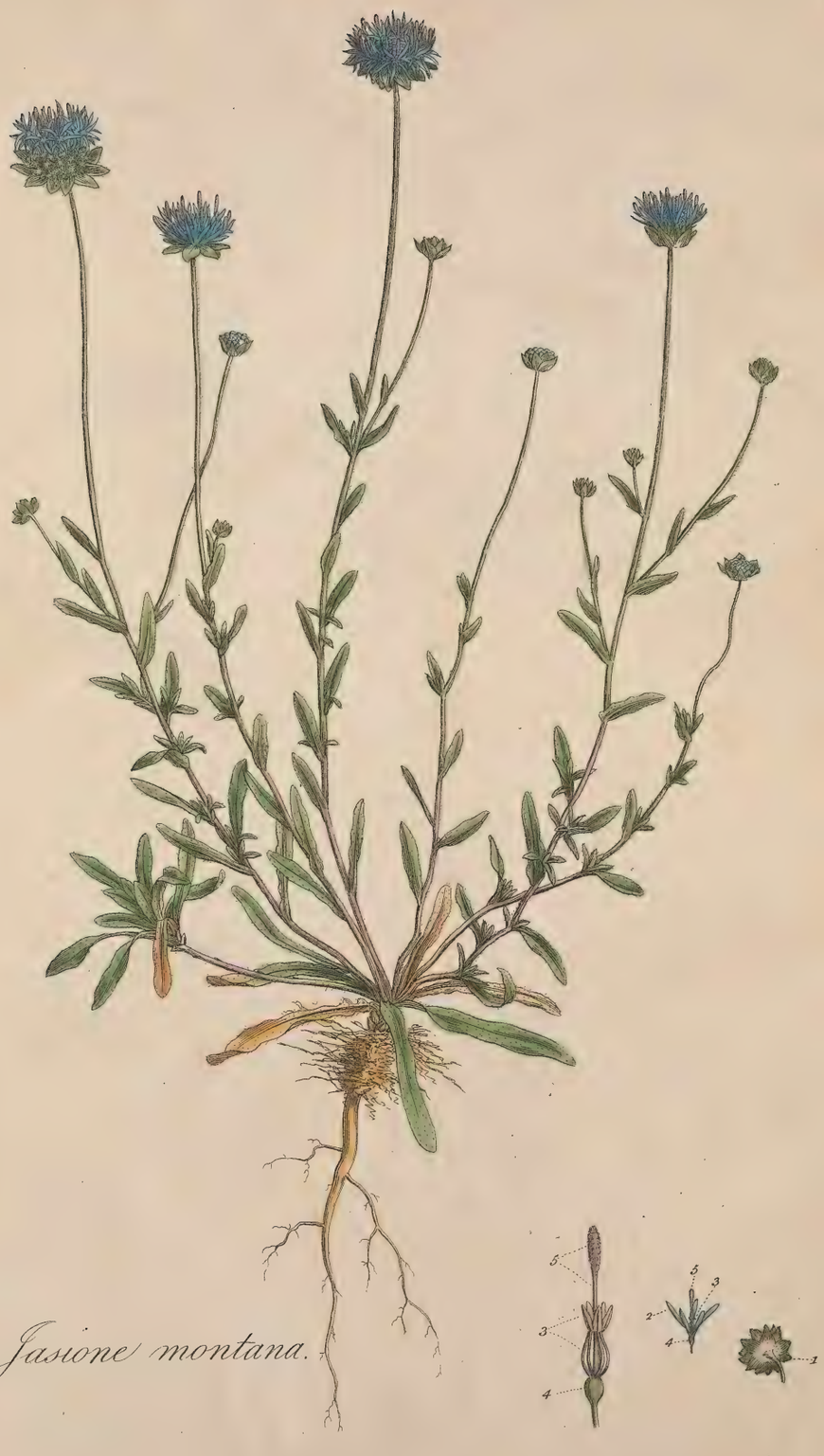
It is obviously distinguished from the *cernua* by having its leaves, for the most part, divided into three segments, whence its name; this character is more to be depended on than the uprightness of its flowers, as they generally droop a little when the plant is in perfection.

Linnæus, and other writers, recommend it as a plant that will dye both linen and woollen of a yellow colour, for this purpose the yarn or flax must be first steeped in allum-water, then dried and steeped in a decoction of the plant, and afterwards boiled in the decoction. *Haller. Hist. Helv.* p. 52.



Bidens tripartita.





Jasione montana.

JASIONE MONTANA. HAIRY SHEEP'S-SCABIOUS.

JASIONE *Lin. Gen. Pl.* SYNGENESIA MONOGAMIA.

Cal. communis 10-phyllus. *Cor.* 5-petala, regularis. *Capſ.* infera, bilocularis.

JASIONE *montana*. *Lin. Syſt. Vegetab.* p. 666. *Spec. Pl.* p. 1317. *Fl. Suec.* n. 782.

RAPUNCULUS foliis linearibus ſubaſperis, ſpica planiuſcula, petalis liberis. *Haller Hiſt.* n. 678.

RAPUNCULUS ſcabioſæ capitulo cæruleo. *Bauhin Pin.* 92.

RAPUNTIUM montanum capitatum leptophyllon. *Col. Ecphr.* 1. p. 226. t. 227.

SCABIOSA globularis quam ovinam vocant *J. B.* III. 12.

SCABIOSA minima hirſuta. *Ger. emac.* 723. *Raii Syn.* p. 278. Hairy Sheep's Scabious, or rather Rampions with Scabious Heads. *Hudſon Fl. Angl. ed.* 2. p. 377. *Lightfoot Fl. Scot.* p. 377.

RADIX annua, lignoſa, albida, fibroſa.
CAULES plures, ſuberecti, ſpithamæi, etiam pedales et ultra, rigiduli, ramoſi, hirſuti.

FOLIA plurima, ſeſſilia, lineari-lanceolata, obtuſiuſcula, undulata, hirſuta.
FLORES capitati, cærulei, ſummitatibus ramorum inſidentes.
CALYX: *Perianthium commune* polyphyllum: foliolis alternis, interioribus anguſtioribus, includens flores plurimos pedunculis breviſſimis adnexos, perſiſtens. *fig.* 1.

Perianthium proprium quinquefidum, ſuperum, perſiſtens.
COROLLA propria pentapetala: *Petalis* lanceolatis, erectis, baſi connexis. *fig.* 2.
STAMINA: FILAMENTA quinque, ſubulata, brevia. ANTHERÆ quinque, oblongæ, baſi connexæ. *fig.* 3.
PISTILLUM: GERMEN ſubrotundum, inferum. STYLUS filiformis, longitudine Corollæ. STIGMA clavatum, purpureum. *fig.* 4, 5.
PERICARPIUM: CAPSULA ſubrotunda, quinquangularis, coronata calyce proprio, bilocularis.

SEMINA plura, ſubovata.

ROOT annual, rigid, whitiſh and fibrous.
STALKS ſeveral, nearly upright, about a ſpan in length, but ſometimes a foot or more, rather rigid, branched, and beſet with ſhort rough hairs.
LEAVES numerous, ſeſſile, between linear and lanceolate, bluntiſh, waved and hirſute.
FLOWERS of a blue colour, growing in little heads on the tops of the branches.
CALYX: the *Perianthium common to all the florets* compoſed of many leaves, which are alternate, thoſe of the inner-row narroweſt, including numerous flowers ſitting on very ſhort footſtalks, and permanent. *fig.* 1.
The Perianthium of each floret deeply divided into five ſegments above the germen, and permanent.
COROLLA: each floret compoſed of five lanceolate, upright *Petals*, connected at the baſe. *fig.* 2.
STAMINA: five tapering ſhort FILAMENTS; ANTHERÆ five, oblong, connected at the baſe. *fig.* 3.

PISTILLUM: GERMEN roundiſh, below the Corolla. STYLE filiform, the length of the corolla. STIGMA club-ſhaped and purpliſh. *fig.* 4, 5.
SEED-VESSEL: a roundiſh CAPSULE, having five angles with two cavities, and crowned by the calyx proper to it.
SEEDS numerous, ſomewhat ovate.

This little plant, which in its general appearance ſo much reſembles a Scabious, is very common on dry, ſandy ground, eſpecially about *Coomb Wood*, and *Hampſtead*, and moſt hilly ſituations near *London*, and elſewhere.

It varies much in ſize, and is ſometimes, though very rarely, found with white bloſſoms.

It flowers from *June* to *Auguſt*.

LINNÆUS remarks, that Bees are particularly fond of its flowers.

OPHRYS SPIRALIS. LADIES TRACES.

OPHRYS *Lin. Gen. Pl.* GYNANDRIA DIANDRIA.

Nectarium ſubtus ſubcarinatum.

Raii Syn. Gen. 21. HERBÆ RADICE BULBOSA PRÆDITÆ.

OPHRYS *ſpiralis* bulbis aggregatis oblongis, caule ſubfolioſo, floribus ſecundis, nectarii labio indiviſo crenato. *Lin. Syſt. Vegetab.* p. 677. *Sp. Pl.* 1340.

EPIPACTIS bulbis cylindricis, ſpica ſpirali, labello crenulato. *Haller. Hiſt.* n. 1294.

SERAPIAS *ſpiralis.* *Scopoli Flor. Carn.* n. 1125.

ORCHIS ſpiralis alba odorata. *I. B.* II. 769.

TRIORCHIS alba odorata minor, atque etiam major. *Bauhin. Pin.* 84.

TRIORCHIS. *Ger. emac.* 218. *Parkins.* 1354 *Raii Syn.* p. 378. Triple Ladies Traces. *Hudſon Fl. Angl.* p. 388.

RADIX fit uno, duobus, tribus, quatuorve bulbis, oblongis, acuminatis, villoſis.

FOLIA radicalia quatuor, et ultra, ſupra terram expanſa, ovata, acuta, hinc convexa, inde cava, ſemunciam lata, ad lentem punctata, obſolete nervoſa.

SCAPUS ſpithamæus, folioſus, foliis vaginantibus, pubeſcentibus, margine membranaceis.

FLORES ex albo-vireſcentes, odorati, quindecim et ultra, *ſpiræ modo diſpoſiti.*

BRACTÆA oblonga, acuminata, cava, villoſa, germinis cum dimidio floris longitudine. *fig.* 1.

PETALA quinque, alba, ſubæqualia, villoſula, tria ſuperiora ſubcoadunata, recta, duo lateralia carinata, lanceolata, *fig.* 2, 3.; labellum *Nectarii* obtuſum, crenulatum, intus viridulum, concavum, *fig.* 4. auct. *fig.* 5.

GERMEN ſeſſile, ovatum, lineis duabus lateralibus extantibus notatum. *fig.* 6.

ROOT conſiſts of one, two, three, or four oblong, pointed, villous bulbs.

LEAVES next the root four, or more, ſpread out on the ground, ovate, pointed, convex on one ſide, and concave on the other, half an inch in breadth, dotted when magnified, and faintly ribbed.

STALK ſix or ſeven inches high, leafy, leaves ſheathy, downy, and membranous at the edge.

FLOWERS of a greeniſh white colour, fragrant, fifteen and more in number, *ſpirally diſpoſed.*

FLORAL-LEAF oblong, pointed, hollow, villous, of the length of the germen, and half the flower, *fig.* 1.

PETALS five, white, nearly equal, ſomewhat villous, the three uppermoſt very ſlightly connected together, ſtraight, the two ſide ones keeled and lanceolate, *fig.* 2, 3.; the lip of the *Nectary* blunt, finely notched, green within and hollow, *fig.* 4. magnified, *fig.* 5.

GERMEN ſeſſile, ovate, marked with two protuberant ſide lines. *fig.* 6.

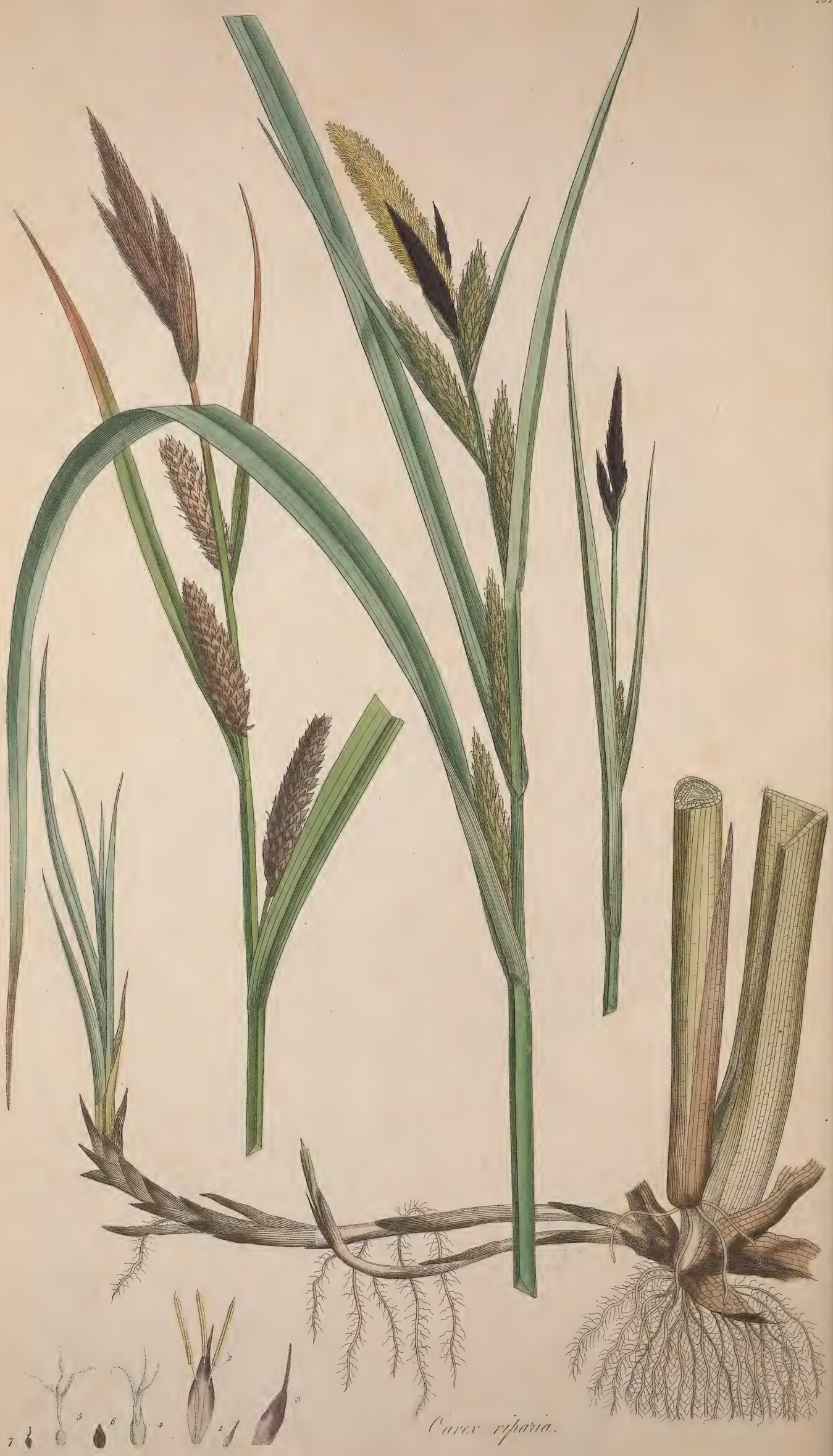
The Rev. Dr. GOODENOUGH, of *Ealing*, kindly communicated to us this plant, having found it ſparingly on *Hanwel Heath*, near *Ealing:* though ſcarce with us, in many parts of *England*, eſpecially the more northern, it is not uncommon. It grows in paſtures, both dry and moiſt, and does not particularly affect a chalky ſoil. In the garden it grows more readily than moſt of its tribe, and flowers later, its uſual month of blowing being *September*.

The protuberant germina, placed regularly one above another, ſomewhat reſemble plaited hair, whence, perhaps, its name of *Ladies Traces.* The flowers are fragrant, and, by the ſpiral manner in which they grow, form a curious ſpecific character.

Baron HALLER, who has taken infinite pains with the plants of this tribe, has not very happily expreſſed this ſpecies; his artiſt appears to have had an unnatural ſpecimen to copy from.

The Ladies Traces varies much in ſize as well as in the number of its roots.

Ophrys spiralis.



Carex riparia.

CAREX RIPARIA. GREAT OR COMMON CAREX.

CAREX *Lin. Gen. Pl.* MONOECIA TRIANDRIA.

MASC. Amentum imbricatum. *Cal.* 1. phyllus. *Cor.* 0.

FEM. Amentum imbricatum. *Cal.* 1. phyllus. *Cor.* 0. *Nectarium* inflatum, 3. dentatum. *Stigm.* 3.

SEM. Triquetrum, intra nectarium.

Raii Synop. Gen. 28. HERBÆ GRAMINIFOLIÆ NON CULMIFERÆ FLORE IMPERFECTO SEU STAMINEO.

CAREX *riparia* ſpicis maſculis pluribus triquetris nigricantibus, acutis, ſquamis ariſtato acuminatis, capſulis ſubinflatis, bicornibus.

CAREX *acuta* ſpicis maſculis pluribus, femineis ſubpedunculatis, erectis, capſulis ovato-lanceolatis ariſtato-acuminatis furcatis. *Hudſon Fl. Angl. p.* 413.

CAREX ſpicis maſculis ternis, femineis numeroſis, erectis, breviſſime petiolatis, capſulis bicornibus. *Haller, hiſt. n.* 1404. et forſan 1398 et 1399.

CAREX *acuta. Lightfoot, Fl. Scot. p.* 565.

GRAMEN cyperoides cum paniculis nigris. *J. B.* 2. 494. *Raii Hiſt.* 1292.

GRAMEN cyperoides latifolium ſpica rufa ſive caule triangulo. *Bauh. Pin.* 6.

GRAMEN cyperoides. *Ger. emac.* 12.

GRAMEN cyperoides majus latifolium. *Park.* 1265.

Raii Syn. 417. Great vernal Cyperus-graſs.

CYPEROIDES aquaticum, maximum, foliis vix unciam latis, caule exquiſite triangulari, ſpicis habitioribus, erectis, ſquamis in ariſtam longius productis, capſulis oblongis, bifidis. *Michel. Nov. Gen. Tab.* 32. *fig.* 7. et 6.

RADIX perennis, repens.

CULMUS in aquoſis bi ſeu tripedalis, folioſus, nodoſus, ſtriatus, triqueter, angulis acutis, aſperis.

FOLIA ſemunciam lata, glauca, carinata, ad margines carinamque aſpera, vaginantia, vagina una cum inferiore parte folii pulchre reticulata.

SPICÆ maſculæ et femineæ diſtinctæ, *maſculæ*, plerumque, tres, ad quinque, erectæ, nigricantes, triquetræ, acutæ, congeſtæ, bractæatæ, ſuprema biunciali, inferioribus brevioribus inæqualibus, *femineæ* tot quot maſculæ, ovato-acutæ, pedunculatæ, plerumque erectæ, aliquando etiam pendulæ, ſupremis ſeſſilibus, androgynis.

FLOS MASC.

CALYX: *Squamæ* plurimæ, imbricatæ, lanceolatæ, ariſtato-acuminatæ, e nigro purpuraſcentes. *fig.* 1.

STAMINA: FILAMENTA tria, filiformia, alba; ANTHERÆ tenues, luteæ, mucronatæ. *fig.* 2.

FLOS. FEM.

CALYX: *Squamæ* ut in maſc. inferne vero latiores et ſuperne magis luculenter ariſtatæ, ariſtâ ſerrulatâ. *fig.* 3.

NECTARIUM germen continens, ovatum, glabrum, bicorne. *fig.* 4. auct. demum inflatum, acuminatum, ſtriatum, fuſcum. *fig.* 6. magn. natur.

PISTILLUM: GERMEN parvum, ovatum, glabrum; STYLUS filiformis, nudus, nectario paulo longior; STIGMATA tria, villoſa, alba, ſubulata. *fig.* 5. auct.

SEMEN unicum, triquetrum, intra Nectarium. *fig.* 7. mag. nat.

ROOT perennial and creeping.

STALK in wet ſituations two or three feet high, leafy, jointed, ſtriated, the angles ſharp and rough.

LEAVES half an inch broad, glaucous, keeled, the keel as well as the edges rough, ſheathing the ſtalk, the ſheath, together with the lower part of the leaf, beautifully reticulated.

SPIKES of the male and female diſtinct, thoſe of the *male* generally from three to five, upright, blackiſh, three-cornered, pointed, cluſtered and furniſhed with floral leaves, the uppermoſt about two inches in length, the lowermoſt ſhorter and unequal; *female* ſpikes as numerous as thoſe of the *male*, ovate, pointed, ſtanding on footſtalks, generally upright, but ſometimes pendulous, the uppermoſt ſeſſile and androgynous.

MALE FLOWER.

CALYX: *Scales* numerous, imbricated, lanceolate, running out to a long beard-like point, of a purpliſh black colour, *fig.* 1.

STAMINA: thre FILAMENTS, thread-ſhaped and white; ANTHERÆ ſlender, yellow, and terminated by a ſhort point. *fig.* 2.

FEM. FLOWER.

CALYX: *Scales* as in the male, but broader below, and more evidently bearded above, the awn finely ſawed or toothed, *fig.* 3.

NECTARY containing the germen, ovate, ſmooth, with two horns, *fig.* 4. magn. finally inflated, pointed, ſtriated, and of a brown colour. *fig.* 6. nat. ſize.

PISTILLUM: GERMEN ſmall, ovate, ſmooth; STYLE filiform, naked, a little longer than the nectary; STIGMATA three, villous, white and tapering. *fig.* 5 magnif.

SEED ſingle, three-cornered, incloſed in the Nectary, *fig.* 7. nat. ſize.

In a former number of this work we gave a figure and deſcription of the *Carex pendula*, one of the largeſt, as well as moſt diſtinct ſpecies of this genus; we here preſent our readers with three more of this numerous and difficult tribe. Our motive for publiſhing them in the ſame number is, that they may the more readily be compared together, and their ſeveral diſtinguiſhing characters be more forcibly impreſſed.

In herborizing it is a practice with me to endeavour at acquiring a perfect knowledge of every plant which occurs in all its poſſible varieties; the greater the difficulty I find in the attempt, the more minute is my enquiry. Theſe inveſtigations have to my great ſatisfaction often terminated in ſome new diſcovery, which has placed the plant in a more conſpicuous light than before; ſuch has been the happy reſult in the preſent inſtance. In paſſing through *Batterſea* meadows I had frequently noticed the three Carices here figured, which I was taught to conſider as the ſame ſpecies, varying only from particular circumſtances, but ſo great was the variation, that I never could perfectly reconcile myſelf to the idea. I ſhall here relate the ſeveral characters which ſtruck me firſt, and gave me the idea of their being different. It was the pointed, triangular, black heads or male ſpikes of the *riparia*, the bluntneſs not only of the

Carex Acuta. Acute Carex.

CAREX *acuta* ſpicis maſculis pluribus, obtuſis, ſquamis obtuſiuſculis, caule acutangulo.
CAREX *acuta* ſpicis maſculis pluribus, femineis ſubſeſſilibus, capſulis obtuſiuſculis. *Lin. Syſt. Vegetab.* p. 706. *Sp. Pl.* p. 1388. *Fl. Suec.* n. 857.
CAREX *glauca Scopoli Fl. Carn.* n. 1157. ?
CYPEROIDES foliis Caryophylleis, caule exquiſite triangulari, ſpicis habitioribus, ſquamis curtis, obtusè mucronatis, capſulis turbinatis, brevibus, confertis. *Michel Nov. Gen.* p. 62. *tab.* 32. f. 12.
GRAMEN cyperoides foliis caryophylleis vulgatiſſimum. *Raii hiſt.* 1292.
CAREX cæſpitoſa var *β*. *Lightfoot Fl. Scot.* ?

RADIX perennis, repens.
CULMUS in aquoſis, bipedalis et ultra, folioſus, nodoſus, ſtriatus, triqueter, angulis acutis, aſperis.

FOLIA tres lineas lata, glauca, carinata, ad margines carinamque aſpera.
SPICÆ maſculæ et femineæ diſtinctæ, *maſculæ* plerumque tres, erectæ, remotiuſculæ, oblongæ, obtuſæ, e purpureo-nigræ ſeu fuſcæ, ſuprema ſeſcunciali, inferioribus brevioribus, inæqualibus, bracteatæ, bracteâ inferiore ſpicis breviore: *femineæ* duæ, vel tres, longiores, et graciliores, pedunculatæ, plerumque erectæ, apicibus ſæpe maſculis.

Flos Masc.

SQUAMÆ plurimæ, arcte imbricatæ, ovato-oblongæ, obtuſæ, e fuſco-purpureæ, nervo medio vireſcente. *fig.* 1.
STAMINA: Filamenta tria, filiformia, alba; Antheræ luteæ. *fig.* 2.

Flos Fem.

SQUAMÆ ovato-acuminatæ, ſuperne ad lentem denticulis ciliatæ, *fig.* 3.
NECTARIUM ovatum, glabrum, ore ſæpius bidentato. *fig.* 4.
PISTILLUM: Germen parvum, intra nectarium; Stylus nectario paulo longior; Stigmata tria, patentia. *fig.* 5.
SEMEN triquetrum, *fig.* 8. 9. intra nectarium bidentatum. *fig.* 6. 7.

ROOT perennial, and creeping.
STALK in wet ſituations, two feet high, and upwards, leafy, jointed, ſtriated, three cornered, the angles ſharp, and rough.
LEAVES, three lines in breadth, glaucous, keeled, the edges and keel rough.
SPIKES, male and female, diſtinct; *male* ſpikes generally three, upright, at a little diſtance from each other, oblong, obtuſe, of a purpliſh, black, or brown colour, the uppermoſt an inch and a half in length, the lower ones ſhorter and unequal, furniſhed with floral leaves, of which the lowermoſt is ſhorter than the ſpikes; *female* ſpikes two or three, longer and ſlenderer than the male, ſtanding on footſtalks, for the moſt part upright, the tips frequently male.

Male Flower.

SCALES, numerous, cloſely imbricated, of an ovate oblong ſhape, obtuſe, of a browniſh purple colour, the midrib greeniſh, *fig.* 1.
STAMINA: Three Filaments, filiform, and white; Antheræ, yellow, *fig.* 2.

Female Flower.

SCALES ovate, and pointed, the upper part when magnified edged with fine teeth, *fig.* 3.
NECTARY ovate, ſmooth, the mouth moſt commonly having two teeth, *fig.* 4.
PISTILLUM: Germen ſmall, within the nectary; Style a little longer than the nectary; Stigmata three, ſpreading, *fig.* 5.
SEED three cornered, *fig.* 8. 9. contained within a nectary having two teeth, *fig.* 6. 7.

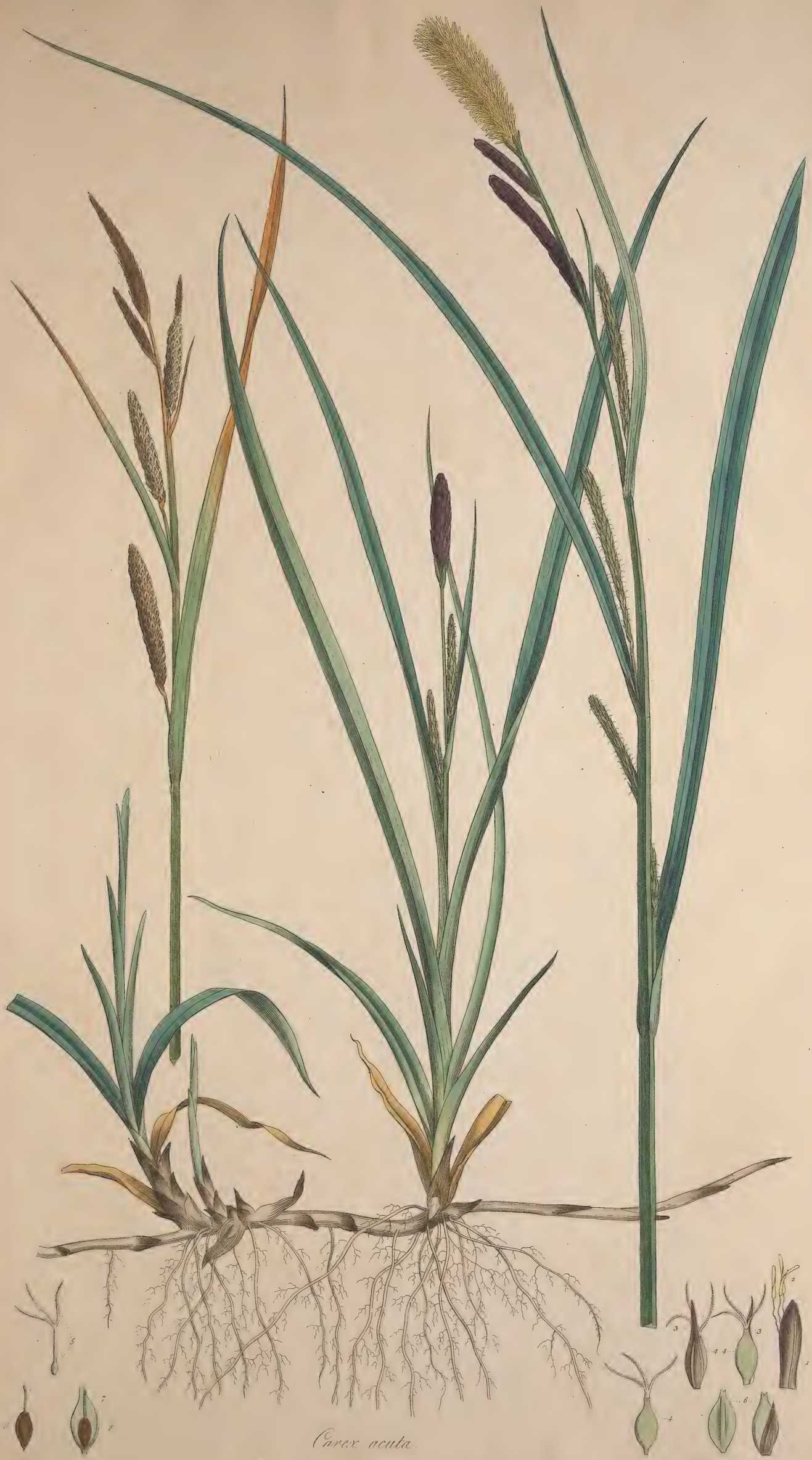
the ſpikes themſelves, but of the ſcales compoſing the male ſpikes of the *acuta*, and the narrow leaves and ſlender appearance of the ſpikes in the *gracilis*, joined to the want of that glaucous hue in the leaves, ſo conſpicuous in thoſe of the two former; impreſſed with theſe general appearances, I carried home their roots, and planted them in my garden, and found at the expiration of two years that they ſtill kept up the ſame appearances. I then attended more minutely to their parts of fructification, and found ſufficient to convince me, and I truſt every unprejudiced perſon, that they are three ſpecies immutably diſtinct.

The largeſt and perhaps the moſt generally common of the three is our *riparia*, which we have diſtinguiſhed by that name, from its being found on the edges of rivers, it will alſo grow in the middle of a ditch or pond, and if ſuffered to encreaſe will quickly fill up any piece of water, being in this reſpect almoſt equal to the *Poa aquatica*, and *Typha latifolia*; it alſo, by means of its powerfully creeping roots, eaſily makes its way through any mooriſh ground, and hence is often found in meadows themſelves, and though much ſmaller in ſuch ſituations, its ſtriking characters are equally diſtinct. Where it grows luxuriantly, its ſpikes, eſpecially the lowermoſt of the female ones, frequently become branched, which gives them a very outrè appearance, that may puzzle for a moment: as the male ſpikes on their firſt appearance are ſo eaſily diſtinguiſhed by their pointed and angular appearance, ſo the female ſpikes, when nearly ripe, are diſtinguiſhed from the two others by having large, ſomewhat inflated, and pointed capſules, ſlightly bifid at the extremity.

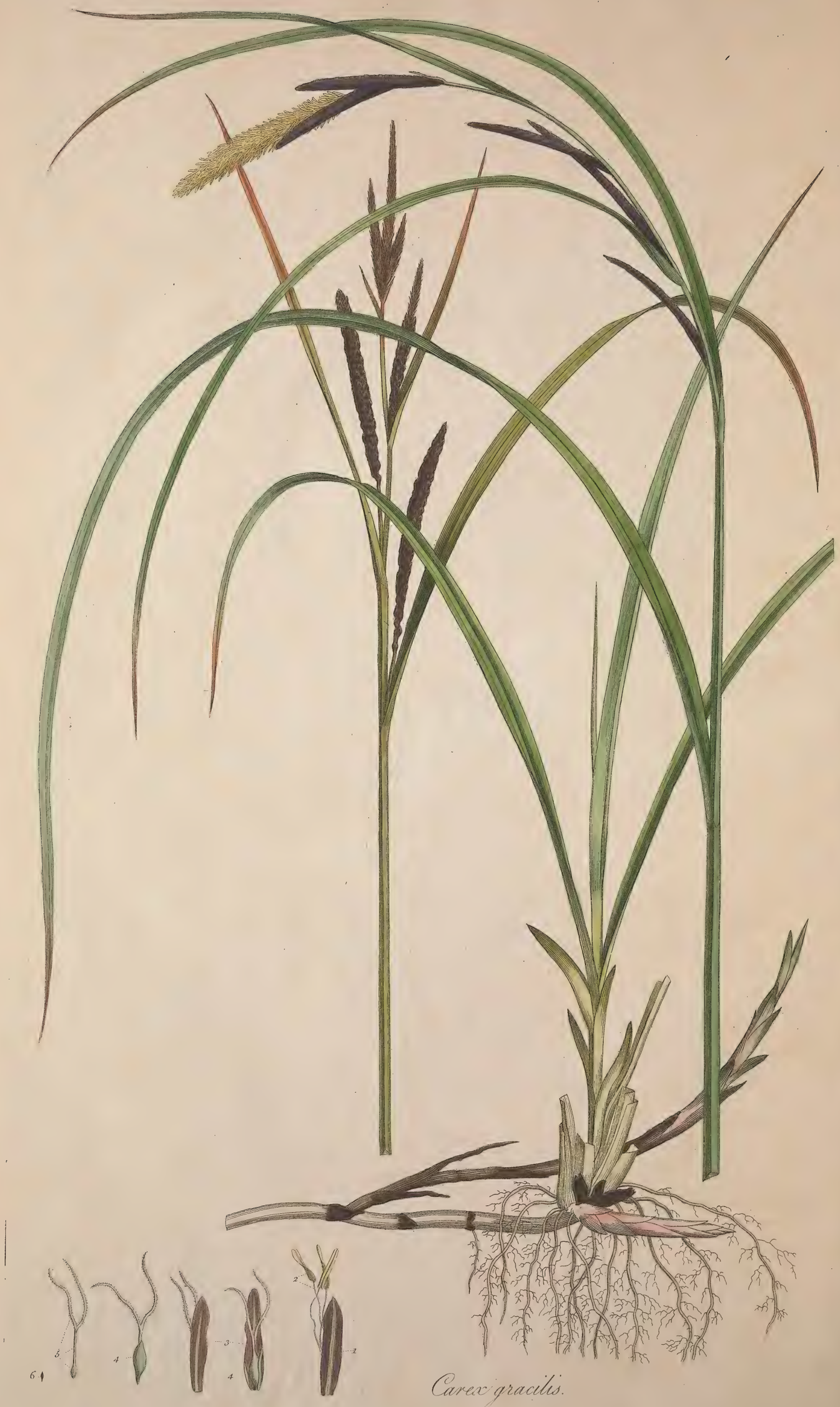
The ſynonyms of this and the two other ſpecies are ſo confounded together, that to trace them through all the writers that have written on the ſubject would be an endleſs taſk, it will be ſufficient therefore to have quoted a few which may be depended on.

The *Acuta* is next in ſize, at leaſt with reſpect to the breadth of its leaves, to the *Riparia*, and is found in ſituations exactly ſimilar, indeed they very frequently grow together, and, from the great ſimilarity of their foliage, may eaſily be confounded; when young, the bluntneſs of its male ſpikes and obtuſeneſs of their Squamæ, ſo as totally to want any kind of Ariſta, invariably diſtinguiſhes it from the Riparia, and though there is frequently a tendency in theſe ſpikes to be three-cornered, yet the angles are always very obtuſe, to which we may add that the colour of them before the Antheræ come forth is much brighter, and ſometimes a ſpike is found perfectly brilliant; the female ſpikes, as well as thoſe of the male, are fewer in number, as well as ſmaller; nor have they that tendency to be pendulous which thoſe of the Riparia frequently have, the Capſules when ripe are alſo much ſmaller, more numerous, and no ways inflated, but very ſimilar to thoſe of the *gracilis*; we may further remark, that while the Squamæ in the male Spikes before the burſting forth of the Antheræ are invariably obtuſe, thoſe of the female ſpikes are pointed, and that while this plant in its ſtrong ſtate may eaſily be miſtaken for the Riparia, in its weak ſtate it approaches very near the *recurva*, which alſo is a ſpecies perfectly diſtinct.

If



Carex acuta.



Carex gracilis.

CAREX GRACILIS. SLENDER SPIKED CAREX.

CAREX *gracilis* ſpicis maſculis et femineis pluribus, ſubfiliformibus, floribus digynis.
CAREX nigra verna vulgaris. *Lin. Fl. Lap.* 330. ?
CYPEROIDES anguſtifolium, caule exquiſite triangulari, aſpero, ſpicis floriferis prælongis, tenuioribus, ſeminalibus autem ſpicis biuncialibus, et habitioribus, erectis, ſquamis brevibus acutis, capſulis ſpadiceo viridibus, rhomboideis, ſubtriquetris. *Micheli Nov. Gen.* p. 60. n. 40.
GRAMEN cyperoides majus anguſtifolium. *Park*, 1265. *Raii hiſt.* 1293. *Syn.* p. 417. n. 2. Great narrow-leaved vernal Cyperus-graſs.

RADIX perennis, repens.
CULMUS in aquoſis, bi ſeu tripedalis, in pratis humilior, folioſus, nodoſus, triqueter, angulis acutis, aſperrimis.

FOLIA *radicalia* longa, viridia, vix glauca, lineas duas lata, ad margines et carinam aſpera, vaginantia, *bracteealia* lineam cum dimidia lata, inferiore (florente planta) ſpicis longiore.

SPICÆ maſculæ et femineæ diſtinctæ, maſculæ plerumque tres, e fuſco nigricantes, graciles, obſolete triquetræ, nutantes, terminalis biuncialis, inferior duplo aut triplo brevior, infima ſæpius androgyna, longior, femineæ tres aut quatuor, teretes, graciles, longitudine maſculi terminalis, ſeſſiles ſeu breviter pedunculatæ, ſuberecti, nigricantes.

MAS.

SQUAMÆ ovato-acutæ, arcte imbricatæ, carinatæ, e purpureo nigricantes, carina, ſubviridi. *fig.* 1. auct.
STAMINA: FILAMENTA tria, capillaria, alba; ANTHERÆ lineares, flavæ, *fig.* 2.

FEM.

SQUAMÆ maſc. ſimiles, magis vero oblongæ ac obtuſæ. *fig.* 3.
NECTARIUM oblongum, glabrum, ore integro; GERMEN minimum; STYLUS nectario longior; STIGMATA duo, villoſa, *fig.* 4. 5.
SEMEN triquetrum, minimum, intra nectarium. *fig.* 6.

ROOT perennial and creeping.
STALK, in watery ſituations two or three feet high, in meadows not ſo tall, leafy, jointed, three cornered, the angles ſharp and very rough to the touch.

LEAVES from the *root* long, of a green colour, ſcarcely glaucous, two lines in breadth, on the edges and midrib rough, ſheathing the ſtalk, *bracteal* leaves a line and a half in breadth, the lowermoſt, while the plant is in flower, longer than the ſpikes.
SPIKES, both male and female, growing diſtinctly, the *male* generally three in number, of a brownish black colour, ſlender, faintly three cornered, drooping, the terminal ſpike about two inches in length, the next below twice or thrice as ſhort, the lowermoſt for the moſt part androgynous and longer, *female* three or four, round, ſlender, length of the terminal male ſpike, ſeſſile or ſtanding on ſhort footſtalks, nearly upright and blackiſh.

MALE.

SCALES ovate, pointed, lying cloſely one over another, keeled, of purpliſh black colour, the keel greeniſh, *fig.* 1. *magnif.*
STAMINA: three FILAMENTS, ſlender and white; ANTHERÆ linear and yellow, *fig.* 2.

SCALES as in the male, but more oblong and blunter, *fig.* 3.
NECTARY oblong, ſmooth, the mouth entire; GERMEN very ſmall; STYLE longer than the Nectary; STIGMATA, two, villous, *fig.* 4. 5.
SEED, three-cornered, very minute, within the nectary, *fig.* 6.

If the ſeaſon be mild, this plant and the Riparia flower in April, and ripen their ſeeds in June and July.

The *gracilis*, though a ſlenderer plant both in ſtalks, leaves, and ſpikes, is equal in height where it grows in ſimilar ſituations to either of the other two, but as this has a greater tendency at leaſt in Batterſea Meadows to grow among the herbage, it is frequently found ſhorter, and ſometimes large patches of its foliage are viſible without any flowering ſpikes.

This ſpecies is diſtinguiſhed from the other two, not only by having narrower leaves, which want the glaucous colour of the other two, and ſlenderer ſpikes, which in their young ſtate are remarkably pendulous, ſo as at firſt ſight to give this plant an appearance of the *Carex pendula*, but the female flowers are conſtantly and invariably digynous. My moſt obliging friend Dr. GOODENOUGH, to whom I had communicated my thoughts on this ſubject, examining theſe plants with his uſual accuracy, anticipated me in the diſcovery of this moſt important, moſt neceſſary character; a character which in a moment decidedly diſtinguiſhes betwixt two plants, which without it would for ever have been liable to be confounded.

We ſhould have been inclined to ſuppoſe that our *gracilis* was the *acuta* of LINNÆUS, had he not quoted MICHELI's figure, to which he adds the epithet *bona*, that figure is a tolerable repreſentation of our *acuta*, but the ſpikes are far too thick for thoſe of the *gracilis*.

This ſpecies, which is equally common with the two others, flowers a week or two later.

Agriculturally conſidered, it is perhaps doubtful, whether we are to rank the Carices with the uſeful or the noxious plants; from what we have hitherto obſerved, we ſhould rather claſs them with the latter, not but we think the *Junci*, *Scirpi*, &c. infinitely more injurious, yet ſtill they occupy the room of better graſſes; their principal merit is, that they afford early paſturage, yet their foliage is harſh and rough, and productive of indifferent hay; and ſuch is the opinion of LINNÆUS, who, in his *Flora Lappon*, remarks that the Huſbandman is not fond of ſuch meadows as are overrun with Carices, as they afford bad fodder and unprofitable paſturage "nec pinguefcat bos *carice paſtus acuta*; unfortunately, however, when the preſent ſpecies, or ſuch as have ſimilar creeping roots, have once got poſſeſſion of the ſoil, they are the moſt difficult plants poſſible to eradicate.

As articles of rural œconomy, they are in many inſtances highly uſeful; in Hampſhire, Surry, and perhaps other hop counties, the leaves of theſe three ſpecies are uſed indiſcriminately under the name of *Sedge*, for tying the young hop plants to the poles. MICHELI informs us, that in Italy they are uſed to cover their wine flaſks, to make the common ſort of chair bottoms, and that the Coopers in making tubs, &c. place them betwixt the ſtaves to make them water-tight: to the comfort of the Laplander, they contribute in a high degree by defending him from the ſe-

verity

verity of the weather; this is ſo particularly deſcribed by LINNÆUS in his *Flor. Lappon.* that we ſhall tranſlate it for ſuch of our readers as may not have an opportunity of conſulting the original, now become very ſcarce.

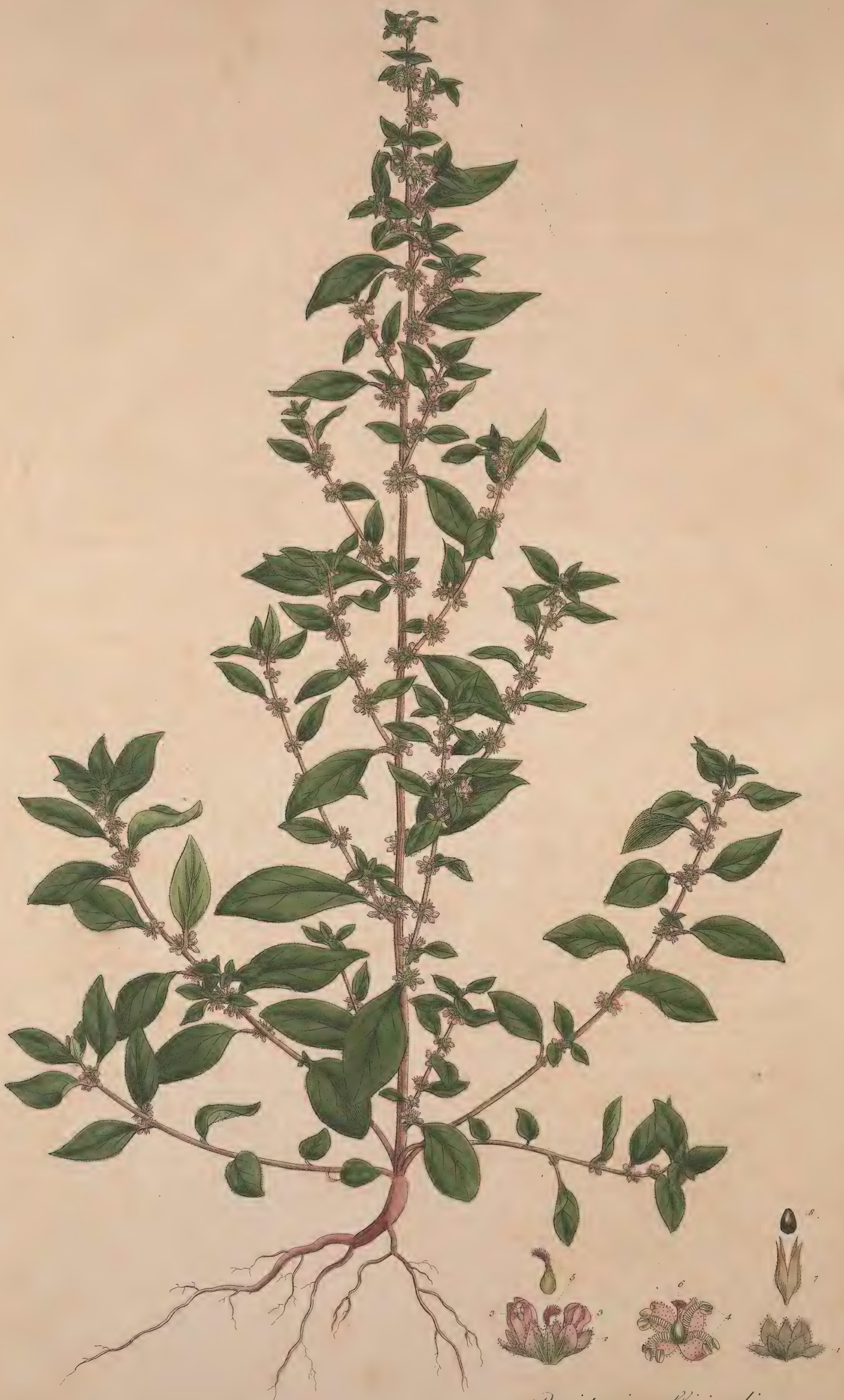
"Thou wilt wonder, perhaps, curious reader, in what manner human beings are capable of preſerving life during "the intenſe ſeverity of a winter's froſt in Lapland, a part of the world deſerted on the approach of winter by almoſt "every kind of bird and beaſt.

"The inhabitants of this inhoſpitable climate are obliged to wander with their Rhendeer flocks continually in the "woods; not only in the day-time, but through the longeſt winter nights, their cattle are never houſed, nor do they "eat any other food than Liverwort, hence the herdſmen; to ſecure them from wild beaſts, and other accidents, are "of neceſſity kept perpetually with them. The darkneſs of their nights is in a great degree overcome and rendered "more tolerable by the light of the ſtars reflected from the ſnow, and the Aurora Borealis, which in a thouſand fan-"taſtic forms nightly illumines their hemiſphere. The cold is intenſe, ſufficient to frighten and drive us foreigners "from their happy woods. No part of our bodies are ſo liable to be deſtroyed by cold as the extremities, which "are ſituated fartheſt from the heart; the chilblains of the hands and feet, ſo frequent with us in Sweden, ſufficiently "indicate this. In no part of Lapland do we find the inhabitants affected with chilblains, though in reſpect to "country one would expect them to be peculiarly ſubject to this diſeaſe, eſpecially as they wear no ſtockings, while "we cloath ourſelves in one, two, and even three pair.

"A Laplander preſerves himſelf from the violence of cold in the following manner; he wears breeches, or rather "trowſers, made of the rough ſkin of the Rhendeer, which reach to his ankles, and ſhoes made of the ſame ma-"terial, the hair turned outward; this graſs, cut down in the ſummer, dried, rubbed betwixt the hands, and after-"wards combed or carded, he puts into his ſhoes, ſo as not only wholly to enwrap his feet, but the lower part of "his legs alſo, which, thus defended, never ſuffer from the ſevereſt cold; with this graſs he alſo fills his hairy "gloves to preſerve his hands, and thus are thoſe hardy people enabled to bear the froſt.

"As this graſs in the winter drives away cold, ſo in the ſummer it checks the perſpiration of the feet, and pre-"ſerves them from being injured by ſtones, &c. in travelling, for their ſhoes are extremely thin, being made of un-"tanned ſkins. It is difficult to learn, on enquiry, what the particular ſpecies of graſs is which is thus in requeſt "with theſe people, as ſome uſe one ſort, ſome another. It is, however, always ſome ſpecies of Carex, and we "underſtood chiefly this."

It is no leſs difficult to underſtand what ſpecies LINNÆUS himſelf means: he quotes *Moriſon's* figure, which is our *ſylvatica*; yet, ſays that the Carex grows in *paludibus limo plenis*, which that plant never does with us, it is moſt likely, in our opinion, to be one or all of the three common ſpecies here figured.



Parietaria officinalis

PARIETARIA OFFICINALIS. PELLITORY OF THE WALL.

PARIETARIA *Lin. Gen. Pl.* POLYGAMIA MONOECIA.

HERMAPHROD. *Cal.* 4-fidus. *Cor.* 0. *Stamina* 4. *Styl.* 1. *Sem.* 1. ſuperum, elongatum.

FEM. *Cal.* 4-fidus. *Cor.* 0. *Stam.* 0. *Stylus* 1. *Sem.* 1. ſuperum, elongatum.

Raii Syn. Gen. 5. HERBÆ FLORE IMPERFECTO SEU STAMINEO VEL APETALO POTIUS.

PARIETARIA *officinalis* foliis lanceolato-ovatis, pedunculis dichotomis, calycibus diphyllis. *Lin. Syſt. Vegetab.* p. 763. *Sp. Pl.* p. 1492.

PARIETARIA foliis elliptico-lanceolatis, hirſutis. *Haller. Hiſt.* p. 162.

PARIETARIA *officinalis*. *Scopoli Fl. Carn.* n. 1242.

PARIETARIA officinarum et Dioſcoridis. *Bauh. pin.* 121.

HELXINE *Camerar. Epit.* p. 849.

PARIETARIA *Ger. emac.* 331. vulgaris *Parkinſ.* 437. *Raii Syn.* p. 158. Pellitory of the Wall. *Lightfoot Fl. Scot.* p. 635. *Hudſon Fl. Angl. ed.* 2. p. 442. *Oeder Fl. Dan. t.* 521.

RADIX perennis, ſublignoſa, *rubens*, fibroſa.

CAULES plures, ſuberecti, dodrantales, pedales et ultra, ramoſiſſimi, teretes, ſtriati, ſolidi, rubentes, pubeſcentes; *rami* cauli ſimiles, alterni, diffuſi.

FOLIA alterna, petiolata, ovata, acuta, utrinque attenuata, integerrima, patentia, ad margines et venas ſubtus præcipue pubeſcentia, ſupra ſaturate viridia, lucida, ſubrugoſa, punctis prominulis adſperſa.

PETIOLI longitudine fere diametri foliorum, pubeſcentes, ſupra canaliculati.

FLORES parvi, herbacei, hirſuti, ſeſſiles, in axillis foliorum conglomerati, hermaphroditi et feminei.

Hermaphroditi Flores duo continentur *involucro* heptaphyllo, perſiſtente, foliolis ovatis, acutis planis, hirſutis, hirſutie glanduloſa. *fig.* 1.

CALYX: PERIANTHIUM monophyllum, quadrifidum, planum, perſiſtens. *fig.* 9.

COROLLA nulla, niſi calcyem dicas.

STAMINA: FILAMENTA quatuor, alba, tranſverſim rugoſa, inſtante antheſi elaſtice reſilientia, calycemque expandentia; ANTHERÆ ovatæ, obtuſæ, didymæ; POLLEN album. *fig.* 4.

PISTILLUM: GERMEN ovatum, viride, nitidum, nudum; STYLUS filiformis; STIGMA penicilliforme, capitatum, ruberrimum. *fig.* 6.

PERICARPIUM nullum. *Perianthium* elongatum, majus, campanulatum, coloratum, deciduum; ore laciniis conniventibus clauſo. *fig.* 3.

SEMEN unicum, ovatum, nitidum, in fundo perianthii.

Femineus flos unus inter hermaphroditos ambos, intra involucrum.

CALYX quadrifidus, hirſutus, erectus, germen involvens. *fig.* 5.

COROLLA nulla.

PISTILLUM ut hermaphroditi, at ſtigma majus et paulo inflexum. *fig.* 5.

PERICARPIUM nullum.

SEMEN unicum ut in hermaphrodito, calyce quadrifido et vix mutato incluſum. *fig.* 7, 8.

ROOT perennial, ſomewhat woody, *of a red colour*, and fibrous.

STALKS ſeveral, nearly upright, from nine inches to a foot or more in height, very much branched, round, ſtriated, ſolid, reddiſh, and downy; *branches* like the ſtalks, alternate and ſpreading.

LEAVES alternate, ſtanding on foot-ſtalks, ovate, pointed, tapering towards each extremity, entire at the edge, ſpreading, particularly downy at the edge and on the veins of the under-ſide, on the upper-ſide of a deep green colour, ſhining, ſomewhat wrinkled, and covered over with ſmall prominent points.

LEAF-STALKS nearly the length of the diameter of the leaves, downy, hollowed above.

FLOWERS ſmall, of a greeniſh colour, rough, ſeſſile, growing in cluſters in the alæ of the leaves, hermaphrodite and female.

Two *Hermaphrodite Flowers* are contained in an *involucrum* compoſed of ſeven leaves, and permanent, the leaves ovate, pointed, flat, hirſute, the hairs glandular at the extremities. *fig.* 1.

CALYX: a PERIANTHIUM of one leaf, deeply divided into four ſegments, which are flat and permanent. *fig.* 9.

COROLLA none, unleſs the calyx be called ſo.

STAMINA: four FILAMENTS of a white colour, wrinkled tranſverſely, on the ſhedding of the pollen flying back with an elaſticity, and expanding the calyx; ANTHERÆ ovate, obtuſe, double; POLLEN white. *fig.* 4.

PISTILLUM: GERMEN ovate, green, ſhining and naked; STYLE filiform; STIGMA forming a bright ſcarlet tuft. *fig.* 6.

SEED-VESSEL none. The *Perianthium* becoming elongated, larger, bell-ſhaped, coloured and deciduous; the mouth ſhut by the ſegments cloſing together. *fig.* 3.

SEED ſingle, ovate, ſhining in the bottom of the perianthium.

One *Female flower* betwixt two hermaphrodite ones, within the involucrum.

CALYX diviſible into four ſegments, hairy, upright, incloſing the germen. *fig.* 5.

COROLLA none.

PISTILLUM as in the hermaphrodites, but the ſtigma ſomewhat larger, and bent a little down. *fig.* 5.

SEED-VESSEL none.

SEED ſingle, like that of the hermaphrodites, incloſed in the quadrifid calyx, which is but ſlightly altered. *fig.* 7, 8.

The

The flowers of the *Parietaria* are ſo ſmall, and ſo difficult to inveſtigate, that we need not wonder at their being deſcribed differently by different botaniſts; LINNÆUS's deſcription, in his *Genera Plantarum*, accords beſt with our obſervations, his therefore we have adopted with ſome few alterations.

We find only two ſorts of flowers on this plant, viz. hermaphrodite and female; of theſe, two hermaphrodite and one female bloſſom are generally placed together in one common involucrum, the female bloſſom intermediate. To obtain a perfect idea of the manner in which the fructification is carried on, we muſt examine theſe flowers at a very early period of their expanſion, we ſhall then find in each involucrum three red ſtigmata, the two outermoſt of which belong to hermaphrodite flowers, whoſe ſtamina are not yet viſible; the middle one, which is largeſt and moſt conſpicuous, to the female. If we take a view of the ſame bloſſoms juſt at the time that the elaſtic filaments by their ſudden expanſion ſcatter the fertilizing duſt of the antheræ, the ſtyles and ſtigmata of the hermaphrodite flowers, viſible before, will often be found wanting, and the germen left naked in the center of the flower; at this period of the bloſſoming, the ſegments of the calyx in the ſame flowers are nearly of the ſame length as the filaments, the ſtyle and ſtigma of the female bloſſom remain perfect, with its germen cloſely ſurrounded by a green, hairy calyx, which never expands: the bloſſoming period being now over, a conſiderable alteration takes place in the calyx of the hermaphrodite flowers, each is conſiderably elongated, becomes more tubular, aſſumes a redder colour, has its tips preſſed down, and ſoon drops out of the involucrum, in which it leaves no appearance of a ſeed; hence I was ready to conclude that theſe flowers, the imperfection of whoſe piſtilla at a certain age had before been noticed, were certainly barren, but on opening them, I found in the bottom of each a ſeed perfectly ſimilar to that produced by, and incloſed in the calyx of the female flower, which does not enlarge as the other does, but partaking more of the nature of a capſule, on preſſure, divides at top into four parts, and contains a blackiſh ſhining ſeed.

It may ſeem a little extraordinary, that the imperfect hermaphrodite flowers of this plant ſhould produce perfect ſeed; but we ſhould conſider that they are perfect at firſt, and that there always is a number of Antheræ belonging to flowers farther advanced burſting near them, from whoſe pollen they may probably be impregnated.

SCOPOLI deſcribes male flowers on this plant, having a ſeſſile, ſhining, oblong, and pointed Nectary; ſurely he muſt conſider the imperfect germen in the hermaphrodite flowers as a Nectarium, otherwiſe he ſees farther than any of his contemporaries.

The curious manner in which theſe flowers ſhed their Pollen, or fertilizing duſt, is known to moſt botaniſts, but may be new to ſome of our readers; each filament has a peculiarity of ſtructure which renders it highly elaſtic, there are four of them in number, on their firſt appearance they all bend inward; as ſoon as the pollen is arrived at a proper ſtate to be diſcharged, the warmth of the ſun, or the leaſt touch from the point of a pin, will make them inſtantly fly back with a degree of force, and diſcharge a little cloud of duſt. This proceſs is beſt ſeen in a morning, when the ſun ſhines hot on the plant, in July and Auguſt; if the plant be large, numbers will be ſeen exploding at the ſame inſtant.

The *Parietaria*, which takes its name from its place of growth, is frequently found on walls, and among rubbiſh, eſpecially on the walls adjoining the Thames, both above and below Weſtminſter-bridge, it is not a native of *Sweden*, or the more northern countries; this autumn the ſame degree of cold (viz. about 31 of Fahrenheit's thermometer) which ſtripped the mulberry of moſt of its leaves, deſtroyed the greateſt part of its herbage.

Mr. PHILIP MILLER *(vide Dict. ed. 6. 4to.)* aſſerts that the *Parietaria* which grows wild in England is the Pellitory with a Baſil leaf, *Parietaria Ocymi folio* BAUH. *Pin.* *Parietaria judaica* LIN. and that the *officinalis* LIN. which he ſays grows naturally in Germany and Holland, was not in England till the year 1727, when he firſt introduced it; in this opinion Mr. MILLER ſtands alone, and there is the greateſt reaſon to ſuppoſe that he is deceived, and the more ſo, as the remainder of his account, in which he ſays that "the ſeeds are difficult to col-"lect, as they are thrown out of their covers as ſoon as they are ripe with an elaſticity," ſhows extreme inattention.

As a medicinal plant more virtues appear to have been attributed to the *Parietaria* than it deſerves; it has been ranked as an emollient, to which, in the opinion of FLOYER and CULLEN, it has no pretenſions, as a diuretic it was an ingredient in the nephritic decoction of the late Edinburgh Diſpenſatory, which is omitted in the preſent; in this laſt intention the expreſſed juice has been given in the doſe of three ounces.

Mr. SOLE, Apothecary of Bath, well known to the Botanic World, for his extenſive collection of indigenous plants, informs me that he has obſerved remarkably good effects from the juice of this herb in dropſical caſes, in which other diuretics had failed; he converts the juice into a thin ſyrup, and gives two table-ſpoonfuls or more thrice a day.

Monſ. TOURNEFORT, ſpeaking of the *Parietaria*, ſays, "Le ſirop de Parietaire ſoulage fort les hydropiques." *Hiſt. des Pl. de Paris.* AURELIUS VICTOR informs us, that CONSTANTINE beſtowed on the Emperor TRAJAN the name of *Parietaria*, becauſe his ſtatues and his inſcriptions, like that herb, were found on all the walls of Rome. *Le Meme.*

It is recommended to be laid on the corn in granaries, for the purpoſe of driving away that deſtructive inſect the Weevil. *Bradley's Farm. Direct. p.* 122.

EQUISETUM ARVENSE. CORN HORSE-TAIL.

EQUISETUM *Lin. Gen. Pl.* CRYPTOGAMIA FILICES.

Spica fructificationibus peltatis, basi dehiscentibus, multivalvi.

Raii Syn. Gen. 4. HERBÆ CAPILLARES ET AFFINES.

EQUISETUM *arvense* scapo fructificante nudo; sterili frondoso. *Lin. Syst. Vegetab.* p. 457. *Sp. Pl.* p. 1516. *Fl. Suec.* n. 928.

EQUISETUM caule florigero nudo, sterili verticillato, radiorum duodecim. *Haller. Hist.* n. 1676.

EQUISETUM *arvense*. *Scopoli Fl. Carn.* n. 1253.

EQUISETUM arvense longioribus setis. *Bauh. Pin.* 16. *Parkins.* 1202. *Raii Hist.* p. 130. Corn Horse-tail.

EQUISETUM segetale. *Ger. emac.* 1114.

HIPPURIS minor cum flore. *Dod. Pempt.* p. 73.

EQUISETUM minus terrestre. *I. B.* III. 730. *Hudson. Fl. Angl. ed.* 2. p. 265. *Lightfoot Fl. Scot.* p. 647.

RADIX perennis, gracilis, nigra, articulata, insigniter reptans, fibris nigricantibus e geniculis exortis capillata.

SCAPI seminiferi ante caules frondosos prodeuntes, et cito marcescentes, crassitie culmi triticei majoris, palmares aut dodrantales, erecti, nudi, lutescentes, geniculati, geniculis 2. 3. 5. vaginis multifidis, nervosis, membranaceis, circumvestiti.

SPICÆ seminiferæ terminales, oblongæ, obtusæ, unciales.

CAPSULÆ seu thecæ seminiferæ plurimæ, angulatæ, erectæ, circa receptaculum proprium collocatæ, et scuto orbiculato lutescente tectæ, *fig.* 1. demum introrsum dehiscentes et pulverem virescentem effundentes, *fig.* 2. 3. auct. *fig.* 4.

CAULIS pedalis et ultra, in apricis obliquus, striatus, scabriusculus, geniculatus. *Vaginæ* numerosæ, denticulatæ.

FOLIA verticillata, octo circiter in singulo verticillo, simplices, cauli simplices.

ROOT perennial, slender, black, jointed, exceedingly creeping, with tufts of black fibres springing from the joints.

STALKS producing the seeds springing up before the leaf-stalks, and soon withering, the thickness of a large wheat-straw, a hand's-breadth or more in height, upright, naked, yellowish, jointed; joints from two to five, covered with membranous, ribbed sheaths, divided at top into numerous segments or teeth.

SEED-SPIKES terminal, oblong, obtuse, about an inch in length.

CAPSULES, or seed-cases, numerous, angular, upright, placed together round a partial receptacle, and covered with a yellowish orbicular shield, *fig.* 1. finally opening inwardly, and throwing out a greenish powder, *fig.* 2. 3. magnified, *fig.* 4.

STALK a foot or more in height, in open situations oblique, striated, roughish, jointed. The *Sheaths* numerous and toothed.

LEAVES whirled, about eight in each whirl, simple, and like the stalk.

Experiment and observation, which have discovered perfect seeds, if not real Stamina and Pistilla, in some of the plants of this hidden class, have hitherto failed in ascertaining what the powder is, which is contained in such abundance in the spikes of the Horse-tail, different Botanists differing widely in their opinions concerning it. LINNÆUS and SCOPOLI consider it as the true seed of the plant: HALLER and ADANSON as the male dust; and so strongly was the last mentioned author of this opinion, that he removed it from the cryptogamous plants, and placed it with the family of the pines, from which, however, as SCOPOLI very judiciously observes, it differs *toto cœlo*.

We sat down to examine the fructification of this plant, in full expectation of finding Pollen not Seed contained in its cells. We conceived, *a priori*, that a substance so delicately formed, and so rapid in its growth, could scarcely produce capsules with ripe seeds; but we rose from our examination in the full belief of the powders being the real seed, so far as we could judge from its structure and œconomy: actual vegetation must however be proved, before we can arrive at certainty in this matter.

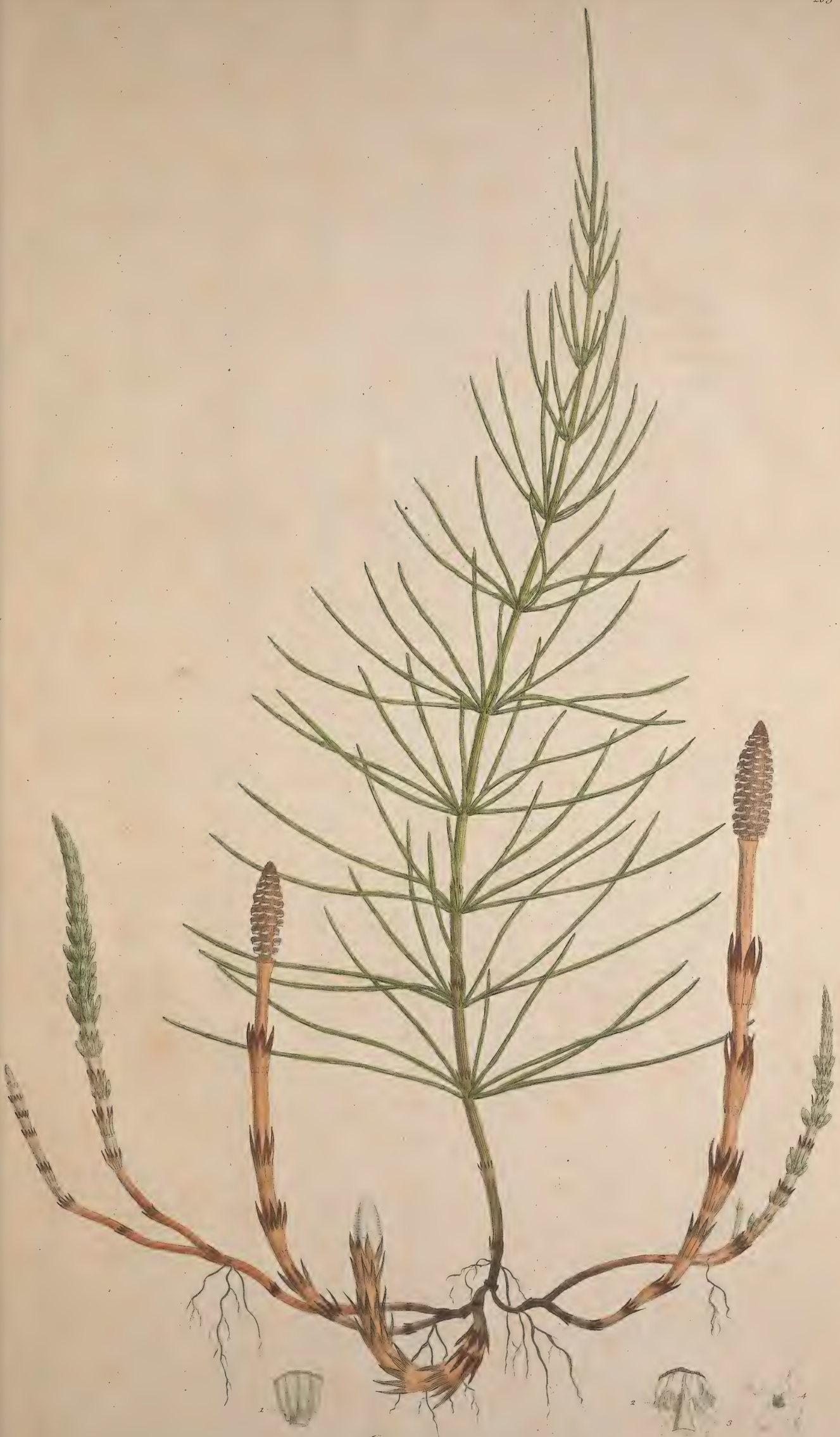
If a little of the powder be shaken out of the spike on a piece of white paper, a moderate magnifier discovers a motion in it, especially if it be breathed on. A similar motion is observed in the capsules of the Ferns when they throw out their seeds; and in the fine powder contained in the heads of the Jungermannia, if we apply a very considerable magnifier to this powder, we find its motion arise from a very different principle from that which actuated the two former. Here every particle of the powder has three or four, very rarely five, fine, pellucid threads, which are club-shaped at the extremity. These threads are elastic, and, by variously extending and curling themselves up, occasion the motion which is so perceptible. Mons. ADANSON, who has minutely described this seed as pollen, compares the appearance it sometimes assumes to a spider with its legs stretched out. Although these motions, which are extremely singular and diverting, are plainly seen with a good magnifier, we never could discover the body of the seed to make any sort of explosion as Pollen would, under similar circumstances of exposure.

The proper time to examine this curious phenomenon is in April, when the plant produces its spikes.

The medicinal virtues of the Equisetum are too problematical to deserve notice. Writers on the *Materia Medica* rank it with the astringents.

The Farmer is deeply interested in a knowledge of this plant, as it is not only one of the most troublesome and difficult weeds to extirpate that we are acquainted with, but noxious even to cattle, especially kine. HALLER relates a particular case in which it proved fatal to a young heifer, by bringing on an incurable *Diarrhœa*.

Many parts of *Battersea Fields* exhibit this plant in perfection. It sometimes is found in meadows and under hedges; and, according to its situation, like all other plants, assumes a variety of appearances.



Equisetum arvense.

BRYUM BARBATUM. BEARDED BRYUM.

BRYUM *Lin. Gen. Pl.* CRYPTOGAMIA MUSCI.

Anthera operculata. *Calyptra* lævis. *Filamentum* e tuberculo terminali ortum.

Raii Syn. Gen. 1. MUSCI.

BRYUM *barbatum* antheris erectis oblongis barbatis, operculo acuminato obliquo, pedunculis lateralibus.

BRYUM unguiculatum et barbatum tenuius et ſtellatum. *Dillen. Muſc.* tab. 48. fig. 48. Small ſtar-topped, clawed, and bearded Heads.

DENSISSIMIS cæſpitibus modo Bryi purpurei ad muros et aggeres naſcitur. *fig.* 1.

CAULICULI ſemunciales aut paulo plus, ramoſi, erecti, folioſi. *fig.* 2, 3.

FOLIA e luteo-viridia, denſa, lanceolata, acuta, inferioribus ſuberectis, ſupremis patentibus. *fig.* 4. auct.

PEDUNCULI ſemunciales et ultra, ex imo ſeu ex medio nunquam e ſummitate ſurculi enati, ſingulares vel plures ex eodem ſurculo, rubentes, nitidi, flexuoſi, bulbillo oblongo nudo ſuperne rubro præditi. *fig.* 5.

CAPSULÆ ſuberectæ, tenues, oblongæ, acuminatæ, olivaceæ, nitidæ. *fig.* 6. *Calyptra* longa, acuminata, parum obliqua. *fig.* 7. *Operculum* longum, tenue. *fig.* 8. *Ciliæ* aurantiacæ, ſeu coccineæ ſpiræ modo contortæ. *fig.* 9.

FORMS a thick turf on walls and banks, in the manner of the Bryum purpureum. *fig.* 1.

STALKS half an inch or ſomewhat more in height, branched, upright, and leafy. *fig.* 2, 3.

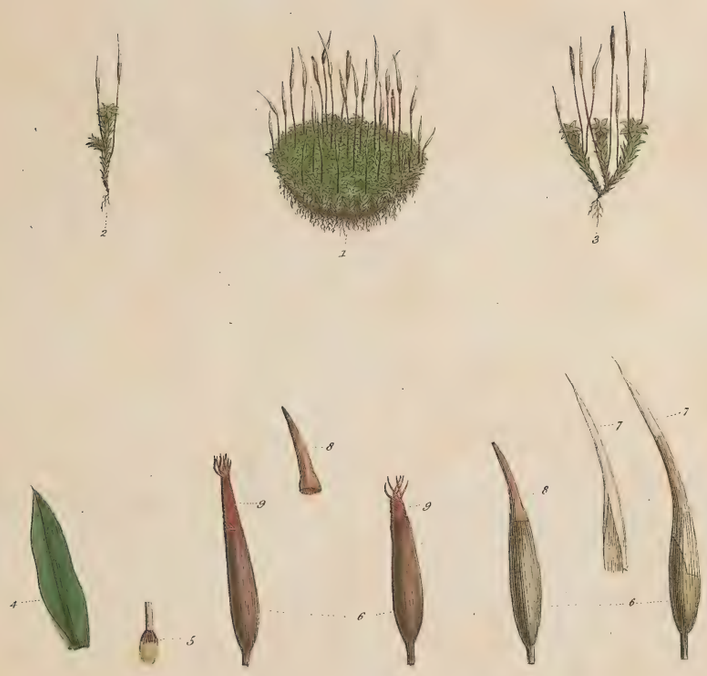
LEAVES of a yellowiſh-green colour, growing thick together, lanceolate, pointed, the lowermoſt nearly upright, the uppermoſt ſpreading; *fig.* 4. magnified.

PEDUNCLES half an inch or more in length, proceeding from the bottom or middle, but never from the top of the ſurculus, one or ſeveral from the ſame ſurculus, red, ſhining, crooked, furniſhed at bottom with a naked oblong bulb, red at top. *fig.* 5.

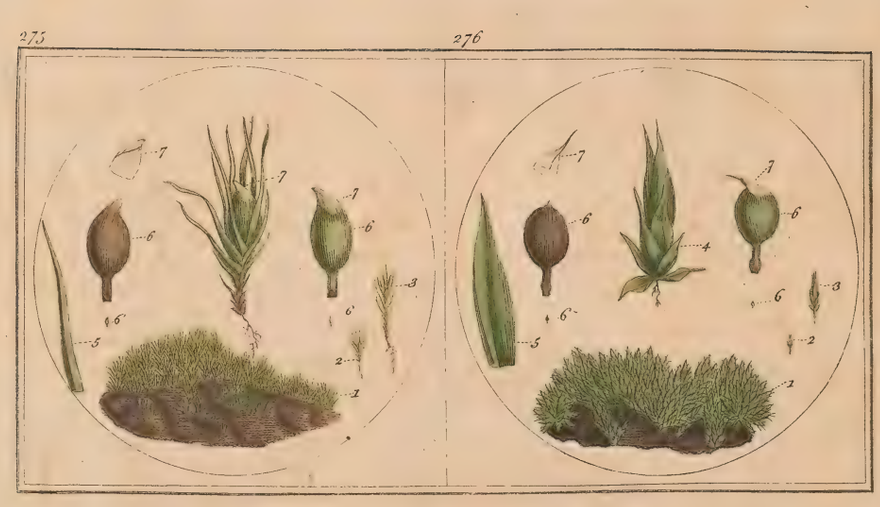
CAPSULES nearly upright, ſlender, oblong, pointed, of an olive colour, and ſhining. *fig.* 6. *Calyptra* long, pointed, a little oblique. *fig.* 7. *Operculum* long, and ſlender. *fig.* 8. *Ciliæ* orange-coloured or ſcarlet, twiſted in the form of a ſcrew. *fig.* 9.

The moſs here repreſented is undoubtedly the *Bryum* figured by DILLENIUS, in his forty-fifth plate, forty-eighth figure. Neither LINNÆUS nor Mr. HUDSON make mention of it. We are convinced, however, from repeated obſervations, that it is a ſpecies perfectly diſtinct. It approaches very near to the *Bryum imberbe* and *unguiculatum*. From the former it differs in having the Antheræ or Capſules terminated by long twiſted ciliæ, and in having the peduncles always proceeding from the baſe of the ſurculus: this laſt character alſo ſtrikingly diſtinguiſhes it from the *unguiculatum*.

It is not unfrequent about *London*, eſpecially in the environs of *Charlton*, on walls, and barren hilly ground, with the *Bryum purpureum* and *cæſpititium*, and produces its fructifications in *December*, *January*, and *February*.



Bryum barbatum.



Phascum subulatum. *Phascum acaulon.*

PHASCUM ACAULON. COMMON PHASCUM.

PHASCUM *Lin. Gen. Pl.* CRYPTOGAMIA MUSCI.
Calyptra minima. *Operculum* nullum.
Raii Syn. Gen. 3. MUSCI.
PHASCUM *acaulon* anthera ſeſſili foliis ovatis acutis. *Lin. Syſt. Veget.* p. 794. *Sp. Pl.* 1570. *Fl. Suec.* 960.
PHASCUM *cuſpidatum* cauleſcens, foliis ovatis cuſpidatis patulis: terminalibus erectis conniventibus. *Schreber. de Phaſco.* t. 1. f. 1, 2.
SPHAGNUM acaulon foliis ovato-lanceolatis, pilo ariſtatis. *Haller. Hiſt.* 1726.
SPHAGNUM acaulon bulbiforme majus. *Dill. Muſc.* 251. t. 32. f. 11. *Raii Syn.* 105. *Lightfoot Fl. Scot.* p. 695. *Hudſon Fl. Angl.* p. 466. *Oeder Fl. Dan.* t. 249. f. 1.

PHASCUM SUBULATUM. HEATH PHASCUM.

PHASCUM ſubulatum acaule, anthera ſeſſili, foliis ſubulato-ſetaceis patulis. *Lin. Syſt. Vegetab.* p. 794. *Sp. Pl.* 1570.
PHASCUM *ſubulatum* cauleſcens, foliis lanceolato-linearibus patulis. *Schreber de Phaſco*, p. 80.
SPHAGNUM acaulon trichodes. *Haller. Hiſt.* n. 1727. *Dillen. Hiſt. Muſc.* 251. t. 32. f. 10. *Oeder Fl. Dan.* t. 249. *Lightfoot Fl. Scot.* p. 693. *Hudſon. Fl. Angl.* p. 466.

DILLENIUS, who drew the figures of his incomparable work on moſſes, without uſing glaſſes of any conſiderably magnifying power, or, perhaps, without attending ſo much to the minutiæ of the parts of fructification as the practice is at preſent, deſcribed theſe plants as *having no Calyptra*, and united them with the genus *Sphagnum*. LINNÆUS afterwards made a diſtinct genus of them, but without correcting the error of his predeceſſor. The following is the deſcription of the genus *Phaſcum*, which he gives in th 6th edition of the *Genera Plantarum*.

Maſculus flos ſubſeſſilis vel brevi pedunculo.
CAL. Calyptra nulla.
ANTHERA ovalis ore ciliato, tecta *operculo* acuminato.
RECEPT. *Apophyſis* nulla.
Femineus flos.

Several Botaniſts afterwards deſcribing and delineating the *calyptra*, LINNÆUS, in the 13th edition of his *Syſtema Naturæ*, publiſhed by MURRAY under the title of *Syſtema Vegetabilium*, alters it thus:

ANTHERA operculata: ore ciliata. *Calyptra* caduca, minuta.

This generic deſcription, thus altered, is adopted by Mr. HUDSON, without any remarks on its inapplicability to the Engliſh *Phaſca*. He ſhould have informed us, that, however well the character might accord with any foreign Phaſcum, the *Engliſh* ones, at leaſt both theſe here figured, which are the moſt common, have neither *Operculum* nor *Ciliæ*. Of this we are fully convinced from repeated examination; and have the pleaſure of having our experiments confirmed by the accurate and ingenious SCHREBER, who, in his moſt excellent *Monographia, Obſervationes de Phaſco*, has the following paſſages: "Suturam, qua plerorumque muſcorum vaſcula infra apicem, ubi "deinde operculum abſcedit, cinguntur, in nulla hujus generis ſpecie obſervare potui. Operculum enim Phaſcis "in univerſum omnibus deeſt, et vaſculum undique in extremum apicem uſque clauditur, ſine ullius determinatæ "aperturæ veſtigio, quamobrem compreſſum utcumque rumpi ſolet. Cilia igitur in quocumque Phaſco fruſtra "quærerentur."

Again, ſpeaking of the Capſule, he ſays: "*Pecten* in ea nullus adeſt nec ullam aperturæ cujuſdam determinatæ "aut foraminis, emiſſioni contentorum inſervientis, veſtigium reperire unquam potui. Non enim ſponte aperitur, "ſed integra perſiſtit; donec maxima foliorum pars putruerit, quod in *Ph. pilifero* ſæpius obſervavi, aut e foliis "apertis integra elabitur."

This ſingular deficiency then, both of the Operculum and Ciliæ, forms, in our opinion, the beſt criterion by which to diſtinguiſh this genus of plants, and we have altered the generic character accordingly.

PHASCUM ACAULON.

THERE is no moſs more common on the moiſt banks about *London* than the *Phaſcum acaulon*; but as it exhibits no appearance of fructification till in an advanced ſtate, and then only to the inquiſitive obſerver, it generally paſſes unnoticed. Mr. LIGHTFOOT gives a ſhort, but very expreſſive, deſcription of it, as follows: "The "leaves, when young, connive together, in "the form of a ſmall oval bulb, about one-"ſixth of an inch long, and hide the capſule, "which is oval and orange-coloured at firſt, but "when ripe fuſcous and ſhining, and about the "ſize of a millet ſeed." We have repreſented the plant at *fig.* 1. as it uſually grows on the ground; *fig.* 2, 3. detached plants of their natural ſize; *fig.* 4. a plant magnified; *fig.* 5. a ſingle leaf magnified; *fig.* 6. the anthera or capſule magnified; *fig.* 7. the calyptra alſo magnified.

PHASCUM SUBULATUM.

THE *Phaſcum ſubulatum* is not ſo frequently met with as the *acaulon*, yet is not uncommon on heaths, in the ſand pits about *Charlton*, and on dry banks in a variety of places. They are both found in fructification from *December* to *January*.

In this ſpecies the capſule, though ſmaller, is much more diſtinctly ſeen, and its calyptra is viſible even to the naked eye. Like the other, it varies much in ſize, as alſo in the length, of its peduncle. Mr. LIGHTFOOT conſiders it as the leaſt of our *Engliſh* plants; but Mr. DICKSON, of *Covent-Garden*, who may juſtly be called *maximus in minimis*, has diſcovered a Phaſcum, the *ſerratum* of SCHREBER, which is certainly ten times ſmaller. *Fig.* 1. repreſents the ſubulatum as it uſually grows; *fig.* 2, 3. detached plants; *fig.* 4. a plant magnified; *fig.* 5. a ſingle leaf magnified; *fig.* 6. the capſule; *fig.* 7. the calyptra magnified.

JUNGERMANNIA COMPLANATA. FLAT JUNGERMANNIA.

JUNGERMANNIA. *Lin. Gen. Pl.* CRYPTOGAMIA ALGÆ.

MASC. pedunculatus, nudus. *Anthera* quadrivalvis.
FÆM. ſeſſilis, nudus, ſeminibus ſubrotundis.

Raii Syn. Gen. 18. MUSCI.

JUNGERMANNIA *complanata* ſurculis repentibus, foliolis inferne auriculatis, duplicato-imbricatis, ramis æqualibus. *Lin. Syſt. Vegetab.* p. 803. *Sp. Pl.* p. 1599. *Fl. Suec.* 1041. *Weis. Cryptog.* p. 124.

JUNGERMANNIA foliis rotundis alterne imbricatis, caule plano multifloro, ſetis breviſſimis. *Haller Hiſt.* n. 1860.

JUNGERMANNIA complanata: ſurculo reptante, foliis ſubrotundis ſerie duplici ordinatis, ſubtus appendiculatis; vaginis ramorum plano-truncatis. *Necker. Meth. Muſc.* p. 142.

LICHENASTRUM imbricatum majus ſquamis compreſſis et planis. *Dillen. Muſc.* 496. *t.* 72. *f.* 26.

JUNGERMANNIA foliis circinatis imbricatim diſpoſitis ex viridi flaveſcentibus. *Michel. Gen.* 7. *t.* 5. *f.* 21.

LICHENASTRUM imbricatum majus. *Raii Syn.* 111. *Hudſon. Fl. Angl.* p. 514. *Lightfoot Fl. Scot.* p. 781.

Deſcriptio ex WEIS.

SURCULIS variæ longitudinis, ab unciali ad biuncialem longitudinem, planis, inordinate ramoſis, ad cortices arborum, latis cæſpitibus repit.

FOLIOLA denſe imbricata, alterna, rotunda, ſubpellucida, plana, ſurculi nervum ſuperne tegunt; inferne nervo adherent parvæ, rotundæ ſquamulæ. Color pallide e luteo viridis. Recens mollis tactu eſt, aqua madida tota flacceſcit. Ad extremitates, et paſſim ad exortum ramorum prodeunt *thecæ* planæ, ſquamis duplo vel triplo longiores, dilute virides, truncatæ, e quibus *ſetæ* breves, lineam non excedentes emergunt, tenuiſſimæ, cum parvis nigris capitulis, in fuſcas lacinulas piloſas diſſilientes.

Fig. 1. Planta magn. nat.
Fig. 2. Pars ejuſdem lente aucta.
Fig. 3. Pars ejuſdem inferior.
Fig. 4. Theca ſeu Vagina.
Fig. 5. Pedunculus.
Fig. 6. Capitulum adhuc integrum.
Fig. 7. Capitulum findens pulveremque ſpargens.
Fig. 8. Capitulum demiſſo pulvere.

Deſcription from WEIS.

SURCULI of various lengths, from one to two inches, flat, irregularly branched, creeping on the bark of the trees in large patches.

LEAVES of a pale yellow-green colour, cloſely imbricated, alternate, round, ſomewhat tranſparent, flat, above entirely covering the mid-rib of the ſurculus, beneath ſmall round ſcales adhere to the mid-rib, the whole plant, when freſh, is ſoft to the touch, moiſtened with water it grows flaccid. At the extremities, and here and there at the origin of the branches, proceed flat *ſheaths* appearing truncated or cut off at top, from whence proceed ſhort ſetæ or peduncles about a line in length, very ſlender, and terminated by ſmall black heads ſplitting into four brown hairy ſegments.

Fig. 1. The plant of its natural ſize.
Fig. 2. A part of the ſame magnified.
Fig. 3. The underſide of the ſame.
Fig. 4. The Caſe or Sheath.
Fig. 5. The Peduncle.
Fig. 6. The Capitulum as yet entire.
Fig. 7. The Capitulum ſplitting and diſcharging its powder.
Fig. 8. The Capitulum with the powder diſcharged.

The name of *Jungermannia* was given to this genus by MICHELI in honour of JUNGERMANNUS, a botaniſt of the laſt century.

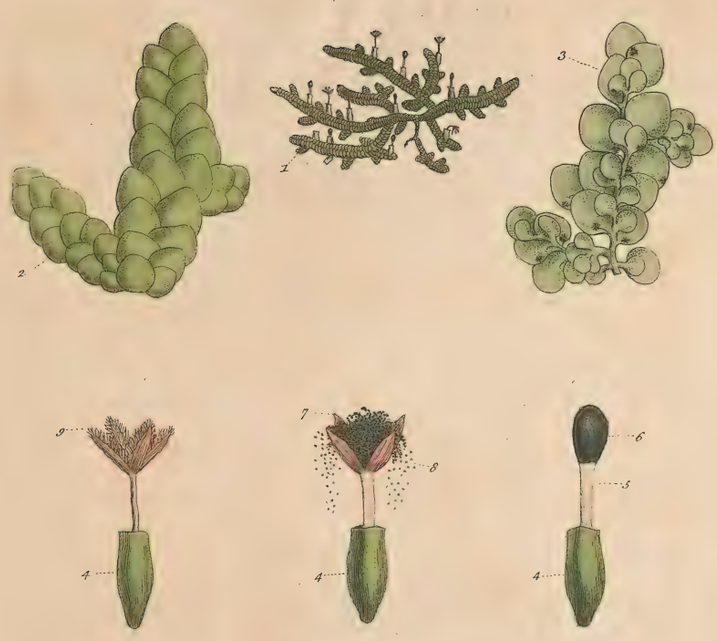
As LINNÆUS conſiders the Capſules of the Moſſes as the *Antheræ* containing *Pollen*, ſo in like manner he regards the *Capitula* of the preſent genus as containing Pollen alſo, and the little apparently pulverulent balls, viſible only on a few of the *Jungermanniæ*, but found on moſt of the *Mnia* as the female flowers, producing ſeeds. Vid. *Generic Character.*

With all due deference to ſuch reſpectable authority, we are of opinion, that the character of this genus would be leſs complex, and equally complete, without calling in thoſe balls or ſphærophylli, as NECKER terms them, at all.

The *Capitula*, or little heads, ſplitting when ripe into four parts, replete with a fine powder (whether pollen or ſeed is immaterial) attached to numerous hairs growing to the inſide of the Capitula, are characters which will in all cases ſufficiently diſtinguiſh this genus. The little heads of theſe plants are capable of affording much microſcopic entertainment. Take a head ready to burſt open, place it before the microſcope, aſſiſt its opening with the point of a needle, and the elaſtic hairs on the inſide will inſtantly appear in motion, and throw off the globules attached to them in great numbers, and with conſiderable force.

The preſent ſpecies is one of the moſt common of this genus, and may be found in great plenty and perfection about the end of *January*, ſpreading on the bark of the Oak and other trees in woods, particularly *Charlton Wood.*

It is diſtinguiſhable from another, equally common, by the pale green colour of its leaves.



Jungermannia complanata.

AGARICUS PROCERUS. TALL MUSHROOM.

AGARICUS *Lin. Gen. Pl.* CRYPTOGAMIA FUNGI.

Fungus horizontalis, ſubtus lamelloſus.

Raii Syn. Gen. 1. FUNGI.

AGARICUS *anulatus* ſtipitatus, pileo campanulato ſubfuſco ſquamoſo, lamellis albidis, ſtipite bulboſo anulato. *Lightfoot Fl. Scot.* p. 1025.

AGARICUS *procerus* ſtipitatus pileo hemiſphærico lacerato-ſquamoſo rufeſcente cinereo, lamellis albis, ſtipite longo cylindrico acetabulo inſerto. *Hudſon Fl. Angl. ed.* 2. p. 612.

AGARICUS *procerus*. *Scopoli Fl. Carn.* n. 1465.

AMANITA petiolo procero, anulato, in acetabulum pilei immiſſo, pileo ſquamoſo et maculato, lamellis albis. *Haller. Hiſt.* n. 2371.

AGARICUS; pileo papillari, ampliſſimo, in margine fornicato, lacero et filamentoſo; petiolo anulato procero, inferius tumido, pilei acetabulo inſerto. *Gleditſch. Fung.* p. 114.

FUNGUS pileolo lato, longiſſimo pediculo variegato. *C. B. Pin.* 371. n. 24.

FUNGI longiſſimo pediculo candicantes, ſed maculati eſculenti. *J. B.* III. 826. *Raii Syn.* p. 3. n. 10. *Schæff. Fung.* t. 22, 23.

STIPES ſolitarius, ſpithamæus, et ultra, craſſitie indicis, baſi bulboſus, fiſtuloſus, *fig.* 3, albidus, ſquamis fuſcis plerumque notatus.

VOLVA ampla, perſiſtens, lacera, bilamelloſa, lamella inferiore membranacea, ſubfuſca, ſuperiore alba, ſpongioſa.

PILEUS palmaris et ultra, primo ſubgloboſus, dein campanulatus, demum planus, ſquamis fuſcis, floccidis, circa verticem crebioribus, maculatus; vertex tumidus, coriaceus; caro craſſitie lamellarum, alba, molliſſima, ſpongioſa.

LAMELLÆ confertæ, fragiles, albidæ, baſi in marginem acetabuli pilei inſertæ, pulverem ſubtiliſſimum cineraſcentem ſpargentes. *fig.* 1, 2.

STALK ſingle, ſix inches or more in height, the thickneſs of the forefinger, bulbous at bottom, hollow, *fig.* 3, whitiſh, and generally mottled with brown ſcales.

RUFFLE large, permanent, torn, compoſed of two lamellæ or coats, the lowermoſt membranous, and browniſh, the uppermoſt white and ſpongy.

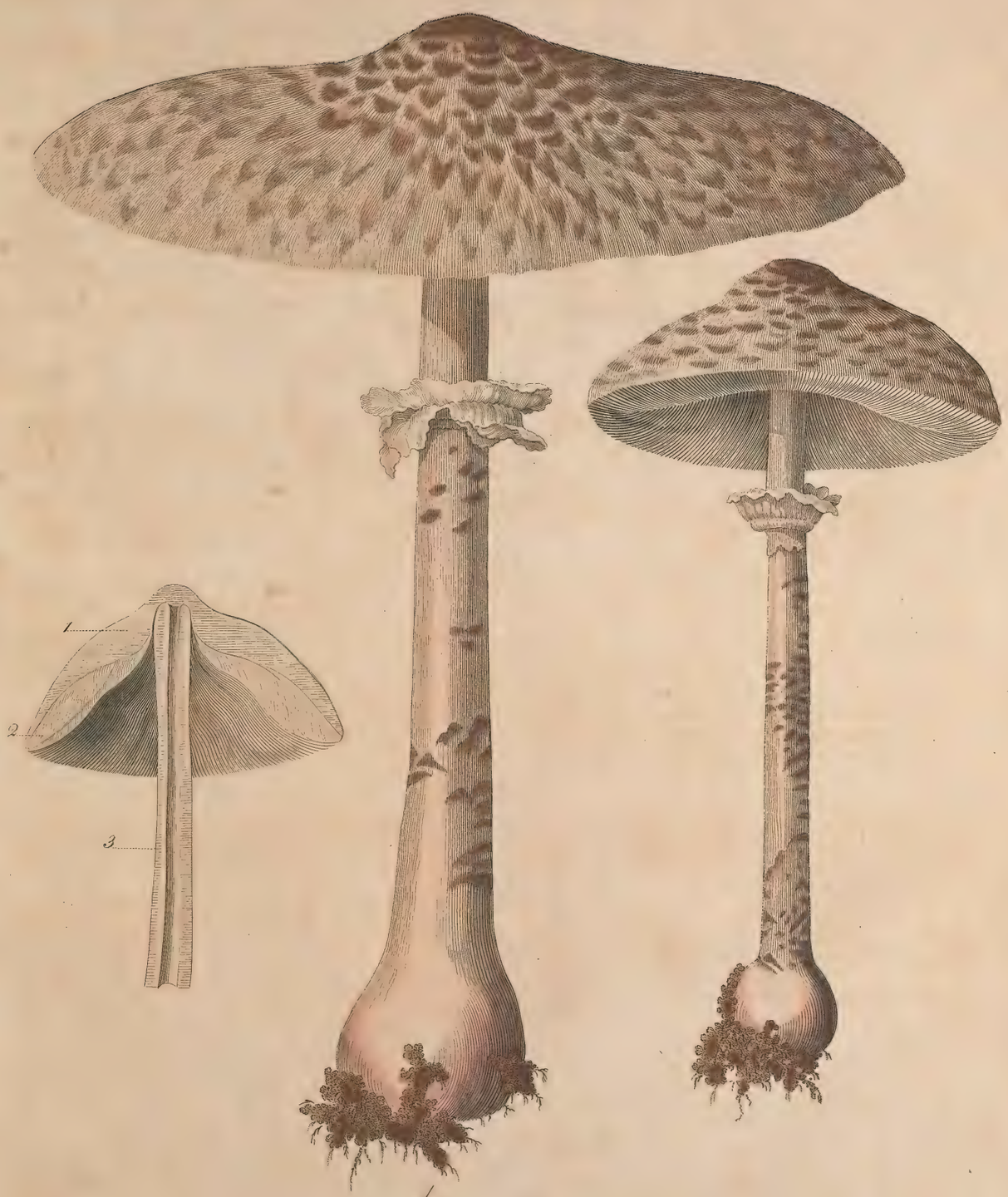
CAP three inches and more in diameter, at firſt roundiſh, then bell-ſhaped, and laſtly flat, ſpotted with brown, flaky, ſcales; thickeſt round the crown; crown prominent and leathery, fleſh the thickneſs of the gills, white, very ſoft and ſpongy.

GILLS numerous, brittle, whitiſh, inſerted at their baſe into the edge of the cup of the cap, throwing out a very fine aſh-coloured powder. *fig.* 1, 2.

This Muſhroom, inferior to few in point of elegance, is frequently found in Woods, and dry hilly Paſtures, among Heath, Broom, &c. in the months of September and October; I have found it in the environs of *Hornſey Wood*, and *The Spaniard*, *Hampſtead Heath*; in *Richmond Park*, and many other places.

It is a well-known Muſhroom, and eaſily diſtinguiſhed from all others by its tallneſs, its bulbous baſe, its large ruffle, its ſpongy cap, which is flaky, or ſcaly, not warty at top, and which, as Mr. LIGHTFOOT juſtly obſerves, ſeparates it from the *verrucoſus*, with which it has no ſmall affinity.

I have ſeen it expoſed to ſale in Covent Garden market, for the true eatable one, but a Connoiſſeur will diſtinguiſh it by the ſponginess of its fleſh, which renders it in a great degree unfit for eating.



Agaricus Procerus

AGARICUS VELUTIPES. VELVET-STALK'D MUSHROOM.

AGARICUS *Lin. Gen. Pl.* CRYPTOGAMIA FUNGI.

Fungus horizontalis, ſubtus lamelloſus.

Raii Syn. Gen. 1. FUNGI.

AGARICUS *velutipes* faſciculoſus, pileo planiuſculo fulvo, ſtipite nudo, tenerrime villoſo, fuliginoſo.

FUNGUS glutinoſus colore aurantio. *Vaillant Bot. Paris.* p. 72. 8. t. 12. *fig.* 8, 9.

FUNGUS faſciculoſus, pileo orbiculari luteſcente, pediculo fuſco, tenerrime villoſo, lamellis ex flavo candicantibus. *Raii Syn. ed.* 3. p. 9.

Ex ligno putreſcente, ſeu arboribus cæſis, coacervatim plerumque naſcitur hic fungus.

VOLVA ad radicem nulla.

STIPES in plantâ mediæ magnitudinis longitudine indicem, craſſitie pennam anſerinam æquat, teres, haud infrequenter compreſſus, fiſtuloſus, tenerrime villoſus, ſeu velutinus, inferne præſertim in vetuſtis e rufo-nigricans, fuligine quaſi infectus, carneâ citrinâ, in tenuiſſima fila ſericea partibili.

ANNULUS nullus.

PILEUS uncialis ad triuncialem, modice convexus, ſæpe difformis, fulvus, glutinoſus; LAMELLÆ plurimæ, inequales, ex albido-luteſcentes, in majoribus et ſeneſcentibus fungis craſſæ, coriaceæ, luteæ, ad marginem pilei undulatæ, longioribus baſi auriculatis, omnibus venoſis; POLLEN cinereum.

This Fungus uſually grows in cluſters, out of decayed wood or felled trees.

SHEATH or egg at the root wanting.

STALK in plants of a middle ſize about the length of the forefinger, and thickneſs of a gooſe-quill, round, not unfrequently flat, hollow, velvety, on the lower part, eſpecially in the old ones, of a reddiſh black colour, as if tinged with ſoot, the fleſh citron coloured, and ſeparable into ſilk-like threads.

RING, or ruffle, wanting.

CAP from one to three inches in diameter, moderately convex, often ſhapeleſs, of an orange or tawny colour, ſlimy; GILLS numerous, unequal, of a whitiſh yellow colour, in the larger and older fungi thick, leathery, yellow, waved towards the edge of the cap, the longer ones ear'd at the baſe, and all of them veiny; POLLEN, or ſeed, aſh-coloured.

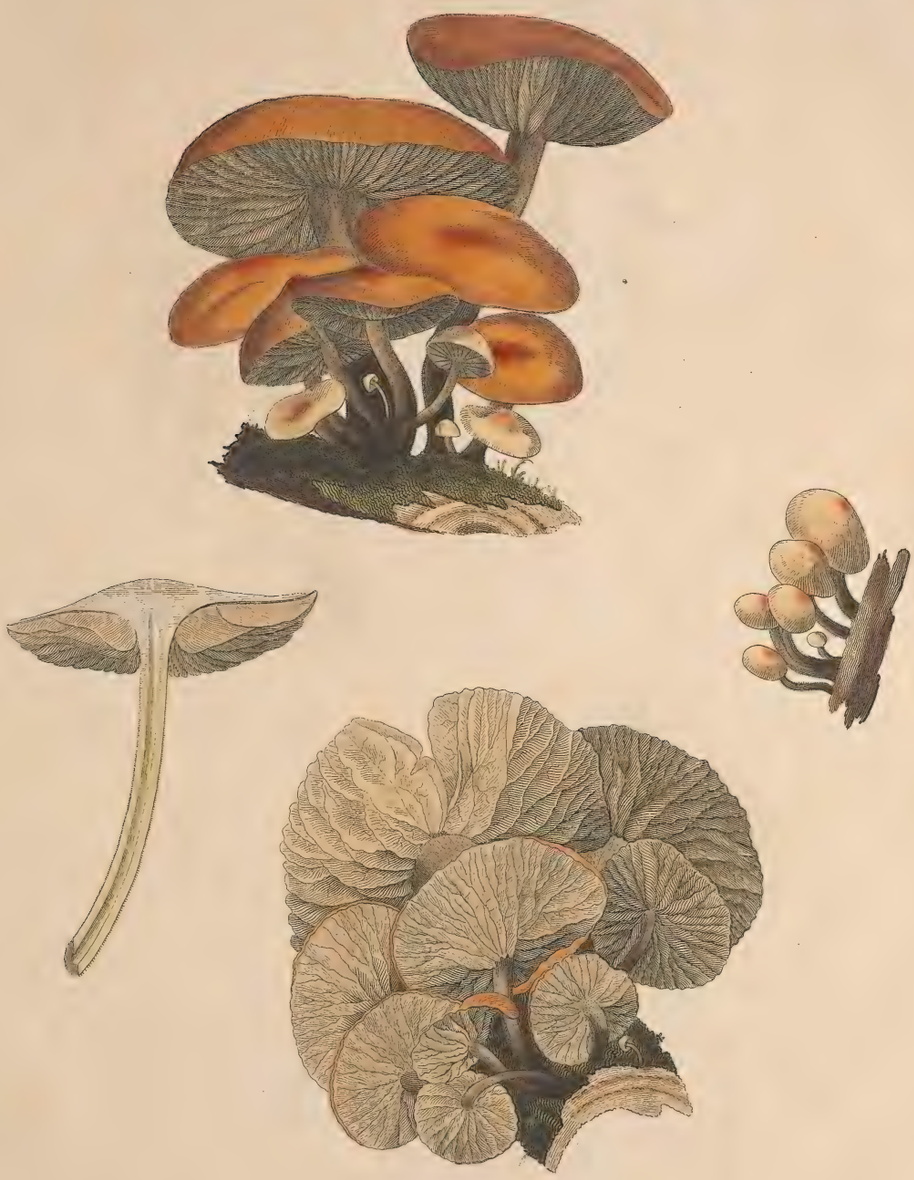
Many of the fungi, like the more perfect plants, make their appearance only at a certain period of the year; others are continually ſpringing up and producing their fructifications, almoſt regardleſs of particular ſeaſons, of the latter kind is the fungus here figured, at leaſt it may be found from September to January in the greateſt plenty.

It uſually grows out of dead, or decaying wood, eſpecially willow and elm, and almoſt always in cluſters of different ſizes, according to particular ſituations; at the bottoms of old willow-trees I have often ſeen fifty or more in a cluſter, with the caps of ſome of the largeſt almoſt as broad as the palm of one's hand, while on ſmall rotten ſticks the cluſter has conſiſted of not more than three or four, with caps not more than half an inch in diameter, but however it may vary in regard to ſize, &c. it luckily has a character which always readily diſtinguiſhes it, and this is its velvety and ſooty ſtalk, moſt conſpicuous in thoſe which are advanced.

RAY's ſynonym and deſcription correſpond pretty accurately with our fungus; Mr. HUDSON appears to have overlooked or confounded it with ſome other ſpecies; VAILLANT has given a good figure, and accurate deſcription of it, in his moſt elegant work the *Botanicon Pariſienſe.*

To the taſte this muſhroom is rather agreeable, and devoid of all acrimony, perhaps it may be eaten with ſafety, it is not however of the kind recommended by HORACE,

——— ——— *pratenſibus optima fungis*
Natura eſt: aliis malè creditur.



Agaricus Velutipes.

AGARICUS FLOCCOSUS. SHAGGY MUSHROOM.

AGARICUS *Lin. Gen. Pl.* FUNGI.

Fungus horizontalis, ſubtus lamelloſus.

Raii Syn. Gen. 1. FUNGI.

AGARICUS *floccoſus* ſtipitatus faſciculoſus, pileo ſtipiteque piloſo-ſquamoſis, e flavo-fuſcis.

PICROMYCES tunicatus. *Batarr.* p. 47. t. 8. H.

AGARICUS floccoſus. *Schæffer. Icon. Fung.* t. 61.

Habitat ad radices arborum, plerumque ceſpitoſus.
STIPES palmaris et ultra, craſſitie digiti minimi ſeu major, ſubcylindraceus, firmus, carnoſus, vix fiſtuloſus, interne albus, ſupra annulum nudus, infra filamentoſus, pileo concolor.

ANNULUS parvus, paulo infra pileum poſitus.
VELUM araneoſum, fugaciſſimum.
PILEUS: *Pilei* diameter ſeſquiuncialis ad palmarem, flavo-fuſcus, convexus, in centro nonnunquam faſtigiatus, piloſo-ſquamoſus. *Lamellæ* plurimæ, confertæ, inæquales, ex albo luteſcentes.

Found at the roots of trees, and generally in cluſters.
STALK four inches or more in height, the thickneſs of the little finger or larger, ſomewhat cylindrical, firm, fleſhy, ſcarcely hollow, white within, above the ring naked, below ſhaggy, of the ſame colour as the cap.

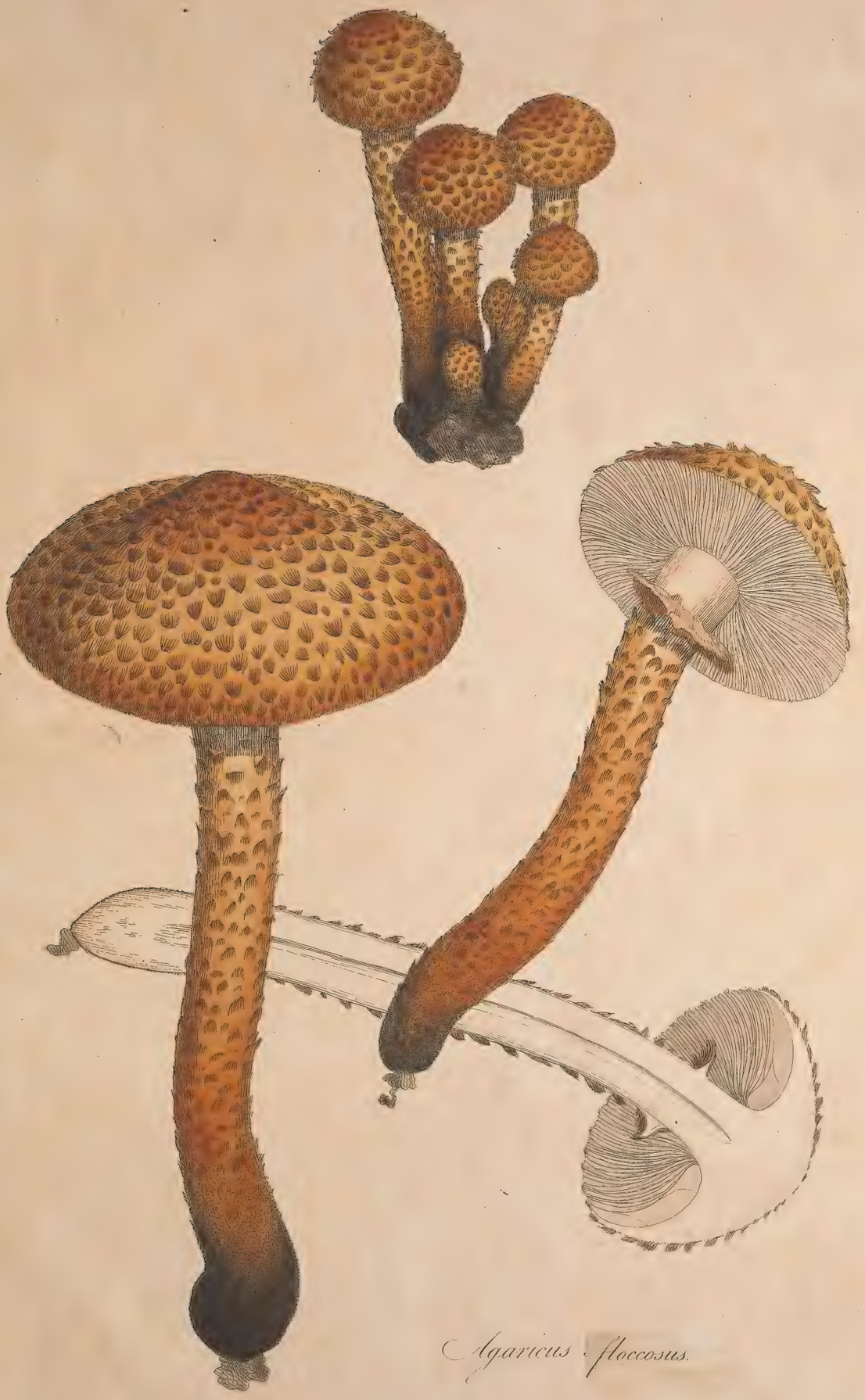
RING ſmall, placed a little beneath the cap.
VEIL cob-webby and very fugacious.
CAP: from an inch and a half to four inches in diameter, of a yellow-brown colour, convex, ſometimes riſing to a point in the middle, ſhaggy. *Gills* numerous, cloſe, irregular, of a yellowiſh-white colour.

It doth not appear, that this Muſhroom is deſcribed either by Mr. RAY or Mr. HUDSON. It approaches very near to the *ſquamoſus* of the latter, and of which Baron HALLER ſeems diſpoſed to conſider it as a variety; to us it appears to be a ſpecies perfectly diſtinct.

BATARRA gives an indifferent figure of it; SCHÆFFER an exceeding good one, very expreſſive of the plant we intend: the ſpecimens from whence his drawings were made ſeem to have been ſmaller than ours, and ſome of them more pointed, which they ſometimes are. Thoſe repreſented on our plate were found about the middle of *October*, growing at the bottom of a pear-tree in the garden of Mr. *John Chorley*, at *South Lambeth*, where they come up regularly every year. I have alſo frequently found this ſpecies in the *Oak of Honour Wood* near *Peckham*. So far as I have remarked, it always grows out of wood, in which reſpect it differs from the *ſimetarius*, which alſo has a ragged head, but grows out of earth, and has a much longer cap.

When young this Fungus is principally diſtinguiſhed by the roughneſs of its cap, which appears almoſt prickly. Its colour varies from a dingy to a more lively brown.

It is not of the eatable kind; nor do we know any inſtance of it proving poiſonous: the maggots of flies devour it.



Agaricus floccosus.

BOLETUS LUCIDUS. LACQUERED BOLETUS.

BOLETUS. *Lin. Gen. Pl.* CRYPTOGAMIA FUNGI. *Fungus* horizontalis ſubtus poroſus. *Raii Syn. Gen.* 1. FUNGI.

BOLETUS *lucidus*, pileo coriaceo ſuperne caſtaneo lucido, ſulcis circularibus notato, inferne albo; poris minutiſſimis.

BOLETUS *rugoſus*. *Jacquin. Fl. Auſtr.* t. 169.

FUNGUS coriaceus, pileolo latiſſimo atrorubente, pediculo breviſſimo. *Raii Syn. ed.* 3. p. 11. ?

FUNGUS ſpecioſus putridis arborum truncis et ſtipitibus preſertim coryli innaſcitur, totus lignoſo-coriaceus et perſiſtens.

STIPES durus, inæqualis, caſtaneus, vernice veluti obductus.

PILEUS plerumque ſubdimidiatus, nonnunquam orbiculatus, planus, ſuperne caſtaneus, nitidiſſimus, ſulcis circularibus concentricis notatus, rugoſus, inferne dum recens albiſſimus; poris minutiſſimis.

FUNGI duo connati, in tabula proponuntur, hinc atque illinc ſpectati, tum fungi pars inferior lente aucta ut pori magis luculenter appareant.

This handſome Fungus grows out of the trunks of decayed trees, particularly the ſtumps of the hazel, and is throughout of a leathery or ſomewhat woody ſubſtance, and permanent.

STALK hard, uneven, of a cheſnut colour, ſhining as if varniſhed.

CAP for the moſt part forming half a circle, ſometimes a whole one, flat, on the upper ſide of a cheſnut colour, and highly poliſhed, marked with circular concentric grooves, the edge thick and wrinkled; on the under ſide, when freſh, very white, the pores exceedingly ſmall.

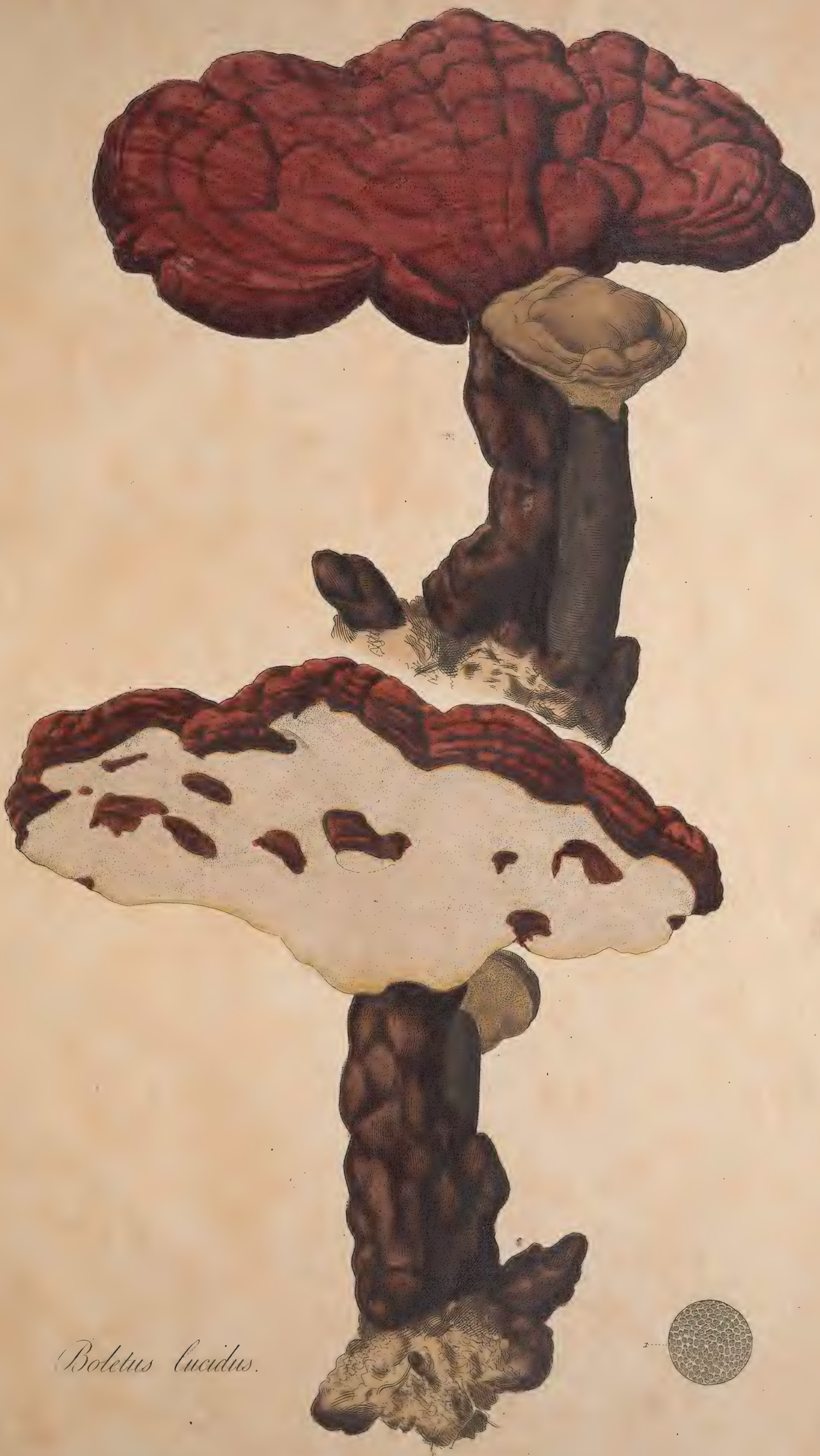
Two Fungi growing together, are repreſented on the plate in two different views; alſo part of the under ſide magnified, to ſhew the pores more plainly.

In the month of November, 1780, I fortunately found the fine ſpecimen of this Boletus, exhibited on the plate, in the Wood adjoining the Oak of Honour, near Peckham; on firſt diſcovering it, the top of the Pileus and ſtalk were of ſo bright a colour, and ſo beautifully poliſhed, that I ſcarcely knew whether I had found a natural or an artificial production, a view of its under ſide, however, ſoon convinced me it was natural; it grew out of a rotten hazel ſtump.

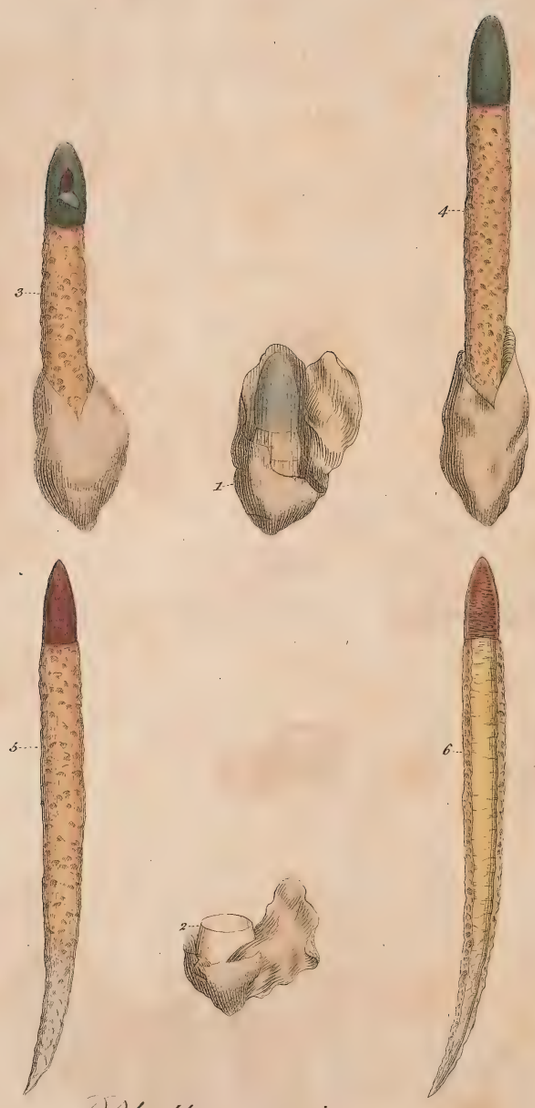
One principal character of this Fungus, is its poliſhed or rather lacquered ſurface, for it has all the appearance of having been varniſhed; this I believe it poſſeſſes in all its ſituations; and on this account I have given it a name different from *Jacquin*, who has an excellent figure of it under the title of *rugoſus*, in his *Fl. Auſtriaca*. The other characters which ſeem to be conſtant, are the depreſſed circles on the upper ſide of the Pileus, its wrinkled, thick, and ſomewhat inverted edge, which is very apt to break out on the under ſide of the Pileus, as repreſented on the plate, but omitted by Jacquin; the unuſual whiteneſs of the pileus on its under ſide and the extreme fineneſs of its pores, which may be overlooked; it appears to be inconſtant in the ſhape of its pileus (which is ſometimes *orbiculatus*, as is ſhewn on the plate in a ſmaller Fungus of the preceding year, and ſometimes *dimidiatus*); and in its ſtalk, which is ſometimes wanting, as I diſcovered from a ſpecimen growing out of the bottom of an elm tree near Hyde Park.

The ſtalk of the ſpecimen figured, which I preſerve, has not ſhrunk at all, the pileus is about one third leſs, but retains its form and much of its beauty.

There was ſome reaſon to ſuſpect this Boletus of being the *perennis* of LINNÆUS, but the deſcription given of that plant in his *Flora Lapponica* removed every doubt, and convinced me he had not deſcribed it.



Boletus lucidus.



Phallus caninus.

PHALLUS CANINUS. RED-HEADED MORELL.

PHALLUS *Lin. Gen. Pl.* CRYPTOGAMIA FUNGI.

Fungus ſupra reticulatus, ſubtus lævis.

Raii Syn. Gen. FUNGI.

PHALLUS *caninus* volvatus, ſtipitatus, ſtipite celluloſo, capitulo impervio, rubro, rugoſo.

PHALLUS exilis Marattæ. *Batarr. Fung.* p. 7. t. 40. F. ?

PHALLUS *caninus* volvatus ſtipitatus, pileo rubro celluloſo acuto, apice clauſo. *Hudſon. Fl. Angl. ed.* 2. p. 630.

VOLVA magnitudine nucis moſchatæ, oblongo-ovata, alba, lævis, intus gelatinoſa, tunicâ interiore ſuperne truncatâ, *fig.* 1, 2.

STIPES extra volvam, ſeſquiuncialis, ſeu biuncialis, magnitudine calami anſerini majoris, teres, filiformis, inferne acuminatus, celluloſus, ſubpellucidus, pallide aurantiacus, intus cavus, cito flacceſcens. *fig.* 3, 4, 5, 6.

CAPITULUM, nam pileus vix dici poteſt, ſtipiti inſidet, eſtque ſeſſile, ſemunciale, diametro ſtipitis, oblongum, ſubacuminatum, apice impervio albeſcente, primo lividum, membranâ nitidâ, tenuiſſimâ tectum, infra quam exigua quantitas humoris vireſcentis, ſeu materies ſeminalis fere inodori cernitur, quâ remotâ ſuperficies capituli rubra et tranſverſim rugoſa apparet, nequaquam vero celluloſa, ſicut in impudico.

VOLVA, or egg, the ſize of a nutmeg, of an oblong, ovate ſhape, white, ſmooth, gelatinous within, the inner coat cut off at top. *fig.* 1, 2.

STALK, beyond the volva, an inch and a half or two inches in length, the ſize of a large gooſequill, round, filiform, terminating in a point at bottom, cellular, ſomewhat tranſparent, of a pale orange colour, hollow within, ſoon becoming flaccid. *fig.* 3, 4, 5, 6.

HEAD, for it cannot properly be called a cap, ſits on the ſtem, is ſeſſile, about half an inch in length, and of the diameter of the ſtem, oblong, a little pointed, impervious and whitiſh at top, at firſt of a livid colour, and covered with a very thin, ſhining membrane, underneath which is a ſmall quantity of a greeniſh liquid, or ſeminal matter, almoſt ſcentleſs, which being removed, the ſurface of the head appears of a red colour, and tranſverſely wrinkled, but by no means cellular, as in the ſtinking Morell.

Mr. EHRET, the celebrated botanic painter, appears to have been the firſt who diſcovered this rare Fungus in this country; he found it in a wood near *Salop**, and made drawings of it for one of his principal patrons. Mr. HUNTER, gardener to the Earl of MANSFIELD, lately found it, though very ſparingly, in *Caen Wood*, and communicated ſeveral ſpecimens of it to Mr. DICKSON of Covent Garden. This autumn 1781, on the 20th of September, I was fortunate enough to be preſent at the diſcovering of one of them in Lord MANSFIELD's ſmall Pine wood, famous for producing the *Phallus impudicus*, *Hydnum auriſcalpium*, and other Fungi; I was in ſearch of theſe, when my draughtſman Mr. SOWERBY pointed out to me a white ſubſtance, riſen a little above the ſurface of the ground, and which at a diſtance reſembled the cap of a ſmall white muſhroom; not ſuſpecting it to be any thing extraordinary, I took it up with leſs caution than I ſhould otherwiſe have done, and on opening it found it to be the *Phallus caninus*, in the ſtate repreſented at *fig.* 1. From the haſty manner in which it was gathered, I had no opportunity of obſerving whether its roots were ſimilar to thoſe of the *Phallus impudicus*, but ſuſpect they were; on examining it the next morning I was pleaſed to find that the ſtalk had ſhot out from its incloſing volva more than an inch; the volva contained a jelly in the manner of the *impudicus*, in paſſing through which, the ſtalk became covered with it, (this is prevented from taking place in the *impudicus*, becauſe the pileus is much wider than the ſtalk) the ſtalk was cellular and hollow, equally rapid in its growth as the *impudicus*, but as its baſe contained within the volva ran out to a finer point, ſo the body of it was more uniformly of a ſize throughout, and of a faint orange colour; not having that firm waxy texture which enables the *impudicus* to ſupport itſelf for many days, it quickly became flaccid after attaining its full growth.

Thus far we may obſerve a great ſimilarity in the ſtructure and œconomy of the two plants we have been comparing; in the remaining part, containing the fructification, we find an amazing difference. The *Phallus impudicus* carries on the top of the ſtalk a very diſtinct and perfect Pileus, or Cap, on the outſide of which the ſeminal matter is depoſited in cells, without the leaſt covering; in the *caninus* there is properly ſpeaking no Pileus, the part on the outſide of which the ſeminal matter is lodged, forms a capitulum, or head, which is only a continuation of the ſtalk, as appears on diſſection, differing in its ſtructure and colour, this head has a *wrinkled*, not a *reticulated* ſurface, within theſe wrinkles, which are not very deep, the ſeminal matter is contained, and (contrary to what we find in the *impudicus*) covered by a very thin membrane; we may obſerve that this matter has very little ſmell in it, nor do flies appear particularly fond of it.

This unuſual ſtructure of the capitulum by no means agrees with LINNÆUS's generic character of a *Phallus*, as that implies a *Pileus ſmooth on the under, and reticulated on the outer ſide*, with which the *impudicus* perfectly correſponds, and yet every botaniſt would call this a *Phallus*; hence there appears a neceſſity for altering its generic character, the eſſence of which ſeems to conſiſt in the *Seeds being contained in a jelly-like liquifying ſubſtance, on the outſide of a Capitulum* or *Pileus*.

BATARRA's figure and deſcription may poſſibly be intended for this Fungus, there is no knowing with certainty, ſo great is their obſcurity.

* In the margin of a Ray's Synopſis which had been Mr. Ehret's, belonging to Mr. Richard Haworth, Apothecary of Chancery-lane, who kindly lent it me, there is the following remark at the Phallus impudicus, in Mr. Ehret's own hand writing: "a ſmaller ſort found in a wood "near Salop, with Mr. Moore 1741, but it did not ſtink."

CATALOGUE

Of certain Plants, growing wild, chiefly in the Environs of SETTLE, in Yorkshire, obſerved by *W. Curtis*, in a Six Weeks Botanical Excurſion from London, made at the Requeſt of J. C. LETTSOM, M. D. F. R. S. &c. in the Months of July and Auguſt, 1782.

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1. *Hippuris vulgaris. Mare's-tail.*
Limnopeuce. *Raii Syn. ed. 3. p.* 136.
In the lakes on *Brigſtear Moſs*, about four miles from *Kendal* plentifully.

2. *Liguſtrum vulgare. Privet.*
Raii Syn. p. 465.
In *Graſs Wood*, near *Graſſington*, about two miles from *Kilnſay*, not uncommon.

3. *Pinguicula vulgaris. Common Butterwort.*
Pinguicula Geſneri. *Raii Syn. p.* 281.
Common on every Bog.

4. *Utricularia vulgaris. Common-hooded Milfoil.*
Lentibularia. *Raii Syn. p.* 286.
In the greateſt plenty with N° 1. flowers in *Auguſt*.

5. *Schœnus Mariſcus. Long-rooted Baſtard Cyperus.*
Cyperus longus inodorus ſylveſtris. *Raii Syn. p.* 426.
On the edge of *Conzic* Tarn, or Lake, about two miles from *Kendal*, in the greateſt abundance, and higheſt perfection, ſome of the flowering ſtems growing to the height of four or five feet.

6. *Schœnus nigricans. Black Bog-ruſh.*
Juncus lævis minor panicula glomerata nigricante. *Raii Syn. p.* 430.
Plentifully on a Bog in *Skirrith Wood*, near *Ingleton*, and moſt other Bogs in the North.

7. *Schœnus compreſſus. Flat-headed Bog-ruſh.*
Gramen cyperoides ſpica ſimplici compreſſa diſticha. *Raii Syn. p.* 425.
Not uncommon in wet boggy places about *Ingleton*, *Settle*, &c.; near *Giggleſwick* Tarn in plenty; flowers in Auguſt.

8. *Schœnus albus. White Bog-ruſh.*
Cyperus minor paluſtris hirſutus paniculis albis paleacis. *Raii Syn. p.* 427.
On *Brigſtear Moſs*, n. 1. in abundance.

9. *Scirpus ceſpitoſus. Heath Club-ruſh.*
Scirpus montanus capitulo breviori. *Raii Syn. p.* 429.
Frequent on Moors, amongſt the Heath or Ling.

10. *Scirpus acicularis.*
Scirpus minimus capitulis equiſeti. *Raii Syn. p.* 429.
On the edge of a rivulet near *Giggleſwick* Tarn, which runs from the ebbing and flowing Well.

11. *Eriophorum vaginatum. Single-headed Cotton-graſs.*
Juncus alpinus cum cauda leporina. *Raii Syn. p.* 436.
On Peat Bogs frequent, in the aſcent to *Ingleborough Hill*.

12. *Melica Montana. Mountain Melic Graſs.*
In *Skirrith Wood*, near *Ingleton*, and in *Graſs Wood*, near *Kilnſay*, not uncommon.

13. *Feſtuca ovina var. vivipara. Viviparous Sheep's Feſcue-graſs.*
Gramen ſparteum montanum ſpica foliacea graminea majus et minus. *Raii Syn.* p. 410.
On the crags near the ſummit of *Ingleborough*, and and on the rocks of *Longſledale*, about ten miles from *Kendal*, plentifully.

14. *Feſtuca elatior. Tall Feſcue-graſs.*
Gramen arundinaceum aquaticum panicula avenacea. *Raii Syn.* p. 511.
On the ſides of the river *Ribble*, near *Settle*, plentifully.

15. *Bromus giganteus. Tall Brome-graſs.*
Gramen avenaceum glabrum, panicula e ſpicis raris ſtrigoſis compoſita, ariſtis tenuiſſimis. *Raii Syn. p.* 415.
Plentifully under the ſtone walls in the road from *Settle* to *Giggleſwick*, and elſewhere.

16. *Bromus hirſutus. Hairy-ſtalked Brome-graſs, Fl. Lond.*
Gramen avenaceum dumetorum panicula ſparſa. *Raii Syn. p.* 51. *nemoralis*, *Hudſon. Fl. Angl.*
Not uncommon in the woods and hedges in Yorkſhire, eſpecially about *Carrend Wenſleydale*.

17. *Triticum caninum. Bearded Wheat-graſs.*
Gramen caninum ariſtatum radice non repente. *Raii Syn. p.* 58.
Plentiful with the laſt mentioned graſs.

18. *Cynoſurus cœruleus. Blue Dog's-tail graſs.*
Gramen parvum montanum ſpica craſſiore purpureo cœruleo brevi. *Raii Syn. p.* 399.
There is no character in this graſs which would induce one to conſider it as a *Cynoſurus*. Several Botaniſts of the firſt eminence make a diſtinct genus of it, and apparently with much propriety. I firſt found it on the rocks near *Settle*, and afterwards on the rocks and tops of the hills generally in the North. From its being in ſeed when I diſcovered it, which was the latter end of *July*, it muſt be one of the earlieſt graſſes in flower; and of all that I have ever ſeen is by far the moſt hardy. The *Poa pratenſis*, in this reſpect, approaches the neareſt to it, and is very ſimilar in its foliage.
The Botaniſt and the Farmer are both intereſted in the further inveſtigation of this alpine plant.

19. *Scabioſa columbaria. Mountain Scabious.*
Scabioſa minor vulgaris. *Raii Syn. p.* 191.
Frequent on all the lime-ſtone rocks.

20. *Plantago maritima. Sea Plantain.*
Plantago, an alpina anguſtifolia. *Raii Syn. p.* 315.
I found this plant very unexpectedly in the road leading from *Kilnſay* to *Arncliff*, in great abundance; and afterwards diſcovered it on the ſides of many of the mountains thereabouts. I could diſcover no difference betwixt it and the Sea Plantain growing at *Graveſend*.

21. *Sanguiſorba officinalis. Great or Meadow Burnet.*
Sanguiſorba major flore ſpadiceo. *Raii Syn. p.* 203.
Common in moſt of the paſtures; in ſome of which it is the principal plant. The farmers were much divided in their opinions reſpecting its goodneſs. It produces a large, but late crop; grows frequently

quently to the height of four or five feet; but its ſtalks are hard, and apparently unfit for fodder. Some have ſuſpected this was the ſpecies recommended to have been cultivated ſome years ſince; but Dr. WATSON, whoſe authority will not be diſputed, aſſures me, it was the leſſer Burnet, whoſe chief excellence conſiſts in affording foliage early in the ſpring, a property the preſent plant cannot boaſt of.

22. *Aſperula Cynanchica. Squinancy-wort.*
Rubeola vulgaris quadrifolia lævis, floribus purpurantibus. *Raii Syn. p.* 225.
On the lime-ſtone hills about *Conzic*, near *Kendal.*

23. *Galium montanum. Mountain Ladies Bed-ſtraw.*
Mollugo montana minor Gallio albo ſimilis. *Raii Syn. p.* 224.
The moſt general plant on all the Northern mountains. The ſummit of *Ingleborough* is principally covered with it and the *Juncus ſquarroſus.*

24. *Galium boreale. Croſs-leaved Ladies Bed-ſtraw.*
Mollugo montana erecta quadrifolia. *Raii Syn. p.* 224.
Plentiful on the hills betwixt *Kilnſay* and *Graſs Wood*, more eſpecially among ſome rocks in *Graſs Wood.*

25. *Alchemilla vulgaris. Common Ladies Mantle.*
Alchimilla, *Raii Syn. p.* 158.
There is ſcarce a paſture or moiſt bank in Yorkſhire on which this pretty plant does not occur.

26. *Alchemilla alpina. Mountain Ladies Mantle.*
Alchimilla alpina pentaphyllos. *Raii Syn. p.* 158.
This ſpecies, which far excels the other in beauty, is by no means ſo frequent. I firſt found it on a hill called *Lime-ſtone Knot*, in *Long ſledale*, a place mentioned by WILSON, in his *Synopſis*, further on in *Long ſledale*, or, as it is there called, *Long ſleddel*, on the high and romantic rocks about *Buckbarrow Well* the Botaniſt will find it in abundance.

27. *Potamogeton ſetaceum. Setaceous Pond-weed.*
In the ditches on *Brigſtear Moſs*, with the *Utricularia* plentifully.

28. *Anchuſa ſempervirens. Ever-green Alkanet.*
Bugloſſum latifolium ſempervirens. *Raii Syn. p.* 227.
From the paucity of places in which this plant was ſaid to have been found wild, and the ſuſpicion which reſted on ſome of thoſe, I had entertained doubts of its being a native of this country: thoſe were entirely removed on my finding it tolerably plentiful in the lanes about *Giggleſwick*, and in the road between *Settle* and *Ingleton.*

29. *Primula farinoſa. Birds Eye.*
Verbaſculum umbellatum alpinum minus. *Raii Syn. p.* 285.
Grows every where with the *Pinguicula.* A variety, with white bloſſoms, has not unfrequently been found; in a Bog in *Skirrith Wood*, near *Ingleton*, I gathered ſpecimens a foot and a half high.

30. *Anagallis tenella. Bog Pimpernel.*
Nummularia minor flore purpuraſcente. *Raii Syn. p.* 283.
Common on the Bogs. The largeſt and fineſt plants I ever ſaw of this ſpecies, grew in a bog betwixt *Kendal* and *Long ſledale.*

31. *Polemonium cæruleum. Jacob's Ladder.*
Polemonium vulgare cœruleum et album. *Raii Syn. p.* 288.
In tolerable plenty at *Malham*, or, as it is there called, *Maum Cove*, by the ſide of the rivulet which ſprings from the baſe of that ſtupendous rock. I found this plant alſo in much greater plenty in *Coniſtone Dib*, in a low wood, under ſhelter of ſome high and romantic rocks, a ſituation it ſeems to affect. Alſo on *Arnber Scar*, on the left-hand between *Kilnſay* and *Arncliff.*

32. *Samolus valerandi. Water Pimpernel.*
Samolus valerandi. *Raii Syn.* 283.
Obſerved a few ſpecimens on *Brigſtear Moſs.*

33. *Campanula latifolia. Giant Bell-flower.*
Campanula maxima foliis latiſſimis. *Raii Syn. p.* 276.
Extremely common about *Settle* and elſewhere, under the ſtone-walls and hedges. The country people improperly call them Fox-gloves.

34. *Ribes rubrum. Common Currants.*
Ribes vulgaris flore rubro. *Raii Syn. p.* 456.
On the edges of the wet ditches, and in the Woods about *Carr End*, *Wenſleydale.*

35. *Gentiana amarella. Autumnal Gentian.*
Gentianella pratenſis flore lanuginoſo. *Raii Syn. p.* 275.
Common on lime-ſtone hills and paſtures.

36. *Ulmus campeſtris* var. *γ Hudſon. Wych Elm.*
Ulmus folio latiſſimo ſcabro. *Raii Syn. p.* 469.
Common in Hedges and Woods. It is much ſuperior in ſize and beauty to the common Elm, and deſerves to be more generally cultivated.

37. *Oenanthe crocata. Hemlock-water Drop-wort.*
Oenanthe cicutæ facie lobelii. *Raii Syn. p.* 210.
In the wet ditches betwixt *Kendal* and *Long ſledale*, and in ſimilar ſituations, in many parts of Yorkſhire.

38. *Scandix odorata. Sweet Cicely.*
Cerefolium magnum ſive Myrrhis. *Ger. emac. p.* 1039.
This plant is not mentioned by Mr. RAY in his *Synopſis*; and Mr. HUDSON introduces it as a doubtful native. The ſituations in which I found it clearly convinced me, it had a good title to be conſidered as a native of Great Britain; and I was confirmed in my opinion by the common people, who find it wild in many places in the greateſt plenty, and call it by the name of *Sweet-ciſs*, an abbreviation of *Cicely.* They rub their furniture with it, to give it a gloſs. It is common under the ſtone-walls about *Settle*, at the entrance into *Kilnſay*, and in *Whitfell Gill*, near *Aſkerig.*

39. *Pimpinella Saxifraga. Burnet Saxifrage.*
Pimpinella ſaxifraga minor, foliis ſanguiſorbæ. *Raii Syn. p.* 213.
Very frequent in the fiſſures of the Lime-ſtone Rocks about *Settle.*

40. *Parnaſſia paluſtris. Graſs of Parnaſſus.*
Parnaſſia vulgaris et paluſtris. *Raii Syn. p.* 555.
Very common in Bogs and wet Meadows.

41. *Droſera rotundifolia. Round-leaved Sun-dew.*
Ros ſolis folio rotundo. *Raii Syn. p.* 356.

42. *Droſera longifolia. Long-leaved Sun-dew.*
Ros ſolis folio oblongo. *Raii Syn. p.* 356.
I found theſe two ſpecies plentifully in the North; but no where in greater plenty, or perfection, than on *Brigſtear Moſs*, near *Kendal*, where they grow to twice or thrice the ſize they uſually acquire with us; but in other reſpects appeared to me to afford no truly ſpecific character. It is very proabable, that the three ſpecies enumerated in RAY, in addition to the above, will be found to be varieties only.

43. *Allium arenarium? Sand Garlic.*
Allium ſylveſtre amphicarpon foliis porraceis, floribus et nucleis purpureis. *Raii Syn. p.* 370.

44. *Allium oleraceum? Herbaceous Garlic.*
Allium ſylveſtre bicorne flore ex herbaceo albicante cum triplici in ſingulis petalis ſtria atro-purpurea. *Raii Syn. p.* 370.
Theſe two ſpecies of Garlic being out of flower when diſcovered, I dare not be poſitive about them. The firſt grew ſparingly, in a paſture at the back of the ſtables belonging to the *Dun Horſe*, *Ingleton*, kept by Mr. *Wariner*, at whoſe houſe every traveller finds himſelf at home. The latter grew alſo ſparingly among rocks, in the *Girling Trough*, near *Coniſtone*, *Kilnſay.*

45. *Anthericum oſſifragum. Lancaſhire Aſphodel.*
Phalangium anglicum paluſtre Iridis folio. *Raii Syn. p.* 375.

Extremely

Extremely common in all Bogs and moorish Grounds, which in *July* and *August* are beautifully decorated with its blossoms.

46. *Convallaria Polygonatum. Sweet Solomon's Seal.*
Polygonatum floribus ex singularibus pediculis. *Raii Syn. p.* 263.
In the rocky part of *Sykes Wood*, near *Ingleton*, sparingly.

47. *Juncus sylvaticus. Great hairy Wood Rush.*
Gramen nemorosum hirsutum latifolium maximum. *Raii Syn. p.* 416.
In *Whitfell Gell*, near *Askrig*, plentifully: also near the bottom of a mountain called the *Rye-loaf*, near *Settle*, where no wood was growing, but probably had grown.

48. *Triglochin palustre. Arrow-headed grass.*
Common in marshy places.

49. *Rumex digynus. Mountain Sorrel.*
Acetosa rotundifolia repens Eboracensis, folio in medio deliquium patiente. *Raii Syn. p.* 143.
Found sparingly in the spot mentioned by RAY, close by *Buckbarrow Well*, in *Longsledale*, on the edge of a deep rivulet abounding in waterfalls. The *Rumex scutatus* of LINNÆUS is very common in the gardens in *Yorkshire:* I have sometimes seen it in situations which have tempted me to think it an indigenous plant.

50. *Colchicum autumnale. Meadow Saffron.*
Colchicum commune. *Raii Syn. p.* 373.
Not uncommon in the meadows in *Yorkshire*. I found it in a pasture close by *Milscur Lush*, near *Kilnsay*, Mr. WM. FOTHERGILL, of *Carr End*, informed me, that it grew plentifully in a meadow near *West Witton*, *Wensleydale*.

51. *Alisma ranunculoides. Small Water Plantain.*
Plantago aquatica minor. *Raii Syn. p.* 357.
In *Gigglesfwick* Tarn plentifully.

52. *Epilobium angustifolium. Rose-bay Willow-herb.*
Lysimachia speciosa quibusdam Onagra dicta siliquosa. *Raii Syn. p.* 310.
In *Grass Wood*, near *Kilnsay*, among the rocks, plentifully in one particular spot.

53. *Epilobium alpinum. Alpine Willow-herb.*
Lysimachia siliquosa glabra minor latifolia. *Raii Syn. p.* 311.
On the moist rocks about *Buckbarrow Well.*

54. *Vaccinium Myrtillus. Blea-berry.*
Vitis idæa angulosa. *Raii Syn. p.* 457.
Common on all the Heaths, Rocks, and Mountains.

55. *Vaccinum Vitis idæa. Red Bil-berry.*
Vitis idæa sempervirens fructu rubro. *Raii Syn. p.* 457.
Not uncommon on Heaths, yet seldom found in blossom.

56. *Vaccinium Oxycoccos. Cran-berry.*
Oxycoccos s. Vaccinia palustria. *Raii Syn. p.* 267.
Frequent on the boggy mosses about *Settle*, *Kendal*, and elsewhere in the North.

57. *Polygonum viviparum. Viviparous Bistort.*
Bistorta minor. *Raii Syn. p.* 147.
On the edge of *Semer Water*, an extensive tarn at *Carr End*, *Wensleydale*.

58. *Paris quadrifolia. Herb Paris, or True-love.*
Herba Paris. *Raii Syn. p.* 264.
In *Kelkoe Wood*, near *Settle*, and most of the woods thereabout.

59. *Pyrola rotundifolia. Common Winter-green.*
In the enchanting woods of *Hackfall*, near *Grewelthorpe*, in tolerable plenty. Sparingly in *Raydale Wood*, near *Carr End*, *Wensleydale*; also in *Tennants Wood*, near *Kilnsay*.

60. *Saxifraga stellaris. Hairy Kidney-wort.*
Geum palustre minus foliis oblongis crenatis. *Raii Syn. p.* 354.
Not uncommon on the moist rocks and boggy ground about *Buckbarrow Well*, *Longsledale*; a few plants in blossom, but mostly in seed.

61. *Saxifraga oppositifolia. Purple Saxifrage.*
Saxifraga alpina ericoides, flore cæruleo. *Raii Syn. p.* 353.
On the craggy rocks of *Ingleborough* and *Pennigent* plentifully, in particular spots.

62. *Saxifraga autumnalis. Autumnal Saxifrage.*
Saxifraga alpina angustifolia, flore luteo guttato. *Raii Syn. p.* 353.
On the moist rocks of *Ingleborough* sparingly. In the greatest plenty in *Longsledale*; also in *Whitfell Gill*, near *Askrig*, most beautifully in blossom.

63. *Saxifraga hypnoides. Trifid Saxifrage — Ladies Cushion.*
Saxifraga muscosa trifido folio. *Raii Syn. p.* 354.
On the mountains about *Settle* plentifully, and most of the mountains in the North.

64. *Arenaria verna. Mountain Sandwort or Chickweed.*
Alsine pusilla pulchro flore folio tenuissimo nostras. *Raii Syn. p.* 351.
Generally with the last mentioned plant. I always found it a sure indication of elevated ground.

65. *Sedum anglicum. English Stonecrop.*
Sedum minimum non acre flore albo. *Raii Syn. p.* 271.
On some rocks in *Longsledale*, on the left-hand side going down the vale; observed it on a few rocks only.

66. *Sedum villosum. Hairy Stonecrop.*
Sedum purpureum pratense. *Raii Syn. p.* 270.
On the side of *Ingleborough* sparingly, in the Bogs where the springs originate; but in much greater plenty in similar situations about *Carr End*, *Wensleydale*.

67. *Spergula nodosa. Knotted Spurrey.*
Alsine palustris foliis tenuissimis, seu Saxifraga palustris anglica. *Raii Syn. p.* 350.
Common on the Bogs about *Settle*, and similar situations in the North.

68. *Prunus Padus. Bird Cherry.*
Cerasus avium nigra et racemosa. *Raii Syn. p.* 463.
In the woods about *Ingleborough*, and elsewhere in the North, plentifully.

69. *Cratægus Aria. White Beam Tree.*
Mespilus alni folio subtus incano, Aria Theophrasti dicta. *Raii Syn. p.* 453.
Common in the mountainous woods in the North; loves a dry situation.

70. *Rosa villosa. Apple Rose.*
Rosa sylvestris pomifera major nostras. *Raii Syn. p.* 454.
In *Grass Wood*, near *Kilnsay*, and in several other woods.

71. *Rubus idæus. Rasberry.*
Rubus Idæus spinosus fructu rubro. *Raii Syn. p.* 467.
Plentiful in the above mentioned wood.

72. *Rubus saxatilis. Stone Bramble.*
Not unfrequent in the mountainous woods about *Settle* and *Ingleton*; but no where in greater perfection than near the summit of *Helsfelnab*, near *Kendal*.

73. *Rubus Chamæmorus. Cloud-berry.*
Chamæmorus. *Raii Syn. p.* 260.
On the sides of the highest mountains about *Settle* and *Ingleton*, especially on the *Rye-loaf*, within a few miles of the former, where I gathered its berries in the greatest perfection, and found the caterpillar of the *Emperor Moth (Phalæna pavonia)* feeding on its foliage.

74. *Potentilla verna. Spring Cinquefoil.*
Pentaphyllum parvum hirsutum. *Raii Syn. p.* 255.
My very obliging friend Mr. WM. FOTHERGILL, of *Carr End*, shewed me this plant growing sparingly on an old stone-wall at *Carlow-nick*, adjoining the west-end of the *Crag Pasture*, about half a mile from *Carr End*. I have the best authority for believing, that the *Potentilla opaca* of Mr. HUDSON is no other than this plant.

75. *Geum rivale. Water Avens.*
Caryophyllata montana purpurea. *Raii Syn. p.* 253.
In the Pastures, Woods, &c. about *Settle* and elsewhere much more common than the *urbanum* is with us.

76. *Dryas octopetala.* *Mountain Dryas.*
Caryophyllata alpina chamædryos folio. *Raii Syn. p.* 253.
This beautiful plant, heretofore known to be only a native of *Scotland* and *Ireland*, I found plentifully in ſeed on *Arncliff Clouder*, a mountain within half a mile of *Arncliff*, in *Littendale*, a few miles from *Kilnſay*.

77. *Comarum paluſtre.* *Marſh-cinquefoil.*
Pentaphylloides paluſtre rubrum. *Raii Syn. p.* 256.
In *Giggleſwick* Tarn, near *Settle*, plentifully, and other marſhy places.

78. *Actæa ſpicata.* *Herb Chriſtopher, or Bane-berry.*
Chriſtophoriana. *Raii Syn.* 262.
I am indebted to Mr. Wm. Fothergill, before-mentioned, for pointing out to me a moſt delightful herborizing ſpot, *viz.* a Glen or Gill, called *Whitfell Gill*, or *Arthur Foſs*, ſituated within a ſmall diſtance of *Aſkrig*. In this ſheltered valley, ornamented with an enchanting water-fall, many rare plants grew in the utmoſt luxuriance. Here I found, in abundance, this poiſonous plant lurking, and half concealing its dark gloſſy berries, not unaptly reſembling thoſe of coffee, but more beautiful, and within reach of my arm, around one plant of it, the following, viz. *Scandix odorata, Saxifraga autumnalis, Ribes rubrum, Rubus idæus, Rubus ſaxatilis, Prunus Padus, Juncus ſylvaticus.* What a treat for a Botaniſt! What a recompence for one of the rougheſt journies over Cam, perhaps, ever experienced! Auguſt 16.

79. *Aquilegia vulgaris.* *Common Columbine.*
Aquilegia. *Raii Syn. p.* 273.
Found among ſome lime-ſtones on the upper part of the *Girling Trough*, near *Coniſtone*, *Kilnſay*, out of bloom. It poſſibly might be the *alpina*.

80. *Thalictrum minus.* *Leſſer Meadow-Rue.*
Thalictrum minus. *Raii Syn. p.* 203.
In *Skirrith Wood*, near *Ingleton*, ſparingly. In great plenty on the mountainous ground about *Kilnſay* and many other places in the north.

81. *Trollius europæus.* *Globe-flower, Locker-gowlons.*
Ranunculus globoſus. *Raii Syn. p.* 272.
In *Skirrith Wood*, and the moiſt woods about *Settle*, in great abundance.

83. *Galeopſis tetrahit* var. 3. *Nettle Hemp.*
Lamium cannabino folio, flore amplo luteo; labio purpureo. *Raii Syn. p.* 241.
This elegant variety is found ſparingly in the Corn-fields about *Settle*.

83. *Draba muralis.* *Speed-well-leaved Whitlow-graſs.*
Burſa paſtoris major loculo oblongo. *Raii Syn. p.* 292.
On *Arnber Scar*, near *Arncliff*, in *Littendale*, and at *Malham Cove*, ſparingly.

84. *Draba incana.* *Wreathen-podded Whitlow-graſs.*
Lunaria contorta major. *Raii Syn. p.* 291.
Very common on the rocks about *Settle*, and ſimilar ſituations elſewhere.

85. *Thlaſpi montanum.* *Mountain Thlaſpi.*
Thlaſpi foliis globulariæ. *Raii Syn. p.* 305.
On the mountainous paſtures in the road from *Settle* to *Malham*, within about half a mile of the Tarn, plentifully, with the *Arenaria verna*, moſtly in ſeed. I ſought for it in vain in the paſtures about the ebbing and flowing well.

86. *Cochlearia officinalis.* *Common Scurvy-graſs.*
Cochlearia. *Raii Syn. p.* 302.
Common by the river *Ribble*, near *Settle*, and on the mountains thereabout. In the latter ſituation it is very dwarfiſh, and is the *grænlandica* of Linnæus.

87. *Turritis hirſuta.* *Hairy Tower Muſtard.*
Turritis muralis minor. *Raii Syn. p.* 294.
On old caſtles, walls, and rocks, about *Settle* and *Ingleton*, common.

88. *Cardamine impatiens.* *Impatient Ladies-Smock.*
Cardamine impatiens, vulgo ſium minus impatiens. *Raii Syn. p.* 299.
On *Giggleſwick Scar* ſparingly, in ſeed.

89. *Geranium ſylvaticum.* *Wood Craneſbill.*
Geranium batrachoides montanum noſtras. *Raii Syn. p.* 360.
In the woods and paſtures about *Settle* and *Ingleton* not uncommon; alſo in *Longſledale*; and about *Carr End*, Mr. W. Fothergill informs me, it is ſo common as to empurple the paſtures when in full bloom.

90. *Geranium ſanguineum.* *Bloody Craneſbill.*
Geranium hæmatodes. *Raii Syn. p.* 360.
In rocky mountainous woods very common, as in *Kelkoe Wood*, near *Settle*, in *Graſs Wood*, and in the road from thence to *Kilnſay*, in the greateſt plenty.

91. *Geranium columbinum.* *Long-ſtalked Craneſbill.*
Geranium columbinum, diſſectis foliis, pediculis florum longiſſimis. *Raii Syn. p.* 359.

92. *Geranium lucidum.* *Shining Craneſbill.*
Geranium ſaxatile. *Raii Syn. p.* 361.
Common on the ſtone-fences about *Settle* and elſewhere.

93. *Fumaria claviculata.* *Climbing Fumitory.*
Fumaria alba latifolia. *Raii Syn. p.* 335.
Plentifully on a thatched Farm-houſe in *Longſledale*, on the left-hand ſide, going down the vale.

94. *Vicia ſylvatica.* *Wood Vetch.*
Vicia ſylvatica multiflora. *Raii Syn. p.* 322.
I found one root only of this beautiful plant in full bloſſom in *Skirrith Wood*, near *Ingleton*.

95. *Hippocrepis comoſa.* *Horſe-ſhoe Vetch.*
Ferrum equinum germanicum ſiliquis in ſummitate. *Raii Syn. p.* 321.
Grows in abundance out of the lime-ſtone rocks, near *Giggleſwick*, *Settle*, and *Kilnſay*.

96. *Trifolium alpeſtre.* *Long-leaved Clover.*
Trifolium purpureum majus, foliis longioribus et anguſtioribus, floribus ſaturatioribus. *Raii Syn. p.* 328.
In *Skirrith* and other mountainous woods and paſtures in the North, moſt plentifully.

97. *Hypericum montanum.* *Mountain St. John's Wort.*
Hypericum elegantiſſimum non ramoſum folio lato. *Raii Syn. p.* 343.
In *Syke's Wood*, near *Ingleton*, and other mountainous woods, not uncommon.

98. *Hieracium murorum.* *Wall Hawkweed*, or *Golden Lung-wort.*
Hieracium murorum folio piloſiſſimo. *Raii Syn. p.* 168.
On the rocks near the water-fall at *Ayſgarth Force*, and, if I miſtake not, on *Kilnſay Crag*.

99. *Hieracium ſubaudum.* *Shrubby Hawkweed.*
Hieracium fruticoſum latifolium hirſutum. *Raii Syn. p.* 167.
This plant, in its uſual ſtate is extremely common. A variety, whoſe leaves are ſpotted with red, and which is ſometimes miſtaken for the *Hypochæris maculata*, is frequent on the rocks in *Graſs Wood* and at *Gordel*.

100. *Carduus helenioides.* *Melancholy Thiſtle.*
Cirſium britanicum Cluſii repens. *Raii Syn. p.* 193.
In a coppice near *Giggleſwick* and in *Skirrith Wood*, plentifully. In the paſtures about *Bordley*, near *Malham*, ſo plentiful as to empurple the paſtures, ſo ſtriking in its foliage, and ſo noxious in its effects, as to attract the notice of the huſbandmen, who call them *White-backs*.

101. *Viola paluſtris.* *Marſh Violet.*
Viola paluſtris rotundifolia glabra. *Raii Syn. p.* 364.
In *Giggleſwick* Tarn, and other marſhy ſituations, common.

102. *Viola grandiflora.* *Yellow Panſie.*
Viola montana lutea grandiflora noſtras. *Raii Syn. p.* 356.
In mountainous paſtures frequent, about *Attamire Cliffs*, near *Settle*.

103. *Orchis bifolia.* *Butterfly Orchis.*
Orchis alba bifolia minor calcare oblongo. *Raii Syn.* 380.
In the hilly pastures above *Stackhouse* and on *Mill Island*, near *Settle*, plentifully, and in many other pastures, fully blown.

104. *Orchis conopsea.* *Sweet Orchis.*
Orchis palmata rubella cum longis calcaribus rubellis. *Raii Syn.* 380.
On *Mill Island* and most of the pastures with the former, fully blown.

105. *Satyrium viride.* *Frog Orchis.*
Orchis palmata minor flore luteo-viridi. *Raii Syn.* 381.
Frequent on the most hilly pastures about *Settle*, in full bloom.

106. *Ophrys muscifera.* *Fly Orchis.*
Orchis myodes galea et alis herbidis. *Raii Syn.* 399.
On the hilly lime-stone pastures at *Stackhouse*, near *Settle*, plentifully; in *Skirrith Wood*, sparingly. Mr. ROBERT KIDD, of *Ashton* near *Gargrave*, shewed me one he had gathered in a wild state, two feet and a quarter high, with fourteen blossoms on it. He also shewed me a great number of the *Ophrys apifera*, or *Bee orchis*, a rare plant with them; but whose place of growth he did not care to divulge.

107. *Cypripedium Calceolus.* *Ladies slipper.*
Calceolus mariæ. *Raii Syn.* 385.
The beauty and extreme singularity of the blossoms of this plant, joined to its great scarcity, have occasioned it to be universally sought after by Botanists and others; who, not content with contemplating its beauties in its native soil, are anxious to see it grow in their gardens, in which, however, they are generally disappointed, as it very rarely thrives on transplanting. We saw, indeed, a few instances to the contrary in some gardens in *Yorkshire*. To this rage for the Ladies Slipper we may attribute its present scarcity in *Helk's Wood* near *Ingleton*, where it used to be found in plenty. We were fortunate enough to discover this plant in considerable plenty in the neighbourhood of *Kilnsay*, not only in the Woods with its usual attendant, the red-flowered Helleborine, but also in hilly pasture ground, with the *Ophrys ovata*; but as some gardeners in the neighbourhood had discovered them, and were unremittingly employed in digging up every one they found, we may venture to prophecy, that in a few years they will be rarely found here also.

108. *Serapias palustris.*
Helleborine palustris nostras. *Raii Syn.* 384.
In the boggy part of *Syke's Wood* plentifully; also near *Kilnsay*, and many other boggy situations. To us it appears to be a very distinct species. Flowers in July.

109. *Serapias purpurascens.*
Helleborine altera atro-rubente flore. *Raii Syn.* 383.
This species is found in *Syke's Wood*, and is common to most of the woods in the North, especially such as are mountainous and rocky; it produces a long spike of red or purplish flowers, the beginning of August. This species is frequently mistaken for the Ladies Slipper.

110. *Sparganium natans.* *Small Burr-reed.*
Sparganium non ramosum. *Raii Syn.* 437. 2. 3.
In the lakes on *Brigstear Moss*, with the *Hippuris* and *Utricularia*, not uncommon.

111. *Carex pulicaris.* *Flea Carex.*
Gramen cyperoides minimum, seminibus deorsum reflexis puliciformibus. *Raii Syn.* 24.
On the sides of *Ingleborough* and other mountainous situations tolerably frequent.

112. *Carex distans.* *Loose Carex.*
Gramen cyperoides spicis parvis longissime distantibus. *Raii Syn.* 421.
This most variable Carex we found in almost every situation. on the edge of *Giggleswick Tarn* it grew with the *panicea* plentifully. I also found it on dry ground near the tops of the highest mountains. Some specimens, in particular, a yard in height, I gathered near the summit of a lofty rock in *Longsledale*.

113. *Carex vesicaria.* *Bladder Carex.*
Gramen cyperoides polystachion majus, spicis teretibus, erectis. *Raii Syn.* 419.
We do not recollect finding this species nearer *London* than *Virginia Water*. In the North it is a common Carex on the edges of tarns and rivulets. It abounds in *Giggleswick Tarn*, a spot fertile in Carices, and on the borders of *Semer Water*, *Wensledale*.

114. *Carex gracilis*, Fl. Lond. *Slender-spiked Carex.*
Gramen cyperoides majus angustifolium. *Raii Syn.* 417.
In great plenty on the borders of *Conzic Tarn* near *Kendal*.

115. *Salix Pentandra.* *Sweet Willow.*
Salix folio laureo, seu late glabro odorato. *Raii Syn.* 449.
About *Kilnsay*, and more especially about *Carr End Wensledale*, this is the most common species of Willow, and is much used for making the larger sort of baskets. Its leaves are glossy, and exhale an odoriferous perfume in hot weather, which, joined to the beautiful appearance of the male-tree when in bloom, and the female when in seed, render it one of the most desirable trees our island naturally produces.

116. *Salix helix.* *Spurge-leaved Willow.*
Salix humilior, foliis angustis subcœruleis ex adverso binis. *Raii Syn.* 448.
Equally common with the foregoing, and used for making the finer sorts of basket-work.

117. *Salix rosmarinifolia.*
We have no doubt but the Willow, to which we assign this name, is a species perfectly distinct. It approaches nearest to the *vitellina*. Its twigs are remarkably tough. We found it on the edge of a rivulet which runs into *Semer Water*, *Wensledale*. As cuttings of this and the two following Willows, introduced into our garden, have grown, we hope to be able to speak more decisively on them at some future period.

118. *Salix myrsinites?*
One small shrub of this species, which corresponds with the description Mr. LIGHTFOOT gives of the *Myrsinites*, we found with several of the following on the slope of a high hill betwixt *Kilnsay* and *Arncliff*.

119. *Salix arenaria.*

120. *Empetrum nigrum.*
Empetrum montanum fructu nigro. *Raii Syn.* 444.
On the sides of *Ingleborough* plentifully.

121. *Taxus baccata.* *Yew-tree.*
Taxus. *Raii Syn.* 445.
Growing in a truly wild state out of the clefts of the rocks on *Giggleswick Scar*. Dr. ABRAHAM SUTCLIFFE, of *Settle*, to whose kind hospitality and useful information I am much indebted, was an eye-witness to the fatal effects of this plant on two Bullocks, who had carelessly been suffered to feed on its foliage.

122. *Acer Pseudoplatanus.* *Sycamore Maple.*
Acer majus. *Raii Syn.* 470.
Very common in woods, hedges, and round gentleman's seats, the latter from its quick growth, its great size, and power of resisting the most violent storms without injury, it is admirably calculated to preserve. Its wood, though seldom used in building, is applied to many œconomical purposes.

123. *Ophioglossum vulgatum.* *Adders-tongue.*
Ophioglossum. *Raii Syn.* 128.

In meadows and by the ſides of rivulets much more frequent than with us.

124. *Oſmunda Lunaria.* *Moon-wort.*
Lunaria minor. *Raii Syn.* 128.
On *Mear Bank* by *Sykes' Wood*, *Ingleton*, and other places, with the frog Orchis, not unfrequent.

125. *Oſmunda criſpa.* *Stone-fern.*
Adiantum album criſpum alpinum. *Raii Syn.* 126.
Among the ſtones about *Buckbarrow Well* in *Longſledale*, in the utmoſt abundance, and here and there on the walls betwixt that ſpot and *Kendal.*

126. *Aſplenium Scolopendrium.* *Harts-tongue.*
Phyllitis. *Raii Syn.* 116.
Between the fiſſures of the rocks on the tops of moſt of the high mountains.

127. *Aſplenium Ruta muraria.*
Ruta muraria. *Raii Syn.* 122.
On the rocks about *Settle*, and elſewhere, very common.

128. *Aſplenium Trichomanes.* *Common Maiden-hair.*
Trichomanes. *Raii Syn.* 119.
Very common on the rocks and ſtone fences.

129. *Polypodium Phegopteris.* *Wood Polypody.*
Filix minor Britannica pediculo pallidiore, alis inferioribus deorſum ſpectantibus. *Raii Syn.* 122.
We found one plant of this rare ſpecies among our dried ſpecimens, but do not recollect its place of growth; ſuſpect we took it for the following, with which it has ſome ſimilarity in its general appearance.

130. *Polypodium Dryopteris.* *Branched Polypody.*
Filix ramoſa minor. *Raii Syn.* 125.
We obſerved this ſpecies in tolerable plenty about *Kilnſay*, particularly among looſe lime-ſtones on the right-hand ſide of the *Girling Trough* near *Coniſton.*

131. *Polypodium fragile.* *Brittle Polypody.*
Filix ſaxatilis caule tenui fragile. *Raii Syn.* 125.
Extremely common on old caſtles, ſtone fences, &c. about *Settle* and elſewhere.

132. *Lycopodium Selago.* *Fir Club-moſs.*
Selago foliis et facie abietis. *Raii Syn.* 106.

133. *Lycopodium alpinum.* *Mountain Club-moſs.*
Lycopodium Sabinæ facie. *Raii Syn.* 108.
Both of theſe ſpecies are found in abundance near the ſummit of *Ingleborough.*

In the courſe of our excurſions we could not avoid noticing, *en paſſant*, an almoſt infinite number of *Moſſes*, *Lichens*, &c. which particularly abound in moſt of the ſpots we viſited; but as few of them were in fructification, and as the larger plants were altogether ſufficient to engroſs our attention, we muſt defer gratifying the curious Cryptogamiſt till an opportunity preſents itſelf of reviſiting theſe delightful regions at a different period of the year.

We may remark, that the *Allium*, which we ſuppoſed to be the *oleraceum*, proved, on flowering, to be the *carinatum*; and that the *Potentilla*, which has not yet flowered, ſeems, from its foliage, as if it would prove either a ſingular variety of the *verna*, or a diſtinct ſpecies.