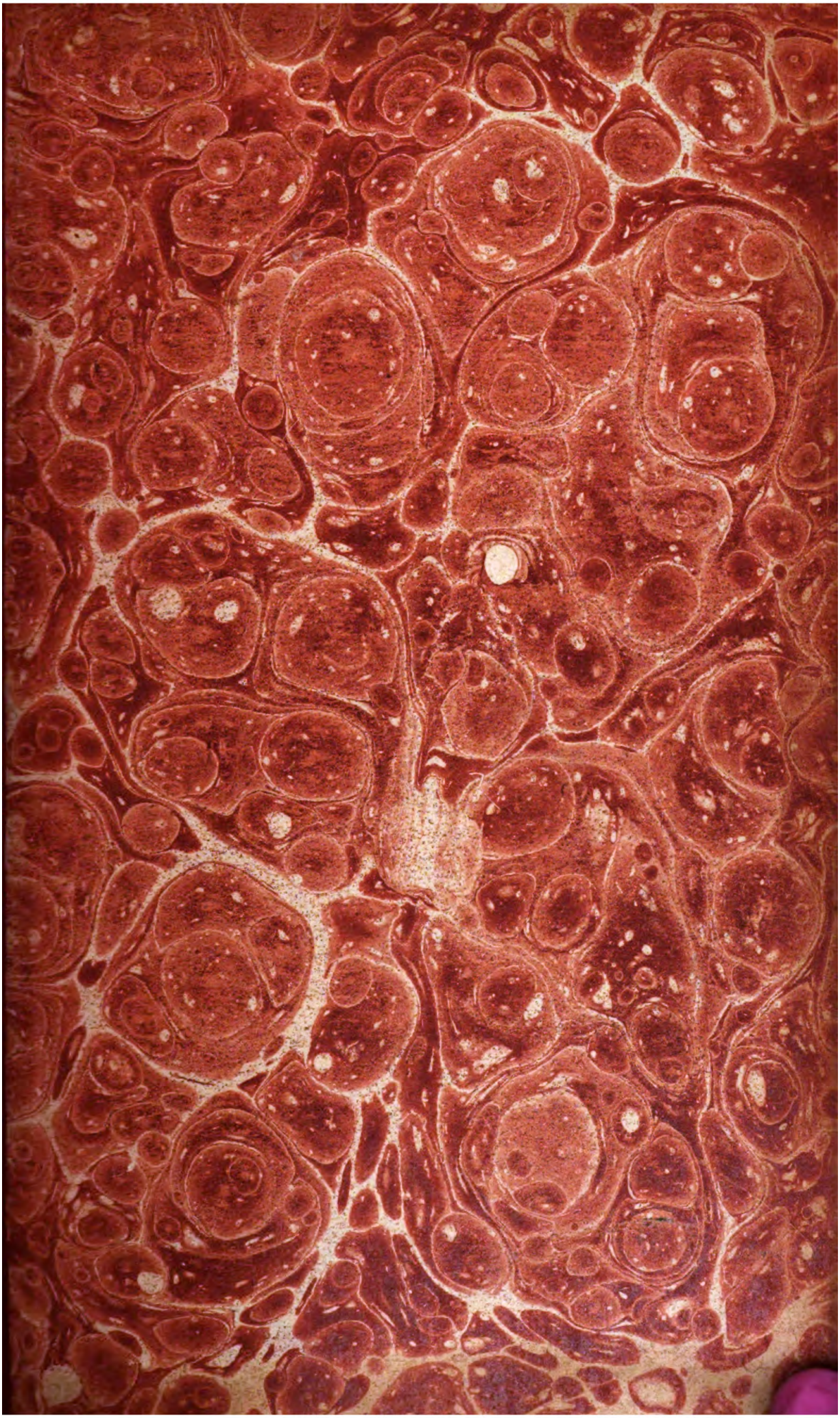

# ENGLISH BOTANY;

OR,

## COLOURED FIGURES

OF

# BRITISH PLANTS,

WITH THEIR

## ESSENTIAL CHARACTERS, SYNONYMS, AND PLACES OF GROWTH:

TO WHICH WILL BE ADDED,

## OCCASIONAL REMARKS.

BY

*JAMES EDWARD SMITH, M.D. F.R.S.*

MEMBER OF THE IMP. ACAD. NATURÆ CURIOSORUM, THE ACADEMIES OF STOCKHOLM, UPSAL, TURIN, LISBON, LUND, BERLIN, PHILADELPHIA, AND THE NAT. HIST. SOCIETIES OF PARIS AND MOSCOW;

PRESIDENT OF THE LINNÆAN SOCIETY.

THE FIGURES BY

JAMES SOWERBY, F.L.S.

——" VIRESQUE ACQUIRIT EUNDO."—— *Virg.*

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MDCCCX.

# TRAGOPOGON pratensis.

## *Yellow Goat's-beard.*

*SYNGENEISIA Polygamia-æqualis.*

GEN. CHAR. *Recept.* naked. *Cal.* simple, of many leaves. *Down* feathered.

SPEC. CHAR. Calyx about equal to the corolla. Leaves undivided, carinated, long-pointed; broad and a little undulated at the base. Flower-stalk cylindrical.

SYN. Tragopogon pratense. *Linn. Sp. Pl.* 1109. *Huds.* 335. *With.* 672. *Relh.* 290. *Sibth.* 236. T. luteum. *Raii Syn.* 171.

NOT unfrequent in grassy pastures and meadows, flowering in June.

Root biennial, tapering, abounding with milk but not acrid. Whole herb smooth. Stems several, branched, 18 inches or 2 feet high, leafy, round, often purplish; the branches being elongated into a simple naked flower-stalk, which is of an equal thickness throughout. Leaves alternate, sessile, some of them radical, others embracing the stem and branches, carinated, all broad and somewhat inflated at the base, but terminating in a long narrow point; very generally the margin towards the bottom is more or less waved or crisped. Flowers solitary, terminal, large and handsome, opening at day-break, and closing before noon, unless (as Mr. Relhan observes) the weather be cloudy. Calyx-leaves equal, though ranged alternately, or in two rows. Florets generally as long or longer than the calyx, yellow, with brownish nerves, especially on the upper side, the outermost row much longer than the rest. Antheræ brown or purplish. Germen with a tuft of hairs at the summit. Seed-down radiated and feathered, standing on a foot-stalk. Seed crooked, furrowed and roughish.

Such is our plant, which in so many respects agrees with the character, and even with the specimen, of Linnæus's *T. orientale*, that we are not sure of their being distinct; yet there can be still less doubt of ours being his *T. pratense*. In fact, the length of the outer florets is very variable.

All botanical writers, except Professor Jacquin, make *Tragopogon* of the neuter gender; but we see no reason why long use should perpetuate so manifest an error, as its derivation, as well as the best authorities, justifies its restoration to the masculine.

Nov.r 1797 Published by J.s Sowerby London

# TRAGOPOGON porrifolius.

## *Purple Goat's-beard.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Recept.* naked. *Cal.* ſimple, of many leaves. *Down* feathered.

SPEC. CHAR. Calyx half as long again as the corolla. Leaves entire, ſtraight. Flower-ſtalk ſwelling upwards.

SYN. Tragopogon porrifolium. *Linn. Sp. Pl.* 1110. *Hudſ.* 335. *With.* 672. *Hull.* 172.

T. purpureum. *Raii Syn.* 171. *Ger. em.* 735.

GATHERED by Mr. Sowerby in the meadows below St. Vincent's rocks, Briſtol. It is biennial, and flowers in May and June.

Root long, tapering. Whole plant abounding with a milky juice, which ſoon turns to a brown reſin, from the evaporation of its watery particles. Herb ſmooth, glaucous, about 4 feet high. Stem round, erect, branching, leafy. Leaves lanceolate, ſcarcely at all undulated, ending in a tapering ſtraight point. Flowers terminal, ſolitary, the ſtalk which ſupports them tapering from the calyx downwards. Calyx-leaves equal, linear-lanceolate, almoſt twice as long as the corolla, which is of a dull purple hue. Antheræ darker. A few hairs may be obſerved at the orifice of the tube of each floret. The feathery crown of the ſeed, at firſt ſeſſile, is ſoon raiſed on a long taper ſtalk, as in the other ſpecies.

The root, when boiled or ſtewed, has a mild ſweetiſh flavour, and uſed formerly to be much more cultivated for the table than it is at preſent. The flowers cloſe early in the day.

# PICRIS echioides.

## *Briſtly Ox-tongue.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Receptacle* naked. *Cal.* double; the inner equal; the outer lax. *Down* feathery. *Seeds* tranſverſely rugged.

SPEC. CHAR. Outer calyx of five very large prickly leaves. Seed-down ſtalked. Leaves waved.

SYN. Picris echioides. *Linn. Sp. Pl.* 1114. *Sm. Fl. Brit.* 814. *Hudſ.* 342. *With.* 673. *Hull.* 172. *Relh.* 297. *Sibth.* 240. *Abbot.* 168. *Curt. Lond. faſc.* 3. *t.* 51.

Hieracium echioides, capitulis Cardui benedicti. *Raii Syn.* 166.

FOUND about hedges, borders of fields and banks, principally on a clay or loamy ſoil, flowering in June and July, but it is not a plant of general occurrence. About London it ſeems to be more frequent than in Norfolk. We have however ſeen it in unuſual abundance in the grounds of Edward Rigby, Eſq. at Framingham near Norwich, and by Wrongay church 5 miles from Lynn.

Root annual, tap-ſhaped, often branched. Herb rather milky and very bitter, remarkable for the rigid ſpines, each growing out of a white tubercle, which are ſcattered over it, and which, added to other briſtles that fringe the leaves and clothe the ſtem, cauſe it not to be handled with impunity. The leaves are undulated, and of a bright ſhining green; the upper ones heart-ſhaped, claſping the ſtem, which riſes to 2 or 3 feet in height, and is much branched. Flowers rather large, and of a full yellow. Outer calyx of 5 large heart-ſhaped leaves, a little diſtant from the inner, which conſiſts of about 8 cloſe leaves, equal in length, each producing from near its top a ſingular pinnate purpliſh awn. Seeds beautifully wrinkled or ſtriated tranſverſely, bearing their plumy down on a ſtalk.

June 1. 1802. Published by Jas Sowerby, London.

4.



# PICRIS hieracioides.

## *Hawkweed Ox-tongue.*

*SYNGENESIA Polygamia æqualis.*

GEN. CHAR. *Receptacle* naked. *Cal.* double. *Down* more or leſs feathery. *Seeds* rugged.

SPEC. CHAR. Calyx lax. Leaves moſtly undivided. Flower-ſtalks furniſhed with ſcales up to the calyx.

SYN. Picris hieracioides. *Linn. Sp. Pl.* 1115. *With. Bot. Arr.* 830. *Relh. Cant.* 297.
Hedypnois hieracioides. *Hudſ. Fl. An.* 342.
Hieracium aſperum majori flore in agrorum limitibus. *Raii Syn.* 167.

THIS occurs abundantly about the borders of fields in a gravelly or calcareous ſoil, flowering in July and Auguſt. It is a plant of rude growth and not very attractive appearance. The root, we believe, is perennial, or at leaſt biennial; ſtem much branched, three feet high; the branches furrowed, purple on their upper ſide and in their axillæ, as Linnæus moſt truly obſerves. Leaves oblong, ſeſſile, undivided, except that the radical ones are frequently groſsly dentated. The herb is rough with hooked briſtles. Flowers bright yellow, the lateral ones riſing on elongated branches above that which terminates the central ſtem. Calyx-leaves all rough on the back. Seed-down ſlightly feathery, ſeſſile.

Dr. Stokes's remark in the Botanical Arrangement (p. 855, note), that the Hedypnois of Hudſon is an artificial genus, is perfectly juſt. Its ſpecies are no way naturally allied, and the down, being ſeſſile or ſtipitate, affords no certain permanent character in this tribe.

5.



# SONCHUS cæruleus.

## *Blue Sow-thistle.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Receptacle* naked. *Calyx* imbricated, swelling at the base. *Down* simple, sessile.

SPEC. CHAR. Flowerstalks and calyx bristly and glandulose. Leaves somewhat lyrate; their terminal lobe triangular and very large.

SYN. Sonchus cæruleus. *Camer. Epit.* 281. *Sm. Fl. Brit.* 815. *Hull. ed.* 2. 227.

S. canadensis. *Linn. Sp. Pl.* 1115. *With.* 674.

S. alpinus. *Huds.* 336. *Fl. Dan. t.* 182. *Willd. Sp. Pl. v.* 3. 1519.

S. flore cæruleo. *Ger. em.* 294.

THE beautiful Blue Sow-thistle of the Alps has found a place in the list of British plants, on the authority of Wallis's History of Northumberland, which turns out to be totally unworthy of regard, for Mr. Winch assures us his plant is only *Cichorium Intybus!* Fortunately however the genuine *Sonchus cæruleus* was discovered on the Aberdeenshire mountain of Lochnagore, by Mr. G. Don, who in September 1801 sent us the leaf delineated in our plate.

This species is perennial, flowering in July and August. The stems are a yard high, erect, simple, leafy, each terminating in a long irregular cluster of large purplish-blue flowers, whose stalks, calyx, and narrow bracteas, are clothed with red prominent viscid bristly hairs, not unlike the pubescence of a rose. Leaves alternate, variously lyrate, with a very large, pointed and toothed, triangular terminal lobe, and clasping the stem with their dilated base. They are smooth and dark green above; glaucous beneath, with many veins and a hispid rib.

2425.

Jan. 1. 1811. Published by Jos. Sowerby, London.

6.



# SONCHUS paluſtris.

## *Tall Marſh Sow-thiſtle.*

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*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Receptacle* naked. *Calyx* imbricated, ſwelling at the baſe. *Down* ſimple, ſeſſile.

SPEC. CHAR. Flower-ſtalks and calyx briſtly, ſomewhat umbellate. Leaves runcinate, arrow-ſhaped at the baſe, rough in the margin.

SYN. Sonchus paluſtris. *Linn. Sp. Pl.* 1116. *Sm. Fl. Brit.* 816. *Hudſ.* 337. *With.* 674. *Hull.* 177. *Relh.* 292. *Curt. Lond. faſc.* 5. *t.* 59.

S. tricubitalis, folio cuſpidato. *Raii Syn.* 163.

---

GATHERED by Mr. Groult on the banks of the Thames between Greenwich and Woolwich, late in July laſt. The plant from which our ſpecimen was taken meaſured 7 feet in height, it being the largeſt of the Syngeneſious claſs, and perhaps the talleſt herbaceous plant, climbers excepted, that this country produces.

Mr. Curtis has well diſtinguiſhed this ſpecies from the *arvenſis*, ſee *v.* 10. *t.* 674, in oppoſition to the opinion of Haller. *S. paluſtris* has a perennial, fleſhy, and branched, but not a creeping root. The whole herb is twice or thrice as large as in the *arvenſis*, though the flowers are rather ſmaller, and generally a little paler. The ſtem-leaves are longer, and their baſe is arrow-ſhaped, terminating in a pair of long narrow divaricating lobes, inſtead of being heart-ſhaped. Their margin is minutely toothed. The panicle aſſumes nearly the ſhape of an umbel or cyme, varying in the number of flowers: its ſtalks, as well as the calyx, are rough with denſe ſhort black glandular hairs or briſtles, in which reſpect, as well as in the ſeeds and their down, it much agrees with *S. arvenſis*.

# SONCHUS arvenſis,

## *Corn Sow-thiſtle.*

---

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Receptacle* naked. *Cal.* imbricated, ſwelling at the baſe. *Down* ſimple, ſeſſile.

SPEC. CHAR. Flower ſtalks and calyx briſtly, ſomewhat umbellate. Leaves runcinate, denticulated, heart-ſhaped at the baſe. Root creeping.

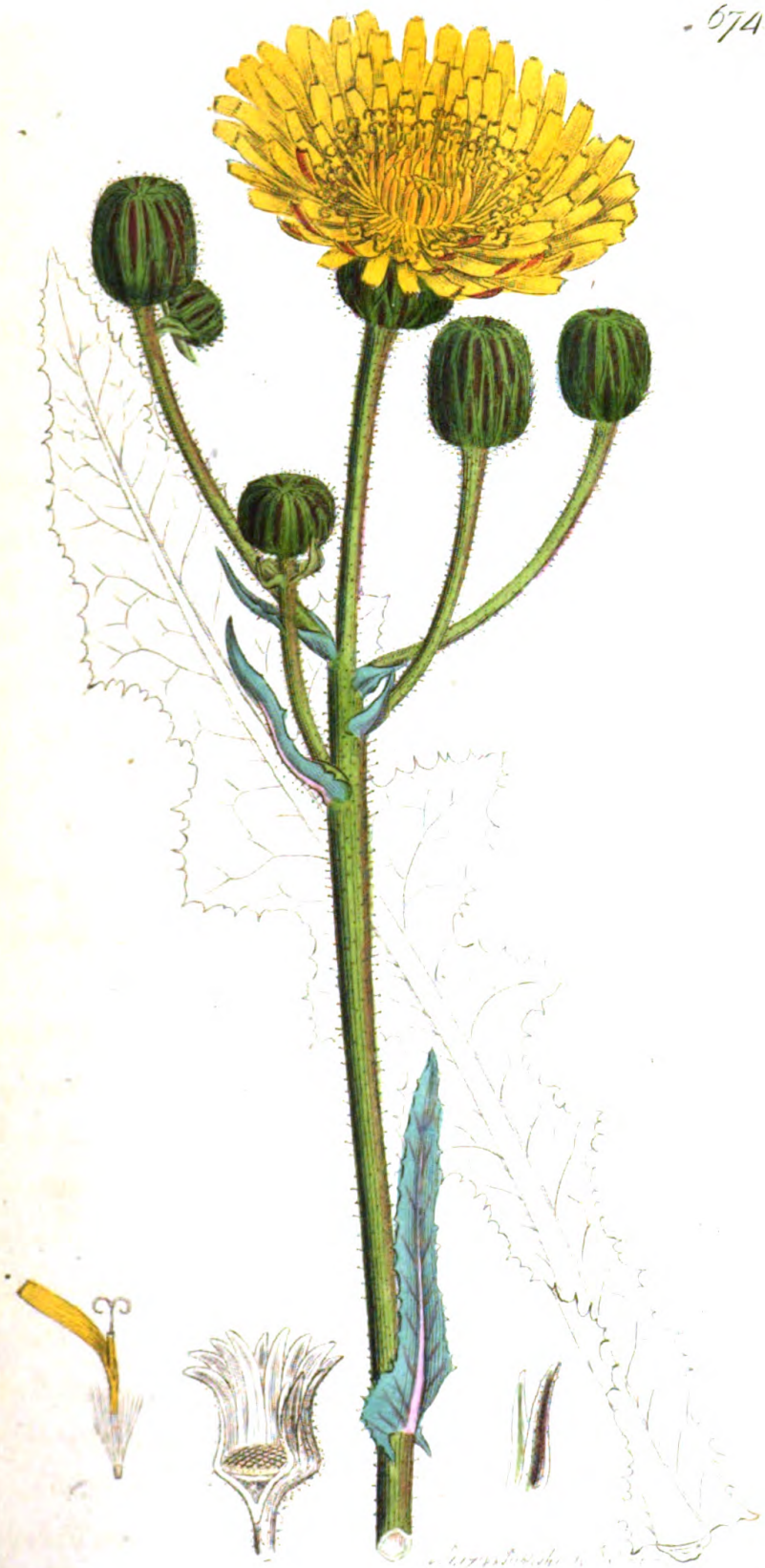
SYN. Sonchus arvenſis. *Linn. Sp. Pl.* 1116. *Hudſ.* 337. *With.* 674. *Hull.* 177. *Relh.* 291. *Sibth.* 237. *Abbot.* 169. *Curt. Lond. faſc.* 4. *t.* 53.

S. repens, multis Hieracium majus. *Raii Syn.* 163.

---

THIS is a common and pernicious weed in corn-fields, though not of ſo general occurrence as the *S. oleraceus*. It is perennial, flowering in July and Auguſt.

Root creeping, milky, compoſed of oblong fleſhy branches, which render it very difficult to be extirpated. Stem 3 or 4 feet high, erect, but little branched, roundiſh, hollow, leafy. Leaves runcinate, ſharpiſh, ſmooth, fringed with little ſpinous teeth; the upper ones heart-ſhaped at the baſe, and embracing the ſtem; the uppermoſt of all entire. Panicle ſomewhat cymoſe or umbellate, terminal, of few flowers. The calyx, flower-ſtalks, and upper part of the ſtem are all clothed with ſpreading brown glandular briſtles. Flowers very large and conſpicuous, of a bright gold-colour, externally reddiſh. Each floret has a hairy tube. Seeds furrowed. Down ſmooth.



8.



# SONCHUS oleraceus.

*Common Sow-thiſtle.*

---

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Receptacle* naked. *Cal.* imbricated, ſwelling at the baſe. *Down* ſimple, ſeſſile.

SPEC. CHAR. Flower-ſtalks cottony. Calyx ſmooth. Leaves runcinate, toothed.

SYN. Sonchus oleraceus. *Linn. Sp. Pl.* 1116. *Sm. Fl. Brit.* 818. *Hudſ.* 336. *With.* 675. *Hull.* 177. *Relh.* 291. *Sibth.* 237. *Abbot.* 169. *Curt. Lond. faſc.* 2. *t.* 58.

Sonchus n. 1—6. *Raii Syn.* 162, 163.

---

ONE of the moſt common of all weeds in every kind of cultivated land; and like ſuch vagrant annuals it aſſumes a variety of forms according to the variations of ſoil and moiſture. The flowers are to be met with from midſummer to the end of autumn.

The root is ſpindle-ſhaped and annual. Herb brittle, milky, deſtitute of pubeſcence, except the young flower-ſtalks, which bear a ſoft white cottony web that ſoon falls off. Stem round, branched, glaucous. Leaves runcinate, fringed with little briſtly teeth; their baſe claſping the ſtem. Flower-ſtalks axillary and terminal, forming cymes, ſmooth except in a young ſtate. Calyx ſmooth, glaucous, at firſt cylindrical and blunt, but ſoon ſwelling out very much at the baſe. Corolla yellow, cloſed at night or in bad weather. Seeds obovate, angular and ſtriated. Down ſmooth, very white and ſilky. Receptacle dotted.

Feb 2, 1800 Published by J. Sowerby.

√

9.



# LACTUCA virosa.

## *Strong-scented Lettuce.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Recept.* naked. *Cal.* imbricated, cylindrical, with a membranous margin. *Down* simple, on a foot-stalk.

SPEC. CHAR. Leaves horizontal, finely toothed; their keel prickly.

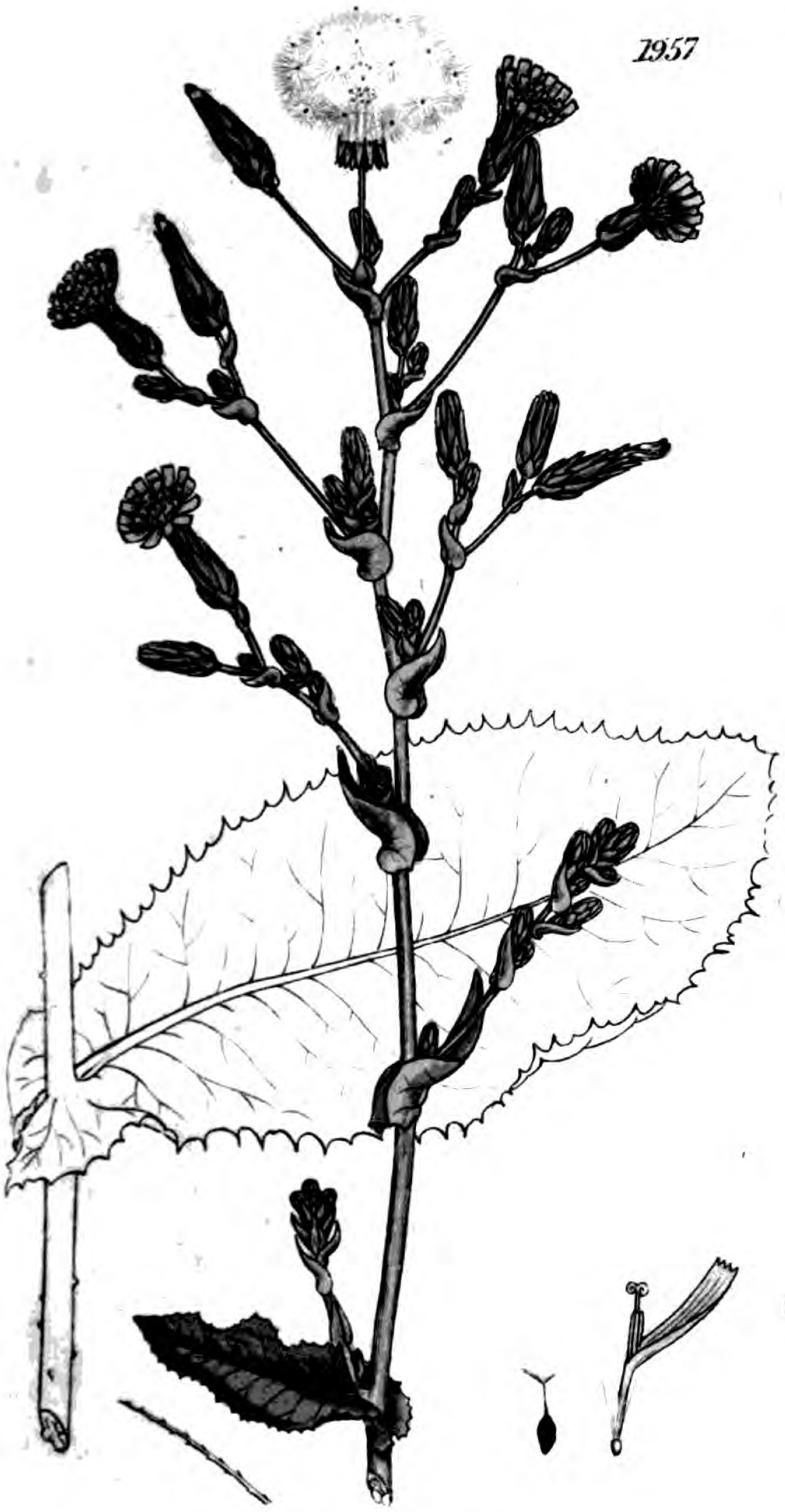
SYN. Lactuca virosa. *Linn. Sp. Pl.* 1119. *Sm. Fl. Brit.* 819. *Huds.* 337. *With.* 677. *Hull.* 175. *Relh.* 305. *Sibth.* 237. *Lightf.* 429. *Woodv. Suppl. t.* 250.

L. sylvestris major, odore opii. *Raii Syn.* 161; and L. sylvestris folio non laciniato. *ib.* 162.

THIS, the largest of our wild lettuces, grows on open sunny chalky banks and old flint walls, and sometimes on dry gravelly banks. Our specimens were collected near Mackerell's tower, Norwich, and at Battersea. It is biennial, and flowers from the end of July to the middle of September.

The whole plant abounds with a white milky juice, smelling like opium and possessing the same narcotic qualities. It issues suddenly in large drops from the calyx and more tender leaves on the slightest touch. The stem is erect, wand-like, round, sparingly leafy, prickly, brown or reddish, panicled at the summit. Leaves smoothish, rather glaucous, finely and sharply toothed; the radical ones numerous, obovate, undivided; the rest smaller, clasping the stem, more or less waved or sinuated. Main rib in all beset with straight parallel prickles. Floral leaves heart-shaped, pointed. Flowers small, palish yellow; their stalks bearing many small bracteas. Calyx smooth. Seeds furrowed. Down rough.

Petiver's figures induce us, with Dr. Stokes, to refer both the above plants of Ray to this species, though the latter of the two is mentioned in the *Synopsis* as if it belonged to *L. Scariola, t.* 268.



Dec. 1, 1808. Published by Jos. Sowerby, London.

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10.



# LACTUCA Scariola.

## *Prickly Lettuce.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Recept.* naked. *Cal.* imbricated, cylindrical, with a membranous margin. *Down* ſimple, on a foot-ſtalk.

SPEC. CHAR. Leaves perpendicular; their mid-rib prickly on the back.

SYN. Lactuca Scariola. *Linn. Sp. Pl.* 1119. *Hudſ. Fl. An.* 338. *With. Bot. Arr.* 834. *Relh. Cant.* 293.

L. ſylveſtris coſta ſpinoſa. *Raii Syn.* 161.

GATHERED wild by the Rev. Mr. Hemſted near Denny Abbey between Cambridge and Ely. It grows among rubbiſh and on waſte ground in other parts of that country, but rarely elſewhere, flowering in Auguſt.

Root biennial, very full of milky juice, as is every part of the plant. Stem erect, 2 or 3 feet high, round, prickly, leafy, branched at the top into a ſort of panicle, conſiſting of numerous pale-yellow flowers. Leaves embracing the ſtem, toothed and prickly in the margin, their main rib ſet with numerous parallel ſpines along the back; the lowermoſt deeply lobed and ſinuated; thoſe on the ſtem turned perpendicularly, and not horizontal as in moſt plants. Calyx ſmooth. Flowers ſmall. Seed furrowed lengthwiſe.

This ſpecies, though bitter, acrid and fœtid in ſome degree, is much milder than the more common Wild Lettuce (*Lactuca viroſa*), and may eaſily be diſtinguiſhed from that by its paler colour altogether, its leſs ſpreading flower-branches, and its vertical leaves.

Dr. Stokes has exceedingly well obſerved that Hudſon's variety β belongs to *L. viroſa*.

V

# LACTUCA ſaligna.

## *Leaſt Lettuce.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Recept.* naked. *Cal.* imbricated, cylindrical, with a membranous margin. *Down* ſimple, on a foot-ſtalk.

SPEC. CHAR. Leaves linear; haſtate or pinnatifid, ſeſſile, their mid-rib prickly on the back.

SYN. Lactuca ſaligna. *Linn. Sp. Pl.* 1119. *Sm. Fl. Brit.* 820. *Hudſ.* 338. *With.* 678. *Hull.* 175. *Relh.* 293. *Dickſ. H. Sicc. faſc.* 17. 16.

L. ſylveſtris minima. *Raii Syn.* 162.

THE Rev. Mr. Relhan has favoured us with this wild ſpecimen of *Lactuca ſaligna* from the neighbourhood of Cambridge. It loves a calcareous ſoil, but is by no means frequent in any ſituation. The London botaniſts a very few years ſince uſed to find it about Pancras. Dr. Pulteney has remarked it, though rarely, in ſhady lanes in Dorſetſhire. We know of no other places where it has been obſerved.

In habit and ſenſible qualities it agrees with other wild lettuces, but its ſlender oſier-like form, and narrow moſtly entire leaves, which, though haſtate at the baſe, are very ſeldom divided or notched in any other part, readily diſtinguiſh it. The ſtem is brown, a little prickly. Leaves and calyx glaucous. Flowers very ſmall, pale-yellow, opening only in ſunſhine, and ſoon fading. The ſeeds are beautifully furrowed, roughiſh; their down finely jointed. The root is biennial, and the flowers appear in Auguſt. The mid-rib of the leaves, though naturally prickly, is occaſionally ſmooth.

# PRENANTHES muralis.

## *Ivy-leaved Lettuce.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Recept.* naked. *Calyx* double. *Down* ſimple, nearly ſeſſile. *Florets* in a ſingle row.

SPEC. CHAR. Florets five. Leaves runcinate.

SYN. Prenanthes muralis. *Linn. Sp. Pl.* 1121. *Hudſ.* 338. *With.* 678. *Reth.* 293. *Sibth.* 238. *Curt. Lond. fasc.* 5. *t.* 58.

Lactuca ſylveſtris murorum flore luteo. *Raii Syn.* 162.

AUTHORS generally mention this as rather a rare plant. Its proper ſtation is in woods on a chalky ſoil, but it alſo occurs on the tops of walls, growing in the mortar, eſpecially on the north ſide or under the ſhade of trees. The Rev. Mr. Hemſted gathered this ſpecimen on Chippenham Park wall, Cambridgeſhire, in July laſt. It grows in Biſhopgate-ſtreet, Norwich.

Root perennial, of ſeveral long fibres. Whole herb tender and brittle, ſmooth, milky when broken. Stem a foot high, erect, ſimple, round, purpliſh, leafy; zigzag and panicled at the top. Leaves runcinate, that is, pinnatifid with ſharp lobes pointing backwards, toothed, veiny, darkiſh green; often purpliſh beneath; the radical ones on foot-ſtalks; the reſt alternate, embracing the ſtem. Panicle much branched, divaricated. Bracteæ ſmall, ovate, acute. Calyx ſlender, purpliſh. Florets 5 only, in a ſimple row, by which this is at once diſtinguiſhed from every other native ſyngeneſious plant. Seed obovate, ſtriated, black.

It varies with entire leaves on the ſtem, as remarked by Dr. Withering.

The leaves much reſemble thoſe of ſome varieties of the Sow-thiſtle, with which alſo the plant agrees in ſenſible qualities. We know not of its being applied to any uſe.


Sowerby London

# LEONTODON Taraxacum.

## *Dandelion.*

*SYNGENESIA Polygamia æqualis.*

GEN. CHAR. *Receptacle* naked. *Calyx* imbricated, with flaccid scales. *Down* simple, on a footstalk.

SPEC. CHAR. Outer scales of the calyx reflexed. Leaves runcinate, toothed, smooth.

SYN. Leontodon Taraxacum. *Linn. Sp. Pl.* 1122. *Huds.* 339. *Relh.* 294. *Curt. Lond. fasc.* 1. *t.* 58. *Woodv. Med. Bot. t.* 3.

L. officinalis. *With.* 679.

Taraxacum officinale. *Sibth.* 239.

Dens leonis. *Raii Syn.* 170. *n.* 1. also 171. *n.* 2.

THE Dandelion is too common to be overlooked by the most incurious botanist; it clothes our meadows with yellow early in the spring, and may be found in bloom throughout summer in waste or ill-cultivated places. The root is perennial, deep and branching, rendering it a troublesome weed. Leaves radical, numerous, runcinate (that is, cut into lateral lobes which are hooked backwards), toothed, pointed, of a full grass-green, smooth. Stalks simple, round, hollow, smooth, single-flowered, brittle. Flower large, opening in the morning and in fine weather only, composed of numerous bright-yellow ligulate florets with 5 teeth. Calyx of several linear entire leaves, of which the outermost are more or less recurved. Styles observed by Mr. Sowerby to be hairy. Seeds obovate, furrowed, rough, bearing on a long footstalk a radiated tuft of simple down. Receptacle convex, dotted. The whole herb is milky and bitter, but, like Lettuce, becomes sweet by culture or blanching.

The above English name, a corruption of the French *dent de lion*, lion's tooth, has taken place of a very coarse one expressive of the diuretic quality of this plant.

Nov. 1798 Published by P. Smith, Leicester

14.



# LEONTODON palustre.

## *Marsh Dandelion.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Recept.* naked. *Calyx* imbricated with flaccid scales. *Down* simple, on a footstalk.

SPEC. CHAR. Outer scales of the calyx shorter, upright, ovate. Leaves sinuated and toothed, nearly smooth.

SYN. Leontodon palustre. *Lyons. Fasc.*
L. Taraxacon. *With.* 679. *Huds.* 339 *δ*.

IN the present volume, *t.* 510, we have expressed an opinion that this plant was merely a variety of the common Dandelion; but since that article was written, a more accurate examination of wild specimens, as well as of others raised from seed sent from Cambridgeshire by the Rev. Mr. Hemsted, has convinced us of our error, and we therefore lose no time to acknowledge it.

The Marsh Dandelion grows generally on moors or wet commons. It was originally observed on Hinton Moor, Cambridgeshire, and has been found on the Lower Common at Heydon, Norfolk, by the Rev. Mr. Bryant, flowering in June or July.

Root perennial, tap-shaped. Whole herb more slender and delicate than the common species. Leaves very various, slightly hairy, often quite smooth, scarcely runcinate, or with their teeth pointing backwards, but more or less deeply pinnatifid and dentate. Flower bright yellow, externally striped with red or purple. Calyx scales gradually smaller outwards, and all erect, or rather closely pressed to each other, the lower ones ovate, not linear. Head of seeds about half the size of L. *Taraxacum*. The calyx scales being none of them reflexed, and the leaves being less runcinate, distinguish it from the most starved varieties of the *Taraxacum*, such as the *β* of Hudson figured by Petiver, *t.* 11. *f.* 8.

15.



# HEDYPNOIS hirtum.

## *Deficient Hedypnois.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Recept.* naked, punctate. *Cal.* imbricated, with scales at the base. *Down* feathery, sessile, unequal.

SPEC. CHAR. Stalks single-flowered. Leaves dentate, rough. Calyx nearly smooth. Outer row of seeds destitute of down.

SYN. Hedypnois hispidum β. *Huds.* 340.

Leontodon hirtum. *Linn. Sp. Pl.* 1123. *With.* 682. *Sibth.* 238. *Curt. Lond. fasc.* 6. *t.* 59.

Hieracium pumilum saxatile asperum, præmorsâ radice. *Raii Syn.* 167.

MANY botanists have doubted whether this were a different species from the H. *hispidum*. Mr. Hudson makes them varieties only, but Linnæus always insisted on their being distinct. Unfortunately the character he pointed out is fallacious, the simple hairs; for the pubescence of both is occasionally simple, forked, or even three-pointed. In herbage they nearly agree, or at least the varieties of each closely approach each other. The flowers of both droop in the bud, but those of H. *hirtum* are the smallest. The calyx is very nearly smooth. The florets are destitute of the yellow hairs at their orifice, and of the brown glands at the back of their apex, and the innermost have a less perfect corolla than those of the circumference; while on the contrary the seeds produced by the innermost are crowned with large sessile feathery down, and those of the circumference are almost beardless, having only a few short jagged scales at their summit. The root of this species is bitten off, not tapering as in the other.

This *Hedypnois* is frequent on gravelly heaths and commons, flowering in July and August. Mr. Curtis observes that it seldom occurs on the same spot with the preceding.

We adopt this genus of *Hedypnois* from Mr. Hudson. What Jussieu and Gærtner have called by the same name is the *Zacyntha* of Schreber's *Gen. Pl.* 534.


Feb.y 1799 Published by Js Sowerby

16.



# HEDYPNOIS hispidum.

## *Rough Hedypnois.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Recept.* naked, punctate. *Cal.* imbricated, with scales at the base. *Down* feathery, sessile, unequal.

SPEC. CHAR. Stalks single-flowered. Leaves dentate, rough. Florets hairy at their orifice, glandular at the tip.

SYN. Hedypnois hispidum. *Huds.* 340.
Leontodon hispidum. *Linn. Sp. Pl.* 1124. *With.* 681. *Relh.* 295. *Sibth.* 239. *Curt. Lond. fasc.* 5. *t.* 56.
Dens leonis hirsutus leptocaulis, Hieracium dictus. *Raii Syn.* 171.

PLENTIFUL in pastures, on a chalk or limestone soil more especially, flowering in July.

Root perennial, tapering, oblique, blackish. Leaves radical, oblong, tapering at the base, bluntish, more or less deeply toothed, and sometimes pinnatifid, clothed with generally forked rigid hairs. Stalks several, upright, simple, roundish, clothed with similar hairs. Flower drooping while in bud, afterwards erect, bright yellow. Calyx-scales erect, unequal and irregular, hairy. Florets furnished with a tuft of long yellow erect hairs at the top of their tube; their summit terminates in 5 teeth, at the back of each of which is a triangular cluster of brown glands, first observed I believe by Mr. Sowerby. The seeds are uniform, slender, each crowned with a spreading tuft of sessile feathery down, whose rays are unequal.

In the full-blown flower the hairs from the orifice of each floret may readily be perceived, and distinguish this plant from the H. *hirtum*, and every other with which it could be confounded.

17.



# HEDYPNOIS Taraxici.

## *Alpine Hedypnois.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Recept.* naked, dotted. *Cal.* imbricated, with ſcales at the baſe. *Down* feathery, ſeſſile, unequal.

SPEC. CHAR. Stalks moſtly ſingle-flowered. Leaves ſmooth, toothed; the teeth recurved. Calyx hairy.

SYN. Hedypnois Taraxici. *Sm. Fl. Brit.* 825.

H. autumnale ε. *Hudſ.* 341.

Hieracium Taraxici. *Linn. Sp. Pl.* 1125. *With.* 683. *Hull.* 175. *Lightf.* 435. *Dickſ. H. Sicc. faſc.* 17. 15.

THE late Mr. J. Mackay, to whom we are obliged for many ſpecimens of this rare plant, mentioned it as growing in moiſt places on ſeveral of the Highland mountains. Lightfoot gathered it in Skye, and Hudſon in Wales, but few travellers have noticed it.

The root is perennial, abruptly bitten off, producing long ſimple lateral fibres, and the flowers appear in Auguſt. The herbage is variable, the leaves being either lanceolate and almoſt linear, or ſpatulate and obovate; their teeth alſo vary greatly in ſize or prominence, but are always more or leſs runcinate, or hooked backwards. The ſurface of the leaves is ſmooth. The ſtalk or ſtalks vary in length. Though generally ſimple, they are ſometimes divided. They ſwell upwards, and there aſſume a denſe black hairineſs, continued all over the calyx. One or two awl-ſhaped bracteæ are found on the ſtalk. The florets are of a full yellow, with brownifh teeth at the ſummit. Receptacle naked. Seeds angular and rough. Down finely feathery, ſeſſile, though the germen ſeems ſurmounted with a taper neck reſembling a footſtalk, but as the ſeed ſwells this appearance vaniſhes.

Dr. Solander, who firſt found a ſingle ſpecimen of this plant in Lapland, conceived it to be a mule production between *Hieracium alpinum* and *Leontodon Taraxacum*, but we find nothing to countenance ſuch an opinion.

Dec.1. 1802. Published by J.A. Sowerby. London.

18.



# HEDYPNOIS autumnalis.

## *Autumnal Hedypnois.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Recept.* naked, punctate. *Cal.* imbricated, with ſcales at the baſe. *Down* feathery, ſeſſile, unequal.

SPEC. CHAR. General ſtalk branched; partial ſcaly. Leaves lanceolate, toothed or pinnatifid, ſmoothiſh.

SYN. Hedypnois autumnalis. *Sm. Fl. Brit.* 826. *Hudſ.* 341.

Leontodon autumnale. *Linn. Sp. Pl.* 1123. *With.* 680. *Hull.* 173. *Relh.* 295. *Sibth.* 238. *Abbot.* 170.

Hieracium minus, præmorsâ radice. *Raii Syn.* 164.

COMMON every where in meadows and paſtures, flowering about Auguſt and later.

Root perennial, abruptly bitten off, furniſhed with very long ſimple fibres from its ſides. Leaves almoſt altogether radical, lanceolate, generally ſmooth, rarely a little rough, variouſly and unequally pinnatifid or merely toothed, oblique or ſomewhat ſerpentine in their general form or poſition. General ſtalk one or more, ſpreading, curved and zigzag, branched, not quite ſmooth, terminating in a few long ſcaly flower-ſtalks which are hollow, and according to the juſt obſervation of the Rev. Mr. Holme each contains a little tuft of very white cotton that ſeems peculiar to the plant. Calyx and top of the ſtalk a little downy. Flowers bright-yellow, not large, often reddiſh on the outſide. Seeds ſlender, furrowed, all crowned with ſeſſile feathery down.

The late Rev. Mr. Bryant obſerved in Norfolk, a few years ſince, a ſingular variety whoſe flowers were proliferous, bearing from the margin of their receptacle a ſeries of leſſer flowers on ſtalks, much like the hen-and-chicken daiſy.


Jun 2. 1811. T. Hoffland fe. J. Sowerby, London.

19.



# HIERACIUM alpinum.

## *Alpine ſingle-flowered Hawkweed.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Recept.* nearly naked, dotted. *Cal.* imbricated, ovate. *Down* ſimple, ſeſſile.

SPEC. CHAR. Leaves oblong, undivided, entire or toothed. Stalk almoſt leafleſs, ſingle-flowered. Calyx hairy.

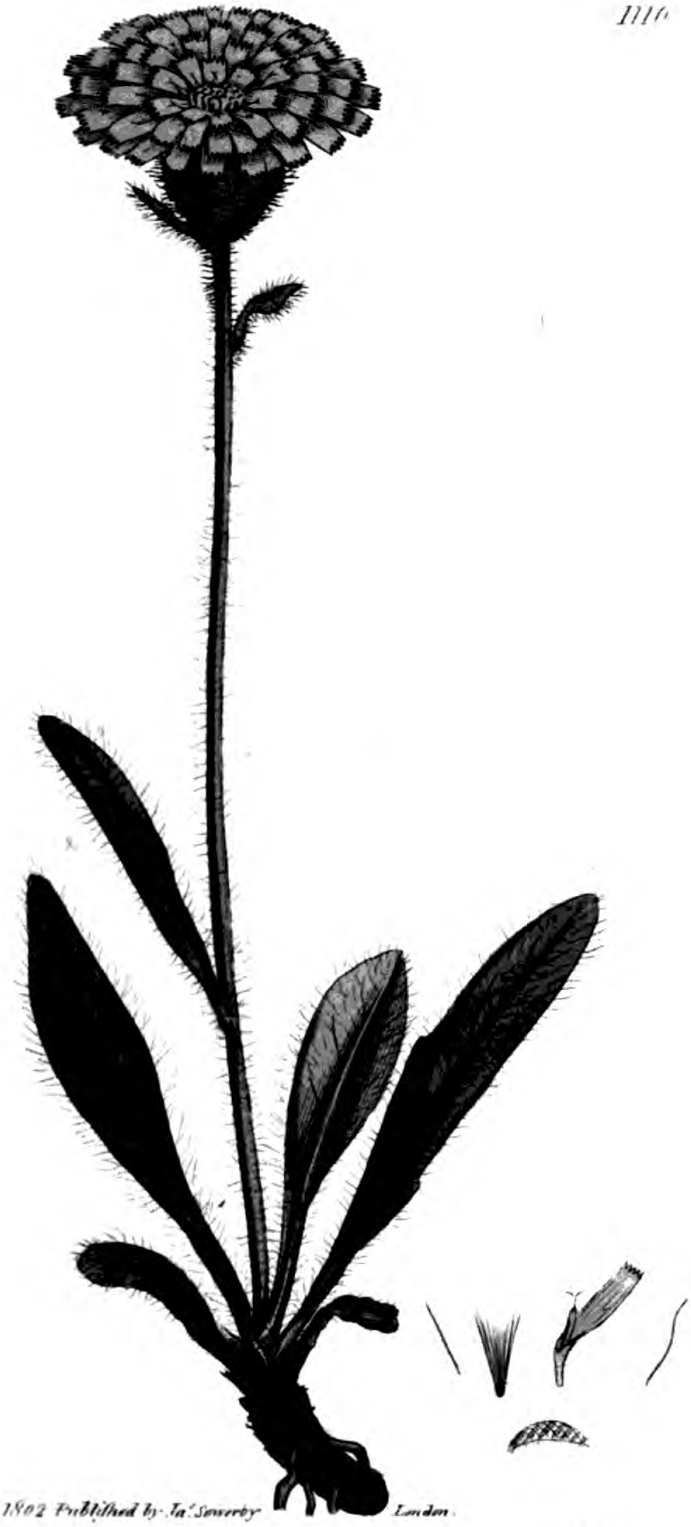
SYN. Hieracium alpinum. *Linn. Sp. Pl.* 1124. *Sm. Fl. Brit.* 827. *Hudſ.* 343. *With.* 683. *Hull.* 175. *Lightf.* 434. *t.* 18.

H. villoſum alpinum, flore magno ſingulari, caule nudo. *Dill. in Raii Syn.* 169. *t.* 6. *f.* 2.

RAY was acquainted with this plant, but took it for *Hieracium quintum villoſum* of Cluſius (*H. villoſum* of Linnæus), an error rightly corrected by Dillenius. It grows on rocky parts of the high mountains of Wales and Scotland, flowering in July.

Root perennial, abrupt, with ſeveral long ſtrong fibres. Whole herb clothed with prominent hoary rigid hairs, yellowiſh brown at their baſe. Leaves almoſt all radical, obovate, not broad, undivided, either entire or more or leſs toothed and undulated. Stalk ſolitary, erect, ſimple, round, darker coloured in the upper part, bearing generally one leaf near its baſe, and a ſmall bractea higher up. Calyx dark-coloured and very hairy. Corolla large, of a full yellow. Tube of each floret hairy. Seeds obovate, angular, dotted. Down ſeſſile, rough. Receptacle naked.

The fructification of this *Hieracium*, when accurately compared with *Hedypnois Taraxici*, is too unlike to warrant the ſuppoſition of the latter being its hybrid offſpring, though appearances might at firſt ſight ſeem to countenance ſuch an idea. Linnæus however eagerly graſped at his ingenious pupil's ſuggeſtion, and has too poſitively inſiſted on it in his *Sp. Plant.* and Diſquiſition on the Sexes of Plants.



1 1802 Published by Ja.t Sowerby London.

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# HIERACIUM Pilofella.

## *Mouſe-ear Hawkweed.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Recept.* nearly naked, dotted. *Cal.* imbricated, ovate. *Down* ſimple, ſeſſile.

SPEC. CHAR. Leaves elliptical, entire, downy beneath. Scions creeping. Stalk ſimple, leafleſs.

SYN. Hieracium Pilofella. *Linn. Sp. Pl.* 1125. *Sm. Fl. Brit.* 828. *Hudſ.* 343. *With.* 682. *Hull.* 175. *Relh.* 308. *Sibth.* 241. *Abbot.* 170. *Curt. Lond. faſc.* 4. *t.* 54.

Pilofella repens. *Raii Syn.* 170.

FEW plants are more common than the *Hieracium Pilofella* in dry expoſed places, ſuch as gravelly banks, ſunny lawns, and the tops of park walls, where it bloſſoms from May to the end of July, preſenting its elegant ſulphur-coloured flowers to the noontide ſun, while the ſurrounding herbage, and even its own foliage, is withered and burnt up.

The roots are perennial, creeping by means of leafy ſcions protruded from their crown. Leaves ſpreading, elliptical, entire, of a ſmooth, but not poliſhed, green above, ſprinkled with rigid hairs that become tawny when dried; underneath the leaves are clothed with a denſe white coat of down, intermixed alſo with hairs. Stalks one, two, or three from the crown of the root, erect, ſimple, round, hairy, deſtitute of leaves, except now and then a ſmall bractea, and each bearing one flower whoſe calyx is rough with black hairs intermingled with white. The florets are narrow, toothed at the end, pale yellow above, remarkable for being elegantly ſtriped with red beneath. Receptacle rough with ſhort briſtles. Seeds brown, ſtriated, crowned with rough rigid down.

√

# HIERACIUM dubium.

## *Branching Mouse-ear Hawkweed.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Recept.* nearly naked, dotted. *Cal.* imbricated, ovate. *Down* simple, sessile.

SPEC. CHAR. Leaves elliptic-lanceolate, nearly entire, besprinkled with long hairs; rather glaucous beneath. Scions creeping. Stalk bearing several flowers.

SYN. Hieracium dubium. *Linn. Sp. Pl.* 1125. *Sm. Fl. Brit.* 828. *Tr. of Linn. Soc. v.* 9. 226. *Huds.* 344. *With.* 684. *Hull. ed.* 2. 230.

H. Auricula. *Fl. Dan. t.* 1111.

H. n. 53. *Hall. Hist. v.* 1. 22.

IT is hoped that all uncertainties respecting the synonyms of this species and *H. Auricula* are now removed by the remarks in the Linn. Trans. cited above. We have lately verified the present as a British native, by living specimens from the Cambridge garden, received from Scotland by its excellent Curator, confirming the authorities on which we depended in *Fl. Brit.* Mr. Donn favoured us at the same time with *H. Auricula* of his Catalogue, which, we are sorry to say, appears a very slight variety of *dubium*, so that we have still to seek the real *Auricula* on the exposed top of some Scottish or Westmoreland mountain.

Our garden specimen is probably more luxuriant than wild ones. The natural time of this plant's flowering seems to be June and July. The spreading leafy scions throw out many perennial roots, like *H. Pilosella, t.* 1093, from which this differs in having longer narrower leaves, glaucous (not white and cottony, though occasionally downy,) beneath, and a stalk bearing two, three or four flowers, rather smaller than in *Pilosella*, and yellow on both sides, not beautifully red underneath. The leaves are besprinkled, and their base fringed, with coarse spreading hairs.

Oct. 1. 1810. Published by Jos. Sowerby London.

# HIERACIUM Auricula.

## *Orange Mouse-ear Hawkweed.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Recept.* nearly naked, dotted. *Cal.* imbricated, ovate. *Down* simple, sessile.

SPEC. CHAR. Leaves lanceolate, nearly entire, besprinkled with long hairs. Scions short. Stalk hairy, bearing several close-set flowers.

SYN. Hieracium Auricula. *Linn. Sp. Pl.* 1126. *Sm. Fl. Brit.* 829. *Tr. of Linn. Soc. v.* 9. 230. *Huds.* 344? *With.* 684? *Hull. ed.* 2. 231?

H. dubium. *Fl. Dan. t.* 1044.

To render our illustration of the British Flora as complete as possible, we judge it indispensable to give a figure of this little-known species, though we can do it from dried exotic specimens only; but having gathered them fresh on Mount Cenis, we can vouch for the accuracy of the plate in every point. We doubt very much whether this *Hieracium* has a right to a place in the British list, but our figure, being kept in view, will serve, in due time, to settle that question. What Hudson gathered on Dalehead, Westmoreland, cannot be ascertained but by a scrupulous investigation of the spot, and a comparison between our present plate and *t.* 2332.

This species differs sufficiently from *dubium* in having lanceolate acute leaves, green on both sides; a very hairy stalk, bearing from 2 to 3, 4, or even 5, close-set, often umbellate flowers, rather smaller than those of *dubium*, and of a full yellow inclining to orange. The calyx is black. Long tawny hairs are scattered more or less abundantly over every part of the herbage. The root is perennial, creeping, but not extensively, with long strong fibres. The scions are few and short. In a garden they might prove more luxuriant, and the habit of the whole plant more lax.

2308

# HIERACIUM aurantiacum.

## *Orange Hawkweed.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Recept.* nearly naked, dotted. *Cal.* imbricated, ovate. *Down* simple, sessile.

SPEC. CHAR. Leaves elliptical, entire. Stem almost naked, simple, hairy, bearing a corymbus of many flowers.

SYN. Hieracium aurantiacum. *Linn. Sp. Pl.* 1126. *Don. Herb. fasc.* 2. 41.

H. hortense latifolium, sive Pilosella major. *Ger. em.* 905.

MR. GEORGE DON has found this truly wild in several woods in Banffshire, as well as at Craigston in the neighbourhood of Turref, and it is quite a new acquisition to the British Flora. It is perennial, flowering in July, and has long been known in gardens, where it grows without trouble, still retaining, in various parts of England, the old name, recorded in Gerarde, of Grim the Collier, in allusion to the smutty effect of the black glandular hairs which invest the stalks and calyx.

The root creeps, and throws out many scions. Stem a foot high or more, erect, simple, round, very hairy, scarcely bearing one or two small leaves, and crowned with a corymbus of several handsome flowers, remarkable for their deep brownish orange colour. The calyx and flower-stalks are clothed, besides the above black hairs, with longer pale or tawny ones, like those on the leaves and stem. The leaves are nearly all radical, elliptical, broad, entire, hairy, especially the rib. Receptacle naked. Seed-down roughish.

June 1st 1816 Published by J. & J. Sowerby, London.

# HIERACIUM murorum.
## *Wall Hawkweed.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Recept.* nearly naked, dotted. *Cal.* imbricated, ovate. *Down* simple, sessile.

SPEC. CHAR. Stem branched, corymbose, one-leafed. Leaves ovate, inclining to heartshaped, wavy; with radiating teeth chiefly at the base.

SYN. Hieracium murorum. *Linn. Sp. Pl.* 1128. *Sm. Tr. of L. Soc. v.* 9. 236. *With.* 686. *Hull.* 176. *Sm. Fl. Brit.* β. 830. *Huds.* γ. 345.

H. macrocaulon hirsutum, folio rotundiore. *Raii Syn.* 169.

Pulmonaria gallica, sive aurea, latifolia. *Ger. em.* 304.

THE wild specimen drawn in our plate was gathered in May last upon Chedder cliffs, Somersetshire, by Mr. E. Forster. The plant is perennial, and usually flowers again in the autumn, as mentioned under *H. sylvaticum*, *t.* 2031, which latter we presume to be the *murorum* of all our local Floras, as it was also mistaken for such in *Fl. Brit.*

The present *Hieracium* is known by its numerous roundish-ovate, or somewhat heartshaped, radical leaves, which are hairy, wavy at the edge, more or less toothed about the base, and the teeth are radiant, the lowermost pointing backwards, and being sometimes remarkably elongated. The footstalks and backs of the leaves are often purple. Stem erect, round, furrowed, hairy, branched, in a corymbose manner, with several flowers, at the top, bearing one leaf only, usually much toothed, in the lower part. Flowers full yellow, rather larger, and with a thicker blacker calyx, than in *H. sylvaticum*, as well as rather more corymbose. In fading all these flowers turn of a tawny orange.

Nov. 1809 published by J. Sowerby London

# HIERACIUM maculatum.

## *Stained-leaved Hawkweed.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Recept.* nearly naked, dotted. *Cal.* imbricated, ovate. *Down* simple, sessile.

SPEC. CHAR. Stem branched, many-leaved, cymose. Leaves ovato-lanceolate, strongly toothed, the teeth pointing forward.

SYN. Hieracium sylvaticum. *Fl. Dan. t.* 1113. *Sm. Tr. of Linn. Soc. v.* 9. 240 β, erasing the syn. of Ray and Dillenius.

H. murorum γ. *Sm. Fl. Brit.* 830.

H. pulmonarioides. *Villars Dauph. v.* 3. 133. *t.* 34?

BROUGHT from Westmoreland to Norwich in 1781 by Mr. Crowe, from whose garden it has established itself in the neighbourhood, spreading extensively by seed, and preserving all its original habit and characters. By the authentic specimen shown me this spring, by Mr. Hailstone, from Dr. Richardson's herbarium, this proves to be what Dillenius mentions (at the bottom of p. 168 of his edition of Ray) as found by Dr. Richardson at *Lhyn y cwm*, and which Dillenius supposed the *H. pulmonaria dictum angustifolium* of *R. Syn. ed.* 2. 74. See *Tr. of L. Soc. v.* 9. 238, where the latter is proved to be *Cineraria integrifolia*.

Our present plant is taller, and has a more leafy stem, than *H. murorum*, *t.* 2082, or even *sylvaticum*, *t.* 2031, differing from the former in having rather elliptical than heartshaped leaves, whose strong deep teeth all point forward and are by no means radiated. The leaves are moreover strongly speckled with black. From *sylvaticum* we now at length venture to distinguish it specifically by the size of those teeth, but especially by the cymose, not panicled, growth of its stem. The flowers also are larger, more numerous, with a darker thicker calyx, and the whole herbage is of a darker green. It is perennial, and flowers occasionally throughout the summer and autumn.——We are more and more inclined to think Villars's plant the same, its leaves being spotted likewise, to which his name alludes. But the barbarous hybrid construction of that name is best avoided. The stem in his is nearly solid, in ours decidedly hollow, and we are not competent to say how material that difference may be.

Warren, publ. lith. by T. Moore & Son.

26.



# HIERACIUM sylvaticum.

## *Wood Hawkweed.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Recept.* nearly naked, dotted. *Cal.* imbricated, ovate. *Down* simple, sessile.

SPEC. CHAR. Stem branched, many-leaved. Leaves ovato-lanceolate, toothed chiefly about the base, the teeth pointing forward.

SYN. Hieracium sylvaticum. *Sm. in Tr. of Linn. Soc. v.* 9. 239. *Gouan. Obs.* 56, by the description. *With.* 687. *Galpine*, 67.

H. murorum. *Ehrh. Herb.* 147. *Allion. Ped. t.* 28. *f.* 1. *Sm. Fl. Brit.* α. 830.

H. murorum, folio pilosissimo. *Raii Syn. ed.* 2. 74. *ed.* 3. 168.

THE history of this plant and *H. murorum*, somewhat confused, in consequence of old mistakes, in *Fl. Brit.* is explained in the Linnæan Society's Transactions, vol. 9, more fully than we can here repeat. It is only necessary to say that the synonyms of Ray, Gerarde and Petiver, *Fl. Brit.* 831, actually belong, not to this Hawkweed, but to *Cineraria integrifolia*, as is proved by a specimen from Dr. Lamb of Newberry.

The plant before us was gathered by Mr. E. Forster in Epping forest near Highbeach. It is however not uncommon in various parts of the kingdom, in dry chalky woods, or on old park walls, flowering usually in July, and again late in autumn, like the more rare *H. murorum*, of which we hope another season to obtain a drawing. The root is perennial, slender, slightly creeping, with long simple fibres. Herb hairy, of a pale grass green. Stem more or less branched, round, panicled, bearing several alternate long-stalked leaves, whose form is lanceolate inclining to ovate, acute, most toothed about their lower half, the teeth either direct or pointing forwards, not backwards. Flowers of a full lemon, not orange, yellow, rather small, their calyx rough, rather more cylindrical than ovate.

*H. murorum* γ *Fl. Brit.* 830, if not a distinct species, which we much suspect, is rather a variety of this.

Jane Loudon published by J. Loudon London.

27.



# HIERACIUM pulmonarium.

## *Lungwort Hawkweed.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Recept.* nearly naked, dotted. *Cal.* imbricated, ovate. *Down* simple, sessile.

SPEC. CHAR. Stem branched, cymose, with few leaves, solid. Leaves lanceolate, deeply toothed, the teeth pointing forward.

SYN. Hieracium pulmonarioides. *Villars. Dauph. v.* 3. 133.

OUR doubts respecting this plant of Villars are removed by the discovery of Scottish specimens, exactly according with his own from Dauphiny. These were gathered by Mr. W. Borrer, on the banks of the river Nivis, near the bridge, last summer. We have several unsettled specimens of this genus, especially from Mr. G. Don, both dried and living, still under our observation, but none that appears to agree with the present.

This species is satisfactorily distinguished from *H. maculatum, t.* 2121, by its solid stem, and the small number of its stem-leaves, which are mostly one or two, near the bottom only. The flowers are fewer and larger. Radical leaves numerous, stalked, lanceolate or slightly elliptical, narrower than those of *maculatum*, and rather clouded than spotted, with faint tints of purplish brown. Their teeth are deep and strong, all pointing forward; the margins and footstalks hairy. Root perennial. Stem not half so tall as that of *maculatum*. We have retained the sense of the original name, which alludes to the leaves being spotted like *Pulmonaria* or Lungwort, but have changed the termination *oides*, which is inadmissible except in words of Greek derivation.

July 1 as published by J. & Thorley London

# HIERACIUM Lawsoni.

## *Glaucous Hairy Hawkweed.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Recept.* nearly naked, dotted. *Cal.* imbricated, ovate. *Down* simple, sessile.

SPEC. CHAR. Stem remotely branched, not striated. Leaves almost all radical, stalked, elliptic-lanceolate, decurrent, glaucous, fringed, nearly entire.

SYN. Hieracium Lawsoni. *Villars. Dauph. v.* 3. 118. *t.* 29, bad.

H. glaucum pilosum, foliis parùm dentatis. *Dill. Elth.* 180. *t.* 149.

H. leptocaulon hirsutum, folio longiore D. Lawson. *Raii Syn. ed.* 2. 74. *ed.* 3. 169.

LIVING plants of this *Hieracium* were communicated to us from the Cambridge garden, by Mr. Donn, as undoubtedly of British growth. It is evidently the above plant of Dillenius, though he seems not to have hit on the proper synonym of Ray, but rather referred it, not without doubt, to one which belongs to the true *murorum*, *t.* 2082. Our plant agrees precisely with the specimen of the *H. Lawsoni* of Villars, mentioned in *Tr. of L. Soc. v.* 9. 241, to which place we refer the botanical critic for further remarks on this subject, requesting him to erase the above synonyms of Ray and Dillenius from *H. sylvaticum* β in *p.* 240, the question respecting them being now decided.

This flowers in July, and has an abrupt perennial root, with thick fibres. The herbage is of a full unpolished glaucous green. Stem erect or spreading, a foot high, round, hairy, very even and not striated, divided into a few long and remote branches, beset in their upper part with black, prominent, glandular bristles, and cottony at the top. Radical leaves numerous, elliptic-lanceolate, acute, nearly entire, hairy, especially their edges and midrib; the base tapers down into a long, bordered, fringed footstalk. One similar but sessile leaf stands usually near the bottom of the stem; the upper ones are scarcely more than bracteas. Flowers solitary at the top of each branch, larger and paler than those of *H. murorum*, with a broad dark hairy calyx.——The plant abounds with bitter milk.——The synonyms in Villars are incorrect.

Now 1st May published by J.ᵐ Sowerby London.

V

29.



# HIERACIUM paludosum.

## *Succory-leaved Hawkweed.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Recept.* nearly naked, dotted. *Cal.* imbricated, ovate. *Down* simple, sessile.

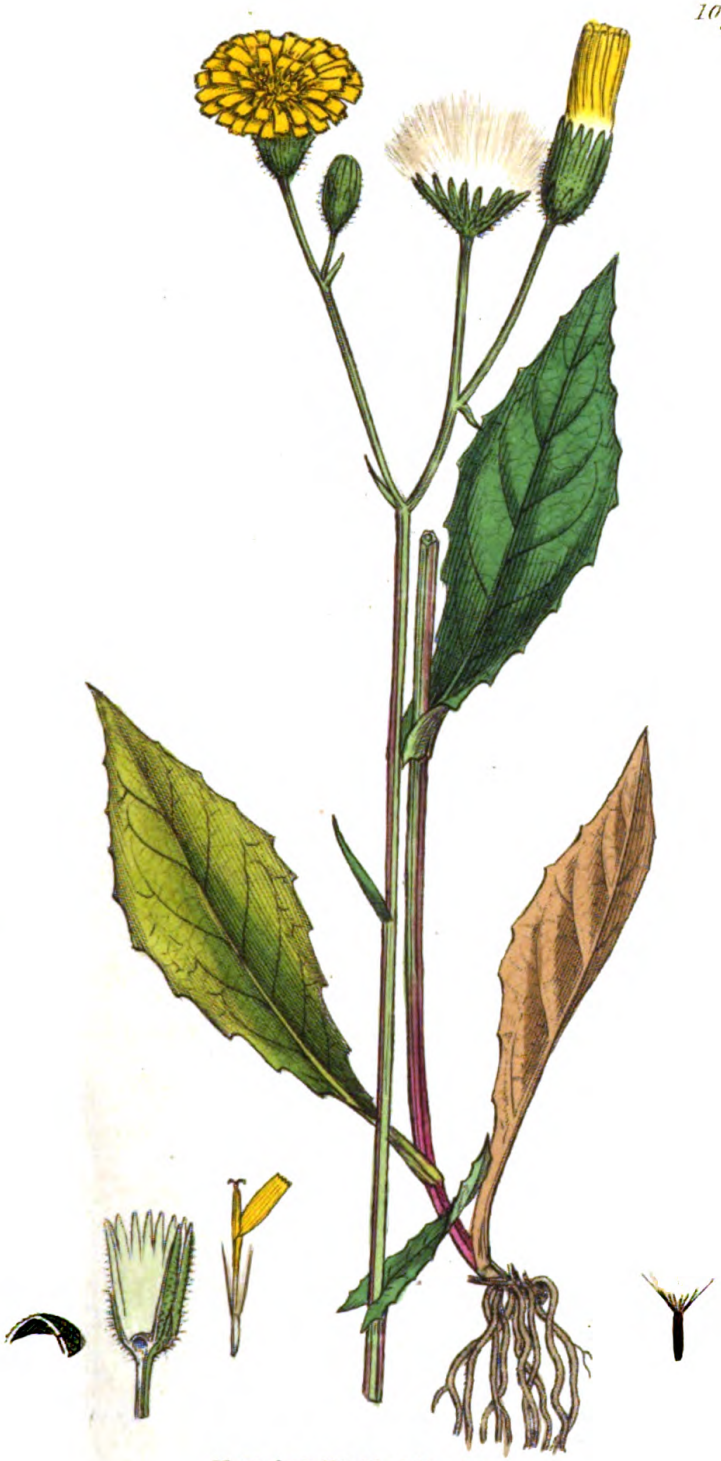
SPEC. CHAR. Stem panicled, hollow. Leaves toothed, smooth, embracing the stem with their heart-shaped base. Calyx rough.

SYN. Hieracium paludosum. *Linn. Sp. Pl.* 1129. *Sm. Fl. Brit.* 831. *Hudf.* 345. *With.* 686. *Hull.* 176. *Lightf.* 438.

H. montanum cichorei folio nostras. *Raii Syn.* 166.

WILD specimens of the plant here delineated were sent from North Wales by Mr. Turner, and from Yorkshire by Mr. Hailstone, in July and August last. It is generally esteemed a rare species, and indeed is only to be found in our most mountainous counties, where it delights in moist shady places. We have formerly seen it cultivated with success even in a smoky London garden for several years; and it is remarkable that some of the most alpine plants, as *Angelica Archangelica*, thrive best in such an atmosphere.

The root is perennial, formed of many downy fibres. Herb smooth, intensely bitter. Stem angular, leafy, hollow, panicled above but simple in the lower part, leafy. Leaves alternate, somewhat elliptical, toothed, sharp-pointed, clasping the stem with their heartshaped base. Panicle corymbose, spreading, furnished with a few small ciliated bracteæ. Calyx rough with black prominent hairs. Corolla bright full yellow. Receptacle naked. Seed pale-brown. Down rough.



Nov.r 1 1802 Published by Ja.s Sowerby London.

30.



# HIERACIUM molle.

## *Soft-leaved Hawkweed.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Recept.* nearly naked, dotted. *Cal.* imbricated, ovate. *Down* simple, sessile.

SPEC. CHAR. Stem panicled, hollow, angular. Leaves lanceolate, slightly toothed, hairy, clasping the stem; lower ones stalked, more elliptical and obtuse.

SYN. Hieracium molle. *Jacq. Austr. v.* 2. 12. *t.* 119. *Dicks. Tr. of Linn. Soc. v.* 2. 288. *H. Sicc. fasc.* 11. 13. *Sm. Fl. Brit.* 832. *With.* 688. *Hull. ed.* 2. 232.

MR. DICKSON discovered this Hawkweed, which Linnæus never described, in woods in the south of Scotland, and we are obliged to him for an authentic specimen, which agrees with original ones of Jacquin in the Linnæan herbarium.

*H. molle* is perennial, and flowers in July. The whole herb is clothed with scattered, short, soft hairs, which on the flower-stalks are glandular and viscid. Stem about 18 inches high, erect, unbranched, leafy, angular, hollow like that of *H. paludosum*, *t.* 1094, panicled at the summit. Lower leaves on long bordered stalks, elliptic-oblong, obtuse, distantly toothed; upper ones sessile, clasping the stem, more lanceolate, less blunt, and scarcely toothed at all. Flowers several, erect, of a full yellow. Calyx clothed with glandular hairs and some cottony down. Seed yellowish, striated. Down rough.

Now first published by J.t Sowerby London.

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# HIERACIUM cerinthoides.

## *Honeywort-leaved Hawkweed.*

*SYNGENESIA Polygamia-æqualis.*

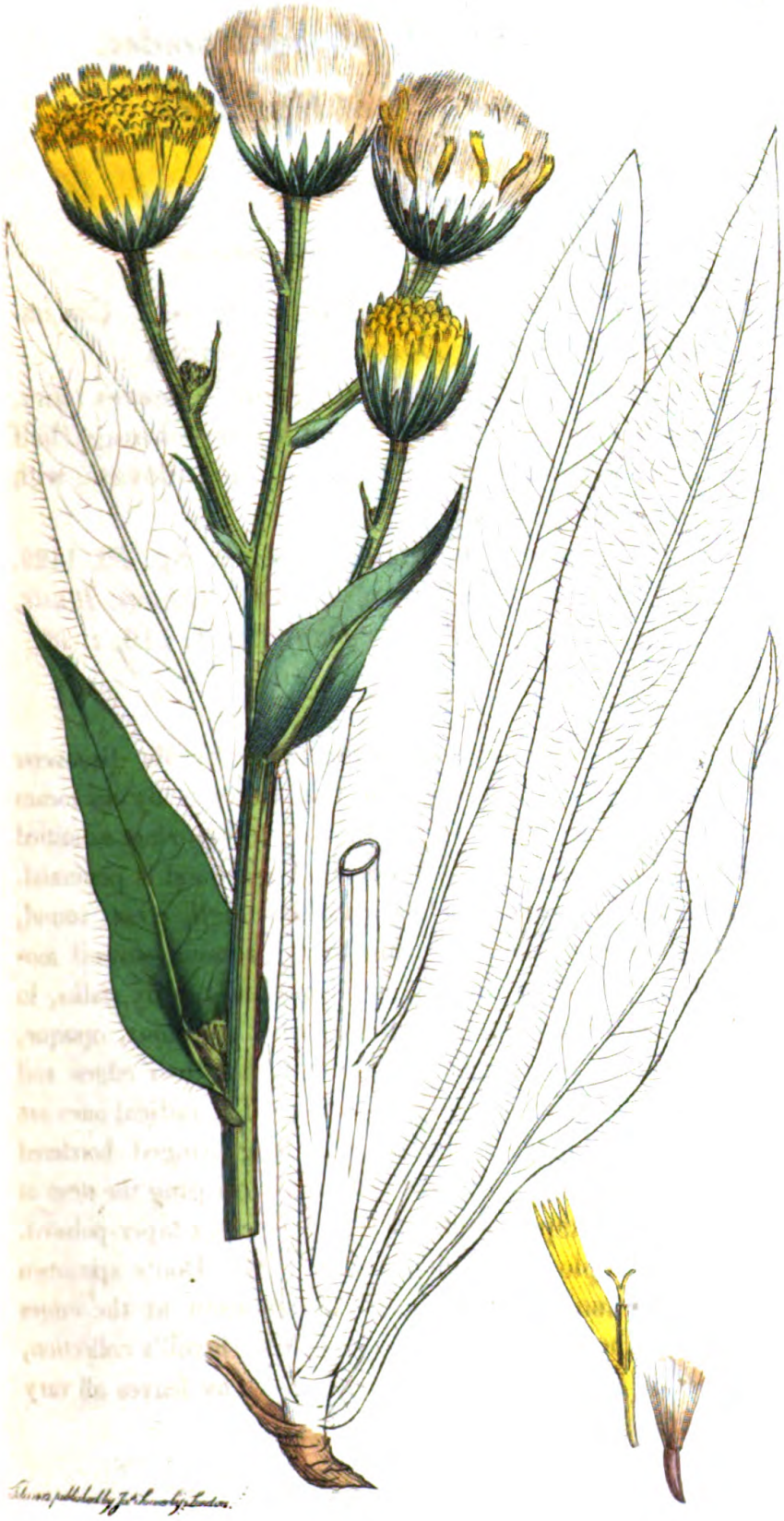
GEN. CHAR. *Recept.* nearly naked, dotted. *Cal.* imbricated, ovate. *Down* simple, sessile.

SPEC. CHAR. Stem corymbose, solid. Leaves hairy, with a few small teeth; the upper oblong, half clasping the stem; the radical ones obovate, with fringed footstalks.

SYN. Hieracium cerinthoides. *Linn. Sp. Pl.* 1129. *Sm. Tr. of Linn. Soc. v.* 9. 242. *Gouan. Illustr.* 58. *t.* 22. *f.* 4. *Villars Dauph. v.* 3. 110. *t.* 32.

SENT from the Highlands of Scotland, by its discoverer Mr. George Don, who informs us this species is by no means uncommon there, upon rocks, though hitherto not admitted into any British Flora. It flowers in August and is perennial.

The stem is eighteen inches or two feet high, erect, round, more or less leafy, solid, bearing at the summit several moderately large yellow flowers, on hispid and downy stalks, in a corymbose form. Leaves all somewhat glaucous, opaque, with a very smooth appearance, except that their edges and ribs are fringed with fine long hairs. The radical ones are lanceolate inclining to obovate, on long fringed bordered stalks; the uppermost dilated and partly clasping the stem at their base, with taper points. Scales of the calyx taper-pointed. Seed-down copious, minutely rough. Mr. Don's specimen has scarcely more than one or two minute teeth at the edges of a few of the stem-leaves. Some in Mr. Davall's collection, like that of Linnæus, are more toothed. The leaves all vary in breadth.



This was published by J. & L. Lewis, Lyg. London.

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# HIERACIUM villosum.

## *Shaggy Alpine Hawkweed.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Recept.* nearly naked, dotted. *Cal.* imbricated, ovate. *Down* simple, sessile.

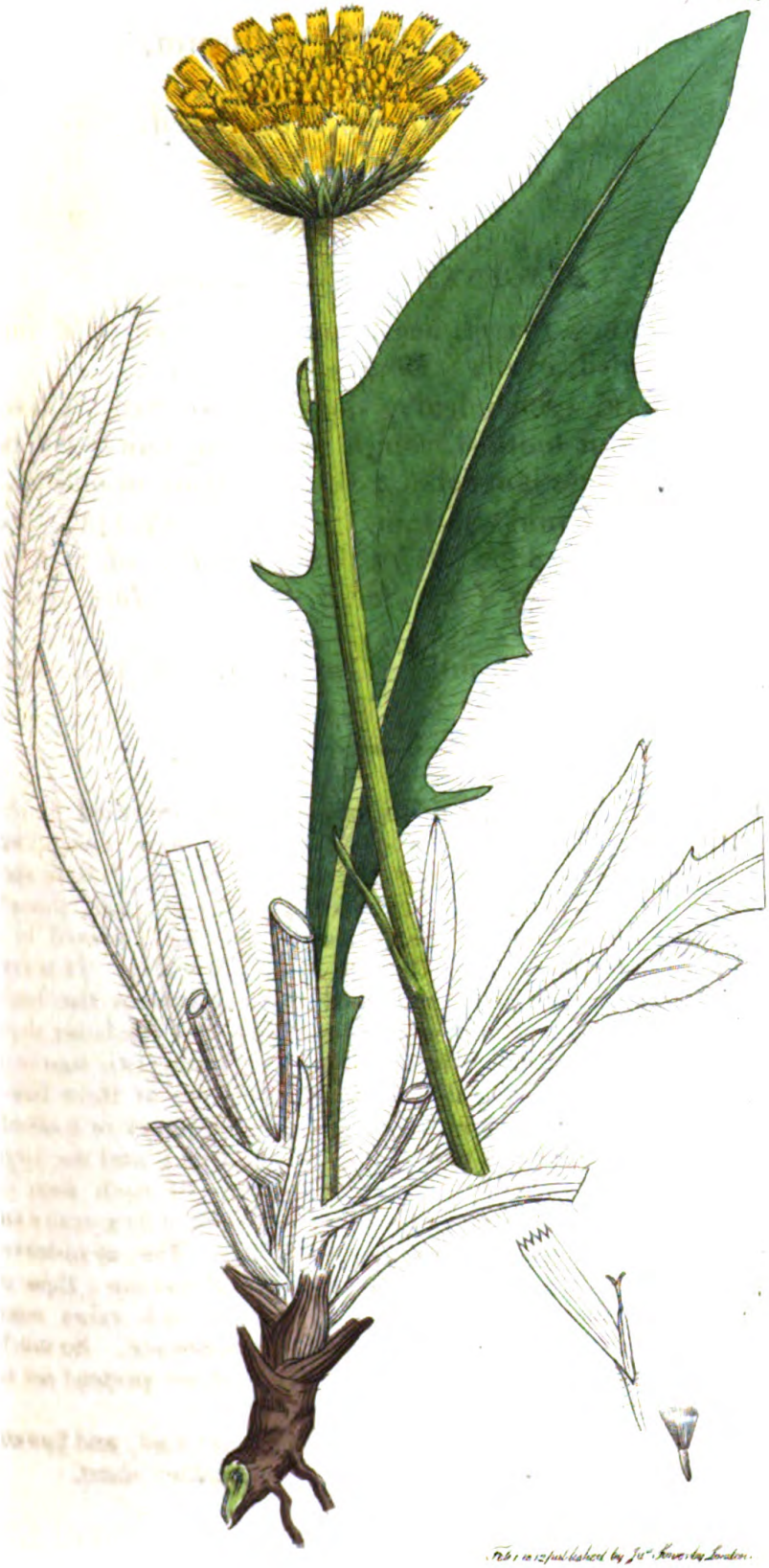
SPEC. CHAR. Stem leafy, slightly branched. Leaves wavy or toothed, rough with long hairs; the radical ones lanceolate; the rest ovate or oblong.

SYN. Hieracium villosum. *Linn. Sp. Pl.* 1130. *Sm. Fl. Brit.* 833. *With.* 687. *Hull. ed.* 2. 232. *Dicks. Tr. of Linn. Soc. v.* 2. 288. *Jacq. Austr. t.* 87.

H. quintum villosum. *Clus. Hist. v.* 2. 141. *Ger. em.* 301.

FEW plants, in our British list, are more involved in obscurity than *H. villosum*, whose synonyms were misapplied by Ray and Dillenius to our *alpinum*, *t.* 1110. Native specimens of *villosum* we have never seen, that in our plate, though originally brought from Ben Lawers, having flowered in a garden, under the care of the late Mr. J. Mackay. It is certainly much more luxuriant, and branched from the base, than any of our native Swiss specimens, but the latter show this species to be extremely variable. Characteristic marks of it are the copious long shaggy hairs, bulbous at their base; the lanceolate stalked radical leaves, either wavy or toothed, whose under side has a pale and glaucous hue; and the large lemon-coloured flowers, solitary at the top of each stem or branch, whose numerous narrow acute dark calyx-scales are somewhat glaucous, and excessively hairy. The stem-leaves in our Scottish specimens are oblong and narrow; those of the foreign ones ovate, at least in part, which raises more doubt in our minds than any other circumstance. So much still remains to be done in this genus, that we pretend not to perfect certainty.

The plant before us has a woody perennial root, and flowers in August. The seed-down is rough, and rather short.



Pub. 1 ia 12 published by Jas. Howe, Ely London.

# HIERACIUM sabaudum.

## *Shrubby Hawkweed.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Recept.* naked. *Cal.* imbricated, ovate. *Seed-down* simple, sessile.

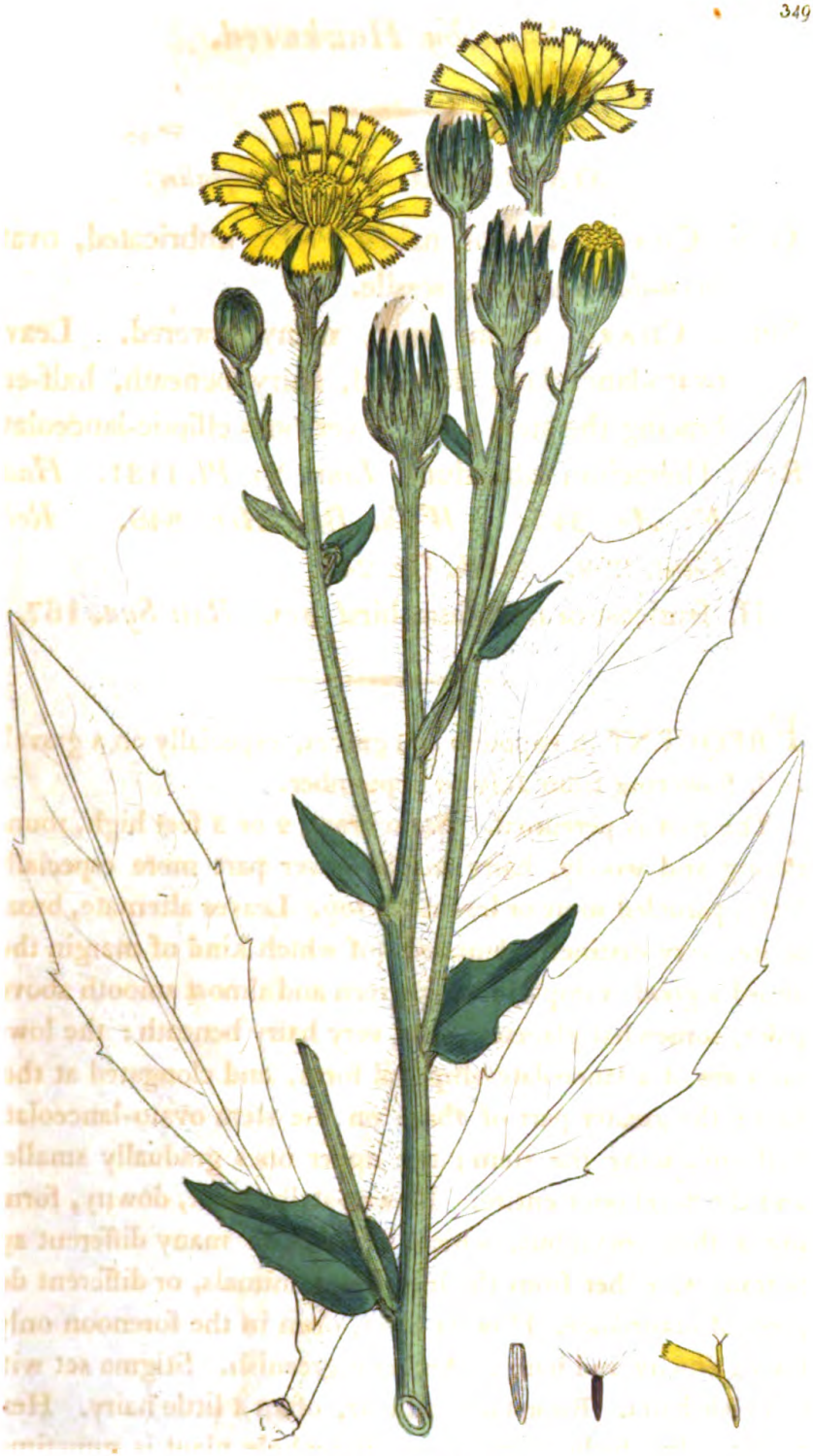
SPEC. CHAR. Stem erect, many-flowered. Leaves ovato-lanceolate, dentated, hairy beneath, half-embracing the stem; the lower ones elliptic-lanceolate.

SYN. Hieracium sabaudum. *Linn. Sp. Pl.* 1131. *Huds. Fl. An.* 345. *With. Bot. Arr.* 849. *Relh. Cant.* 298. *Sibth. Ox.* 241.

H. fruticosum latifolium hirsutum. *Raii Syn.* 167.

FREQUENT in coppices and groves, especially on a gravelly soil, flowering from July to September.

The root is perennial. Stem erect, 2 or 3 feet high, round, strong and woody, hairy in the lower part more especially, leafy, panicled more or less at the top. Leaves alternate, broad, acute, very distinctly dentated (of which kind of margin they afford a good example); dark-green and almost smooth above; paler, somewhat glaucous, and very hairy beneath: the lower ones are of a lanceolate-elliptical form, and elongated at their base; the greater part of those on the stem ovato-lanceolate, half-embracing the stem; the upper ones gradually smaller, and the floral ones entire. Flower-stalks erect, downy, forming a thin corymbus, which is liable to many different appearances, either from the injuries of animals, or different degrees of luxuriance. Flowers erect, open in the forenoon only. Calyx downy and hairy. Antheræ greenish. Stigma set with blackish hairs. Receptacle cellular, often a little hairy. Herb milky. In shady damp places the whole plant is sometimes smooth, but always rigid and firm in texture.



J. & J. Rivers del. & sc.

# HIERACIUM denticulatum.

## *Small-toothed Hawkweed.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Recept.* nearly naked, dotted. *Cal.* imbricated, ovate. *Down* simple, sessile.

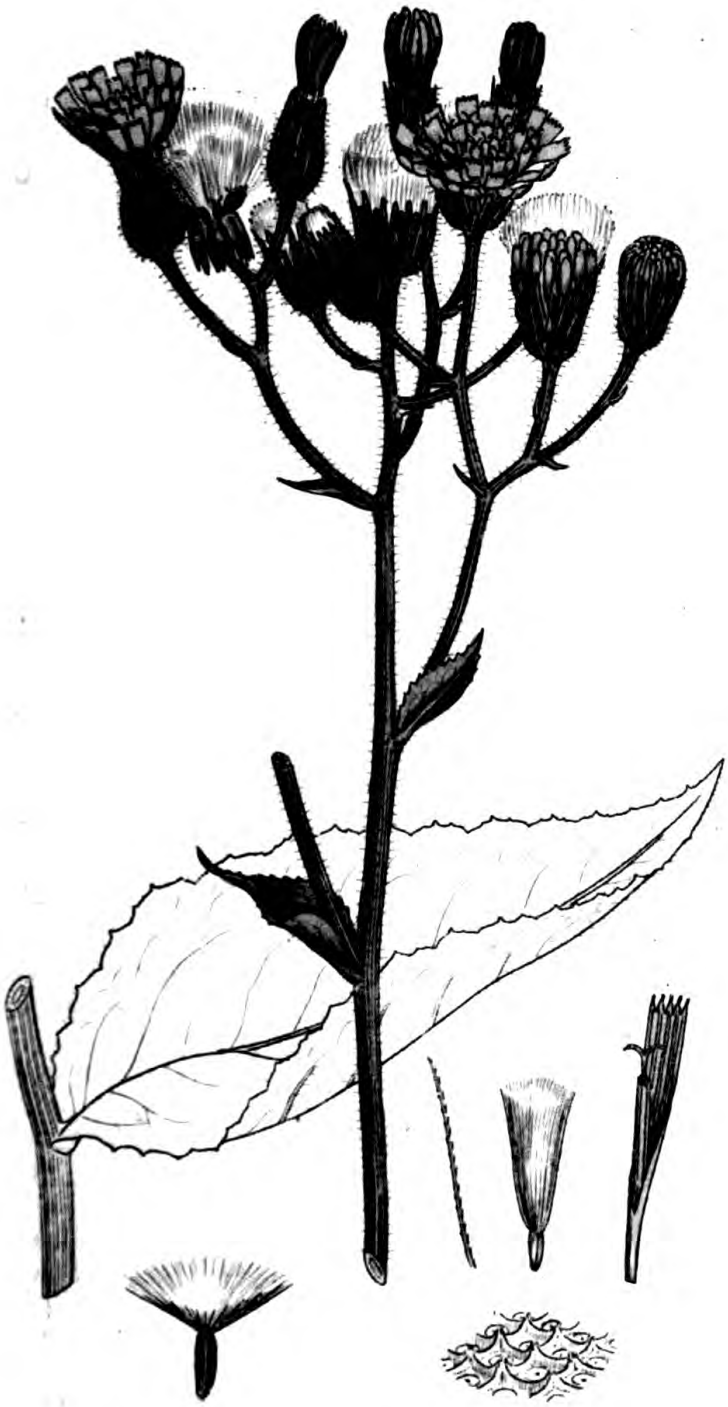
SPEC. CHAR. Stem erect, many-flowered, solid. Leaves sessile, elliptic-lanceolate, finely toothed, smoothish, glaucous beneath. Flowerstalks glandular and cottony.

SYN. Hieracium prenanthoides. *Sm. Fl. Brit.* 835, excluding all the synonyms, except
H. Kalmii. *Sym. Syn.* 173. *Hull.* 176.

DAUPHINY specimens in Mr. Davall's herbarium show this not to be *H. prenanthoides* of Villars, whilst Scottish ones from Mr. G. Don prove it *H. Kalmii* of British writers, of which he claims the first discovery at Loch Rannach, Perthshire, in 1794. Mr. Dickson communicated it, many years ago, from Harehead wood, near Selkirk, to Mr. E. Forster, from whose garden our specimen was taken. It is widely different from *H. Kalmii* of Linnæus, and therefore we have given it a new name, expressive of one of the essential marks. It is perennial, and flowers in July.

Stem a yard high, upright, round, striated, roughish, spongy and solid (scarcely fistulous) within, beset with several alternate leaves, and ending in a corymbose panicle of many full-yellow moderate-sized flowers, on very hispid, glandular, cottony stalks. Leaves sessile, not properly embracing the stem; the lower ones tapering at their base, and elliptic-lanceolate; the upper exactly ovate; all acute, thin, smoothish, finely and minutely toothed, the teeth obtuse and glandular; sometimes fringed, but not strongly; glaucous beneath. Calyx brownish, muricated, cottony and rather viscid. Bracteas small, entire, acute. Seeds angular, very smooth. Down rough.

Haller's n°. 43 proves the true *prenanthoides*, but Mr. Davall thought another species was confounded with it under that number. Whether either of these be really British, we must leave for future inquiry, the difficulties relating to this genus not being yet all removed.



Mac Farlane published by J. Loperly London

# HIERACIUM prenanthoides.

## *Rough-bordered Hawkweed.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Recept.* nearly naked, dotted. *Cal.* imbricated, ovate. *Down* simple, sessile.

SPEC. CHAR. Stem erect, many-flowered, solid. Leaves somewhat toothed, rough near the edge, glaucous beneath, clasping the stem; the lower ones elliptic-oblong; upper heart shaped. Flowerstalks glandular and cottony.

SYN. Hieracium prenanthoides. *Villars. Dauph. v.* 3. 108. *With.* 685. *Sym.* 173. *Hull.* 176. *ed.* 2. 231.

H. spicatum. *Allion. Ped. v.* 1. 218. *t.* 27. *f.* 1 *and* 3. *Dicks. Tr. of Linn. Soc. v.* 2. 288. *Crypt. fasc.* 2. 29.

THIS species was brought from Scotland many years ago by Mr. Dickson, and given to Mr. E. Forster, from whose garden we had it last autumn. It is perennial, flowering in the latter part of the summer. The synonyms of Villars and Allioni are determined by authentic specimens, but Haller's n. 43 α, we are now certain, is not this plant, though his β seems to come very near it. It is safest to exclude his synonym from the *Fl. Brit.* altogether, as well as Boccone's *t.* 53.

The plant before us differs from *H. denticulatum, t.* 2122, with which it was confounded in *Fl. Brit.*, in having the leaves embrace the stem by their rounded dilated base, and in their singular roughness near the edge, which there forms a bristly border. These marks are enough to distinguish them. The Swiss *Hieracia* are so obscure, and the authors who treat of them so misquote each other, that it is very difficult to come to any certainty abou them; but we believe the *cydoniæfolium* of Villars is Haller's n. 43 α, and not his n. 45, which is *paludosum*. We have no authentic specimen of Haller's n. 43 β, which deficiency leaves us in doubt concerning it.— By several dried ones, sent from Mr. G. Don, we believe the Hawkweeds of Scotland are not yet all determined, but the greatest attention to living plants can alone enable us to reduce them to order. When that is accomplished, we have ample materials for settling their synonyms.

Jan.y 1, 1811 published by Jas. Sowerby, London.

36.



# HIERACIUM umbellatum.

## *Narrow-leaved Hawkweed.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Recept.* nearly naked, dotted. *Cal.* imbricated, ovate. *Down* simple, sessile.

SPEC. CHAR. Stem erect, somewhat umbellate. Leaves linear, scattered, slightly toothed.

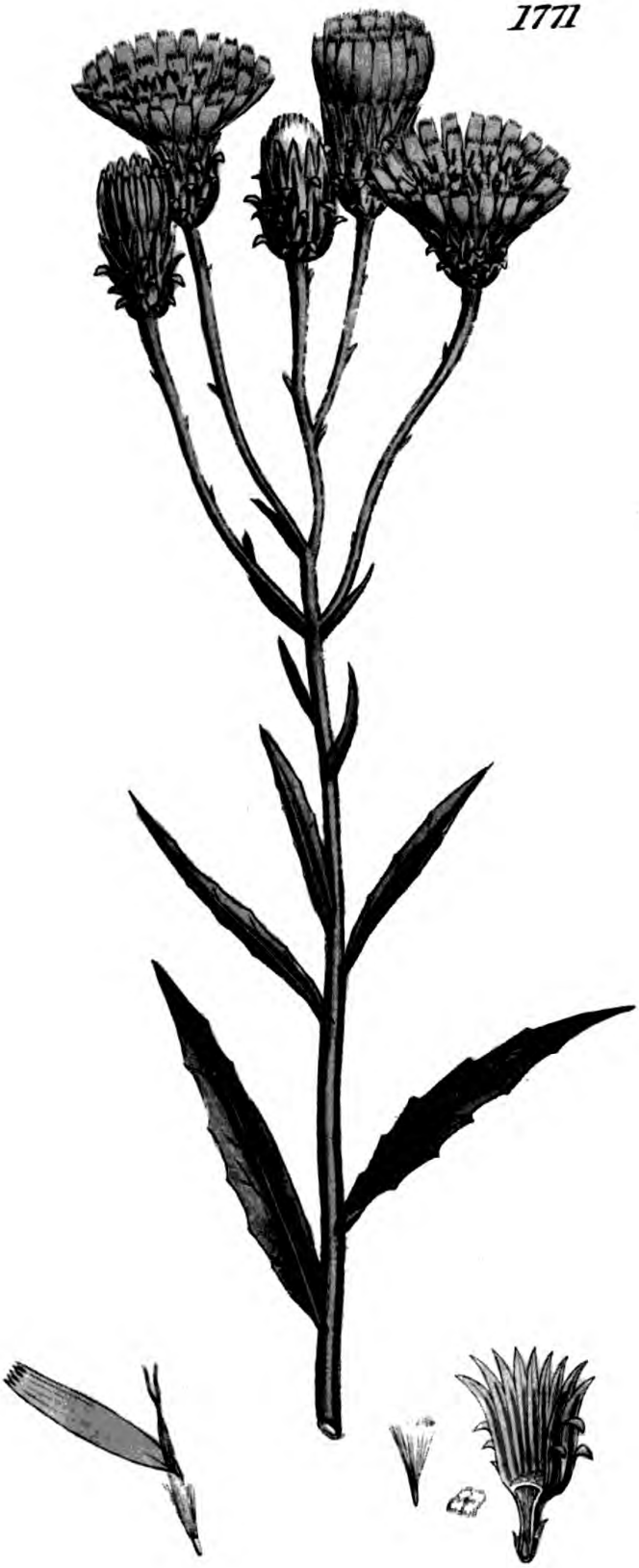
SYN. Hieracium umbellatum. *Linn. Sp. Pl.* 1131. *Sm. Fl. Brit.* 835. *Huds.* 346. *With.* 688. *Hull.* 177. *Relh.* 309. *Sibth.* 242. *Abbot.* 171. *Curt. Lond. fasc.* 6. *t.* 58.

H. fruticosum angustifolium majus. *Raii Syn.* 168, *n.* 3; also *n.* 4 and 5.

GATHERED on the beautiful woody hills at the back of Thorpe, near Norwich, where it flowers in August. It loves a dry gravelly or stony soil, and a shady situation among bushes and brakes.

Root perennial, of several simple fibres. Stem erect, 2 or 3 feet high, unbranched, round, leafy, except near the bottom, smooth or slightly downy upwards, terminating in several wavy, scaly, simple, swelling flower-stalks, forming rather a corymbus than an umbel, except from some accidental injury. Leaves numerous, scattered, sessile, linear, or linear-lanceolate, slightly or distantly toothed, dark green, often shining, sometimes downy. Calyx dark green, almost always smooth; the tips of its scales recurved. Corolla of a bright and full yellow, rather large, closed in an afternoon. Seed angular, brown, finely dotted, crowned with rough brownish down. Receptacle in some degree scaly.

This species varies in the breadth, smoothness and teeth of the leaves, which are sometimes almost grassy, especially in Wales and other mountainous countries. No other British Hawkweed can be confounded with it.



Aug 1st 07. Published by Jas Sowerby London.

37.



# CREPIS fœtida.

## *Stinking Hawkweed or Crepis.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Receptacle* hispid. *Calyx* surrounded with deciduous scales. *Down* simple, generally on a footstalk.

SPEC. CHAR. Leaves runcinato-pinnatifid, hairy; their footstalks toothed. Calyx downy.

SYN. Crepis fœtida. *Linn. Sp. Pl.* 1133. *Huds. Fl. An.* 339. *With. Bot. Arr.* 852. *ed.* 3. 689. *Relh. Cant.* 296.

Hieracium Castorei odore Monspeliensium. *Raii Syn.* 165.

GATHERED at Barton in Norfolk by the Rev. Mr. Hemsted. It always grows on a chalky soil, flowering in June or July, but is not of frequent occurrence.

Root biennial, small. Stems several, branched, spreading (the central one only being erect), round, hairy, leafy. Radical leaves spreading in the form of a star, deeply pinnatifid in a runcinate manner, and toothed, running down into a bordered toothed footstalk: those on the stem sessile; and the uppermost generally undivided. Flowers terminal, solitary, drooping when in the bud, then erect, rather small, yellow. Calyx clothed more or less with soft hairy down, not glandular. Receptacle (as Leers justly remarks) furnished with short hair, fringing the margins of its little cavities, as Gærtner also, *tab.* 158, has observed it in C. *alpina* and *biennis*, so that we have ventured to alter the generic character from *Receptacle naked* to *hispid*.—The seed-down is simple, scarcely perceptibly feathered under the highest magnifier, and stands on a footstalk.

Every part of the herb smells like bitter almonds, but much stronger, approaching to opium, or the juice of wild lettuce.

July 1st 1797 Published by J. Sowerby London

# CREPIS pulchra.

## *Small-flowered Hawks-beard.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Recept.* roughish. *Cal.* surrounded with deciduous scales, and at length swelling into protuberances. *Down* simple, generally on a footstalk.

SPEC. CHAR. Leaves downy, toothed; those on the stem somewhat arrow-shaped. Stem panicled, corymbose. Calyx pyramidal, smooth.

SYN. Crepis pulchra. *Linn. Sp. Pl.* 1134. *Sm. Tr. of Linn. Soc. v.* 10. 344. *Ait. Hort. Kew. v.* 3. 128.
Hieracium pulchrum. *Bauh. Hist. v.* 2. 1025.
H. montanum alterum, leptomacrocaulon. *Column. Ecphr.* 248. *t.* 249.
Lapsana chondrilloides. *Linn. Sp. Pl. ed.* 1. 812.

WE very much doubt whether this plant has been seen by any English botanist of our times, though admitted into the first edition of the *Hortus Kewensis*, as having been cultivated by Rand in 1739 at Chelsea. Mr. G. Don found it wild in 1796, amongst crumbling rocks on the hill of Turin, near Forfar, and from seed communicated by him our specimen was raised. It is annual, flowering from June to September, and varying much in luxuriance according to the soil.

The root is small, taper, branching. Stem erect, downy, slender, round, hollow, panicled in a corymbose form at the top. Radical leaves obovate, thin, downy, toothed most in their lower part; the rest few, small, arrow-shaped, clasping the stem with their toothed base. Flowers small, yellow, closing about noon; their anthers and stigmas brownish. The scales at the base of the calyx are not deciduous. The down of the seed is nearly sessile, very slender, minutely toothed.

Engraved published by Jos Trundy London

# CREPIS tectorum.

*Smooth Hawk's-beard.*

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*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Recept.* roughish. *Cal.* surrounded with deciduous scales, and at length swelling into protuberances. *Down* simple, generally on a footstalk.

SPEC. CHAR. Radical leaves runcinate: the rest embracing the stem, lanceolate and toothed. Stem smooth.

SYN. Crepis tectorum. *Linn. Sp. Pl.* 1135. *Sm. Fl. Brit.* 837. *With.* 689. *Hull.* 174. *Relh.* 310. *Sibth.* 240. *Abbot.* 172. *Curt. Lond. fasc.* 5. *t.* 55.

Hedypnois tectorum. *Hudf.* 341.

Hieracium luteum glabrum, sive minùs hirsutum. *Raii Syn.* 165.

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NOTHING can be more common than this *Crepis* in dry waste places, on walls, rubbish, and banks, flowering from June to the end of September.

Root annual, tapering. Herb very various in size, strength and luxuriance. Stem upright, branched, furrowed, smooth, or very rarely a little hairy, generally stained with purple just above each ramification. Leaves smooth, bright green; the radical ones runcinate; the rest clasping the stem with an arrow-shaped base, and more or less deeply toothed above their insertion. Panicle upright, forked, corymbose, roughish, furnished with small leaves. Flowers bright yellow, much smaller than in any other common Hawkweed. Calyx rough. Seeds furrowed. Down rough, sessile. Receptacle somewhat cellular and roughish.

Although variable in its herbage, the smooth leaves, small flowers and purplish stem make this plant easily known. It most certainly belongs to the very natural genus of *Crepis*, however incorrectly the characters of that genus may be defined by some authors.

Jan.ᵗ 1 1802. Published by Jn. Sowerby London

# CREPIS biennis.

## *Rough Succory Hawkweed.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Recept.* naked. *Calyx* ſurrounded with deciduous ſcales. *Down* ſimple, generally on a footſtalk.

SPEC. CHAR. Leaves runcinato-pinnatifid, rough, furniſhed at the baſe with teeth pointing upwards. Calyx briſtly.

SYN. Crepis biennis. *Linn. Sp. Pl.* 1136. *Relh. Cant.* 296. *With. Bot. Arr.* 855.

Hedypnois biennis. *Hudſ. Fl. An.* 342.

Hieracium maximum Chondrillæ folio aſperum. *Raii Syn.* 166.

FOUND in a chalky ſoil, and communicated from near Bury by William Mathew, Eſq. The root is biennial, ſpindle-ſhaped, flowering about June or July of the ſecond year. Stem erect, three or four feet high or more, angular, rough, leafy, branched in the upper part, often purpliſh below. Radical leaves ſeveral, on long purpliſh footſtalks, obovate, lyrato-dentate; thoſe on the lower part of the ſtem runcinate, with many ſmall ſharp ſcattered teeth; the uppermoſt leaves more deeply pinnatifid, ſeſſile, dilated and half embracing the ſtem at their baſe, with ſeveral ſharp aſcending teeth. All the leaves are rough, eſpecially their mid-ribs beneath, with projecting briſtles. Many alternate flower-ſtalks terminate the ſtem, the lowermoſt branched, making a ſort of corymbus, each with a linear leaf at its baſe. The external calyx is lax, ſomewhat membranous in the margin, ſlightly briſtly on the back, and half as long as the inner one, which is erect, more briſtly on the back, and woolly at the baſe. The corolla is externally reddiſh. Florets 5-toothed, cloſing in the afternoon. Styles browniſh. Seeds ſtriated, and ſo much lengthened out into a beak that the down may almoſt be called ſtipitate. This down appears rough when highly magnified.—Sometimes, as Dr. Stokes well remarks, the calyx is ſmooth or nearly ſo, which is partly the caſe in Linnæus's own Scanian ſpecimens.

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# HYOSERIS minima.

*Swine's Succory.*

*SYNGENESIA Polygamia Æqualis.*

GEN. CHAR. *Receptacle* naked. *Calyx* nearly equal. *Down* ſimple, or imperceptible.

SPEC. CHAR. Stem divided, deſtitute of leaves. Flower-ſtalks ſwelled upwards.

SYN. Hyoſeris minima. *Linn. Sp. Pl.* 1138. *Hudſ. Fl. An.* 346. *With. Bot. Arr.* 857. *Relh. Cant.* 300. Hieracium minimum Cluſii, Hyoſeris Tabernæmontani & Gerardi. *Raii Syn.* 173.

IN barren ſandy gravelly fields, but not common. Sent June 30th laſt from near Apſley and Ampthill, Bedfordſhire, by the Rev. Mr. Abbott; alſo from Walthamſtow, by Mr. E. Forſter, junior. It was long ago found by the ſide of Armingball wood near Norwich.

Root annual, but little branched. Leaves ſpreading on the ground, entire or irregularly toothed, rough, eſpecially on their edges. Stems three, four, or more, round, ſmooth, taper and purpliſh at the bottom, ſwelling gradually upwards, alternately branched, ſtriated, immediately under the flowers hollow and inflated, with here and there a few ſmall ſcattered, pointed, erect bracteæ. The flowers are ſolitary at the end of each ſubdiviſion of the ſtem, ſmall, erect, bright yellow. Corollæ very obtuſe and toothed. Seeds crowned with an elevated rim, more rarely with ſhort ſimple down.

Like all field plants it varies extremely as to luxuriance, in its moſt abject ſtate producing one ſimple ſolitary ſtalk with a ſingle flower, while in a more favourable ſoil it ſometimes bears ſix or more branched ſtems, many flowers, and leaves proportionably numerous and large. Hypochæris glabra is remarkable for the ſame phænomenon.

V

# HYPOCHÆRIS radicata.

*Long-rooted Cat's-ear.*

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*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Recept.* chaffy. *Cal.* ſomewhat imbricated. *Down* feathery.

SPEC. CHAR. Leaves runcinate, bluntiſh, rough. Stems branched, naked, ſmooth. Flower-ſtalks ſcaly.

SYN. Hypochæris radicata. *Linn. Sp. Pl.* 1140. *Sm. Fl. Brit.* 842. *Hudſ.* 347. *With.* 692. *Hull.* 172. *Relh.* 301. *Sibth.* 242. *Abbot.* 172. *Curt. Lond. faſc.* 3. *t.* 52.

Hieracium longiùs radicatum. *Raii Syn.* 165.

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TWO ſpecies of *Hypochæris* have already appeared in this work, *t.* 225 and 575; and that now before us, which is by far the moſt common, abounding in every paſture, completes the hiſtory of the genus as far as regards the Britiſh Flora.

This flowers from June to Auguſt, and is furniſhed with a perennial milky very deep root, whence the ſpecific name. Leaves all radical, lying cloſe to the earth, by which they entirely choak all other plants within their reach; their form is oblong, bluntiſh, runcinate inclining to lyrate, toothed, and they are clothed with rigid hairs. The ſtems, or rather common flower-ſtalks, are upright, very much branched, round, ſmooth, ſomewhat glaucous; the partial ones ſcaly, and ſwelling upwards. Flowers large, bright yellow. Calyx-ſcales roughiſh at the keel. Receptacle beſet with long ſharp chaffy ſcales among the florets, the character of the genus, by which this is at once known from other common plants, vulgarly confounded under the name of Hawkweeds. Seeds furrowed, with minute tubercles on the intermediate ridges. Down on a ſtalk, feathery and rough.

# HYPOCHÆRIS maculata.

*Spotted Hawkweed, or Cat's-ear.*

---

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Recept.* chaffy. *Cal.* ſomewhat imbricated. *Seed-down* feathery.

SPEC. CHAR. Stem naked, ſolitary. Leaves ovato-oblong, undivided, dentated.

SYN. Hypochæris maculata. *Linn. Sp. Pl.* 1140. *Hudſ. Fl. An.* 346. *With. Bot. Arr.* 858. *Relh. Cant.* 300.

Hieracium primum latifolium. *Raii Syn.* 167. *Ger. em.* 301.

---

ONE of our rare chalk-country plants, diſcovered hitherto only about Newmarket heath, Burnack heath Northamptonſhire, and in the ſequeſtered country about Malham Cove in Yorkſhire. Mr. Hemſted gathered our preſent ſpecimen near the Devil's ditch, where Ray mentions its growing. It is perennial, flowering in July.

The root is thick and long, abounding with milky juice, as does the reſt of the plant. Leaves all radical, except the plant becomes luxuriant from cultivation, oblong, ſomewhat pointed, very irregularly toothed, rough, ſpotted with red or brown. Stalk commonly ſimple and ſingle-flowered, roughiſh, with one or two diſtant lanceolate bracteæ. Outer ſcales of the calyx rough with black prominent briſtles, intermixed with ſcattered white ones. The flower, not much unlike that of Dandelion, cloſes in the afternoon, and "turneth into a downie blowball," as Gerarde ſays, "that is carried away with the winde." The ſeeds, according to Linnæus, are wrinkled. We have not ſeen them in a ripe ſtate.

# HYPOCHÆRIS glabra.

*Smooth Cat's-ear.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Recept.* chaffy. *Cal.* ſomewhat imbricated. *Down* feathery.

SPEC. CHAR. Nearly ſmooth. Calyx oblong, imbricated. Stem branched, a little leafy. Leaves dentate or ſinuated.

SYN. Hypochæris glabra. *Linn. Sp. Pl.* 1140. *Hudſ.* 347. *With.* 692. *Abbot.* 173. *Curt. Lond. faſc.* 3. *t.* 53.

Hieracium parvum in arenoſis naſcens. *Raii Syn.* 166.

A NATIVE of dry gravelly or ſandy heaths, communicated from Bedfordſhire by the Rev. Mr. Abbot. It was firſt obſerved in Norfolk by the Rev. Mr. Bryant, upon Cawſton heath, and has ſince that time been pointed out to us by Mr. Crowe in turnep fields about Norwich, but in ſo luxuriant a ſtate as ſcarcely to be known for the ſame ſpecies. Mr. Curtis's figure more approaches to this ſtate. Ours expreſſes its growth when out of the reach of all manure. It flowers from June to the end of Auguſt.

Root annual, tapering. Stems ſeveral, round, ſmooth, ſimple or branched, ſpreading, and if branched generally bearing a leaf or two at each diviſion. Leaves oblong, or tongue-ſhaped, blunt, toothed, and if luxuriant ſinuated, nearly ſmooth, ſhining, ſometimes ciliated and ſlightly hairy. Flowers terminal, ſolitary, erect, paliſh yellow, ſmall, open only in a morning for 3 or 4 hours in bright weather. Calyx conical, ſlender, glaucous, ſmooth, its ſcales tipped with purple. Florets with 5 teeth. Chaff of the receptacle long, lanceolate, deciduous. Seed-down feathery, at firſt erect, then ſpreading; in the central florets the top of the ſeed is lengthened out into a ſtalk that elevates the down, which in thoſe of the circumference is ſeſſile.

This herb is milky and bitter like moſt of its natural family.

# LAPSANA communis.

## *Nipple-wort.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Receptacle* naked. *Cal.* ſcaly at the baſe; its inner leaves equal, channelled. *Seeds* without wing or down.

SPEC. CHAR. Calyx when in fruit angular. Stem panicled. Flower-ſtalks thread-ſhaped.

SYN. Lapſana communis. *Linn. Sp. Pl.* 1141. *Sm. Fl. Brit.* 842. *Hudſ.* 347. *With.* 693. *Hull.* 178. *Relh.* 301. *Sibth.* 242. *Abbot.* 173. *Curt. Lond. faſc.* 1. *t.* 59. *Dickſ. H. Sicc. faſc.* 11, 12.

Lampſana. *Raii Syn.* 173.

FREQUENT in waſte as well as cultivated ground, and ſometimes a troubleſome weed, as the ſeeds lie long in the earth, ſpringing up from time to time occaſionally, like thoſe of poppies. It flowers in June or July.

Root annual, fibrous. Stem upright, near three feet high, roundiſh, furrowed, panicled, leafy, ſcarcely rough or hairy. Leaves ſoft and flaccid, a little hairy, ſlightly toothed; the radical ones lyrate; the reſt ovate, alternate, pointed. Flower-ſtalks alternate, erect, round, ſlender, ſmooth, with a little pointed bractea at the baſe of each. Flowers ſmaller than in moſt of our Syngeneſious plants, bright-yellow. Calyx ſmooth, hard, rigid, permanent, and cloſed about the ſeeds, which are few, angular, entirely deſtitute of down or feather of any kind.

The Engliſh name originates in an old report, of Pruſſian origin and perhaps little to be truſted, that the herb cures ſore breaſts. See Gerarde's Herbal.

46.



# CICHORIUM Intybus.

## *Wild Succory.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Receptacle* ſlightly chaffy. *Cal.* ſurrounded with ſcales. *Seed* crowned with teeth.

SPEC. CHAR. Flowers ſeſſile, in pairs. Leaves runcinate.

SYN. Cichorium Intybus. *Linn. Sp. Pl.* 1142. *Hudſ.* 348. *With.* 693. *Relh.* 302. *Sibth.* 243. *Curt. Lond. faſc.* 4. *t.* 56. *Mart. Fl. Ruſt. t.* 144.

C. ſylveſtre. *Raii Syn.* 172.

VERY common in the borders of fields, by road ſides, and in all ill cultivated or waſte land, preferring however ſomething of a calcareous ſoil, and flowering in July or Auguſt.

Root perennial, fleſhy, tap-ſhaped, often branched, running deep into the ground, milky. Stem 2 or 3 feet high, erect, hard and tough, wand-like, alternately branched, angular above, briſtly, producing many flowers, for the moſt part in pairs, and accompanied by ſmall ſtem-claſping leaves. The radical leaves are numerous, ſpreading, long, runcinate, roughiſh. Flowers ſeſſile, large and handſome, of a brilliant ſky blue, rarely white, compoſed of numerous, ligulate, 5-toothed florets. Common calyx of erect, parallel, linear leaves, with a rough keel, reflexed as the ſeeds ripen, ſurrounded at the baſe with a ſeries of ſhorter leaves or ſcales. Receptacle punctate, and ſcattered with a few chaffy hairs. Seeds angular, crowned with ſeveral ſhort chaffy teeth.

When Mr. Curtis deſcribed the Wild Succory he conſidered it as a beautiful but noxious weed, and ſo it was generally conſidered. Dr. Withering mentions it as eatable in ſallads, and that the dried roots will make bread; adding, after the *Amœnitates Academicæ*, that ſheep, goats, and ſwine eat it, but cows and horſes refuſe it. This laſt is a miſtake. The beſt account of the agricultural uſes of the Succory are in Profeſſor Martyn's too much neglected *Flora Ruſtica*, where its culture and uſes are detailed. I have been an eye-witneſs to the experiments made in France upon this plant, its luxuriant growth when cultivated, and its value as an early fodder for horſes and cows.


Jan.ᵒ 1. 1799 Published by J.ᵒ Sowerby

# ARCTIUM Lappa.

## *Burdock, or Clot-Bur.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Cal.* globose; each of its scales terminating with an incurved hook.

SPEC. CHAR. Leaves heart-shaped, without prickles, on footstalks.

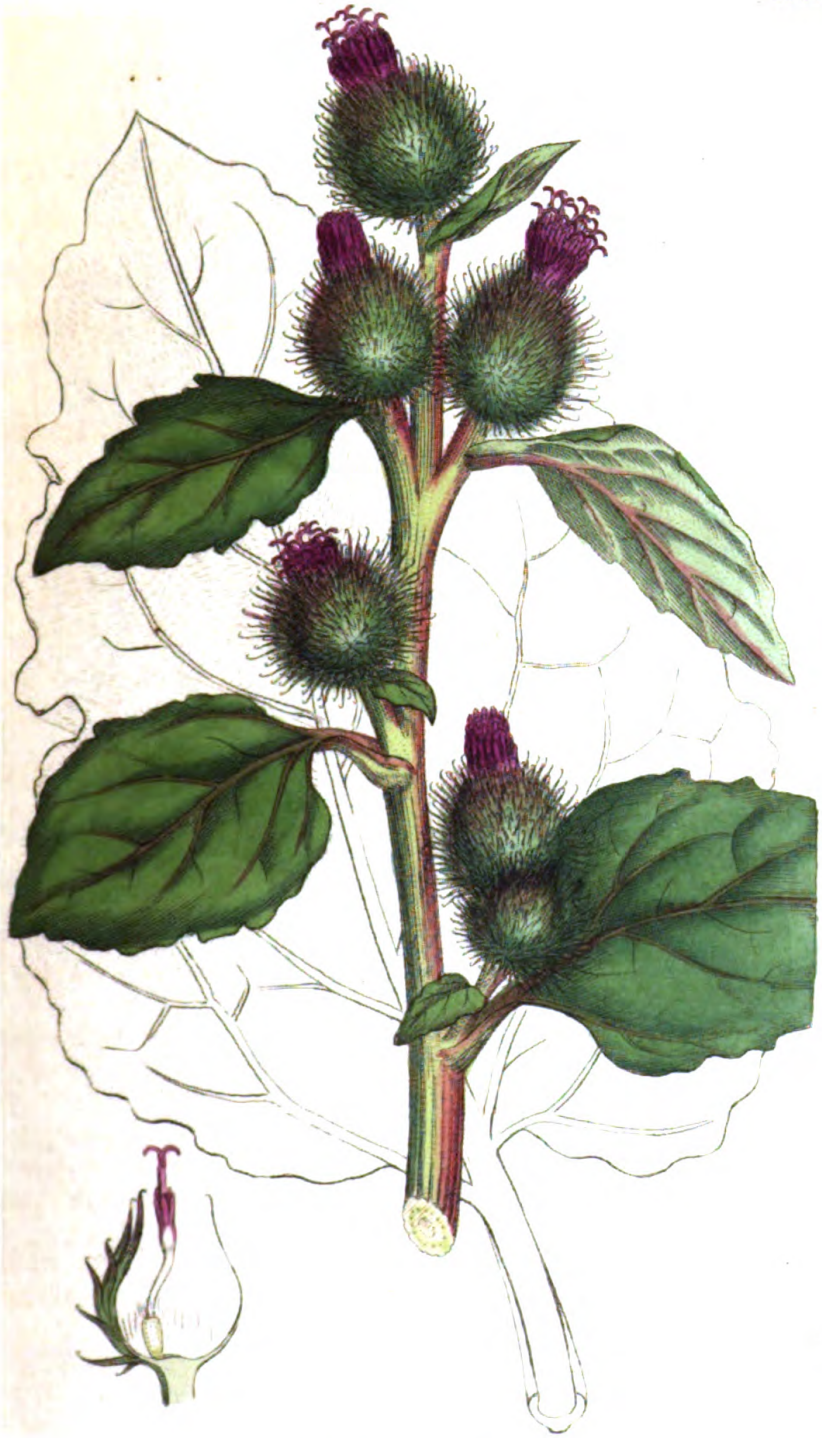
SYN. Arctium Lappa. *Linn. Sp. Pl.* 1143. *Sm. Fl. Brit.* 844. *Huds.* 348. *With.* 694. *Hull.* 178. *Relh.* 314. *Sibth.* 243. *Abbot.* 174. *Curt. Lond. fasc.* 4. *t.* 55. *Woodv. Med. Bot. t.* 15.

Lappa n. 1—6. *Dill. in Raii Syn.* 196, 197.

A PLANT almost every where to be found in waste or neglected ground, varying much according to the luxuriancy of the soil, (see Ray's *Synopsis*), and thriving particularly on dunghills. It flowers in July and August, and is biennial.

Root tapering. Stem erect, much branched and widely spreading, somewhat pyramidal, 3 feet or more in height, furrowed, downy, often purple. Leaves alternate, heart-shaped, acute, waved, ribbed, three-nerved at the base, white and downy beneath. They stand on concave footstalks, and are, when full sized, almost the largest leaves of any British plant. Flowers nearly sessile, clustered about the upper part of the stem and branches. Calyx globular, formed of numerous narrow scales, each tipped with a little incurved hook, by means of which the whole calyx, when laden with ripe seed, easily separating from its stalk, adheres to the hairy or woolly coats of animals, who can scarcely free themselves from this encumbrance without rubbing the calyx to pieces, and so scattering the seed about their habitations, where it is most likely to meet with a manured soil. The florets are purple, all tubular and regular. Receptacle bristly, as is also the crown of the seed.

The flowers vary in size, as well as in having more or less cottony down about their calyx.



Oct. 1 1808 Published by Jas. Sowerby London.

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48.



# ARCTIUM Bardana.

## *Woolly-headed Burdock.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Cal.* globose, each of its scales terminating in an incurved hook.

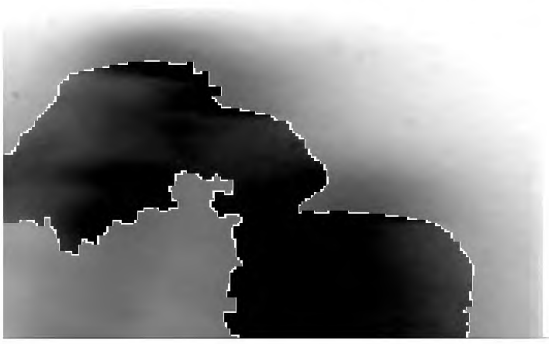
SPEC. CHAR. Leaves heartshaped, without prickles, nearly entire, on footstalks. Calyx interwoven with cottony down.

SYN. Arctium Bardana. *Willd. Sp. Pl. v.* 3. 1632. *Donn. Cant. ed.* 5. 193.

A. Lappa β. *Linn. Sp. Pl.* 1143. *Fl. Dan. t.* 642.

Lappa major montana, capitulis tomentosis. *Raii Syn.* 197.

PROFESSOR WILLDENOW, whose recent death we have to lament, has asserted in his *Sp. Pl.* that the Woolly-headed Burdock has often been raised by him from seed, and continued constant to its characters. We therefore think it entitled to a place in our work. The fine cobweb down entangled amongst its calyx-scales distinguishes it from our *t.* 1228. The leaves moreover are said to be more entire. It is a very common plant, as well as the other, by way-sides and among rubbish. Ray distinguishes several varieties of each of these species. His *Lappa major montana, capitulis minoribus, rotundioribus, et magis tomentosis*, a north-country variety of the present, we have just received from Mr. Edmund Goodenough, son of the Lord Bishop of Carlisle. The heads are smaller and more depressed; leaves quite entire.



Now first published by J. Sowerby, London.

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# SERRATULA tinctoria.

*Common Saw-wort.*

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*SYNGENESIA Polygamia æqualis.*

GEN. CHAR. *Calyx* nearly cylindrical, imbricated; ſcales not pungent.

SPEC. CHAR. Leaves ciliated, lyrato-pinnatifid; the terminal ſegment largeſt. Florets all alike.

SYN. Serratula tinctoria. *Linn. Sp. Pl.* 1144. *Hudſ. Fl. An.* 349. *With. Bot. Arr.* 865. *Relh. Cant.* 303.

Serratula. *Raii Syn.* 196.

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THE root is perennial, and ſomewhat woody. Stem two or three feet high, angular. Lower leaves generally, and ſometimes all the leaves, undivided. The whole plant is firm, rigid, and harſh to the touch, but not prickly. The flowers are ſaid to be ſometimes white; but this is an uncommon circumſtance. This plant is not one of the moſt frequent: its uſual places of growth are graſſy paſtures in the neighbourhood of woods and thickets; ſometimes in hedges. Linnæus ſays, it is much uſed in Sweden as a yellow dye for coarſe woollen cloths; whence he gave it the name of *tinctoria*. Materials for that colour are ſo abundant, and moſt of them ſo ſuperior to this, that we believe it is never made uſe of in England.

A. Bowerby del.

50.



# SERRATULA alpina.

## *Alpine Saw-Wort.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Cal.* nearly cylindrical, imbricated; ſcales not pungent.

SPEC. CHAR. Calyx clothed with ſoft hairs, ovate. Leaves undivided, cottony beneath.

SYN. Serratula alpina. *Linn. Sp. Pl.* 1145. *Hudſ.* 349. *With.* 696. *Hull.* 180. *Lightf.* 448. *t.* 19.

Cirſium humile montanum, Cynogloſſi folio, polyanthemum. *Raii Syn.* 193.

β. C. montanum polyanthemum, Salicis folio anguſto denticulato. *Raii Syn.* 193.

COMMUNICATED by J. W. Griffith, Eſq. from the higheſt rocks of Caernarvonſhire, where it flowers in July and Auguſt. It appears from Mr. Lightfoot's account not to be very rare in Scotland, though one of the moſt truly alpine of all our Britiſh productions.

The roots are ſlender, though tough and woody. Stem very various in height, generally about 10 or 12 inches, ſimple, ſtriated, cottony, leafy. Leaves no leſs various in form, generally ovate; ſometimes linear-lanceolate, ſometimes almoſt trowel-ſhaped; always more or leſs toothed, ſmooth above, cottony beneath; the radical ones on footſtalks, thoſe on the ſtem ſeſſile and alternate. A cluſter of flowers, each on its own ſimple flower-ſtalk, terminates the ſtem. The calyx is imbricated with ſoft, blunt, brown, hairy ſcales, and contains numerous purpliſh tubular florets with blue antheræ. The ſeed-down is feathery.

Lightfoot's figure, though miſerably drawn and engraved, ſhews the moſt uſual appearance of this *Serratula*; Plukenet's *t.* 154. *f.* 3, is more dwarf. Dillenius, in *Hort. Eltb. t.* 70, and the figure in *Fl. Dan. t.* 37, repreſent the narrow-leaved taller variety β, as it grows in moiſt or rich places, or amongſt other tall plants. Notwithſtanding Linnæus's doubt in *Sp. Pl.* we are perſuaded, from obſervations made upon the ſpot, that theſe are mere varieties occaſioned by local accidents.

June 1 1799 Published by Jas. Sowerby

# CARDUUS nutans.

## *Muſk Thiſtle.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Cal.* ſwelling, imbricated with ſpinous ſcales. *Recept.* hairy. *Down* deciduous.

SPEC. CHAR. Leaves interruptedly decurrent, ſpinous. Flowers drooping. Calyx-ſcales lanceolate, their upper part ſpreading.

SYN. Carduus nutans. *Linn. Sp. Pl.* 1150. *Sm. Fl. Brit.* 848. *Hudſ.* 350. *With.* 699. *Hull.* 179. *Relh.* 315. *Sibth.* 244. *Abbot.* 175. *Raii Syn.* 193.

THIS, the only Britiſh *Carduus* which remains to be publiſhed in the preſent work, is not uncommon in waſte ground, fallow fields and barren paſtures where the ſoil is gravelly, or, more eſpecially, calcareous. It is an annual plant, flowering in July and Auguſt. The flowers are not unornamental, and ſmell ſtrongly of muſk in warm weather. Their drooping poſture diſtinguiſhes them from our other thiſtles.

The ſtem riſes, from a ſpindle-ſhaped root, to the height of 2 or 3 feet, ſometimes not ſo much, and is ſtriated, ſlightly inveſted with cottony down, and clothed with alternate leaves, which form an interrupted ſpinous wing on each ſide the ſtem. The leaves alſo are very ſpinous, deeply ſinuated and waved, green on both ſides, a little hairy but not rough. Flowers on a woolly, round, naked, curved ſtalk, ſolitary, terminal, of a rich crimſon. Calyx ovate, its ſcales ending in broad ſpreading leafy points, ſlightly clothed with cotton. Seeds obovate, ſhining, marked with dotted ſtreaks. Down deciduous, ſimple, rough, but not feathery.

Jan.y 1. 1803. Published by Ja.s Sowerby London

# CARDUUS acanthoides
## *Welted Thiſtle.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Cal.* ſwelling, imbricated with ſpinous ſcales. *Recept.* hairy. *Down* deciduous.

SPEC. CHAR. Leaves decurrent, ſinuated, ſpinous. Calyx globoſe, not quite ſeſſile; its ſcales linear, recurved.

SYN. Carduus acanthoides. *Linn. Sp. Pl.* 1150. *Sm. Fl. Brit.* 848. *With.* 698. *Hull.* 179. *Sym.* 176. *Relh.* 304.
C. criſpus. *Hudſ.* 350. *Lightf.* 452.
C. polyacanthos. *Curt. Lond. faſc.* 6. *t.* 54. *Sibth.* 245. *Abbot.* 175.
C. caule criſpo. *Raii Syn.* 194.

THIS ſpecies of Thiſtle, though not common, is rather more frequently to be met with, about hedges and dry waſte places, than the *tenuiflorus*, *v.* 6. *t.* 412, with which ſome of its ſynonyms have been confounded. Hudſon and Lightfoot took it for the *criſpus* of Linnæus, which is not a Britiſh plant.

*C. acanthoides* flowers in June and July. Its root is annual, ſpindle-ſhaped. Whole plant more green and leſs hoary than *tenuiflorus*. Stem 3 feet or more in height, branched, furrowed, clothed on every ſide with ſcalloped wings formed by the decurrent leaves. Theſe wings, as well as the leaves themſelves, which are deeply ſinuated, have all their edges fringed with innumerable divaricating ſpines of various lengths. The flowering branches are elongated and a little ſpreading, terminating in irregular cluſters of purple erect flowers, generally on ſhort partial ſtalks. The calyx is globoſe, very different from that of *tenuiflorus*; its ſcales linear, a little recurved at the tip, eſpecially when old, terminating in ſlender ſpines, and but ſlightly woolly. Wing of the ſeed deciduous, briſtly, rough.


Jan.y 1, 1821. Published by J.n Sowerby

# CARDUUS tenuiflorus.

## *Slender-flowered or Welted Thistle.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Cal.* ovate, imbricated with spinous scales. *Receptacle* hairy.

SPEC. CHAR. Leaves decurrent, pinnatifid, spinous. Branches straight, winged. Flowers in terminal clusters, sessile, nearly cylindrical. Scales nearly erect, tipped with long spines.

SYN. Carduus tenuiflorus. *Curt. Lond. fasc.* 6. *t.* 55. *Sibth. Ox.* 244. *With. Bot. Arr. ed.* 3. 698.

C. acanthoides. *Huds. Fl. An.* 351. *Lightf. Scot.* 451. *With. Bot. Arr. ed.* 2. 871.

C. spinosissimus capitulis minoribus. *Raii Syn.* 194.

AFTER much controversy among our British botanists concerning this thistle, the herbarium of Linnæus has decided it to be none of those mentioned in his works, though his *pycnocephalus* and *australis* come so very near it, that for some time we have been inclined to consider all three as varieties of each other. The two last however have fewer scales in their calyx, the stalk less winged, and their flowers (whether sessile or pedunculated) are much fewer together, with less numerous florets also than in the *tenuiflorus*. It is necessary here to remark that the synonyms of *pycnocephalus* in *Sp. Pl.* are both false, Jacquin's *Hort. t.* 44. being the plant Linnæus intended and described; the remark in *Syst. Veg.* "*flosculis sæpius* 3 *s.* 4," is an absurd blunder of the editor, for the original MS. has "*fere* 10," which is true.

We adopt Mr. Curtis's name, which is more apt than any by which this plant has hitherto been called. We cannot pay the same compliment to his C. *polyacanthos*, which is the real *acanthoides* of Linnæus.

The slender-flowered thistle, though not a general plant, is frequent on banks and among rubbish near London, as about Marybone, &c. The root is annual. Stem erect, 3 feet high, branched, winged with broad, sinuated, strongly spinous portions of the decurrent leaves, which are in like manner sinuated and spinous, the radical ones being on short footstalks, somewhat lyrate, and all a little cottony. Flowers terminal, clustered, sessile, erect, pale rose-coloured. Calyx nearly cylindrical; scales with a membranous margin, and strong yellow terminal spine, not woolly, pale in their lower part, green at the tip. Florets from 10 to 15 or more. The calyx is permanent, according to Dr. Goodenough's observation, and not deciduous when the seeds ripen, as in C. *pycnocephalus*.

Lanceolate Thistle. Drawn by Sowerby Junior

54.



# CARDUUS marianus.

## *Milk Thiſtle.*

*SYNGENESIA Polygamia æqualis.*

GEN. CHAR. *Cal.* ſwelling, imbricated with ſpinous ſcales. *Recept.* hairy. *Down* deciduous.

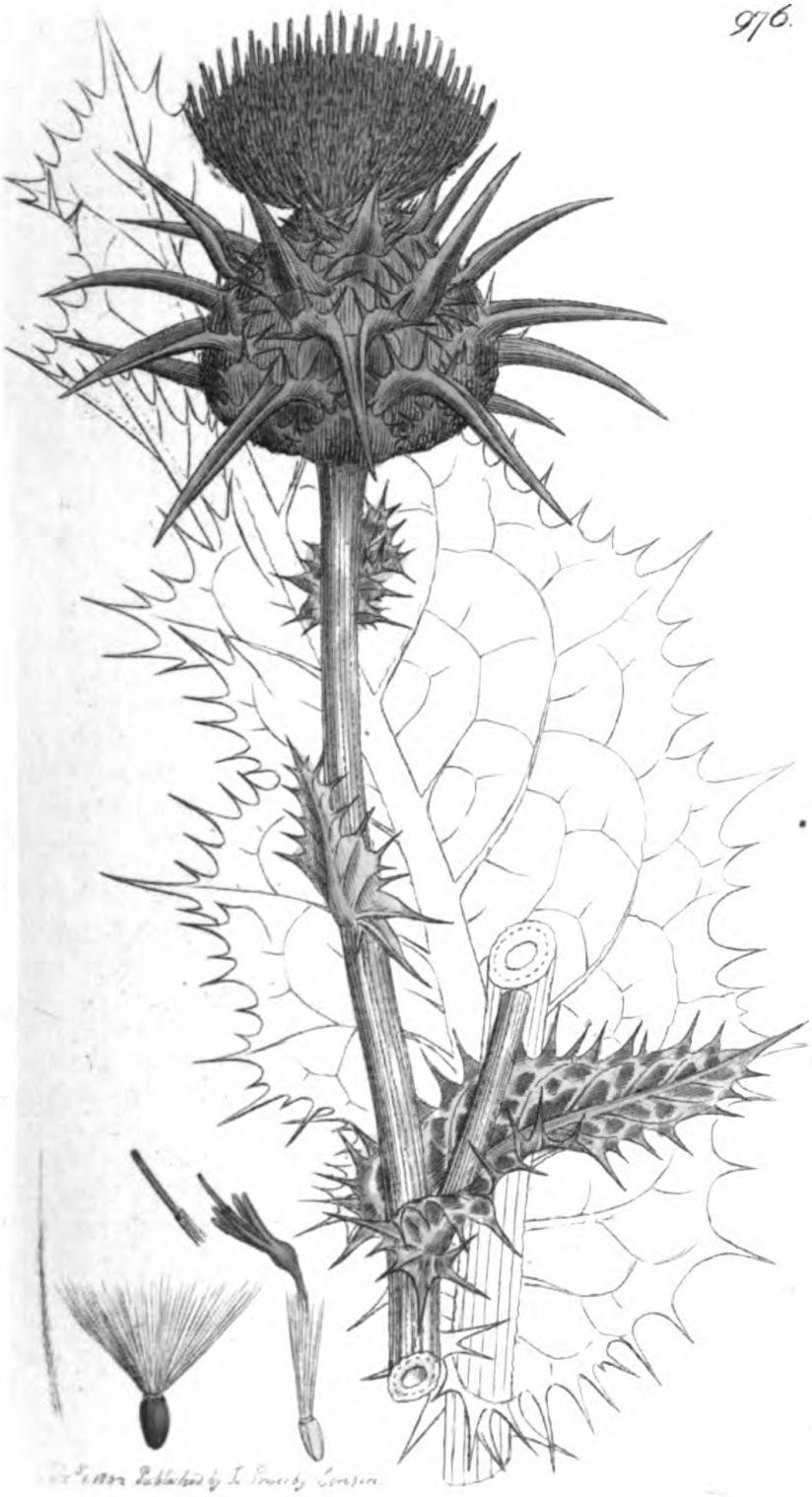
SPEC. CHAR. Leaves claſping the ſtem, waved, ſpinous; the radical ones pinnatifid. Calyx-ſcales leafy, bent backward, ſpinous at the edge.

SYN. Carduus marianus. *Linn. Sp. Pl.* 1153. *Sm. Fl. Brit.* 851. *Hudſ.* 353. *With.* 700. *Hull.* 179. *Relh.* 306. *Sibth.* 246. *Abbot.* 176. *Curt. Lond. faſc.* 3. *t.* 54.

C. Mariæ. *Raii Syn.* 195.

IF the idea of a *thiſtle* were not an impediment, this magnificent plant might be allowed with advantage to ornament ſuch gardens or borders of ſhrubberies as are on a ſufficiently large ſcale to admit it. In general, however, notwithſtanding its beauty, it can only be conſidered as a cumbrous weed. Wherever it grows it effectually excludes all other vegetables; but, being eaſily eradicated, is only permitted to eſtabliſh itſelf on banks by road-ſides, and ſimilar ſpots, where the flowers are ſeen about June or July.

The root is tap-ſhaped and annual. Stem erect, widely branching, ſmooth, 4 or 5 feet high. Radical leaves many, ſpreading, pinnatifid; the reſt claſping the ſtem with their heartſhaped baſe; all waved ſinuated and ſpinous at the edge, of a deep ſhining green, elegantly marbled all along the veins with white, which botaniſts and phyſicians of the dark ages report to have been cauſed by the milk of the Virgin Mary falling upon a plant of this ſpecies, and that all its progeny have retained the bleſſed ſtain. There is however a refractory heretical variety found near London whoſe leaves remain entirely green. The large purple flowers grow ſolitary at the end of each branch. Their calyx is ſmoth, conſiſting of broad leaf-like ſcales, each terminating in a long reflexed ſtrong thorn, fringed at its baſe with ſmaller ſpines. Seeds large and poliſhed.



Published by J. Sowerby London.

# CARDUUS lanceolatus.

## *Spear Thiſtle.*

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*SYNGENESIA Polygamia Æqualis.*

GEN. CHAR. *Cal.* ovate, imbricated with ſpinous ſcales. *Receptacle* hairy.

SPEC. CHAR. Leaves decurrent, pinnatifid, hiſpid; their ſegments divaricated. Calyx villoſe. Stem hairy.

SYN. Carduus lanceolatus. *Linn. Sp. Pl.* 1149. *Hudſ. Fl. An.* 350. *With. Bot. Arr.* 868. *Relh. Cant.* 304. C. lanceatus. *Raii Syn.* 195.

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AMONG the various tribes of thiſtles, many of them very intricate to a botaniſt, this is one of the moſt eaſily diſtinguiſhed, as well as the moſt common. All our road-ſides, banks and heaps of rubbiſh are occupied by it, of which it ſeems proudly to take poſſeſſion, to the excluſion of all vegetables beſides. Yet, as Dr. Withering obſerves, it is often a ſhelter and protection to other plants, and is one of the firſt to grow in places where many would not thrive. In other reſpects its uſe in the œconomy of nature is not very diſcernible, except that the ſeeds are eaten by ſmall birds, particularly the Gold-finch.

Root biennial. Stem erect, three or four feet high, firm, branched, ſtriated, ſlightly hairy, and covered like the back of the leaves and calyx with a cotton-like web. The leaves, white beneath, are green and very hiſpid on the upper ſide, decurrent at the baſe, and all their indentations are armed with ſtrong divaricating ſpines. It begins flowering in June, and laſts till winter.

56.



# CARDUUS paluſtris.

## *Marſh Thiſtle.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Cal.* ſwelling, imbricated with ſpinous ſcales. *Recept.* hairy. *Down* deciduous.

SPEC. CHAR. Leaves decurrent, pinnatifid, toothed, ſpinous, rough. Calyx ovate, cluſtered; its ſpines minute. Down feathery.

SYN. Carduus paluſtris. *Linn. Sp. Pl.* 1151. *Sm. Fl. Brit.* 850. *Hudſ.* 352. *With.* 697. *Hull.* 179. *Relh.* 305. *Sibth.* 245. *Abbot.* 176. *Curt. Lond. faſc.* 6. *t.* 56. *Raii Syn.* 194.

ONE of the moſt frequent Thiſtles in marſhy places, boggy woods, and on wet commons, flowering in July and Auguſt.

Root biennial, branched. Stem erect, very ſtraight, from 3 to 6 feet in height, angular, winged as in the preceding, but the wings are more deeply ſinuated or interrupted; the branches, likewiſe winged, are long, ſpreading, wand-like, often purpliſh. Leaves dark-green, rough, deeply pinnatifid, toothed, very ſpinous. Flowers terminal, cluſtered, deep purple, though a ſolitary plant with white flowers often occurs among a number of the uſual colour. Calyx ovate or nearly globoſe; its ſcales ſmoothiſh, obovate or bluntiſh, tipped with very ſhort harmleſs ſpines, and furniſhed with a dilated keel at their upper part. Seeds very ſmooth. Down feathery, deciduous.

This can ſcarcely be confounded with any other Britiſh *Carduus*. Its long, wand-like branches, and the wet ſituations it always prefers, make it ſufficiently known. The flowers are ſmaller than thoſe of *C. acanthoides*, and their abrupt cloſe ſcales, tipped with ſmall ſhort harmleſs prickles, and winged or keeled at the back, added to the feathery ſeed-down, clearly diſtinguiſh the *paluſtris*.

Jan 1. 1802 Published by J. Sowerby, London

# CARDUUS arvenſis.

## *Creeping Thiſtle.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Cal.* ſwelling, imbricated with ſpinous ſcales. *Recept.* hairy. *Down* deciduous.

SPEC. CHAR. Leaves ſeſſile, pinnatifid, ſpinous. Stem panicled. Calyx ovate; its ſpines minute. Down feathery.

SYN. Carduus arvenſis. *Sm. Fl. Brit.* 851. *Curt. Lond. faſc.* 6. *t.* 57. *Sibth.* 245.

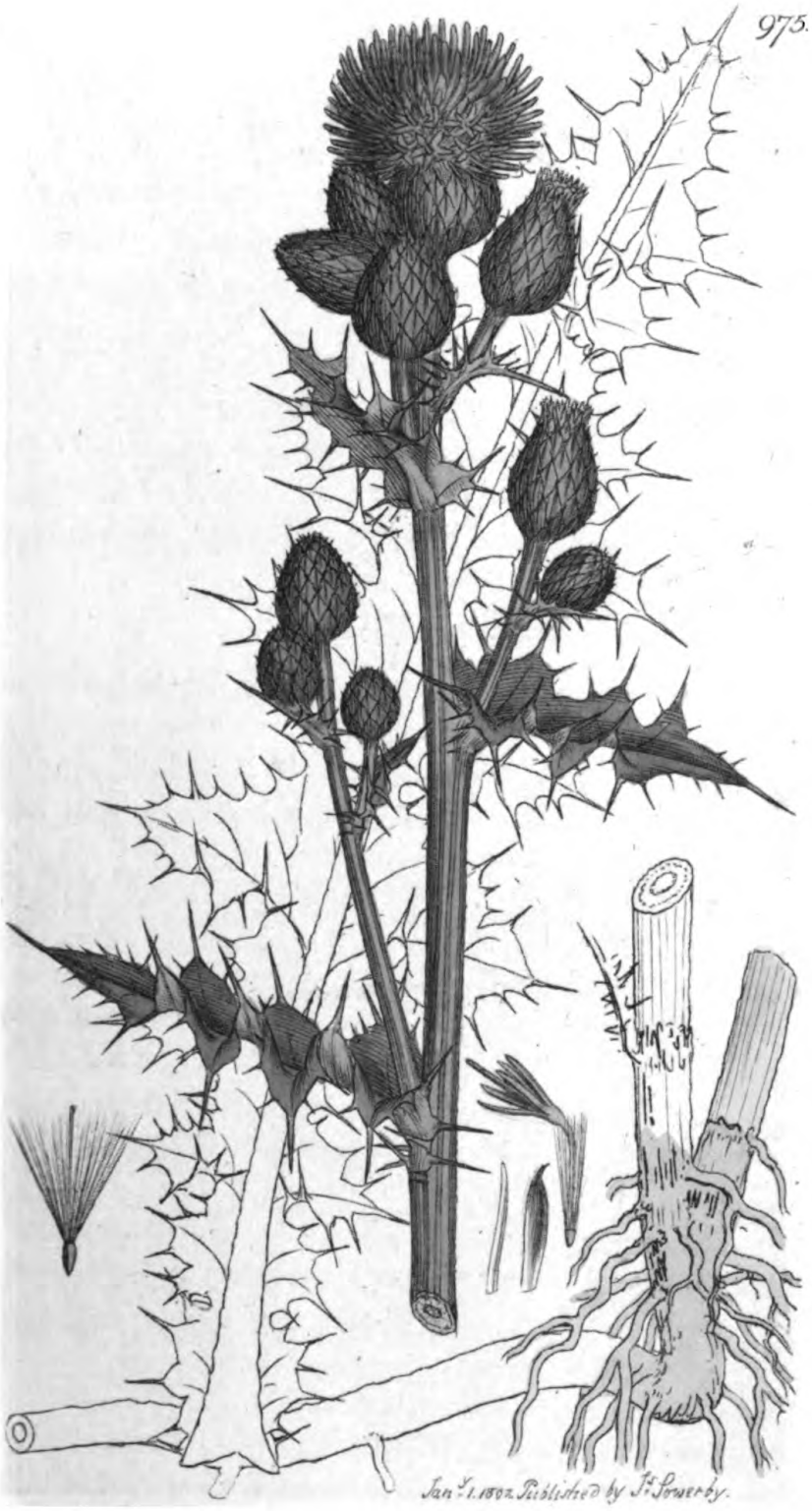
C. vulgatiſſimus viarum. *Raii Syn.* 194.

Serratula arvenſis. *Linn. Sp. Pl.* 1149. *Hudſ.* 349. *With.* 696. *Hull.* 180. *Relh.* 303. *Abbot.* 174. *Mart. Ruſt. t.* 132.

WE moſt heartily aſſent to Mr. Curtis's removal of this plant from *Serratula* to *Carduus*, it being undoubtedly of the ſame genus as the ſpecies in our laſt plate, and poſſeſſing, like that, the eſſential characters of *Carduus* and not of *Serratula*. The Engliſh name we have choſen ſeems to expreſs all Mr. Curtis intended, as well as his epithet *curſed*; for the lazy farmer may benefit his fields more by attending to its mode of growth, than by all the curſes he perhaps has often tried in vain. While however we perpetually ſee *annual* thiſtles, for want of timely mowing, ſuffered to ſpread their ſeeds over a whole country, we deſpair of the requiſite means being adopted to overcome the deeply creeping *perennial* roots of this very troubleſome weed.

The botaniſt cannot miſtake this ſpecies. Its ſtems are upright, about a yard high, panicled, and bearing many paliſh purple flowers, now and then white. Leaves ſeſſile, not decurrent, ſmoothiſh, pinnatifid, very ſpinous. Calyx ovate; ſcales broad-lanceolate, downy at their edge, tipped with a ſmall ſpine. Seed-down feathery, deciduous, not permanent as in *Serratula*.

It grows every where by road-ſides and in fields, flowering in July.



Jan.y 1. 1802. Published by Jts Sowerby.

58.



# CARDUUS eriophorus.

## *Woolly-headed Thiſtle.*

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*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Cal.* ovate, imbricated with ſpinous ſcales. *Receptacle* hairy.

SPEC. CHAR. Leaves ſeſſile, pinnatifid, every other ſegment pointing upwards. Calyx globular, woolly.

SYN. Carduus eriophorus. *Linn. Sp. Pl.* 1153. *Hudſ. Fl. An.* 354. *With. Bot. Arr.* 875. *Relh. Cant.* 307. *Sibth. Ox.* 246.

C. tomentoſus, Corona fratrum dictus. *Raii Syn.* 195.

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THE thiſtle here delineated is the largeſt Britiſh ſpecies, and generally eſteemed the moſt uncommon; we have however obſerved it in various parts of this iſland on a calcareous ſoil. Mr. Jacob Rayer gathered the preſent ſpecimen in Hampſhire in Auguſt laſt.

The root is biennial. Stem 3 feet or more in height, erect, much branched, many-angled, hairy. Leaves ſpreading, alternate, ſeſſile, deeply pinnatifid with two ranks of oblong divaricated ſegments, alternately pointing upwards and downwards, and armed with very ſtrong ſpines. The upper ſide of the leaves is rough with ſmall rigid cloſe-preſſed briſtles; the under clothed with cottony down. Flowers ſolitary, terminating the branches, erect, very large, 6 or 8 inches in circumference. Calyx globular, or ſomewhat depreſſed; its ſcales numerous, ſpreading, thickly interwoven with wool, and moſtly terminating in a linear blunt leafy appendage, ciliated and tipped with ſpines. Florets ſlender, purple. The radical leaves are often two feet long, and their ſegments (as Mr. Woodward obſerves) are much more diſtinctly ranged in two ranks than thoſe on the ſtem. The flowers are now and then found white.

# CNICUS tuberosus.

## *Tuberous Plume-thistle.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Cal.* swelling, imbricated with spinous scales. *Recept.* hairy. *Down* feathery, deciduous.

SPEC. CHAR. Leaves with slightly-winged stalks, pinnatifid, lobed, fringed with prickles. Stem unarmed, with about two stalked flowers. Calyx-scales lanceolate, pointed, rather spreading.

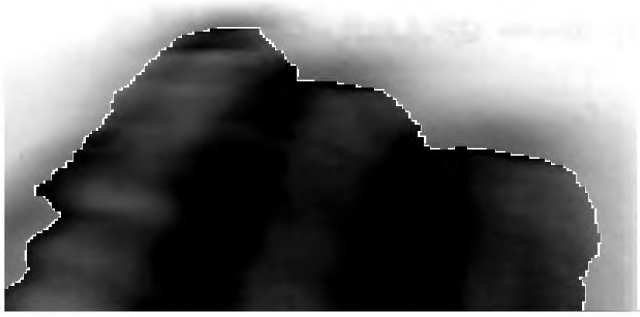
SYN. Cnicus tuberosus. *Willd. Sp. Pl. v.* 3. 1680.
Carduus tuberosus. *Linn. Sp. Pl.* 1154.
Jacea tuberosa. *Ger. em.* 728.

WE readily concur with the opinion of Professor Willdenow, first published in his *Prodr. Berolin.* 261, that *Cnicus* is best distinguished by its feathery seed-down from *Carduus*. With this latter genus then will remain our *nutans*, *t.* 1112, *acanthoides*, *t.* 973, *tenuiflorus*, *t.* 412, and *marianus*, *t.* 976, only, of the British species.

The plant before us, entirely new to Britain, was discovered last year by our excellent friend A. B. Lambert, Esq. in a wood of his own, called Great Ridge, near Boyton house, Wilts, growing plentifully, in one spot only. It flowers the beginning of August, and is perennial.

The root creeps, sending down many oblong perpendicular knobs. The stem is about two feet high, leafy, furrowed, hairy, without spines, simple, except at the top, where it usually bears two flowers, scarcely more, the figure in Gerarde being, as far as we have observed, faulty in this particular. The leaves are pinnatifid, and variously cut, fringed with copious yellowish prickles, slightly hairy, their base running down into narrow winged footstalks. Flowers on long hairy stalks, at first rather drooping, bright purple, with a slightly downy calyx, whose scales have prominent, leafy, minutely spinous, tips. Seed-down feathery.—Linnæus justly says the flowers are like *heterophyllus*, *t.* 675, but smaller. It is a very distinct species.


Oct. 1. 1805 published by Jos. Sowerby London



# CARDUUS heterophyllus.

## *Melancholy Thiſtle.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Cal.* ſwelling, imbricated with ſpinous ſcales. *Recept.* hairy. *Down* deciduous.

SPEC. CHAR. Leaves embracing the ſtem, lanceolate, ciliated, undivided or laciniated, very downy beneath. Flower moſtly ſolitary, pedunculated.

SYN. Carduus heterophyllus. *Linn. Sp. Pl.* 1154. *Fl. Dan. t.* 109.

C. helenioides. *Hudſ.* 352. *Lightf.* 457. *With.* 702. *Hull.* 179.

Cirſium Britannicum Cluſii repens. *Raii Syn.* 193.

A NATIVE of rather moiſt alpine paſtures in the north, ſent from near Horton in Craven by Mr. Bingley. It is perennial, flowering in July or Auguſt.

Root creeping, tuberous, black. Stem 3 feet high, erect, for the moſt part ſimple and ſingle-flowered, ſometimes, as in our figure, two-flowered, round, furrowed, woolly, leafy. Leaves lanceolate, acute; naked and very ſmooth above; clothed with denſe ſnowy down beneath; their margin fringed with a double row of ſmall prickles; the radical ones ſtand on footſtalks; the reſt are alternate, embracing the ſtem with their heart-ſhaped baſe; ſome of the leaves are occaſionally pinnatifid, which variableneſs in their form gave occaſion to the name *heterophyllus*. The flower terminates the ſtem on an elongated ſtalk, and is large and handſome; it has often one little leaf cloſe to its baſe; at firſt it droops, but is afterwards erect. Calyx green, ſlightly downy, ovate; its ſcales lanceolate, upright, naked, keeled and browniſh at their tips, each terminated by a very ſmall ſpine. Stigma linear, cloven. Down of the marginal ſeeds merely rough, of the reſt feathery.

*C. helenioides* of Linnæus differs widely from this, its ſtem being twice as tall, leaves more numerous, and never lobed. It bears four or more ſeſſile flowers cluſtered together at the top of the ſtem, but half the ſize of ours, and is a ſtranger to our iſland.


675.

61.



# CARDUUS pratenſis.

## *Meadow Thiſtle.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Cal.* ovate, imbricated with ſpinous ſcales. *Receptacle* hairy.

SPEC. CHAR. Leaves ſeſſile, half embracing the ſtem, lanceolate, ſlightly dentated, ciliated with ſmall unequal ſpines. Stem moſtly ſingle-flowered.

SYN. Carduus pratenſis. *Jacq. Flo. Auſtr. vol.* i. *t.* 42. *Hudſ. Fl. An.* 353. *With. Bot. Arr.* 877.
C. diſſectus. *Hudſ. Fl. An. ed.* 1. 307.
C. heterophyllus. *Relh. Cant.* 306.

THIS thiſtle, though found in meadows in various parts of England, has never been well underſtood. It appears not to be deſcribed by Linnæus, nor is it in his Herbarium. The only ſpecies of his that it can poſſibly be is the diſſectus, a plant he took up from books, without having it in his Herbarium, and which therefore we cannot certainly aſcertain. Neither dare we poſitively ſay with Dr. Stokes, that this is C. heterophyllus of Lightfoot, though we ſuppoſe it may be ſo. Our ſpecimen was gathered near Bromley in Kent, flowering in June.

The root is perennial, creeping, with long fibres. Stem erect, 1 or 2 feet high, moſtly ſimple, and terminated with one (rarely more) erect flower, its ſurface ſtriated and cottony. Leaves ſeveral at the lower part of the ſtem, lanceolate, ſome ſlightly waved and dentated, others entire, all ciliated with unequal ſmall ſpines, and green above, cottony (not very white) beneath. The upper leaves half embrace the ſtem, and become gradually ſmaller and more diſtant. A very ſmall one generally ſtands near the flower. Scales of the calyx not very ſharp, purpliſh, clothed with a web. Corolla, ſtyle and ſtamina nearly of an uniform purple.

We beg leave to recommend C. helenioides and heterophyllus to the examination of Britiſh botaniſts, as the ſpecimens in the Linnæan Herbarium appear really diſtinct ſpecies.

62.



# CARDUUS acaulis.

## *Dwarf Thiſtle.*

---

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Cal.* ovate, imbricated with ſpinous ſcales. *Receptacle* hairy.

SPEC. CHAR. Stem wanting. Calyx ſmooth.

SYN. Carduus acaulis. *Linn. Sp. Pl.* 1156. *Hudſ. Fl. An.* 354. *With. Bot. Arr.* 877. *Relh. Cant.* 307.

Carlina acaulis minore purpureo flore. *Raii Syn.* 195.

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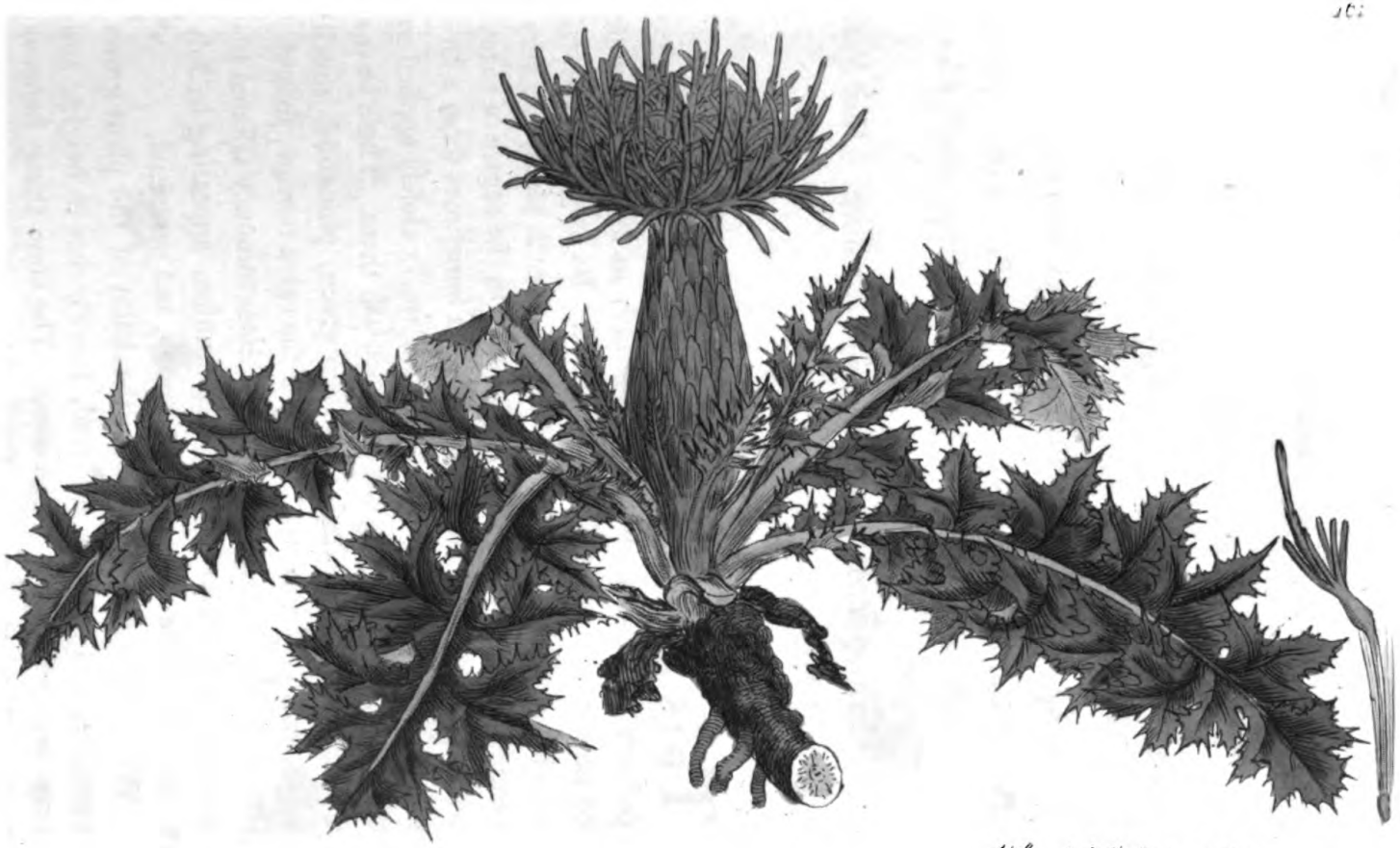
THIS ſpecies of Carduus occurs in gravelly and chalky paſtures and commons, very abundantly in Norfolk, though by no means a general Engliſh plant. Its large red flowers, which are ſeldom more than one upon each plant, are very conſpicuous, ſtanding cloſe to the root, in the centre of many wide-ſpreading depreſſed leaves, which ſometimes form a circle of near a foot in diameter, and are ſo cloſely applied to the ground that nothing can grow beneath them. Theſe leaves are ſmooth and ſhining, of a deep green, pinnatifid, much lobed, and very ſpinous. Scales of the calyx narrow, ſmooth, rather obtuſe, ſlightly ſpinous, ſometimes minutely ciliated towards the top. Flower erect, deep crimſon, appearing in July or Auguſt. The root is ſtrong, woody, and perennial.

When cultivated in a garden, the habit of the plant grows more lax, and a ſtem is produced, ſome inches in height, and branched, bearing ſeveral flowers. The ſame thing happens to the Carlina acaulis of the ſouth of Europe.



J. Sowerby del. Feb. 1794.

# ONOPORDUM Acanthium.

*Cotton-Thiſtle.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Cal.* ſwelling, its ſcales ſpreading and ſpinous. *Recept.* cellular, a little ſcaly.

SPEC. CHAR. Calyx-ſcales ſpreading every way, awl-ſhaped. Leaves ovate-oblong, ſinuated, woolly on both ſides.

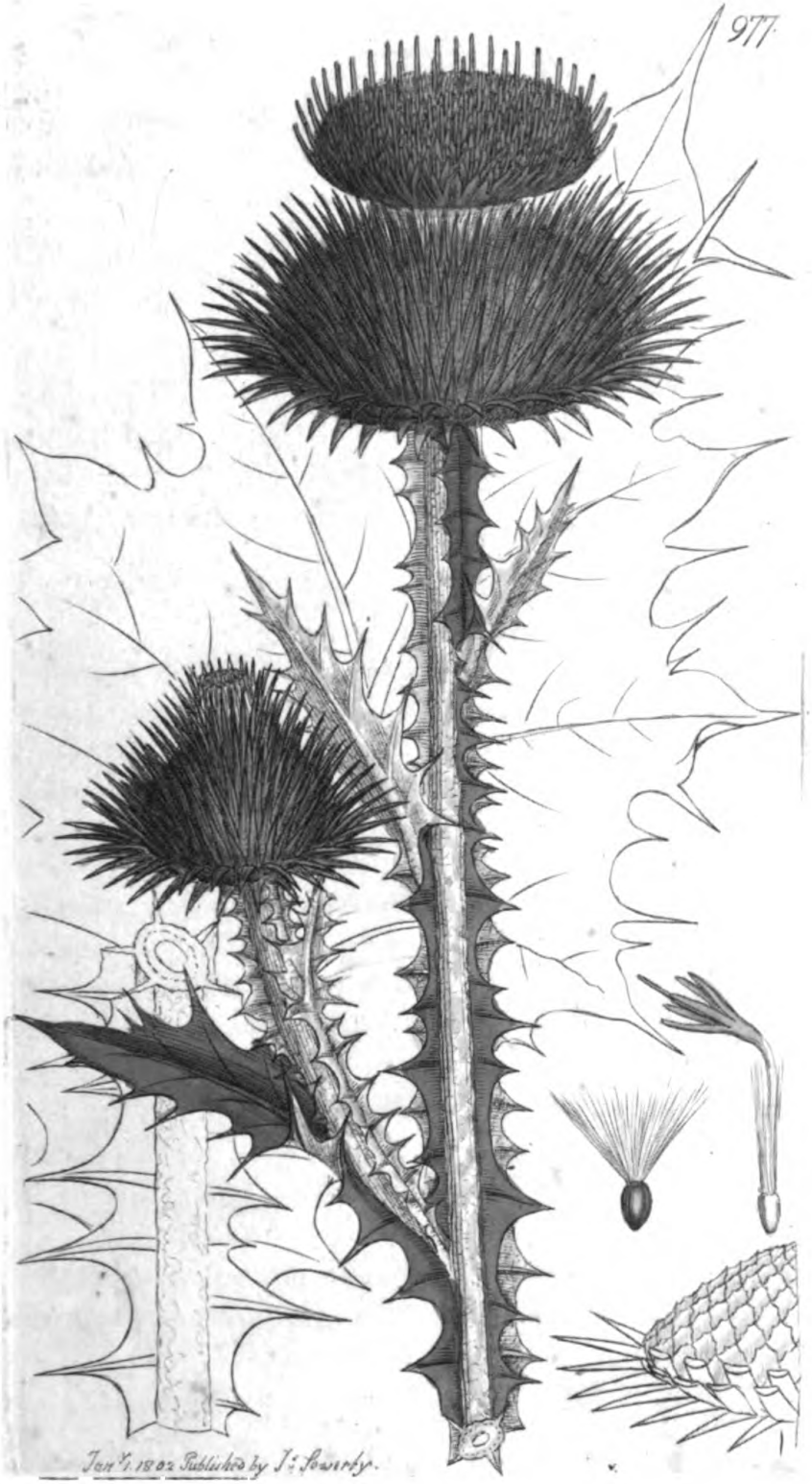
SYN. Onopordum Acanthium. *Linn. Sp. Pl.* 1158. *Sm. Fl. Brit.* 856. *Hudſ.* 354. *With.* 704. *Hull.* 180. *Relh.* 307. *Sibth.* 247. *Abbot.* 177. *Curt. Lond. faſc.* 5. *t.* 57.

Carduus tomentoſus, Acanthium dictus, vulgaris. *Raii Syn.* 196.

IN waſte ground about towns, and by road-ſides on a gravelly ſoil, this very conſpicuous plant often occurs; on other ſoils it is entirely unknown, as in moſt parts of Yorkſhire, Derbyſhire, and other rocky or mountainous tracts. It flowers in July or Auguſt, and is biennial.

The whole herbage is clothed with a white cottony web, eaſily detached by rubbing. The ſtem riſes to 4 or 5 feet in height, and is winged, the leaves being completely decurrent, ovate, edged with large unequal ſpines. Flowers terminal, ſolitary, large, erect, purple. Calyx globoſe, becoming depreſſed or flattiſh, conſiſting of innumerable, ſpreading, lanceolate, cottony ſcales, tipped with yellow ſpines. Receptacle cellular like a honey-comb, its partitions riſing into unequal pointed ſcales. Seeds obovate, brown, poliſhed. Down rough, deciduous, turning reddiſh with age.

The ſeeds of this, as well as of *Carduus marianus*, are the favourite food of Goldfinches, the *Fringilla carduelis* of Linnæus.



Jan.y 1. 1802 Published by J. Sowerby.

64.



# CARLINA vulgaris.

## *Common Carline.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Cal.* ſwelling: the outer ſcales ſpinous; the inner coloured, ſcarioſe, radiant. *Recept.* chaffy. *Down* feathery.

SPEC. CHAR. Stem many-flowered, corymboſe. Flowers terminal. Outer ſcales of the calyx pinnatifid; inner whitiſh.

SYN. Carlina vulgaris. *Linn. Sp. Pl.* 1161. *Sm. Fl. Brit.* 857. *Hudſ.* 355. *With.* 704. *Hull.* 178. *Relh.* 319. *Sibth.* 247. *Abbot.* 177.

C. ſylveſtris quibusdam, aliis Atractylis. *Raii Syn.* 175.

FREQUENTLY to be met with ſcattered over dry ſandy heaths and paſtures, among Ling and other humble ſhrubs, where it flowers in June and July, after which, being biennial, it dies, but does not immediately decay, for the leaves and even flowers, which are of the nature of a *Gnaphalium* or *Xeranthemum*, battered and bleached, ſtand many a wintry ſtorm.

The root is ſpindle-ſhaped. Whole plant rigid. Stem a foot high, leafy, furrowed, more or leſs woolly. Leaves alternate, ſinuated, very ſpinous, veiny, moſt woolly beneath. Flowers terminal, erect. Outer calyx-leaves very ſpinous; the inner ones longer, linear, ſmooth, radiating, yellowiſh-white, poliſhed, everlaſting, reſembling the rays of flowers in the order *Polygamia-ſuperflua.* Florets uniform, tubular, purpliſh. Antheræ with 2 briſtles at their baſe. Seed crowned with feathery down. Scales of the receptacle much reſembling the inner ſcales of the calyx.

The Carline Thiſtle, formerly uſed in medicine, is not this, but *Carlina acaulis* of Linnæus. It was reported to have been pointed out by an angel to Charlemagne, to cure his army of the plague. His name is the origin of the generic one.

March 1820 Published by J. Sowerby

V

# BIDENS tripartita.

## *Trifid Bur Marygold.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Recept.* chaffy. *Down* formed of rigid briſtles, rough backwards. *Cal.* of many leaves. *Cor.* ſometimes radiated.

SPEC. CHAR. Leaves three-cleft. Calyx leafy at the baſe. Briſtles of the ſeed two or three, erect.

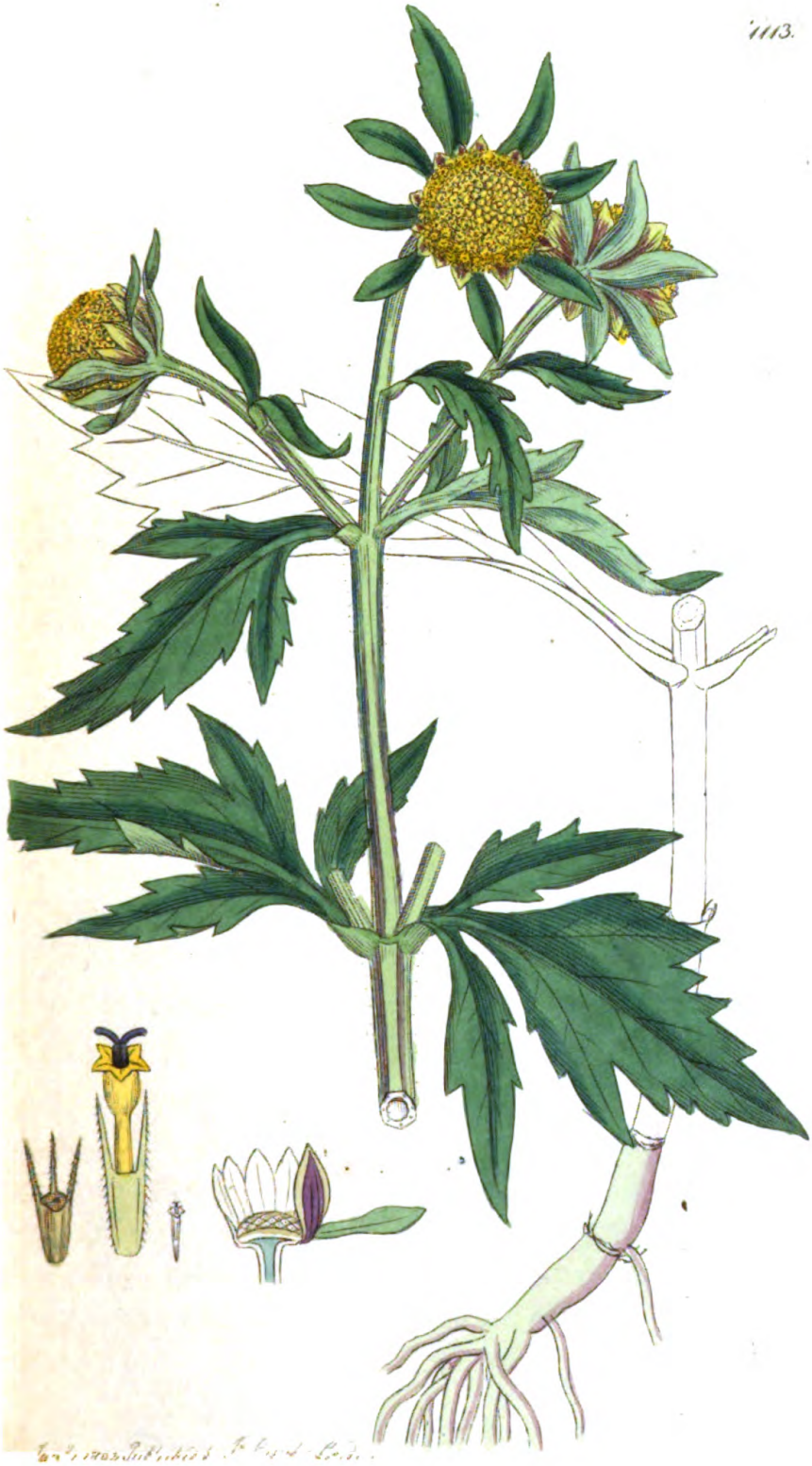
SYN. Bidens tripartita. *Linn. Sp. Pl.* 1165. *Sm. Fl. Brit.* 858. *Hudſ.* 355. *With.* 706. *Hull.* 181. *Relh.* 319. *Sibth.* 248. *Abbot.* 177. *Curt. Lond. faſc.* 4. *t.* 57.

Verbeſina ſeu Cannabina aquatica, flore minùs pulchro, elatior et magìs frequens. *Raii Syn.* 187.

FREQUENT in watery places and about the banks of ditches, flowering in Auguſt and September.

Root annual, ſpindle-ſhaped. Stem 2 or 3 feet high, upright, branched, ſpreading, leafy, angular, furrowed, ſmooth. Leaves oppoſite, ſmooth, deeply ſerrated, cut into one large lobe with two or fou ſmaller at its baſe. Flowers ſolitary, terminating each branch, rather drooping, ſurrounded with ſeveral ſimple, ſpreading, entire, rough-edged leaves. Calyx-ſcales nearly equal, flat, ſmooth, ſtreaked with brown. Florets yellow, uniform, tubular and regular. Scales of the receptacle like the calyx-ſcales, but narrower. Seeds compreſſed, furniſhed with two or three angles which are regularly beſet with little reflexed teeth, and terminate in two or three upright triangular briſtles, likewiſe rough with reflexed teeth.

This plant is ſaid to dye woollen and linen cloths yellow, but we have better materials for the purpoſe in common.



66.



# BIDENS cernua.

## *Nodding Bur Marygold.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Recept.* chaffy. *Down* formed of rigid briſtles, rough backwards. *Cal.* of many leaves. *Cor.* ſometimes radiated.

SPEC. CHAR. Leaves lanceolate, ſerrated. Flowers drooping, leafy at their baſe. Briſtles of the ſeed about four, erect.

SYN. Bidens cernua. *Linn. Sp. Pl.* 1165. *Sm. Fl. Brit.* 858. *Hudſ.* 356. *With.* 705. *Hull.* 181. *Relh.* 320. *Sibth.* 248. *Abbot.* 177. *Curt. Lond. faſc.* 3. *t.* 55.

Verbeſina pulchriore flore luteo. *Raii Syn.* 187.

LESS common than the preceding ſpecies, but not very rare in ponds and ditches on a gravelly ſoil, growing in the water and bloſſoming in September.

Root annual, branching. Stem often roughiſh, and leſs ſpreading than the other. Leaves embracing the ſtem, undivided, lanceolate, deeply ſerrated. Flowers remarkably drooping, larger and of a brighter yellow than thoſe of *B. tripartita*; the angles of the ſeeds moreover are leſs regularly ſpinous, and their briſtles four inſtead of 2 or 3. Sometimes the flowers are furniſhed with large radiant ligulate marginal female florets, in which caſe the plant becomes *Coreopſis Bidens* of Linnæus, and is one proof among others that nature has fixed no ſtrict limits between the orders *Polygamia-æqualis* and *Polygamia-ſuperflua*, the latter being ſomewhat analogous to double flowers in other claſſes.

The *Bidens minima* of Linnæus and others is only a ſtarved plant of this ſpecies growing out of the water.

67.



# EUPATORIUM cannabinum.

## *Hemp-agrimony.*

*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Receptacle* naked. *Seed-down* feathery. *Calyx* oblong, imbricated. *Style* cloven half way down, longer than the corolla.

SPEC. CHAR. Leaves digitate.

SYN. Eupatorium cannabinum. *Linn. Sp. Pl.* 1173. *Huds. Fl. An.* 356. *With. Bot. Arr. ed.* 3. *v.* 3. 706. *Relh. Cant.* 309. *Sibth. Ox.* 249. *Raii Syn.* 179.

THIS plant occurs frequently about the banks of rivers, and other watery spots.—It is nevertheless found also in elevated calcareous situations, where it appears to great advantage, as at Matlock; but always grows in a more or less black and boggy soil, like the larger inhabitants of alpine meadows, *Veratrum*, *Gentiana*, *Aconitum*, *Cacalia*, &c. It seems indeed to supply the place of *Cacalia alpina*, in some of our mountainous thickets, and very much agrees with that plant in habit, colour, and the insects it nourishes.

The *Eupatorium* flowers in July and August. The root is perennial. Stems several, 2 or 3 feet high, erect, branched, roundish, downy, leafy. Leaves opposite, nearly sessile, deeply divided into 3 or 5 sessile leaflets, of which the two outermost are sometimes a little remote from the others, by that means forming a pinnate leaf; the leaflets are lanceolate, paler and downy beneath, strongly serrated, especially about the middle. Flowers very numerous, light reddish purple, in a thick terminal clustered corymbus. Calyx-scales blunt, with a membranous white or reddish margin. Florets about 5 or 6, all tubular, equal, regular and perfect, characterized by the projection of their long cloven styles; the silvery bristles which crown the germen (and afterwards the seed), and which are truly though minutely feathery, are seen separating the florets. Germen, as Dr. Withering remarks, sprinkled with minute shining globules. The whole herb is slightly aromatic.

In young plants the upper leaves are observed to be simple. See Ray and Withering.


Jan.y 1796 Published by Jno Sowerby London

J

# CHRYSOCOMA Linosyris.

## *Flax-leaved Goldy-locks.*

*SYNGENESIA Polygamia æqualis.*

GEN. CHAR. *Flowers* discoid. *Receptacle* naked. *Down* simple. *Calyx* hemispherical, imbricated. *Style* scarcely longer than the florets.

SPEC. CHAR. Herbaceous. Leaves linear, smooth. Scales of the calyx loosely spreading.

SYN. Chrysocoma Linosyris. *Linn. Sp. Pl.* 1178. *Fl. Suec.* 283. *Ait. Hort. Kew. ed.* 1. *v.* 3. 163. *Willd. Sp. Pl. v.* 3. 1791.

Linaria aurea Tragi. *Ger. em.* 554.

NO tidings of the present plant, as a native of Britain, have ever reached us, till it was discovered, flowering early in September 1812, by the Rev. Charles Holbech, of Farnborough, Warwickshire, growing in great plenty, amongst a turf of coarse grasses, on the rocky cliff of Berryhead, Devon, about two hundred paces from the westernmost battery, on the Dartmouth side, indubitably wild. This is the small variety, which alone, as Linnæus tells us, grows in the south part of the isle of Oeland. The plant is mentioned as a native of most parts of Germany, as well as of Switzerland, and the south of France.. It is scarcely cultivated but in botanic gardens. As we find no coloured figure cited, ours will be the more generally acceptable. Some old authors appear to have described and figured this *Chrysocoma* twice over, misled by its variableness of magnitude.

The root is perennial and creeping, with long stout fibres. Stem erect, round, rigid, simple, smooth, leafy, a foot high, or not so much. Leaves numerous, scattered, linear, acute at each end, entire, rather fleshy, rough with minute white points. Flowers few, terminal, corymbose, of an uniform yellow; their stalks hardly scaly in our specimens. Florets about thirty, uniform, acute. Seeds hairy. Down minutely rough. Cells of the receptacle with a slight jagged border, not amounting to scaliness.

69.



# SANTOLINA maritima.

*Sea Cotton-weed.*

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*SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Recept.* chaffy. *Down* none. *Cal.* imbricated, hemiſpherical.

SPEC. CHAR. Flower-ſtalks collected into a corymbus. Leaves oblong, obtuſe, crenated, very downy.

SYN. Santolina maritima. *Linn. MSS. Hudſ. Fl. An.* 356. *With. Bot. Arr.* 886.

Athanaſia maritima. *Linn. Sp. Pl.* 1182. *Mant.* 2. 464.

Gnaphalium maritimum. *Raii Syn.* 180.

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THIS ſpecimen was gathered laſt Auguſt by Dr. Smith, on the ſea beach, juſt above high-water mark, a mile to the north of Landguard Fort in Suffolk, where this rare plant grows in tolerable plenty, and flowers from the middle of Auguſt to the latter part of September. It occurs alſo on various parts of our ſouthern coaſt.

The long perennial roots run very deep into the ſand, and throw up ſeveral branched buſhy ſtems about a foot high, extremely brittle, round, covered with numerous, alternate, oblong, almoſt ſpatulate, crenate leaves, which, as well as the ſtem and calyx, are completely inveſted with a pure-white thick cottony web. A corymbus of bright yellow flowers terminates the ſtem and ſide branches. The calyx is formed of numerous concave, ſomewhat membranous, ſcales; and the hemiſpherical receptacle is ſet with ſimilar ſcales, woolly at their tip. The florets are numerous, all tubular, regular, hermaphrodite and fertile. Seeds oval, curved, compreſſed, ſharp and membranous at the edge, deſtitute of wing or down. Every part, eſpecially the flowers, has a ſtrong aromatic ſcent, like Coſtmary (Tanacetum Balſamita).

Thoſe who go to look for theſe flowers in July, according to the information of authors, will be diſappointed. All the figures of this plant, Miller's not excepted, are extremely bad.

70.



# TANACETUM vulgare.

## *Common Tansy.*

*SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Seeds* crowned. *Cal.* imbricated, hemispherical. *Florets* of the radius three-cleft, obsolete; sometimes wanting.

SPEC. CHAR. Leaves doubly pinnatifid, deeply serrated, naked.

SYN. Tanacetum vulgare. *Linn. Sp. Pl.* 1184. *Sm. Fl. Brit.* 862. *Huds.* 357. *With.* 708. *Hull.* 182. *Relh.* 321. *Sibth.* 249. *Abbot.* 179. *Woodv. Med. Bot. t.* 115.

Tanacetum. *Raii Syn.* 188.

THIS well-known plant not unfrequently occurs in hilly pastures and by road sides, generally in large patches, flowering in July and August. It abounds on Newmarket heath, where our specimen was gathered.

Root perennial, creeping. Stems erect, a foot or two in height, scarcely branched, leafy, angular. Leaves numerous, alternate, clasping the stem, spreading but little, deeply divided into numerous, uniform, oblong, deeply serrated lobes, all naked or destitute of pubescence, except occasionally underneath, though harsh and rough to the touch. Flowers in a terminal flat corymbus, of a full uniform yellow, hemispherical. Perfect florets of the disk tubular, 5-cleft, very numerous; those of the radius few, ligulate, tipped with 3 teeth, but often wanting, and when present so short and inconspicuous as not to be observable without attention. Seeds obovate, each bearing a 5-sided chaffy crown.

The whole plant is very bitter, and exhales a peculiar strong scent. It is recommended in several disorders as a tonic and cordial, as well as to expel worms. It also serves to give its flavour to a kind of rich pudding, now grown obsolete in England, and seldom seen but at corporation feasts.

A curled variety, noticed by Dillenius, is now and then seen in gardens, and is esteemed more grateful to the stomach than the wild plant.

Oct. 1. 1809. Published by Jas Sowerby, London.

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# ARTEMISIA campestris.

## *Field Southernwood.*

*SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Receptacle* slightly downy. *Seed-down* none. *Cal.* imbricated, the scales roundish and closed. *Flowers* of the radius without a corolla.

SPEC. CHAR. Leaves in many linear segments. Stems procumbent before flowering, wand-like.

SYN. Artemisia campestris. *Linn. Sp. Pl.* 1185. *Huds. Fl. An.* 357. *With. Bot. Arr.* 889.

Abrotanum campestre. *Raii Syn.* 190.

THE field southernwood has hitherto been found in no part of England but about Thetford, where it was discovered in Ray's time, and still grows by the side of the great road about a mile from that town in the way to Norwich, and also on Icklingham heath, eight miles from Bury, from whence the wild specimen here delineated was sent by Sir Thomas Cullum, Bart.

The whole herb is without smell, and flowers in August.

Root perennial, producing the first year a number of long-stalked pinnated and deeply divided leaves, spreading flat on the ground in the form of a star; from the centre of which the stem comes out the summer following, prostrate at first, but rising when the flowers appear, branched, and clothed with alternate, more sessile, and less compound leaves, the uppermost being perfectly simple. The segments of all the leaves are linear, more or less clothed with close-pressed silky hairs beneath. Branches forming long simple racemes of small drooping flowers on slender foot-stalks, each accompanied by a small simple leaf. The receptacle, as Linnæus observes, in this and some other species, is naked, and not downy.

## ARTEMISIA maritima.
### *Drooping-flowered Sea Wormwood.*

*SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* naked or downy. *Seed-down* none. *Cal.* imbricated, the scales roundish and closed. *Florets* of the radius awlshaped, undivided.

SPEC. CHAR. Leaves downy, pinnated: the uppermost undivided. Clusters drooping. Receptacle naked. Flowers oblong, downy, sessile.

SYN. Artemisia maritima. *Linn. Sp. Pl.* 1186. *Willd. Sp. Pl. v.* 3. 1833. *Sm. Fl. Brit.* 864, α, β. *Huds.* 358. *With.* 709. *Hull.* 182. *Relh.* 321. *Woodv. Med. Bot. t.* 122.

Absinthium marinum album. *Raii Syn.* 188. *n.* 2. also 3, 4 and 6.

AT the persuasion of Mr. Turner and Professor Willdenow we have been induced to reconsider the Sea Wormwoods, and it appears that two distinct species are common on our muddy shores, distinguished by having drooping or upright flowers, which differences seem to be constant, and to be accompanied with differences in the general aspect of the plants.

This is the *A. maritima* of the Linnæan Herbarium, and of all authors, being the more common of the two. It is subject to varieties in the breadth and hoariness of its leaves, and when our *t.* 1001 was published, we thought we had found the posture of the flowers also variable. We take the first opportunity of correcting this mistake, and would substitute for what is given in *v.* 14, at *t.* 1001, the following character and synonyms.

## ARTEMISIA gallica.
### *Upright-flowered Sea Wormwood.*

SPEC. CHAR. Leaves downy, pinnated; the radical ones capillary: the uppermost undivided. Clusters erect. Receptacle naked. Flowers oblong, downy, partly sessile, of few florets.

SYN. Artemisia gallica. *Willd. Sp. Pl. v.* 3. 1834.

A. maritima γ. *Sm. Fl. Brit.* 864.

Absinthium seriphium tenuifolium marinum narbonense. *Dill. in Raii Syn.* 189.

Feb. 1.1807. Published by Jas. Sowerby London

73.



# ARTEMISIA maritima.

## *Sea Wormwood.*

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*SYNGENESIA Polygamia-ſuperflua.*

GEN. CHAR. *Recept.* naked or downy. *Seed-down* none. *Cal.* imbricated, the ſcales roundiſh and cloſed. *Florets* of the radius awlſhaped, undivided.

SPEC. CHAR. Leaves in many deep diviſions, downy. Cluſters drooping. Receptacle naked. Female florets about three.

SYN. Artemiſia maritima. *Linn. Sp. Pl.* 1186. *Sm. Fl. Brit.* 864. *Hudſ.* 358. *With.* 709. *Hull.* 182. *Relh. Suppl.* 2. 14. *Woodv. Med. Bot. t.* 122.

Abſinthium marinum album. *Raii Syn.* 188. *n.* 2. alſo *n.* 3, 4, 5 and 6.

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NOT uncommon in muddy places about the ſea coaſt, flowering in Auguſt and September.

Root woody, perennial. Whole plant clothed with a grey cottony down. Stems erect or proſtrate, panicled, leafy, a foot or more in height. Lower leaves pinnate; leaflets three-cleft; upper ones variouſly, but for the moſt part deeply, divided; ſegments all entire: uppermoſt leaves often ſimple. Cluſters of flowers generally more or leſs drooping. Flowers ovate. Calyx woolly; its ſcales browniſh, with a membranous edge. Receptacle quite naked. Florets of the radius never more than 2 or 3, and often wanting.

This plant has the qualities of the Common Wormwood, but is leſs bitter, and more agreeable in its flavour. Some occaſional variations in this reſpect, as well as in the breadth and hoarineſs of the leaves, denſity of the cluſters, and ſize of the flowers, gave occaſion to our botaniſts in the time of Dillenius to make ſeveral ſpecies, which he judiciouſly conſiders as varieties. We have actually traced moſt of them to their origin, and ſtrongly ſuſpect the *A. cæruleſcens* of Hudſon to have been no other than the *maritima*, with broader and more ſimple upper leaves than uſual.

74.



# ARTEMISIA Absinthium.

## *Common Wormwood.*

*SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* naked or downy. *Seed-down* none. *Cal.* imbricated, the scales roundish and closed. *Florets* of the radius awl-shaped, undivided.

SPEC. CHAR. Leaves in many deep divisions, clothed with close silky down. Flowers hemispherical, pendulous. Receptacle hairy.

SYN. Artemisia Absinthium. *Linn. Sp. Pl.* 1188. *Sm. Fl. Brit.* 865. *Huds.* 358. *With.* 710. *Hull.* 182. *Relh.* 322. *Sibth.* 250. *Abbot.* 179. *Woodv. Med. Bot. t.* 120.

Absinthium vulgare. *Raii Syn.* 188.

WORMWOOD grows in the midst of almost every english village, particularly where the soil is chalky or gravelly. There, on many a rugged dusty green, where the whipping-post and stocks, with their appropriate distich

> "Fear God and honour the King,
> Or else they will you into me bring,"

are, as Shakespear says, *wormwood* to the idle and disorderly, this herb is sure to be met with. It is perennial, and flowers in August.

The stems form tufts about a foot high, and are furrowed, branched and leafy. The whole plant is of a pale whitish green, and clothed with short or close-pressed silky down. Leaves alternate, doubly but irregularly pinnatifid, their edges entire. Clusters of flowers collected into a leafy panicle. Each flower is broad and hemispherical, drooping: the disk buff-coloured. The styles are large, recurved, with cloven stigmas. The florets of the radius short, and rather ovate. Receptacle very hairy.

This plant is remarkable for its intense bitterness united to a peculiar strong aromatic odour. It is often used to keep insects from clothes and furniture. As a medicine it is one of the most active bitters, and from its effect upon the nerves not to be used without caution. The vegetable alkali of the shops was for a long time procured from this plant exclusively.

Col. J. Ib. 13 Published by Jas Sowerby. London.

75.



# ARTEMISIA vulgaris.

*Mugwort.*

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*SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* naked or downy. *Seed-down* none. *Cal.* imbricated, the ſcales roundiſh and cloſed. *Florets* of the radius awl-ſhaped, undivided.

SPEC. CHAR. Leaves pinnatifid, flat, cut; downy beneath. Cluſters ſimple. Flowers ovate. Receptacle naked.

SYN. Artemiſia vulgaris. *Linn. Sp. Pl.* 1188. *Sm. Fl. Brit.* 865. *Hudſ.* 359. *With.* 710. *Hull.* 182. *Relh.* 311. *Sibth.* 250. *Abbot.* 179. *Woodv. Med. Bot. t.* 121. *Raii Syn.* 190.

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VERY common in waſte ground, hedges, and borders of fields, flowering throughout Auguſt and later.

Root woody and perennial. Stems 3 or 4 feet high, erect, branched, leafy, marked with numerous longitudinal purpliſh ribs, ſmooth. Leaves alternate, pinnatifid, ſomewhat lyrate, unequally cut; ſmooth and dark-green above; cottony and very white beneath. Flowers in axillary ſimple leafy ſpikes or cluſters, erect, or divaricated, ovate, ſeſſile, downy. Tubular florets ſeveral, 5-cleft, purpliſh, furniſhed with 5 ſtamina and a cloven piſtillum, and ſurrounded by 5 awl-ſhaped female flowers which conſtitute the radius. Receptacle naked. Seeds angular, without down or wing.

The whole plant has a weak aromatic ſcent, and a ſlightly bitter flavour. Its medical virtues deſerve no notice.—There is a variety deſtitute of all redneſs about the ſtem or flowers, equally common with that we have delineated.

Jun.1 1802 Published by Jn. Sowerby London.

76.



# ARTEMISIA cærulescens.

## *Blueish Mugwort.*

*SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* naked or downy. *Seed-down* none. *Cal.* imbricated, the scales roundish and closed. *Florets* of the radius awlshaped, undivided.

SPEC. CHAR. Leaves hoary; those of the stem lanceolate and undivided; the lower ones variously divided. Flowers erect, cylindrical. Receptacle naked.

SYN. Artemisia cærulescens. *Linn. Sp. Pl.* 1189. *Sm. Fl. Brit.* 866. *Huds.* 359. *With.* 711. *Hull. ed.* 2. 238.

A. marina. *Ger. em.* 1104.

Absinthium maritimum, lavendulæ folio: *Bauh. Pin.* 139. *Moris. sect.* 6. *t.* 1. *f.* 5. *Duham. Arb. v.* 1. 24. *t.* 7.

THAT no plant, asserted by any good authority to be a British native, may be wanting in this work, we are obliged to delineate a garden specimen of this, very expressively called by old writers Lavender-leaved Mugwort or Wormwood. Mr. Tofield assured his friend Hudson that it grew wild near Boston in Lincolnshire; which might very well be, as it is not uncommon on the sea shores of the milder climates of Europe. Gerarde says it grows in the isle of Wight; yet no botanist has recently found it in Britain. Mr. Tofield might mistake some variety of *maritima, t.* 1706, or *gallica, t.* 1001, for this; yet if the plants be compared, such an error seems very unlikely, especially as the *cærulescens* is well known to most botanists.

Its glaucous hoary hue, leaves for the most part simple, lanceolate, bluntish and entire, of a considerable breadth, the lowermost only being lobed or pinnatifid, strongly mark the species. The flowers are abundant in August and September, and stand erect. The receptacle is naked and very minute.

# GNAPHALIUM luteo-album.

## *Jerſey Cudweed.*

*SYNGENESIA Polygamia-ſuperflua.*

GEN. CHAR. *Recept.* naked. *Down* rough or feathery. *Cal.* imbricated; with coloured membranous ſcales. *Florets* of the radius awlſhaped. Some *florets* of the diſk occaſionally abortive.

SPEC. CHAR. Herbaceous. Leaves half embracing the ſtem, ſwordſhaped, waved, woolly on both ſides: the lower ones blunt. Flowers cluſtered.

SYN. Gnaphalium luteo-album. *Linn. Sp. Pl.* 1196. *Sm. Fl. Brit.* 867. *Hudſ.* 359. *With.* 712. *Hull.* 183. *Dickſ. H. Sicc. faſc.* 5. 13.

Elichryſum ſylveſtre latifolium, capitulis conglobatis. *Raii Syn.* 182.

RAY and his friends made no ſcruple of allowing a place in the Britiſh Flora to the plants of Jerſey and Guernſey, though thoſe of Gibraltar might almoſt as well be admitted. The *Gnaphalium* now before us is ſaid to be very frequent in dry barren places in the firſt-mentioned iſland, flowering in July and Auguſt. Our ſpecimen however is of Engliſh growth, and, as Mr. Relhan thinks, indubitably wild, having been found by him in the road from Hanxtown to Little Shelford, Cambridgeſhire, far from any houſe (nor is it indeed a garden plant), alſo in a gravel-pit a quarter of a mile from the road. We give it on that gentleman's authority; and the only queſtion can be, whether its very volatile ſeeds could have been wafted thither from the botanic garden at Cambridge.

Root annual, ſmall. Whole herb clothed with white lax cottony down. Stems ſpreading at the baſe, about a foot high, or more. Leaves alternate, ſomewhat revolute and waved. Flowers many in a denſe terminal woolly cluſter. Calyx pale-yellow, ſhining. Hermaphrodite florets few, yellow, central, 5-cleft; female ones numerous, redder, awlſhaped, with a red ſtigma. Seeds all fertile, ſmall, rough.

# GNAPHALIUM margaritaceum.

## *American Cudweed, or Pearly Everlasting.*

*SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Down* rough or feathery. *Cal.* imbricated; with coloured membranous scales. *Florets* of the radius awlshaped. Some *florets* of the disk occasionally abortive.

SPEC. CHAR. Herbaceous. Leaves linear-lanceolate, sharp-pointed, alternate. Stem branched upwards. Corymbs level-topped.

SYN. Gnaphalium margaritaceum. *Linn. Sp. Pl.* 1198. *Sm. Fl. Brit.* 868. *Huds.* 360. *With.* 712. *Hull.* 183. *ed.* 2. 239. *Dicks. H. Sicc. fasc.* 8. 15.
G. americanum. *Raii Syn.* 182.

A NATIVE of moist places near the banks of rivers, but Ray judged it scarcely wild, probably because it is known to abound in America. Our much esteemed friend the Rev. T. Butt sent it from a rivulet in the heart of Wire forest, Worcestershire, and Dr. Salt gathered it by a rivulet at Longdon near Litchfield. Mr. Middleton of Malton, Yorkshire, sent a specimen to Mr. Sowerby from the river Rhymney, Glamorganshire, where, as Dillenius records, it is abundant, and, Mr. Middleton thinks, certainly wild. This flower, from its purity and durability, an elegant emblem of immortality, is planted, as that gentleman informs us, "in the church-yards of South Wales to decorate the graves of the dead;" hence it becomes naturalized in such places. It is a common favourite in cottage gardens throughout many parts of England, flowering in August.

Root perennial, somewhat creeping. Plant 2 or 3 feet high, cottony, especially the backs of the leaves. Flowers numerous, corymbose, slightly aromatic, most beautiful before they expand, the pure opaque unchangeable whiteness of the calyx being then most conspicuous. The disk is of a dull yellow. Receptacle granulated. Seed-down rough.

May 1, 1809, Published by J. Sowerby London

V

# GNAPHALIUM dioicum.

## *Mountain Cudweed, or Cat's-foot.*

*SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Receptacle* naked. *Down* feathery. *Cal.* imbricated; its marginal scales rounded, membranous and coloured. *Florets* all equal and tubular.

SPEC. CHAR. Shoots procumbent. Stem perfectly simple, bearing a simple corymbus. Flowers diœcious.

SYN. Gnaphalium dioicum. *Linn. Sp. Pl.* 1199. *Hudſ. Fl. An.* 360. *With. Bot. Arr.* 894. *Relh. Cant.* 311

G. montanum album. *Raii Syn.* 181. barren plant.

G. longiore folio et flore. *Raii Syn.* 182. fertile plant.

FOUND on dry mountainous heaths, and in barren pastures of England, Scotland, and Wales. We received it from Mr. William Travis of Scarborough, in June last.

The roots are somewhat woody, creeping, perennial, and throw out long simple fibres which run deep into the ground. Runners several, leafy, procumbent, spreading in every direction. Leaves pointed, entire, bright green and smooth above, very white and cottony beneath; the radical ones, as well as those on the procumbent shoots, are spatulate, and the latter mostly opposite. From the crown of the root arises one simple upright flowering-stem, 3 or 4 inches high, round and cottony (like the runners), clothed with alternate lanceolate leaves, and terminated by a simple corymbus of 4 or 5 flowers, occasionally white or reddish; the latter particularly are very pretty, and both retain their colour when dry, being of the tribe of *Everlastings*. The white are most generally (not always) male in effect, having only a barren style, and very obscure rudiments of a seed, but their stamina are perfect. The others have only a pistillum, but even in these the seed is seldom perfected, as Mr. Woodward (in *Bot. Arr.*) justly observes, the plants increasing much by root. The scales of the calyx vary in length, but we do not find that either the long or round form is appropriated exclusively to either sex.


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# GNAPHALIUM ſylvaticum.
## *Highland Cudweed.*

*SYNGENESIA Polygamia-ſuperflua.*

GEN. CHAR. *Recept.* naked. *Down* rough or feathery. *Cal.* imbricated; with coloured membranous ſcales. *Florets* of the radius awl-ſhaped. Some *florets* of the diſk occaſionally abortive.

SPEC. CHAR. Stem ſimple, erect. Flowers ſpiked. Leaves lanceolate, tapering at the baſe, woolly on both ſides.

SYN. Gnaphalium ſylvaticum. *Linn. Sp. Pl.* 1200. *Sm. Fl. Brit.* 870. *Lightf.* 472, variety. *With.* 713. *Hull.* 183.

G. norvegicum. *Retz. Prod.* 193.

SOME account of this ſpecies of *Gnaphalium* will be found in our 2d volume, *p.* 124, where our *G. rectum*, which has generally been confounded with it, is figured. The two plants are indeed nearly akin, but we ſtill think them diſtinct.

That now under conſideration grows on ſeveral highland mountains, and has been ſent us wild by Mr. G. Don, and Mr. J. Mackay; the latter informs us it is not found in woods, though Linnæus expreſsly aſſerts the contrary, and we have no reaſon to think, from his definition in the *Fl. Lapp.* or from his herbarium, that he gathered both ſpecies in Lapland, though he confounded their ſynonyms. If he did, he is reſponſible both for his own error and the badneſs of the ſpecific name.

The root is black, perennial, furniſhed with many ſimple fibres. Stem from 4 to 6 inches high, leafy, woolly. Leaves alternate, lanceolate, entire, acute, narrow and elongated at their baſe, clothed on both ſides with white cottony down. Spike terminal, leafy, denſe, almoſt perfectly ſimple, except when very luxuriant. Flowers much like thoſe of *G. rectum*, except that the calyx-ſcales are more compact, and much blacker towards their extremities.

913.

Aug.ᵗ 1. 1790 Published by J.ᵒ Sowerby London.

81.



# GNAPHALIUM rectum.

## *Upright Cudweed.*

*SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Receptacle* naked. *Down* feathery. *Cal.* imbricated; its marginal ſcales rounded, membranous and coloured. *Florets* all equal and tubular.

SPEC. CHAR. Stem erect, terminating in a leafy compound ſpike. Leaves linear-lanceolate, almoſt naked on the upper ſide.

SYN. Gnaphalium rectum. *Bauh. Hiſt. vol.* 3. *part* 1, *p.* 160.

Gn. ſylvaticum. *Hudſ. Fl. An.* 360. *With. Bot. Arr.* 895. *Relh. Cant.* 312. *Lightf. Fl. Scot.* 472. *Retz. Fl. Scand.* 156.

Gn. anglicum. *Raii Syn.* 180. *Ger. em.* 639.

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A NATIVE of groves, thickets and paſtures in a light ſandy ſoil in many places, ſent from Bedfordſhire by the Rev. Mr. Abbot. It flowers in the latter part of Summer, and is eaſily perceived. The root is perennial.

We cannot but agree with Prof. Retzius, who, in his *Flora Scandinaviæ Prodromus*, has diſtinguiſhed this from another ſpecies of Gnaphalium, with which Linnæus confounded it. The real Gn. *ſylvaticum* of the laſt named author, intended by him in Fl. Lapp. and Sp. Plant. is the Gn. *norvegicum* of Retzius, and Fl. Dan. 254, as appears from original ancient ſpecimens in the Herb. Linn. as well as from the ſpecific character; though it alſo appears from the Cliffortian Herbarium, now in the poſſeſſion of Sir J. Banks, and indeed from many of his ſynonyms throughout, that Linnæus confounded the two together, as many other botaniſts have done. As theſe ſpecies are unqueſtionably diſtinct, it becomes neceſſary to give ours another trivial name, and we have choſen that of John Bauhin for its aptneſs as well as its antiquity.

The real *ſylvaticum* is a native of alpine woods, and is what Mr. Lightfoot ſpeaks of as a variety (p. 472). We hope at ſome future period to give a figure of it; in the mean time Fl. Dan. t. 254, is a good repreſentation, which Mr. Woodward and Dr. Stokes truly remarked (*With.* 895.) did not well ſuit our lowland plant. That which it deſcribes differs from our Gn. *rectum* in having broader leaves, more attenuated however at the baſe, and leſs naked on the upper ſurface; and a ſhort denſe ſimple ſpike of flowers, with a blacker calyx.

# GNAPHALIUM supinum.
## *Dwarf Cudweed.*

*SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Down* rough or feathery. *Cal.* imbricated; with coloured membranous scales. *Florets* of the radius awl-shaped. Some *florets* of the disk occasionally abortive.

SPEC. CHAR. Stem decumbent, simple, racemose. Flowers few. Leaves linear-lanceolate, downy on both sides.

SYN. Gnaphalium supinum. *Linn. Syst. Nat. ed.* 12. *v.* 3. 234. *Sm. Fl. Brit.* 871. *Huds.* 361. *With.* 714. *Hull.* 183. *Dicks. H. Sicc. fasc.* 2. 17.

G. alpinum. *Lightf.* 470. *t.* 20. *f.* 2.

FOUND on the summits of the Scottish alps in a micaceous soil, flowering in July. Mr. Lightfoot, not adverting to the description of this plant in the appendix to the *Syst. Nat.*, took it, with some hesitation, for *G. alpinum* of Linnæus, a species much more resembling the *dioicum*, and not yet noticed in Britain. Linnæus for some time neglected the plant now under consideration, as a dwarf variety of *G. sylvaticum*.

It has a perennial creeping blackish root. Stems 2, 3, or 4 inches long, simple, slender, leafy, a little woolly, seldom quite erect, and often nearly prostrate. Leaves alternate, linear-lanceolate, entire, narrow, more or less woolly on both sides. Flowers few, in a simple loose leafy cluster; sometimes in dwarf plants solitary; erect, rather larger than in *G. sylvaticum*, *t.* 913, or *rectum*, *t.* 124; the calyx-scales are also longer, sharper, and of a paler more uniform brown than in those species. Florets all fertile. Seeds compressed, polished Receptacle reticulated.

July 1 1803 Published by Ja.° Sowerby London

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83.



# GNAPHALIUM uliginosum.

## *Marsh Cudweed.*

*SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Down* rough or feathery. *Cal.* imbricated; with coloured membranous scales. *Florets* of the radius awl-shaped. Some *florets* of the disk occasionally abortive.

SPEC. CHAR. Stem much branched, spreading. Flowers in terminal tufts.

SYN. Gnaphalium uliginosum. *Linn. Sp. Pl.* 1200. *Sm. Fl. Brit.* 872. *Huds.* 361. *With.* 715. *Hull.* 183. *Relh.* 324. *Sibth.* 251. *Abbot.* 180. *Dicks. H. Sicc. fasc.* 2. 18.

G. longifolium humile ramosum capitulis nigris. *Raii Syn.* 181.

THIS species of *Gnaphalium* is easily to be found on sandy wet commons, where water has stood in winter, and is not less easily known from every other of British growth. Its very numerous spreading branches, each terminated by a dense head of yellowish-brown shining flowers, encompassed with many leaves, mark it sufficiently.

The root is small and annual. Stem about a span high, branched from the bottom, its branches spreading in all directions, but erect at their extremities, alternately subdivided, leafy, clothed with very white cottony down. Leaves alternate, linear-lanceolate, taper at their base, woolly on both sides, but less so than the stem. The flowers appear in August. The calyx-scales are lanceolate, acute, of a pale yellowish brown. Florets all fertile, yellow. Receptacle reticulated.

July 1. 1803. Published by Jas Sowerby. London.

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84.



# GNAPHALIUM gallicum.

## *Narrow-leaved Cudweed.*

*SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Down* rough or feathery. *Cal.* imbricated; with coloured membranous scales. *Florets* of the radius awl-shaped. Some *florets* of the disk occasionally abortive.

SPEC. CHAR. Stem erect, branched. Leaves linear, revolute, acute. Flowers awl-shaped, axillary, crowded.

SYN. Gnaphalium gallicum. *Huds.* 361. *Sm. Fl. Brit.* 872. *With.* 715. *Hull. ed.* 2. 239. *Dicks. H. Sicc. fasc.* 11. 10.

G. parvum ramosissimum, foliis angustissimis, polyspermon. *Raii Syn.* 181. *Pluk. Phyt. t.* 298. *f.* 2.

Filago gallica. *Linn. Sp. Pl.* 1312.

MUCH doubt has arisen concerning this Cudweed as a native of Britain, because it is not now to be found in the sandy fields about Castle Heveningham in Essex, where Dale formerly observed it to be plentiful. Plukenet's figure however precludes all uncertainty as to Dale's plant, and Mr. Woodward is mentioned in the Botanist's Guide, 191, to have noticed the same in Derbyshire. We have only seen garden specimens. It is annual, flowering in July and August, and likes a poor dry gravelly soil.

The root is small and tapering. Stems one or more, a span high, leafy, simple below, repeatedly branched in a corymbose form above. Leaves scattered, narrow, slightly revolute. Flowers small, sessile, and mostly crowded, among some of the leaves; tumid at their base; closed and tapering upwards. Calyx-scales narrow, keeled, membranous at the tip. Florets of the disk about 3, tubular, brownish yellow; those of the radius several, very slender. The germens seem all to be usually fertile. Seed-down rough. Receptacle small, convex, granulated. The whole herb is cottony, with a pretty silvery aspect.

Jenson published by Jno. Sowerby London.

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# GNAPHALIUM minimum.

## *Leaſt Cudweed.*

*SYNGENESIA Polygamia-ſuperflua.*

GEN. CHAR. *Recept.* naked. *Down* rough or feathery. *Cal.* imbricated; with coloured membranous ſcales. *Florets* of the radius awlſhaped. Some *florets* of the diſk occaſionally abortive.

SPEC. CHAR. Stem erect, branched. Leaves lanceolate, acute, flat. Flowers conical, rather cluſtered, both lateral and terminal.

SYN. Gnaphalium minimum. *Sm. Fl. Brit.* 873. *Raii Syn.* 181. *Relh.* 324.

G. montanum. *Hudſ.* 362. *With.* 715. *Hull.* 183.

Filago montana. *Sibth.* 262. *Abbot.* 189.

PLENTIFUL on the moſt barren ground, about the margins of gravel-pits, and other dry ſandy places, where it flowers from July to the end of autumn, varying greatly in luxuriance according to the nouriſhment or moiſture it receives.

Root annual, ſmall but tough. Stem erect, a few inches high, round, leafy, a little woolly; ſlender, ſimple, and naked below; branched and corymboſe above. Leaves alternate, upright, lanceolate, or a little ovate, acute, entire, flat, woolly on both ſides. Flowers ſmall, ſeſſile, either ſcattered or in cluſters, axillary or terminal, conical, angular, woolly. Calyx-ſcales awl-ſhaped, keeled, membranous at the tip; the inner ones entirely ſo. Hermaphrodite florets from 4 to 8, tubular, regularly 5-cleft, yellow: female ones ſlender, filiform: all producing perfect ſeed. Down rough. Receptacle tuberculated.

Former writers have miſtaken this for the *Filago montana* of Linnæus, a plant not found in Britain, which is twice as large in all its parts and much more woolly, as appears by the Linnæan Herbarium.

Ap.[1] 1. 1805 Published by Ja.[s] Sowerby London.

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86.



# GNAPHALIUM germanicum.

## *Common Cudweed.*

*SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Down* rough or feathery. *Cal.* imbricated; with coloured membranous scales. *Florets* of the radius awl-shaped. Some *florets* of the disk occasionally abortive.

SPEC. CHAR. Stem erect, proliferous. Leaves lanceolate. Heads globose, many-flowered, lateral as well as terminal.

SYN. Gnaphalium germanicum. *Sm. Fl. Brit.* 874. *Hudf.* 362. *With.* 716. *Hull.* 184.

G. minus, seu Herba impia. *Raii Syn.* 180.

Filago germanica. *Linn. Sp. Pl.* 1311. *Relh.* 327. *Sibth.* 262. *Abbot.* 189.

DRY gravelly or sandy fields produce this plant in abundance. Its first flowers appear in June or July, but its repeatedly branching stem bears a succession of fresh ones to the end of autumn.

Root annual, small. Stems at first a span high, erect and simple, leafy and woolly, terminated by a solitary round sessile head of numerous flowers: but two or more branches soon spring from under this head, point upward, flower, and branch in a similar manner, so that the offspring as it were exalting itself above the parent has given occasion to the ingenious name of *Herba impia*, or Wicked Cudweed. Leaves numerous, alternate, erect, lanceolate, waved, woolly on both sides. Flowers spreading in every direction, cylindrical. Calyx-leaves brownish, shining, tapering, smooth, with a green rib. Florets pale yellow; the hermaphrodite only 2 or 3; female several, very slender; both kinds producing perfect seed, crowned by rough down.

The name Cudweed has arisen from a supposed power in this herb to provoke rumination in cattle; and its dry woolly substance, when taken into the throat, is not unlikely to have such an effect.

Published by J. Sowerby London

87.



# CONYZA squarrosa.

## *Plowman's Spikenard.*

*SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Down* rough. *Calyx* imbricated, roundish. *Florets* of the radius three-cleft.

SPEC. CHAR. Leaves ovato-lanceolate, downy. Stem herbaceous, corymbose. Calyx-scales leafy, recurved and prominent.

SYN. Conyza squarrosa. *Linn. Sp. Pl.* 1205. *Sm. Fl. Brit.* 875. *Huds.* 363. *With.* 717. *Hull.* 183. *Relh.* 325. *Sibth.* 251. *Abbot.* 180.

Baccharis monspeliensium. *Raii Syn.* 179.

A FREQUENT plant on dry, chalky, limestone, or marly soils, but not on gravel. It often occurs in shady situations, sometimes in sunny ones, but seems to require shelter from cold winds. It flowers in July and August.

Root biennial, branched and fleshy. The whole herb is soft and downy; in flavour bitter and somewhat aromatic, with a portion of mucilage. Stem upright, 2 or 3 feet high, angular, leafy. Leaves of a broad lanceolate figure, veiny, soft; the radical ones large, tapering at the base, crenate; the rest smaller, and often entire. Flowers numerous, in a terminal leafy corymbus or panicle. Calyx ovate; its outer scales with recurved green leafy tips; the inner erect, reddish, fringed. Florets yellow; those of the disk regular, tubular; those of the radius ligulate, 3-cleft at the tip, without stamina; all fertile. Seeds obovate, angular. Receptacle tuberculated.

The radical leaves bear some resemblanc to those of Foxglove.

Aug.t 1803 Published by Ja.s Sowerby London

88.



# ERIGERON canadense.

## *Canada Flea-bane.*

*SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Down* simple. *Florets* of the radius linear, very narrow, numerous. *Cal.* imbricated.

SPEC. CHAR. Stem hairy, panicled. Leaves lanceolate; the lower ones toothed.

SYN. Erigeron canadense. *Linn. Sp. Pl.* 1210. *Sm. Fl. Brit.* 876. *Huds.* 363. *With.* 718. *Hull.* 185. *ed.* 2. 240. *Dicks. H. Sicc. fasc.* 10. 16.
Conyza canadensis annua acris alba, linariæ foliis. *Raii Syn.* 175.

FOUND in cultivated as well as waste ground, but Ray thinks it not indigenous, for the reason, we presume, given in our last page concerning the American Cudweed. It is hard to say to what distances such volatile seeds may or may not be transported by natural means. We have not met with this *Erigeron* near London, as indicated by Ray and Hudson. A fresh specimen, drawn in the plate, was sent us from the Ballast hills of the Northumberland coast by Mr. Robson, and a dry one from "sandy ground below the bridge at Neath, Glamorganshire, to all appearance perfectly wild," by Mr. Middleton.

Root annual. Stem erect, wand-like, leafy, hairy, furrowed, branched in a panicled manner, and bearing very numerous small yellowish flowers. It varies from 1 to 2 feet, or more, in height. Leaves numerous, alternate, lanceolate, acute, rough-edged, entire, except the lower ones, which are mostly toothed towards their extremities. Calyx-scales linear-lanceolate, acute, smoothish; at length reflexed. Marginal florets narrow, erect, whitish, tipped with flame-colour; those of the disk white. Seeds white, silky. Down rough, as well as the receptacle.

May 1. 1809 Published by J. Sowerby London.

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# ERIGERON acre.

## *Blue Flea-bane.*

*SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Down* ſimple. Florets of the radius linear, very narrow, numerous. *Cal.* imbricated.

SPEC. CHAR. Stem racemoſe. Stalks moſtly ſingle-flowered. Leaves lanceolate or tongue-ſhaped, ſeſſile.

SYN. Erigeron acre. *Linn. Sp. Pl.* 1211. *Sm. Fl. Brit.* 877. *Hudſ.* 363. *With.* 718. *Hull.* 185. *Relh.* 325. *Sibth.* 252. *Abbot.* 181. *Curt. Lond. faſc.* 1. *t.* 60.

Aſter arvenſis cæruleus acris. *Raii Syn.* 175.

THIS, like the *Gnaphalium* in our laſt plate, prefers a barren gravelly ſoil, but is generally found in more graſſy or ſhady ſpots, and often upon chalk or limeſtone. It is biennial, flowering naturally in July and Auguſt; but from accidental cauſes its bloſſoms may occaſionally be met with in early ſpring, or late in mild winters.

Root woody and branched. Stem a foot or two high, upright and ſtraight, leafy, furrowed, purpliſh and hairy, producing many flowers in a racemoſe form in its upper part, on long bracteated ſtalks. Leaves ſcattered, ſeſſile, roughiſh, of an oblong-lanceolate, ſpatulate, or tongue-like figure, moſtly entire; the lowermoſt obovate and often coarſely ſerrated. Calyx hairy. Flowers appearing delicately ſtreaked with blue, from the numerous upright linear florets of the radius, which encompaſs the yellow diſk. Seed-down copious, long, rough, of a tawny hue, by which, when once known, the plant is eaſily recogniſed. Seeds rough.

Apr.l 1 1803 Published by Ja.s Sowerby, London.

V

90.



# ERIGERON alpinum.

*Alpine Flea-bane.*

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*SYNGENESIA Polygamia-ſuperflua.*

GEN. CHAR. *Recept.* naked. *Seed-down* ſimple. *Florets* of the radius linear, very narrow.

SPEC. CHAR. Stems almoſt ſingle-flowered. Calyx ſlightly hairy.

SYN. Erigeron alpinum. *Linn. Sp. Pl.* 1211. *Dickſ. in Linn. Tranſ. V.* 2. 288. *With.* 718. *Fl. Dan. t.* 292.

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FIRST diſcovered by Mr. Dickſon upon moiſt rocks of the mountain Ben Lawers in Scotland. Our ſpecimen was ſent by Mr. Mackay. It is perennial, and flowers in July.

The root conſiſts of many long ſimple round fibres. Stems ſeveral, erect, leafy, angular and rather hairy, naturally ſimple, and bearing one or, at moſt, two flowers; but in a luxuriant ſoil, or when by accident broken, they ſhoot out into many ſingle-flowered branches. Leaves ſpatulate, ribbed, hairy; thoſe on the ſtem alternate, ſeſſile, and dilated at their baſe. Flower erect. Calyx of numerous linear upright leaves, ſlightly hairy, often reddiſh. Central florets very numerous, tubular, yellowiſh, hermaphrodite, but with the thickened ſtigma that according to Dr. Stokes indicates barrenneſs; a point we have no means of aſcertaining. The ſeeds of theſe florets however look as if perfect. Florets of the radius numerous, ligulate, very narrow, ſpreading, pale purple, furniſhed with a ſtyle and ſlender ſtigmas, no ſtamina. Seeds of all the florets hairy. Seed-down turning reddiſh, and, when very highly magnified, rough. Receptacle naked, marked with minute depreſſions.

Like moſt alpine plants, this varies very much in ſize according to ſoil and ſituation. The E. *uniflorum*, if diſtinct, is to be known from it chiefly by the calyx being woolly, or clothed with long thick-ſet white hairs.

May 1. 1798 Published by J. Stoneby London

91.



# ERIGERON uniflorum.

## *Pale-rayed Mountain Flea-bane.*

*SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Down* simple. *Florets* of the radius linear, very narrow, numerous. *Cal.* imbricated.

SPEC. CHAR. Stems mostly single-flowered. Calyx hairy. Florets of the radius erect, somewhat tubular.

SYN. Erigeron uniflorum. *Linn. Sp. Pl.* 1211. *Fl. Lapp. ed.* 2. 250. *t.* 9. *f.* 3. *Sm. Tr. of Linn. Soc. v.* 10. 346.

GATHERED on Ben Lawers, as well as on rocks by the river Almond, near Lindoch, seven miles from Perth, by Mr. G. Don, who justly distinguished this species from *E. alpinum, t.* 464, with which even Linnæus at one time confounded it. In root, habit and size these two plants nearly agree, as well as in time of flowering. The stems of both are usually simple and single-flowered, occasionally many-flowered. But the florets of the radius in *uniflorum* are more slender and always upright, of a darker purple about their middle, though more or less white at the tip; those of the disk are tipped with a very dark purple or brown. The calyx is very hairy externally; its inner scales purple, fringed. The disk very rarely varies to a light yellow.

May 1, 1812 published by Jos. Sowerby London.

92.



# TUSSILAGO Farfara.

## *Colts-foot.*

*SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Receptacle* naked. *Down* simple. *Calyx-scales* equal, as long as the disk, somewhat membranous.

SPEC. CHAR. Stalk single-flowered, clothed with imbricated scales. Leaves heart-shaped, angulated and toothed.

SYN. Tussilago Farfara. *Linn. Sp. Pl.* 1214. *Huds. Fl. An.* 364. *With. Bot. Arr.* 904. *ed.* 3. *v.* 3. 719. *Relh. Cant.* 314. *Sibth. Ox.* 261. *Curt. Lond. fasc.* 2. *t.* 60.

Tussilago. *Raii Syn.* 173.

COMMON on moist marley and calcareous ground, flowering in March or April, soon after which the leaves appear, and continue through the summer.

Root perennial, creeping horizontally. Stalks erect, simple, leafless, but clothed with lanceolate, imbricated, close-pressed scales. Flowers terminal, solitary, drooping before they expand, then erect, lemon-coloured, not inelegant, being more conspicuous on account of their radiated form than those of many other species. The calyx consists of several simple parallel linear equal scales, accompanied at the base by a few scattered scales like those on the stalk, and which cannot be considered as belonging to the calyx itself. Flowers of the disk tubular and hermaphrodite; those of the radius numerous, ligulate and female. The seeds of both are so generally barren, that we are at a loss to decide upon Dr. Stokes's remark, in the second edition of Withering, that those of the disk only are so; but, as he justly observes, those of the radius only have the cloven taper stigma, which in this tribe indicates a fertile floret, and we therefore do not doubt his accuracy in the other respect. The leaves grow on long foot-stalks, clustered, from short lateral branches, and are heart-shaped, acute, angular and sharply toothed, very smooth above, cottony and veiny beneath. They are when young rolled back, and in that state thickly clothed with very white cotton, as is the stalk also. This cotton has been used for tinder and similar purposes. The leaves are bitterish, mucilaginous, and astringent, and are said to be good for the lungs, either taken in an infusion or smoked as tobacco. See Ray and Withering. Hence the generic name, from *Tussis* a cough.


Nov. 1, 1799 Published by J. Sowerby London

93.



# TUSSILAGO hybrida.
## *Longer-stalked Butter-bur.*

*SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Down* simple. *Calyx-scales* equal, as long as the disk, somewhat membranous.

SPEC. CHAR. Panicle dense, oblong. Female florets very numerous; hermaphrodite one or two, central, with generally separate antheræ.

SYN. Tussilago hybrida. *Linn. Sp. Pl.* 1214. *Huds. Fl. An.* 364. *With. Bot. Arr.* 906. *ed.* 3. *v.* 3. 721.
Petasites major, floribus pediculis longis insidentibus. *Raii Syn.* 179.

WE are obliged to Mr. Travis of Scarborough for this wild specimen, which was gathered near Thorp Arnold in Leicestershire, on the sides of ditches, where this plant grows intermixed with *T. Petasites*. It is said to be not uncommon in that county, and also to be frequent about Manchester. It is perennial, flowering in April, and the down of the seeds before they are shed, forming a silvery plume, is very ornamental and conspicuous.

Root thick, creeping very far. Leaves radical, heart-shaped, pointed, irregularly toothed, cut away close to the side nerves at the base, very broad, downy beneath, standing on long upright fleshy cottony foot-stalks. Stalk erect, rising above the leaves, simple, round, cottony, invested with lanceolate scales, the lowermost of which mostly terminate in a small leafy appendage. Panicle dense, oblong or nearly ovate at first; after flowering, cylindrical and more loose. Partial flower-stalks mostly a little branched, slender, scaly and downy. Flowers flesh-coloured. Calyx short, nearly smooth, tipped with purple. Florets very numerous, all tubular, and for the most part female. Style much longer than the corolla, cloven, sharp-pointed. Linnæus describes these female florets as naked, or without corolla; but we must confess that in his own specimen as well as ours we can find no floret without. Seed obovate, rarely fertile. Down rough. In the centre among these female florets are found one or two, scarcely more, hermaphrodite ones, which have a reddish and rather more conspicuous corolla. Their antheræ are red, separate, or scarcely at all syngenesious. Their stigma is club-shaped, notched but hardly cloven, much thicker and shorter than in the female florets, and the germen is evidently imperfect.

We are almost persuaded of what nobody has hitherto hinted, that this plant is the true female of *T. Petasites*, being furnished with only a small provision of the other sex to perform its office occasionally, as is the case in *Spinachia*, *Cannabis*, *Musa*, *&c.* See *T. Petasites* in the next plate.

Nov.r 1. 1797 Published by J.n Sowerby London

94.



# TUSSILAGO Petasites.
## *Common Butter-bur.*

*SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Down* simple. *Calyx-scales* equal, as long as the disk, somewhat membranous.

SPEC. CHAR. Panicle dense, ovate. Flowers almost all hermaphrodite, with united antheræ.

SYN. Tussilago Petasites. *Linn. Sp. Pl.* 1215. *Huds. Fl. An.* 364. *With. Bot. Arr.* 906. *ed.* 3. *v.* 3. 720. *Relh. Cant.* 314. *Sibth. Ox.* 261. *Curt. Lond. fasc.* 2. *t.* 59.

Petasites. *Raii Syn.* 179.

VERY common on the banks of rivers and in moist shady places, flowering in April, about which time also the leaves appear, and in the course of the summer grow to a great size, being 2 or 3 feet in diameter.

The root is perennial, creeping very far, and increasing rapidly, so as to be extirpated with difficulty; in which respect it agrees with *T. hybrida*, as well as in the appearance and form of its leaves, which however are somewhat larger in the *Petasites*. The flower-stalk differs chiefly in being rather shorter, and the panicle after flowering less lengthened out. The flowers are larger, and scales of the calyx twice as long. All the florets are hermaphrodite in appearance; but their stigmas are thick and barren, many authors observing that the seeds are never perfected. The younger Linnæus and Haller, however, have occasionally noted a very few female florets to accompany the others, which the latter tells us produce good seeds. This circumstance is rare, and has not been observed in England; nor, if general, would it invalidate our conjecture, that this is the real male of *T. hybrida*, forming but one species with that. It is worth consideration whether the *T. alba* may not stand in the same relation to the *paradoxa* of Retzius, *Ait. Hort. Kew. v.* 3. 188. The antheræ of *T. Petasites* are united, as in *alba*; in *paradoxa*, as in *hybrida*, they are separate. All these plants increase so much by root, that impregnation (whether in the same individual or not) rarely takes place, which is also the case with mints and many other vegetables. We agree with Dr. Stokes and Professor Sibthorp, that as the florets of the circumference only in this genus produce perfect seeds, the central ones having the thickened stigma which appears always to be barren, it might be removed to the order of *Polygamia-necessaria*; but Syngenesious plants are subject to such variations in the perfection of their organs of impregnation, that it is by no means certain how far that order, or indeed some others, are founded in nature. This point we cannot here discuss, but may on some future occasion.

Feb. 1. 1797. Published by J. Sowerby London

95.



# SENECIO vulgaris.

## *Common Groundſel.*

*SYNGENESIA Polygamia-ſuperflua.*

GEN. CHAR. *Recept.* naked. *Down* ſimple. *Cal.* cylindrical, many-leaved, equal, ſcaly at the baſe; ſcales dead at the tip.

SPEC. CHAR. Flowers without a radius, ſcattered. Leaves ſinuated in a pinnate form, toothed, embracing the ſtem.

SYN. Senecio vulgaris. *Linn. Sp. Pl.* 1216. *Sm. Fl. Brit.* 881. *Hudſ.* 365. *With.* 721. *Hull.* 186. *Relh.* 315. *Sibth.* 252. *Abbot.* 182. *Curt. Lond. faſc.* 1. *t.* 61. *Raii Syn.* 178.

EVERY one knows the Common Groundſel, a weed found in all kinds of cultivated ground, as well as on banks by roadſides, and ſimilar places. It is annual, and flowers almoſt all the year round. The flower-buds and young tops are the food of many ſmall birds, and are given to Canary-birds and others in a ſtate of confinement. In ſeveral parts of England it is called Simſon, apparently a corruption of the Latin *Senecio*, perhaps through the medium of the French *Seneſſon*.

The herb varies in ſize, and is either altogether ſmooth, or ſlightly clothed with ſoft hairs and a kind of cottony down, eſpecially the backs of the leaves. The colour of the leaves is a bright ſhining green, and their ſmell merely herbaceous, without any very peculiar odour. Flowers terminal, ſomewhat panicled. All the ſcales of the calyx very conſpicuouſly withered, and black at the tip. Corolla compoſed of yellow tubular hermaphrodite fertile florets, without any radiating ones, ſo that this ſpecies ſtrictly belongs to the firſt order of *Syngeneſia*. Seeds furrowed, pubeſcent. Down which crowns the ſeed ſeſſile, rough.

96.



## SENECIO viſcoſus.

*Stinking Groundſel.*

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*SYNGENESIA Polygamia ſuperflua.*

GEN. CHAR. *Receptacle* naked. *Down* ſimple. *Calyx* cylindrical, ſcaly at the baſe; ſcales dead at the tip.

SPEC. CHAR. Radius revolute. Leaves pinnatifid, viſcid. Scales of the calyx lax, and nearly as long as the calyx itſelf, which is hairy.

SYN. Senecio viſcoſus. *Linn. Sp. Pl.* 1217. *With. Bot. Arr.* 909. *Hudſ. Fl. An.* 365. α.

Senecio hirſutus viſcidus major odoratus. *Raii Syn.* 178.

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GATHERED by Dr. Smith about the chalk-pits at Dartford in Kent, flowering in July. The root is annual. The whole plant covered with a fetid viſcous liquor which retains ſmall inſects, duſt and light ſubſtances in great abundance. The ſtem is much branched and ſtraggling, not ſimple and erect as in Senecio ſylvaticus. The flowers are in all their parts twice as large as in that plant, but much more ſcattered, and leſs numerous, as well as of a brighter gold colour, and the calyx is hairy. All theſe circumſtances ſurely juſtify us in conſidering them as diſtinct ſpecies.


J. Dowsley del.t Oct.r 1. 1791.

√

# SENECIO lividus.

## *Green-scaled Groundsel.*

*SYNGENESIA Polygamia superflua.*

GEN. CHAR. *Recept.* naked. *Down* simple. *Cal.* cylindrical, many-leaved, equal, scaly at the base; scales dead at the tip.

SPEC. CHAR. Radius revolute. Leaves clasping the stem, lanceolate, pinnatifid and toothed. Scales of the calyx short; their points acute, and not discoloured.

SYN. Senecio lividus. *Linn. Sp. Pl.* 1216. *Willd. Sp. Pl. v.* 3. 1983.

S. corollis revolutis, foliis amplexicaulibus lanceolatis dentatis, squamis calycinis brevissimis intactis. *Linn. Hort. Ups.* 261.

Jacobæa annua, senecionis folio, fœniculi odore. *Till. Pis.* 86. *t.* 28. *f.* 2.

THIS new British plant was discovered in October, 1812, by W. Middleton, Esq., on some newly enclosed moor land at Sneaton, near Whitby, Yorkshire, and no one can withhold from its finder the praise of great accuracy of observation. Its appearance is most like *S. sylvaticus*, *t.* 748, but the essential and all-sufficient marks of distinction are the dilated base of the leaves, which embraces the stem, and the taper-pointed scales at the base of the calyx, which are not blackened and abrupt at the tip, as in perhaps every other *Senecio;* so that it in some measure wanders from the generic character. By the Linnæan herbarium we find this species varying very much in the depth of the segments of its leaves. Mr. Middleton observes that the florets of the radius are not at first revolute, but gradually become so. The seeds of this plant, as well as of *S. squalidus*, *t.* 600, were sent to Linnæus by Dillenius. An Italian specimen, from Arduino, helps us to the synonym of Tilli.

Pub. 1807, & sold by Jno. Conrady London.

✓

98.



# SENECIO ſylvaticus.

## *Mountain Groundſel.*

*SYNGENESIA Polygamia-ſuperflua.*

GEN. CHAR. *Recept.* naked. *Down* ſimple. *Cal.* cylindrical, many-leaved, equal, ſcaly at the baſe; ſcales dead at the tip.

SPEC. CHAR. Radius revolute. Leaves pinnatifid, lobed, toothed. Scales of the calyx ſhort. Stem erect, ſtraight, corymboſe.

SYN. Senecio ſylvaticus. *Linn. Sp. Pl.* 1217. *Sm. Fl. Brit.* 883. *With.* 722. *Hull.* 186. *Sibth.* 253. *Abbot.* 182.

S. viſcoſus β. *Hudſ.* 365.

S. minor latiore folio, ſive montanus. *Dill. in Raii Syn.* 198.

MR. HUDSON was almoſt ſingular in the opinion that this plant was a variety of the S. *viſcoſus* of Linnæus, delineated in our firſt vol. *t.* 32, to which we ſee no reaſon to aſſent. That ſpecies has a branched ſpreading ſtem about a foot high; flowers leſs corymboſe, twice or thrice as large as theſe, with a much more conſpicuous radius, and the calyx-ſcales nearly equal to the calyx itſelf; this on the contrary has a ſtraight upright wand-like ſtem, about 3 feet high; upper leaves more finely divided; flowers corymboſe, numerous, much ſmaller and paler, with a ſhort ſmall recurved radius, and the calyx-ſcales ſmall and ſhort as in moſt of the genus; the herb, though almoſt equally unpleaſant in its ſcent, is however much leſs viſcid.

S. *ſylvaticus* is annual, and flowers in July. It loves a gravelly or ſandy ſoil, and is found in buſhy ſpots upon heaths, where trees or furze have been cut down; eſpecially where brakes or other plants have been burnt in the preceding autumn.

J

# SENECIO ſqualidus.

## *Inelegant Ragwort.*

*SYNGENESIA Polygamia-ſuperflua.*

GEN. CHAR. *Recept.* naked. *Down* ſimple. *Cal.* cylindrical, ſcaly at the baſe; ſcales dead at the tip.

SPEC. CHAR. Radius ſpreading, longer than the calyx; its florets elliptical and entire. Leaves pinnatifid; their ſegments diſtant, ſomewhat linear.

SYN. Senecio ſqualidus. *Linn. Sp. Pl.* 1218. *Hort. Upſ.* 260.

THIS *Senecio* grows abundantly on almoſt every wall in and about Oxford, and though long ſince noticed there by Sir Joſeph Banks, it has not found its way into the *Flora Oxonienſis*, nor hitherto into any other. A careful compariſon with the herbarium of Linnæus ſhews it to be his *ſqualidus*, ſeeds of which he received from Dillenius with a manuſcript name of *Jacobæa laciniatis foliis, tanaceti odore*, before the publication of his *Hort. Upſalienſis*, in which work he gueſſes it to be a native of the South of Europe. Moſt probably Dillenius collected theſe ſeeds from the walls of Oxford. If it were at that time only a garden plant there, it could ſcarcely have now totally left the garden, and eſtabliſhed itſelf ſo perfectly elſewhere. It is at firſt ſight ſo like a variety of *S. Jacobæa*, that Dillenius, as well as the late Prof. Sibthorp, might not dare to inſert it in their works on wild plants. We have not materials to determine whether it may be the S. *gallicus* of Villars, *v.* 3. 230.

The root is annual or biennial. Stem various in luxuriance, erect, branched, often a little hairy. Leaves embracing the ſtem, deeply pinnatifid, narrow, dentate, nearly ſmooth, flat, rather fleſhy, often purpliſh beneath. Flowers ſolitary at the end of terminal, ſtraggling, bracteated, corymboſe ſtalks. Calyx ſmooth, almoſt hemiſphærical, its outer ſcales few and ſmall. Inner florets very numerous. Thoſe of the radius broad, ſpreading, elliptical, entire, of a bright golden yellow, at length reflexed. Theſe florets, and indeed its whole habit and a peculiar ſmell, ſomewhat like Tanſy or Mugwort, make the plant ſufficiently diſtinct.

It flowers from June to the very end of Autumn. Our ſpecimens were gathered by A. B. Lambert, Eſq.

Drawn 1797 by Mr. Hoole, for Sowerby.

# SENECIO tenuifolius.

## *Hoary Groundſel.*

*SYNGENESIA Polygamia-ſuperflua.*

GEN. CHAR. *Recept.* naked. *Down* ſimple. *Cal.* cylindrical, ſcaly at the baſe; ſcales dead at the tip.

SPEC. CHAR. Radius ſpreading. Leaves pinnatifid, ſomewhat revolute; paler and ſhaggy beneath. Stem erect, cottony.

SYN. Senecio tenuifolius. *With.* 723. *Jacq. Auſtr. t.* 278. *Sym. Syn.* 181. *Sibth.* 253.
S. erucifolius. *Hudſ.* 366. *Relh.* 316. *Abbot.* 182. *Curt. Lond. faſc.* 5. *t.* 64.
Jacobæa Senecionis folio incano perennis. *Raii Syn.* 177.

SENT from Holm near the ſea, Norfolk, by the Rev. Mr. Sutton. No plant is more variable in the appearance of its foliage. On a calcareous ſoil, its favourite ſituation, the leaves are very much revolute, and quite white beneath with a thick cottony web, of which the ſtem always more or leſs partakes; in damp ſhady places they are almoſt flat, and green, though always paler and ſomewhat ſhaggy, on the under ſide. Such are the extremes of the two varieties marked by Dr. Withering, but intermediate ſpecimens are always to be found.

The root is perennial, moderately creeping. Stem ſimple, erect, wand-like, 1 to 3 feet high, leafy, furrowed, ſhaggy. Leaves numerous, alternate, pinnatifid; the uppermoſt with linear ſegments, very little toothed. Flowers corymboſe, bright-yellow. Calyx ſcales broad, green, more or leſs woolly, with a white membranous border, a little browniſh at the tip, though leſs ſo than in ſome other ſpecies; thoſe at the baſe few and ſmall. Rays broad, ſpreading, but ſoon revolute. Seed-down long, rough. It flowers in July and Auguſt, and is not a very common plant.

This is certainly diſtinct from S. *erucifolius* of Linnæus, the authentic ſpecimen of which from Scania, deſcribed in both editions of *Sp. Pl.* though with wrong ſynonyms, much more nearly reſembles S. *ſylvaticus*, of which I am inclined to think it a variety.

# SENECIO Jacobæa.

## *Common Ragwort.*

*SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Down* ſimple. *Cal.* cylindrical, many-leaved, equal, ſcaly at the baſe; ſcales dead at the tip.

SPEC. CHAR. Radius ſpreading. Leaves doubly pinnatifid, ſomewhat lyrate, divaricated, toothed, ſmooth. Stem erect.

SYN. Senecio Jacobæa. *Linn. Sp. Pl.* 1219. *Sm. Fl. Brit.* 885. *Hudſ.* 365. *With.* 724. *Hull.* 187. *Relh.* 328. *Sibth.* 254. *Abbot.* 182. *Mart. Ruſt. t.* 85.

Jacobæa vulgaris. *Raii Syn.* 177.

ABUNDANT every where in dry paſtures, waſte ground, and by road ſides, flowering copiouſly in the uſual hot weather of July and Auguſt, at which time it forms a contraſt with the ſurrounding ſcorched and withered herbage.

Root perennial. Stem erect, furrowed, very leafy, branched in a corymboſe manner. Leaves alternate, deep ſhining green, doubly pinnatifid, or cut into various ſpreading, wedge-ſhaped, toothed ſegments: the lower ones on ſtalks; the reſt embracing the ſtem. Flowers very numerous, in terminal upright corymbi, of a bright golden yellow, eſpecially their radius, which conſiſts of a great number of linear narrow florets, at firſt ſpreading, but recurved in decay. The ſeeds of the diſk are thickly clothed with ſhort ſilky hairs, but I am obliged to Mr. Sowerby for obſerving that thoſe of the radius are quite ſmooth. The down of all is rough, but not feathery. A cottony web, more or leſs denſe, frequently inveſts the flower-ſtalks and calyx.

In Yorkſhire this plant is ſometimes called Swine's Creſſes, and has been recommended in a bruiſed ſtate as an application to cancers.

The leaves are devoured by the pretty black and yellow winged caterpillars of the *Phalæna Jacobæa*.

102.



# SENECIO aquaticus.

## *Marſh Ragwort.*

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*SYNGENESIA Polygamia-ſuperflua.*

**Gen. Char.** *Recept.* naked. *Down* ſimple. *Cal.* cylindrical, many-leaved, equal, ſcaly at the baſe; ſcales dead at the tip.

**Spec. Char.** Radius ſpreading; florets elliptical. Leaves lyrate, ſerrated; the lowermoſt obovate and undivided. Seeds ſmooth.

**Syn.** Senecio aquaticus. *Hudſ.* 366. *Sm. Fl. Brit.* 885. *With.* 725. *Hull.* 187. *Relh.* 329. *Sibth.* 254. *Abbot.* 182.

Jacobæa latifolia paluſtris ſive aquatica. *Raii Syn.* 178.

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EQUALLY common with the preceding, but in different ſituations; preferring moiſt meadows and even ditches, where it flowers from July to the end of autumn, and the root is perennial.

Linnæus conſidered this but as a variety of *S. Jacobæa*, and indeed its leaves are ſubject to ſo many changes of form, from ovate to deeply pinnatifid, that they ſometimes approach nearly to thoſe of the foregoing; they are however always of a lighter colour. The flowers are fewer, larger, with the radiant florets more elliptical; ſometimes indeed, when they are but few in number, very much ſo, and of a conſiderable breadth. Theſe circumſtances authorized Mr. Hudſon and others to conſider this as a diſtinct ſpecies. We are happy to have diſcovered an additional character in the ſmoothneſs of the ſeeds, in which this *Senecio* differs from every other we have been able to examine; for in this the ſeeds of both diſk and radius are quite ſmooth, except a little occaſional roughneſs on the upper part of their edges, nor have they any of thoſe ſilky hairs found in other plants of this genus.

Feb.y 1. 1803 Published by Ja.s Sowerby, London.

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# SENECIO paludosus.

## *Marsh Groundsel. Bird's-tongue.*

*SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Down* simple. *Cal.* cylindrical, scaly at the base; scales dead at the tip.

SPEC. CHAR. Radius spreading. Leaves sword-shaped, sharply serrated, somewhat woolly beneath. Stem perfectly straight.

SYN. Senecio paludosus. *Linn. Sp. Pl.* 1220. *Hudſ.* 366. *With.* 725. *Hull.* 187. *Relh.* 317.

Virgæ aureæ sive Solidagini angustifoliæ affinis, Lingua avis Dalechampii. *Raii Syn.* 176.

NO plant more rare than the present has hitherto appeared in our work. Mr. Hudson admitted it on the authority of Ray; but the place of growth he mentions, near Streatham ferry in the Isle of Ely, has many a time been searched in vain, so that most botanists have supposed something else had been mistaken for it. Mr. Relhan however mentions Littleport, Chatteris, and Burwell fens as its stations; and our specimen was found at Wangford near Brandon, by Francis Eagle jun. Esq. and communicated by the Rev. Mr. Hemsted. It grows in deep inaccessible fens and ditches, flowering in June and July.

Root of many long simple fibres, perennial. Stem from three to six feet or more in height, perfectly straight, upright and simple, leafy, round, hollow, striated, loosely clothed with cottony down, which likewise invests the young leaves and flower-stalks. Leaves scattered, numerous, sessile, lanceolate, acute, sharply serrated; narrow and entire at the base; smooth above; pale, and generally downy, beneath. Flowers in a kind of terminal corymbus, the lowermost stalks arising from the bosoms of the upper leaves. Bracteæ awl-shaped. Flowers above an inch in diameter, bright-yellow. Florets of the radius linear, five-toothed, spreading, but little recurved. Receptacle set with short hairs between the seeds, as is often the case in many plants in which that part is said to be naked, for these hairs are very different from the long chaffy scales to be found in some genera. The seed-down is rough.

Oct. 1, 1799. Published by J. Harris, Strand, London.

104.



# SENECIO saracenicus.

## *Broad-leaved Groundsel.*

*SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Down* simple. *Cal.* cylindrical, many-leaved, equal, scaly at the base; scales dead at the tip.

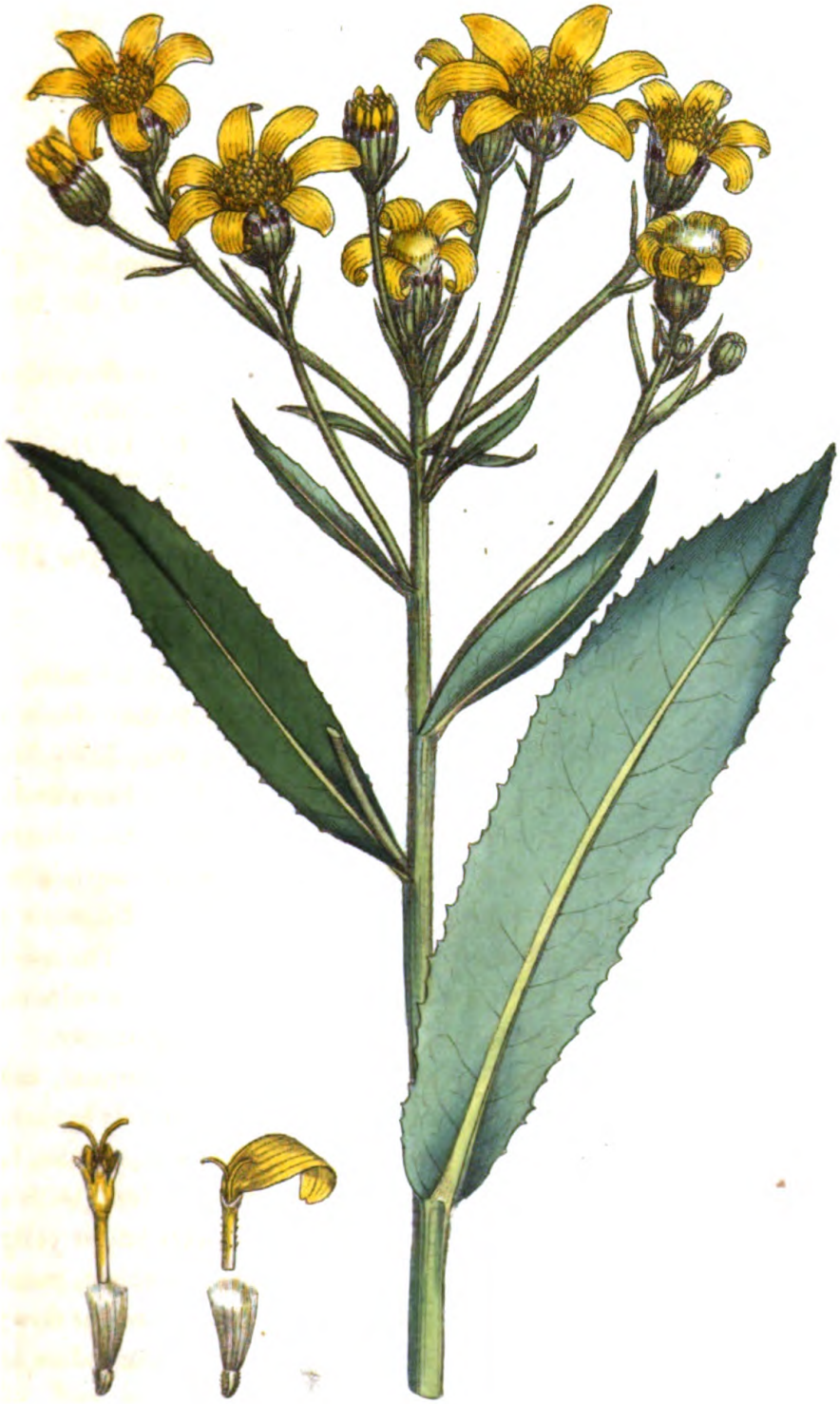
SPEC. CHAR. Radius spreading. Flowers corymbose. Leaves lanceolate, serrated, nearly smooth.

SYN. Senecio saracenicus. *Linn. Sp. Pl.* 1221. *Sm. Fl. Brit.* 887. *Huds.* 367. *With.* 726. *Hull. ed.* 2. 242. *Jacq. Austr. v.* 2. 52. *t.* 186.

Virga aurea maxima, radice repente. *Raii Syn.* 177.

MR. JOHN WINDSOR, an assiduous young botanist, favoured us with this wild specimen in July 1810 from the neighbourhood of Settle, Yorkshire. The Rev. John Rudd, F.L.S., of Preston, sent others in August from Brawsholme, 19 miles from the town last named. Mr. Okell has observed the same near Chester, and we have gathered it long since in a watery lane near Preston hall, between Kirkby Lonsdale and Kendal. This is one of our rarest British plants. The specific name alludes to its being used by the Saracens as a vulnerary. Its qualities are astringent, with considerable acrimony.

The root is perennial and creeping. Stems annual, erect, straight, from 3 to 5 feet high, leafy, angular, scarcely branched, smooth, or but slightly downy. Leaves alternate, sessile, lanceolate or oblong, acute, a span long, more or less, with numerous, sharp, tooth-like serratures. Flowers bright yellow, in a large terminal corymbus, with narrow, lanceolate, pointed bracteas, and rather downy stalks. Calyx also somewhat downy, its supplementary scales lanceolate. Florets of the radius long and somewhat elliptical, scarcely toothed at the end, with longish claws, not numerous, revolute in decay only. Seeds nearly, if not quite, smooth, with a roughish down.



# ASTER Tripolium.

*Sea Star-wort.*

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*SYNGENESIA Polygamia Superflua.*

GEN. CHAR. *Receptacle* naked. *Seed-down* ſimple. *Cor.* with more than ten rays. *Cal.* imbricated, its lowermoſt ſcales ſpreading.

SPEC. CHAR. Leaves linear-lanceolate, entire, fleſhy, ſmooth, obſcurely three-nerved. Scales of the calyx ſomewhat membranous and obtuſe. Flowers corymboſe.

SYN. Aſter Tripolium. *Linn. Sp. Pl.* 1226. *Hudſ. Fl. An.* 368. *Ait. Hort. Kew. v.* 3. 199. *With. Bot. Arr.* 915. *Relh. Cant.* 318.

A. maritimus cæruleus, Tripolium dictus. *Raii Syn.* 175.

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A NATIVE of muddy ſea-ſhores and mouths of rivers in every part of our coaſt, gathered on Woldham marſh by Lord Viſcount Lewiſham Aug. 29.

Root perennial, with long fibres. Stems from ſix inches to three feet high, leafy, branched, and producing abundance of flowers, which are not unornamental. Sometimes theſe flowers are perfectly deſtitute of rays, as found at Purfleet by Mr. T. F. Forſter, junior, and at Lynn by Dr. Smith.—See the annexed ſpecimen. The rays, when preſent, as is commonly the caſe, are generally of a delicate pale purple; ſometimes they are white.

Dr. Stokes has obſerved this plant in *inland* ſalt-marſhes, and therefore ſuppoſes, with great probability, its preſence may be an indication of ſalt ſprings.

106.



# SOLIDAGO Virgaurea.

## *Common Golden-rod.*

*SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Receptacle* naked. *Down* simple. *Ligulate florets* about 5. *Calyx-scales* imbricated, closed.

SPEC. CHAR. Stem slightly zigzag, angular. Flower-clusters panicled, upright, crowded.

SYN. Solidago Virgaurea. *Linn. Sp. Pl.* 1235. *Huds. Fl. An.* 367. *With. Bot. Arr.* 917. *Relh. Cant.* 318. *Sibth. Ox.* 254.
Virga aurea. *Raii Syn.* 176.

IN woods, copses, and among furze upon heathy ground not unfrequent, flowering from July to September.

Root perennial, of long simple fibres. Stem very various in height, from 10 inches to 3 feet, curved below, then erect, leafy, very slightly zigzag, angular and striated, rough, a little downy. Leaves harsh, clothed with short rigid down, paler beneath, on winged footstalks; the radical ones obovate, or at least very broadly lanceolate, serrated, or rather crenate; those on the stem alternate, narrower and more entire. Flowers yellow, in terminal and axillary erect clusters, forming a dense panicle, which varies extremely as to luxuriance and number of flowers. Bracteæ lanceolate, downy. Calyx-scales with a membranous border, downy. Rays of the flower from 5 to 9 or 10. Seed-down rough when magnified. The herb bruised smells like wild carrot. It has been esteemed a vulnerary, and is recommended to be taken internally as well as applied to the wound. As a tonic it may strengthen the general habit of body, and by that means be of use.

Some botanists have suspected our Golden-rod to be different from the *S. Virgaurea* of Linnæus, but on a careful comparison of specimens we find them precisely the same.

Pub. 1796 Published by J. Sowerby London.

107.



# INULA Helenium.

## *Elecampane.*

*SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* nearly naked. *Down* simple. *Cal.* imbricated. *Florets* of the radius very numerous, linear. *Antheræ* with 2 bristles at the base.

SPEC. CHAR. Leaves clasping the stem, ovate, rugged, downy beneath. Scales of the calyx ovate.

SYN. Inula Helenium. *Linn. Sp. Pl.* 1236. *Sm. Fl. Brit.* 891. *Huds.* 368. *With.* 730. *Hull.* 185. *Relh.* 330. *Sibth.* 255. *Abbot.* 183. *Woodv. Med. Bot. t.* 108.
Helenium. *Raii Syn.* 176.

THE wild specimen figured in our plate was gathered at Limpenhoe, Norfolk, by the Rev. George Reading Leathes, F. L. S. in the latter end of August. The Elecampane grows in moist rich pastures and meadows in several parts of England, but is not common. In gardens it used to be more cultivated than at present, for the sake of its root, which is perennial, large and fleshy, abounding with mucilage, combined with an aromatic bitter flavour, and some acrimony. These qualities render it useful to promote expectoration. In Germany it is said to be frequently candied, and taken as a stomachic.

The stems are a yard high or more, thick, furrowed, leafy, downy, branched above. Leaves large, ovate, slightly serrated, veiny, most downy and white beneath; the radical ones on stalks; the rest clasping the stem. Flowers large, terminal, solitary, of a fine golden yellow. Calyx-scales broad, leafy, veiny, entire; the inner ones narrow. Radius composed of a multitude of linear spreading florets; the disk of still more numerous tubular ones. Seeds quadrangular, smooth. Down roughish. Receptacle not quite smooth.

Jan.y 1 1805 Published by Jas. Sowerby, London.

# INULA dyſenterica,
## *Common Fleabane.*

*SYNGENESIA Polygamia-ſuperflua.*

GEN. CHAR. *Recept.* nearly naked. *Down* ſimple. *Cal.* imbricated. *Florets* of the radius very numerous, linear. *Antheræ* with 2 briſtles at the baſe.

SPEC. CHAR. Leaves oblong, claſping the ſtem with their heart-ſhaped baſe, downy. Stem woolly, panicled. Calyx-ſcales briſtle-ſhaped, hairy.

SYN. Inula dyſenterica. *Linn. Sp. Pl.* 1237. *Sm. Fl. Brit.* 891. *Hudſ.* 368. *With.* 731. *Hull.* 185. *Relh.* 331. *Sibth.* 246. *Abbot.* 184. *Curt. Lond. faſc.* 3. *t.* 56.

Conyza media. *Raii Syn.* 174.

THIS is a frequent plant in clear ditches and watery places, where its golden flowers are conſpicuous in Auguſt.

The root is creeping and perennial. Stem a foot or more in height, upright, branched in a panicled or corymboſe manner, angular, woolly, clothed with alternate oblong ſpreading leaves, which embrace the ſtem with their heart-ſhaped baſe. Their margin is waved and ſlightly toothed; their ſurfaces veiny; and the under ſide in particular denſely clothed with hoary down. Flowers numerous, terminal, ſolitary, horizontal, of a full bright yellow. Leaves of the calyx awl-ſhaped, hairy. Radiant florets twice as long as the calyx, ſpreading, linear, ending in three teeth, and at length revolute. Each anthera with 2 longiſh briſtles at its baſe. Seeds obovate, rough, crowned with rough down. Receptacle a little cellular, and beſet with minute unequal teeth. The herb is viſcid to the touch, and exhales a peculiar ſharpiſh aromatic ſcent, not unlike that of a peach.

Mr. Relhan in the ſecond edition of his *Flora Cantabrigienſis* juſt publiſhed, to which edition we have of late always referred, mentions a variety of this *Inula* with very ſhort rays that has hitherto eſcaped our notice.

Jan.y 1 1809 Published by Ja.s Sowerby, London

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109.



# INULA pulicaria.

## *Small Fleabane.*

*SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* nearly naked. *Down* simple. *Cal.* imbricated. *Florets* of the disk very numerous, linear. *Antheræ* with 2 bristles at the base.

SPEC. CHAR. Leaves clasping the stem, waved. Stem much branched, hairy. Flowers hemispherical, with a very short radius.

SYN. Inula pulicaria. *Linn. Sp. Pl.* 1238. *Sm. Fl. Brit.* 892. *Huds.* 369. *Relh.* 331. *Abbot.* 184. *Curt. Lond. fasc.* 3. *t.* 57. *Dichs. H. Sicc. fasc.* 7. 13.

I. uliginosa. *Sibth.* 256.

I. cylindrica. *With.* 731. *Hull.* 185.

Conyza minor. *Raii Syn.* 174.

FOUND, not unfrequently, on moist sandy heaths and commons, where water has stagnated during winter. It is an annual plant, flowering late in autumn.

We have sought in vain for any solid differences between this and *I. pulicaria* of the Linnæan herbarium, notwithstanding the opinions of Dr. Withering and Dr. Sibthorp. The root is tapering and branched. Stem generally erect, but often spreading or decumbent, branched, many-flowered, zigzag, angular, hairy, and leafy. Leaves slightly embracing the stem, lanceolate or oblong, waved, recurved, entire or very slightly toothed, hairy on both sides. Flowers solitary at the end of each branch, soon overtopped by other branches, erect, hemispherical, of a dull pale yellow. Calyx of numerous, linear, nearly equal, hairy scales. Florets of the radius mostly numerous, but very short, reaching very little beyond the calyx, recurved, and 3-toothed. Receptacle tuberculated. Seeds rough, crowned with a few rough rigid bristles, with a few short scales surrounding them.


Aug.t 1803 Published by Ja.s Sowerby London.

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110.



# INULA crithmoides.

## *Samphire-leaved Fleabane.*

*SYNGENESIA Polygamia superflua.*

GEN. CHAR. *Receptacle* naked. *Seed-down* ſimple. *Antheræ* terminated by two briſtles at the baſe.

SPEC. CHAR. Leaves linear, fleſhy, generally three-pointed.

SYN. Inula crithmoides. *Linn. Sp. Pl.* 1240. *Hudſ. Fl. An.* 369. I. crithmifolia. *With. Bot. Arr.* 924. Aſter maritimus flavus, Crithmum chryſanthemum dictus. *Raii Syn.* 174.

THIS is one of thoſe maritime plants which prefer a muddy ſoil, and is therefore not common. The Reverend Mr. Baker favoured us with this ſpecimen from Portland iſland, near the light-houſes. It flowers in Auguſt.

The root is perennial, creeping, and its long fibres run down deep into the mud. Leaves alternate, ſmooth, very ſucculent, and ſalt to the taſte; the lowermoſt blunt and entire; the others generally having a tooth on each ſide the tip, though many of the upper leaves are often quite entire. The flower-ſtalks, clothed with narrow briſtly bracteæ, and ſwelling upwards, terminate the branches; and each bears a ſolitary erect flower, of a beautiful appearance, having yellow rays and an orange diſk. Mr. Woodward well obſerves that the down of the ſeed is finely dentated. Indeed that part is ſcarcely quite *ſimple* in any flower, only in ſome genera the teeth are much longer than in others, ſo that the down becomes compound or plumoſe.

We do not know that this plant is applied to any uſe. It probably would afford an alkaline ſalt, like moſt other ſucculent ſea plants. It is remarkable that ſuch vegetables generally retain their ſalt taſte, even when cultivated far from the ſea.

# CINERARIA paluſtris.

## *Marſh Flea-wort.*

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*SYNGENESIA Polygamia-ſuperflua.*

GEN. CHAR. *Receptacle* naked. *Seed-down* ſimple. *Cal.* ſimple, of many equal ſcales.

SPEC. CHAR. Flowers corymboſe. Leaves broadly lanceolate, dentated or ſinuated. Stem ſhaggy.

SYN. Cineraria paluſtris. *Linn. Sp. Pl.* 1243. *Hudſ. Fl. An.* 369. *With. Bot. Arr.* 919. *Relh. Cant.* 320.

Conyza foliis laciniatis. *Raii Syn.* 174.

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THIS, though by no means a common plant, is found in many ditches and wet marſhy places in the fens. Mr. Woodward favoured us with this ſpecimen in the middle of June laſt from near Hadiſcoe in Norfolk; it grows alſo on St. Faith's Newton bogs near Norwich.

The large fibrous perennial root runs deep into the muddy bottoms of ditches, and throws up high above the ſurface of the water one very ſtout principal ſtem, with a few leſſer ones, all of them erect, unbranched, with many angles and ſtriated between, clothed with thick ſoft ſhaggy hair, covered from top to bottom with numerous alternate lanceolate leaves, and terminated by a leafy corymbus of bright yellow flowers with lemon-coloured rays. The leaves are ſlightly viſcid and hairy, irregularly dentated, and often ſinuated. The flowers agree perfectly with the character of Cineraria, though once referred by Linnæus to the genus Othonna. All the hairs of this plant are pellucid, and finely jointed like a Conferva.

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112.



# CINERARIA integrifolia.

## *Mountain Flea-wort.*

*SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Down* ſimple. *Cal.* ſimple, of many equal ſcales.

SPEC. CHAR. Leaves oblong, obſoletely denticulated, ſhaggy. Flowers in a ſimple involucrated umbel.

SYN. Cineraria integrifolia. *With. Bot. Arr.* 920. *Murr. Syſt. ed.* 14. (β pratenſis) 765. *Jacq. Fl. Auſtr. t.* 180.

C. alpina. *Hudſ. Fl. An.* 370. *Relh. Cant.* 320. *tab. Linn. Sp. Pl.* (var. ν) 1243.

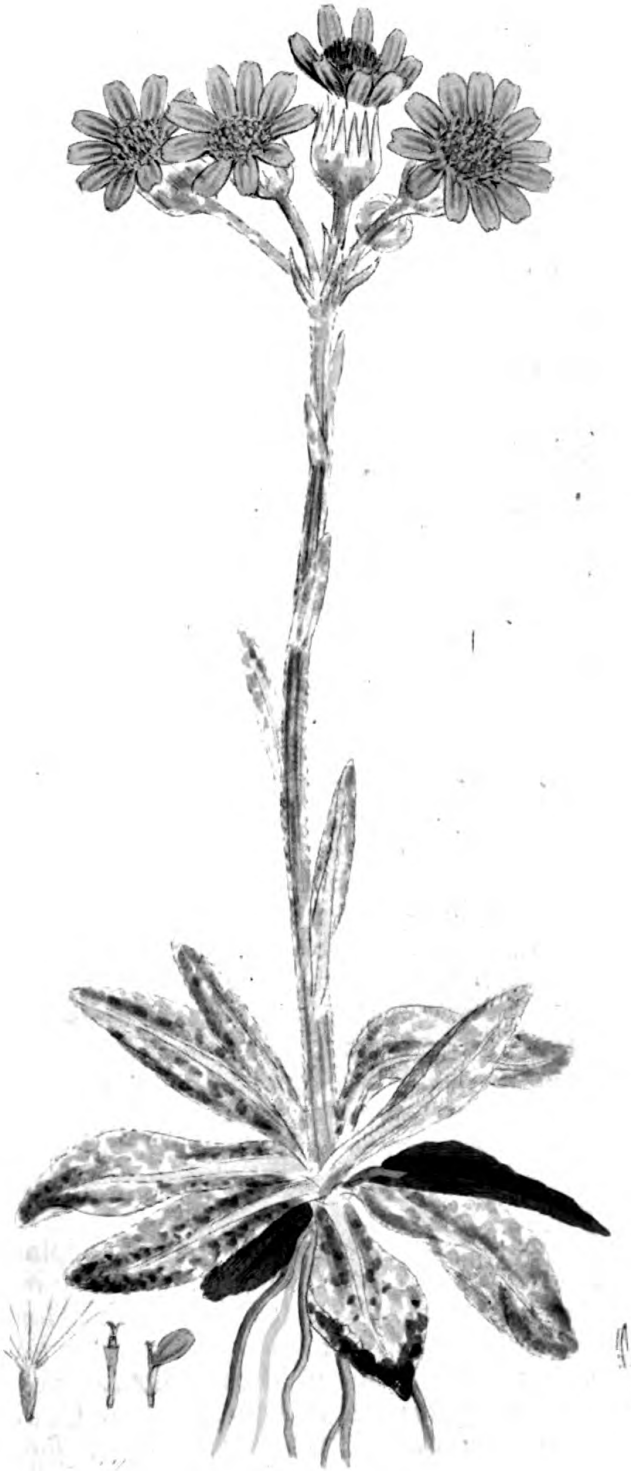
Jacobæa Pannonica folio non laciniato. *Raii Syn.* 178.

GATHERED by the Rev. Mr. Hemſted on Gogmagog hills and Newmarket heath, where, as on many other chalky downs of England, this plant is to be found flowering in May and June.

Root long and thready, perennial. Radical leaves numerous, ſpreading on the ground, ovate, ſpatulate, or obovate occaſionally, generally lengthened out at the baſe, reflexed and denticulated in the margin, clothed with looſe ſhaggy wool: thoſe on the ſtem differ in being narrower, and alternate. Stem from ſix to twelve inches high, erect, ſimple, furrowed, woolly, bearing a few pedunculated flowers in a ſimple umbel, with an involucrum of a few lanceolate, pointed, almoſt naked, leaves. The ſcales of the calyx are nearly naked, and have a membranous margin. Seeds hairy. Down ſimple, roughiſh. The florets of the radius are generally broadeſt in the middle, or nearly oval.

Cineraria alpina α *Linn. Sp. Pl.* is Senecio alpinus of the *Suppl. p.* 371, a very different plant, whoſe hiſtory in the laſt mentioned place is terribly confuſed, No. 67 of Haller being Senecio Doronicum, and No. 68 our Cineraria integrifolia. No. 63 of Haller is (according to Mr. Davall) its true ſynonym.

Our plant never approaches the appearance of C. integrifolia α, alpina, *Murr.* & *Jacq.* t. 179, nor can we ſuppoſe that variety to belong to any thing elſe than Jacquin's C. longifolia, t. 181.



V

# DORONICUM Pardalianches.

## *Great Leopard's-bane.*

*SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Down* ſimple. *Calyx-ſcales* in 2 rows, equal, longer than the diſk. *Seeds* of the radius beardleſs.

SPEC. CHAR. Leaves heart-ſhaped, denticulate; the radical ones on foot-ſtalks; the reſt embracing the ſtem.

SYN. Doronicum Pardalianches. *Linn. Sp. Pl.* 1247. *Lightf.* 485. *Hudſ.* 650. *With.* 732. *Hull.* 185. *Scop. Carn. v.* 2. 174.

MR. LIGHTFOOT obſerved this plant in ſeveral places in the Lowlands of Scotland, but always near houſes, ſo that he ſuſpected it to be only a naturalized ſpecies. Dr. Withering mentions it as growing on the banks of the Severn, below Bridgenorth, and in ſome other places. Our ſpecimen was gathered by the road ſide near Saling-hall, Eſſex, by T. Walford, Eſq. who believes it certainly never to have been planted there. Yet if truly indigenous, ſo conſpicuous a plant would ſurely not have eſcaped the notice of Ray and his correſpondents.

It is perennial, and flowers in May. The crown of the root is woolly. Stem two or three feet high, branched, furrowed, hairy, the uppermoſt hairs glandular. Leaves more or leſs hairy, ſoft and pliable, irregularly and ſlightly toothed, veiny; the radical ones large, heart-ſhaped, on long footſtalks; the ſtem-leaves more ovate, ſeſſile. Flowers large, ſolitary at the end of each branch. The calyx and receptacle both conical; the ſcales or leaves of the former numerous, linear, in two rows, all equal, much longer than the diſk of the flower, and indeed almoſt as long as the radius, which conſiſts of nearly an equal number of linear pale-yellow female florets, ſtriped externally with green, and notched at the tip. Their ſeeds have no wing or down; while thoſe of the tubular florets in the diſk are crowned with long rough briſtles. Scopoli, from whom the excellent deſcription in Lightfoot is almoſt entirely taken, obſerves, that it requires only a month to form and ripen the ſeeds.

The root has been ſuppoſed a poiſon to beaſts of prey, but its qualities are very problematical.

114.



# BELLIS perennis.

## *Common Daisy.*

*SYNGENESIA. Polygamia-superflua.*

GEN. CHAR. *Receptacle* naked, conical. *Down* none. *Cal.* hemispherical; its scales equal. *Seeds* obovate.

SPEC. CHAR. Root creeping. Stalk naked.

SYN. Bellis perennis. *Linn. Sp. Pl.* 1248. *Huds. Fl. An.* 370. *With. Bot. Arr. ed.* 3. 733. *Relh. Cant.* 320. *Sibth. Ox.* 256. *Curt. Lond. fasc.* 1. *t.* 62.

B. sylvestris minor. *Raii. Syn.* 184.

FEW plants are better known than the daisy. Every pasture and grass-plat is bespangled with its flowers from the beginning of spring till the end of autumn; and if any mild weather happens to break the severity of winter, the daisy is sure to welcome the appearance of the sun, and expand itself to his beams. At night it always closes, and hence its English name, day's-eye or eye of the day. See the apt quotations from Chaucer in the *Flora Londinensis*, where also we are informed that this common plant is not eaten by sheep or horses, nor willingly by cows.

The root is strong, perennial, branched and creeping, throwing out long straight fibres, and producing at its crown veral tufts of leaves speading in a star-like form upon the ground, which are obovate, blunt, crenate, slightly hairy, and all mostly radical, one or two of them only being very rarely borne upon the bases of the stalks in a luxuriant state. Stalks generally upright, single-flowered, round, hairy, naked. Flowers various in size, inodorous. Calyx dark green, hairy, spreading. Radius of several spreading linear or somewhat elliptical female florets, with a notch at the tips, of a polished white, mostly tinged with beautiful crimson at the extremity, especially underneath. Disk of many tubular yellow hermaphrodite florets. Receptacle very conical, and hollow, dotted, without scales or hairs. Seeds obovate, compressed, without any wing or down. Stigma cloven; that of the hermaphrodite florets thicker than in the others.

In gardens the daisy is cultivated with double flowers, that is, composed entirely of the ligulate female florets, and either white, red, or speckled. Sometimes the calyx is proliferous at its base, when it is called the hen-and-chicken daisy.

Sept.r 1797 Published by J.d Sowerby London

115.



# CHRYSANTHEMUM leucanthemum,

## *Great White Ox-eye.*

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*SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Seed* bordered. *Cal.* hemiſpherical, imbricated; ſcales membranous at the edge.

SPEC. CHAR. Leaves embracing the ſtem, oblong, blunt, cut; pinnatifid at the baſe: the radical ones on foot-ſtalks, obovate.

SYN. Chryſanthemum leucanthemum. *Linn. Sp. Pl.* 1251. *Hudſ.* 371. *With.* 733. *Hull.* 184. *Relh.* 321. *Sibth.* 257. *Abbot.* 185. *Curt. Lond. faſc.* 5. *t.* 62. *Mart. Fl. Ruſt. t.* 109.

Leucanthemum vulgare. *Raii Syn.* 184.

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EXTREMELY common in paſtures, the borders of fields, and even among corn, flowering in June and July. It is perennial, and increaſes much by ſeed. We do not find it complained of as a troubleſome weed, nor celebrated for any agricultural utility. As a medicine it has been uſed for an expectorant and diuretic; but appears to be inferior to many other plants. Its taſte and ſmell are ſlightly aromatic, with a nauſeous herbaceous ſweetneſs.

The roots are fibrous, branched, tough and woody. Stems erect, 2 feet high, a little branched, round, furrowed, with red intermediate ribs. Radical and lower ſtem-leaves on long foot-ſtalks, obovate, ſerrated, and cut; the reſt ſeſſile, embracing the ſtem, alternate, oblong, jagged irregularly in the upper part, toothed in a pinnate manner about the baſe. All the leaves are nearly ſmooth and of a deep green. A large ſolitary handſome flower terminates each branch, the diſk of which is flat and yellow, the radius pure white, the florets of each being very numerous; thoſe of the radius are elliptical, with 2 ribs and 3 teeth. The receptacle is flat, and deſtitute of ſcales. Seeds obovate, black, with white elevated ribs.


June 1799 Pubd by J. Sowerby Lond.

116.



# CHRYSANTHEMUM ſegetum.

## *Corn Marigold.*

*SYNGENESIA Polygamia-ſuperflua.*

**Gen. Char.** *Receptacle* naked. *Seed* bordered. *Cal.* hemiſphærical, imbricated; ſcales membranous at the edge.

**Spec. Char.** Leaves embracing the ſtem, glaucous, jagged upwards, toothed at the baſe.

**Syn.** Chryſanthemum ſegetum. *Linn. Sp. Pl.* 1254. *Hudſ.* 371. *With.* 735. *Relh.* 321. *Sibth.* 257. *Curt. Lond. faſc.* 6. *t.* 60. *Dickſ. H. Sicc. faſc.* 6. 13. *Mart. Fl. Ruſt. t.* 110. *Raii Syn.* 182.

A COMMON weed in corn-fields, particularly troubleſome (as Mr. Woodward remarks) among turneps on a ſandy ſoil. It is an annual of quick growth, laſts a long time (from June to Auguſt) in flower, and is very prolific. Our Engliſh agriculturiſts agree that it is only to be eradicated by the hand.

Root tapering, ſlender, not much branched. Stem 2 or 3 feet high, erect, alternately branched, leafy, angular, ſmooth and glaucous, as is the whole herb. Leaves alternate, embracing the ſtem, oblong, pointed, more or leſs cut and jagged, ſometimes pinnatifid, in the upper part, while their dilated baſe is more finely toothed or ſerrated; very rarely they are quite entire. Flowers ſolitary, terminating each branch, which is gradually thickened and naked upwards; they are large and handſome, of a bright golden yellow. Calyx of numerous ſcales, of which the innermoſt are largeſt and moſt membranous. Tubular florets of the diſk very numerous and ſmall; ligulate ones of the radius in a ſimple ſeries, broad and almoſt inverſely heart-ſhaped, with a tubular baſe. Seed grooved, and crowned with a membranous border.

Jan.y 1799 Published by J.s Sowerby London

117.



# PYRETHRUM Parthenium.

## *Common Feverfew.*

*SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Seeds* crowned with a membranous margin. *Cal.* hemispherical, imbricated with sharpish scales, bordered with a membrane.

SPEC. CHAR. Leaves compound, flat, on foot-stalks; leaflets ovate, cut. Flower-stalks branched, corymbose. Stem erect.

SYN. Pyrethrum Parthenium. *Sm. Fl. Brit.* 900. *Relh.* 334.

Matricaria Parthenium. *Linn. Sp. Pl.* 1255. *Huds.* 371. *With.* 735. *Hull.* 184. *Sibth.* 258. *Abbot.* 185. *Woodv. Suppl. t.* 249.

Matricaria. *Raii Syn.* 187.

FREQUENT in waste ground and about hedges, flowering in June and July. Deserted gardens in towns are soon overrun with it. The root is perennial, but seems to bear flowers the first year of its growth.

The stem is erect, branched, furrowed, leafy. Leaves on foot-stalks, simply or doubly pinnated, lobed and cut; their segments more or less ovate, decurrent, of a dull palish green, somewhat hoary. Flowers on long, simple or branched, angular stalks, which are thicker towards their summit, and form a sort of terminal corymbus. Calyx hemispherical or flattish, downy. Disk yellow. Radius short, white, sometimes wanting; its florets approaching to the roundish figure of those of the *Achilleæ*. Seeds furrowed, crowned with a small membrane, which some authors have overlooked. Receptacle naked, flattish. The flowers are often double; that is, the yellow florets of the disk all become ligulate and white like those of the radius.

Feverfew ranks with the plants in our two preceding plates as an aromatic bitter and tonic, and is reported to be particularly useful in hysteric disorders. Its english name seems to imply a febrifuge quality.

Nov. 1 1809 Published by Jas Sowerby London

# PYRETHRUM inodorum.

*Corn Feverfew. Scentlefs May-weed.*

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*SYNGENESIA Polygamia fuperflua.*

GEN. CHAR. *Recept.* naked. *Seeds* crowned with a membranous margin. *Cal.* hemifphærical, imbricated with fharpifh fcales, bordered with a membrane.

SPEC. CHAR. Leaves feffile, pinnate, in many capillary fegments. Stem branched, fpreading. Crown of the feeds entire.

SYN. Chryfanthemum inodorum. *Linn. Sp. Pl.* 1253. *With.* 734. *Hull.* 184. *Relh. Suppl.* 1. 14. *Sibth.* 257. *Abbot.* 185.

Matricaria inodora. *Hudf.* 372.

Chamæmelum inodorum annuum humilius, foliis obfcurè virentibus. *Dill. in Raii Syn.* 186.

---

VERY common in fields and by way-fides, efpecially on a gravelly foil, flowering late in Autumn.

Root annual, tapering. Whole herb almoft deftitute of any peculiar fmell. Stem branched, fpreading, leafy, angular, fmooth. Leaves feffile, pinnated in a lyrate manner; their leaflets cut into numerous, very narrow, fmooth, fegments, each tipped with a little point. Flowers terminal, folitary, large, on naked ftalks. Difk yellow, convex. Radius of many fpreading elliptic-oblong white obtufe florets, each tipped with 3 teeth. Scales of the calyx fmooth, furrounded with an equal narrow brown membranous border. Receptacle conical, blunt, naked. Seeds crowned with a membranous undivided border. Mr. Crowe has obferved a variety with a multiplied radius.

The naked receptacle eafily diftinguifhes this plant from every *Anthemis*, and the crowned feeds from *Matricaria*. By the crown being entire, not lobed, if other marks were wanting, it may be known from *M. maritima*, another fpecies of *Pyrethrum*. We cannot help adopting this genus from Haller and Gærtner, as it is difficult to form any thing like natural genera in this order without adverting to the crown of the feed. The common Feverfew makes the third Britifh fpecies of *Pyrethrum*, having certainly the proper effential character, though Haller appears to have overlooked it.

119.



# PYRETHRUM maritimum.

## *Sea Feverfew.*

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*SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Seeds* crowned with a membranous margin. *Cal.* hemiſphærical, imbricated with ſharpiſh ſcales, bordered with a membrane.

SPEC. CHAR. Leaves bipinnate, fleſhy, awnleſs; convex above; keeled beneath. Crown of the ſeeds lobed.

SYN. Pyrethrum maritimum. *Sm. Fl. Brit.* 901.

Matricaria maritima. *Linn. Sp. Pl.* 1256. *Lightf.* 491. *With.* 736. *Hull.* 184.

M. inodora γ. *Hudſ.* 373.

Chamæmelum maritimum perenne humilius, foliis brevibus craſſis, obſcurè virentibus. *Dill. in Raii Syn.* 186. *t.* 7. *f.* 1.

---

OUR ſpecimen of this rare plant was gathered by the late John Adams, Eſq. in the looſe ſand of the ſhore of Manorbia bay, about 6 miles from Pembroke. Mr. Robſon has favoured us with others from Durham. It is perennial, and flowers about July or Auguſt.

Several ſtems, various in length, ſpread on the ground, forming a ſort of tuft, being thickly clothed with leaves, though not much branched. They are ſmooth, ſhining, moſtly purpliſh. Leaves ſeſſile, doubly pinnate, of a rather dark and ſhining green, fleſhy; the ſegments ſhort, blunt, deſtitute of any terminal awns, convex above, and more ſo beneath. Flowers terminal, ſolitary, not quite ſo large as thoſe of *P. inodorum*, *t.* 676. Calyx ſmooth, its ſcales bordered with a very narrow blackiſh membrane. Diſk convex, yellow, broader in proportion to the radius than in *P. inodorum*, from which ſpecies this ſtill more eſſentially differs in having the crown of the ſeed divided into 3 or 4 lobes. The whole herb is ſlightly aromatic, and unqueſtionably diſtinct from *P. inodorum*, with which Hudſon confounds it.

Feb. 1. 1802 Published by Jos. Sowerby, Lond.

V

# MATRICARIA Chamomilla.

## *Wild Chamomile.*

*SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* naked, almost cylindrical. *Seeds* without a crown. *Cal.* flattish, imbricated with membranous-bordered scales.

SPEC. CHAR. Leaves smooth, pinnated; leaflets linear, simple or divided. Radius spreading. Scales of the calyx dilated.

SYN. Matricaria Chamomilla. *Linn. Sp. Pl.* 1256. *Sm. Fl. Brit.* 902. *Huds.* 372. *With.* 736. *Hull.* 184. *Relh.* 335. *Sibth.* 258. *Abbot.* 185. *Curt. Lond. fasc.* 5. *t.* 63. *Mart. Fl. Rust. t.* 74.
Chamæmelum. *Raii Syn.* 184.

THIS weed is much more plentiful about London, where it grows in fields, waste ground, about road sides and on dunghills, than in Norfolk, where it rarely occurs.

The root is fibrous and annual. Stem about a foot high, much branched and very leafy, smooth, striated. Leaves sessile, clasping the stem, smooth, deep green, pinnated; their leaflets narrow and linear; simple in the upper, pinnate in the lower leaves; all obtuse tipped with a minute point. Flowers numerous, terminal, solitary, about the size of the Common or Sweet Chamomile, and partaking somewhat of its fragrance. Calyx flattish, smooth. Disk conical, pale greenish yellow. Radius of many white oblong florets, spreading by day, closely deflexed at night. Seeds angular, oblique, entirely naked. Receptacle between a conical and cylindrical form, slender, smooth and naked; by which last circumstance this is known at once from *Anthemis arvensis*, *v.* 9. *t.* 602, without adverting to the more hoary appearance of the latter. *Anthemis Cotula*, more like the *Matricaria* in general appearance, is distinguished by its fœtid smell, and narrow bristly scales of its receptacle.

Nov.r 1. 1803. Published by Jas. Sowerby, London.

V

# ANTHEMIS maritima.

## *Sea Chamomile.*

*SYNGENESIA Polygamia-superflua.*

**Gen. Char.** *Recept.* chaffy. *Seeds* scarcely bordered. *Cal.* hemispherical, nearly equal. *Florets* of the radius more than five, oblong.

**Spec. Char.** Leaves doubly pinnatifid, acute, fleshy, somewhat hairy. Stem prostrate. Calyx slightly downy.

**Syn.** Anthemis maritima. *Linn. Sp. Pl.* 1259. *Sm. Fl. Brit.* 904. *Huds.* 374. *With.* 740. *Hull. ed.* 2. 246. *Phelps Calend.* 136.

Chamæmelum maritimum latifolium ramosissimum, flore albo. *Dill. in Raii Syn.* 186.

A NATIVE of the sea shore in rocky or stony places, but of rare occurrence. Mr. Robson favoured us with a wild specimen from Sunderland, Durham, and our figure has been assisted by one from a garden. The plant is annual, flowering in July.

The stems grow prostrate, in a circular position, and are from 6 to 12 inches long, angular, leafy, hoary, sometimes purplish; branched and bearing several flowers. Leaves sessile, alternate, fleshy, most hairy beneath, cut into many sharp pinnatifid segments, flat on the upper side. Flowers solitary, on terminal, downy, swelling stalks. Calyx hemispherical, its scales torn and almost feathery, invested with a few fine hairs. Disk flat, yellow, the sharp chaffy scales of the receptacle rising above the unopened florets; radius of many white, spreading, slightly toothed, oblong florets. Seeds crowned with a narrow entire border. The flowers smell like Tansy, the leaves like Mugwort. The scales of the receptacle distinguish it at once from *Pyrethrum maritimum, t.* 979, not to mention the hoariness of the herbage.

Jun 1 1804 published by Jos Sowerby London.

# ANTHEMIS nobilis.

## *Common Chamomile.*

*SYNGENESIA Polygamia-ſuperflua.*

GEN. CHAR. *Recept.* chaffy. *Seeds* ſcarcely bordered. *Cal.* hemiſphærical, nearly equal. *Florets* of the radius more than 5, oblong.

SPEC. CHAR. Leaves doubly pinnate, thread-ſhaped, acute, a little downy. Scales of the receptacle membranous, ſcarcely ſo long as the florets.

SYN. Anthemis nobilis. *Linn. Sp. Pl.* 1260. *Sm. Fl. Brit.* 904. *Hudſ.* 373. *With.* 739. *Hull.* 188. *Sibth.* 258. *Woodv. Med. Bot. t.* 103.

Chamæmelum odoratiſſimum repens, flore ſimplici. *Raii Syn.* 185.

THE fragrant Chamomile, ſo uſeful as a ſtomachic medicine, is not generally met with wild. We gathered this ſpecimen a little to the ſouth of Loweſtoft church, Suffolk, in Auguſt laſt. It always grows on gravelly open commons, ſpreading cloſe to the earth, and forming conſiderable patches among the ſhort herbage of ſuch places. When not in flower its ſcent betrays it if trodden upon. This quality has induced ſome curious people to plant Chamomile for a green walk in gardens, for which purpoſe it is recommended by great beauty and richneſs of foliage, but receives injury from being walked on in froſty weather.

Root perennial, ſtrong. Stems proſtrate, branched, villous. Leaves bipinnate, hairy or downy; leaflets ſlender, cylindrical, entire or lobed. Flowers terminal, ſolitary, white with a yellow diſk, which in time becomes conical. Seeds very obſcurely margined. Scales of the receptacle lanceolate, thin, not riſing above the florets. The whole plant is intenſely bitter, with a peculiar but agreeable ſmell. In gardens it is generally double, the florets of the diſk being all like thoſe of the radius; but ſuch flowers are not reckoned ſo ſtrong in flavour as the natural ones.

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# ANTHEMIS arvensis.

## *Corn Chamomile.*

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*SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* chaffy. *Down* none. *Cal.* hemispherical, nearly equal. *Flowers* of the *radius* more than 5.

SPEC. CHAR. Receptacle conical; its scales lanceolate, keeled, acute. Seeds crowned with a border. Leaves slightly hairy.

SYN. Anthemis arvensis. *Linn. Sp. Pl.* 1261. *Hudf.* 373. *With.* 737. *Hull.* 188. *Relh.* 323. *Sibth.* 259. *Abbot.* 186. *Mart. Fl. Rust. t.* 73.
Chamæmelum inodorum. *Dill. in Raii Syn.* 185.

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A NUMBER of common plants of the *Syngenesia Polygamia-superflua* so much resemble each other, that they commonly excite little attention. They have not much beauty to boast; their smell is often disagreeable; they are noxious weeds to the husbandman; and the herb-gatherer is content if he can only distinguish among them the valuable Chamomile for the apothecary. Even the botanist often passes over these plants with a heedless undistinguishing eye. Their characters however are fixed and certain, and, when examined, richly repay our trouble, especially those found in the fructification.

*Anthemis arvensis* is not one of the most common of this tribe. It occurs here and there in gravelly fields, or rather, as Mr. Crowe observes, about farm-yards and out-houses, generally in plenty. Mr. B. Forster communicated our specimen from Walthamstow. It is biennial, flowering in June and July. Root small. Stem upright, much branched. Leaves alternate, doubly pinnatifid, their segments narrow and lanceolate. Soft cottony hairs are scattered over the whole herb, which has little or no smell. Flowers terminal, with a yellow disk, which becomes at length conical, and a broad white recurved radius. Calyx woolly, its inner scales in particular broad, and membranous at the edge. Scales of the receptacle lanceolate, keeled; and the seed is crowned with a quadrangular border: by which two last marks it is particularly distinguished from the fœtid *A. Cotula*. From every *Matricaria* and *Chrysanthemum* it is known by the presence of these scales on the receptacle,

# ANTHEMIS Cotula.

## *Stinking Mayweed or Chamomile.*

*SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* chaffy. *Seeds* scarcely bordered. *Cal.* hemisphærical, nearly equal. *Florets* of the radius more than 5, oblong.

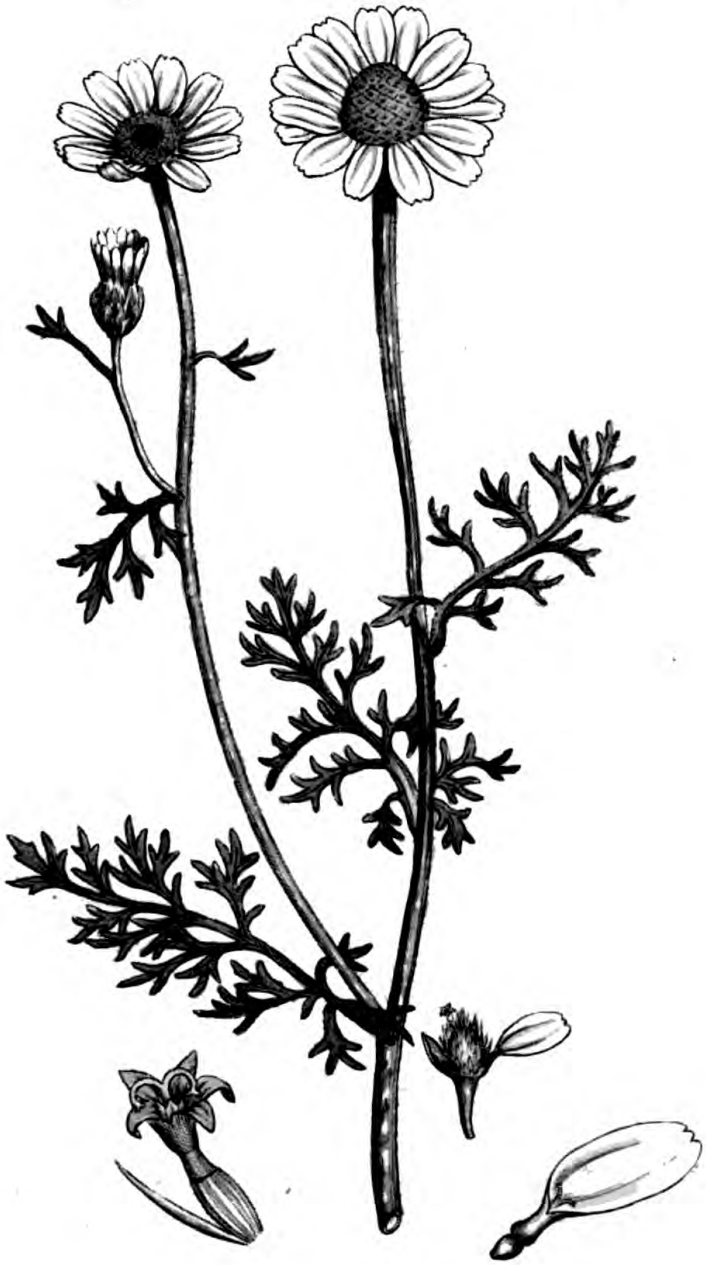
SPEC. CHAR. Receptacle conical; its scales bristle-shaped. Seeds without any border. Leaves doubly pinnatifid, smoothish.

SYN. Anthemis Cotula. *Linn. Sp. Pl.* 1261. *Sm. Fl. Brit.* 906. *Huds.* 373. *With.* 738. *Hull.* 188. *Relh.* 336. *Sibth.* 259. *Abbot.* 186. *Curt. Lond. fasc.* 5. *t.* 61.

Chamæmelum fœtidum. *Raii Syn.* 185.

WE have alluded to this disagreeable weed in describing *A. arvensis, t.* 602, a much rarer plant. *A. Cotula* is one of the most common of this tribe, in fields and waste ground, flowering from July to September, and is known by the strong scent and acrimony of its herbage and blossoms.

Root annual, small. Stem upright, much branched, leafy, smooth, many-flowered. Leaves alternate, sessile, doubly pinnatifid, cut, narrow, flat, bright green, nearly or quite smooth. Calyx more or less hairy, with narrow, slightly bordered, scales. Disk of the flowers lemon-coloured, convex. Rays white, numerous, elliptical, 3-toothed, reflexed at night. Seeds obovate, furrowed, roughish, quite destitute of any crown or border. Receptacle not merely conical, but almost cylindrical, beset with narrow bristle-like scales, which are shorter than the florets.



Aug.1. 1807. Published by Jas. Sowerby London.

125.



# ANTHEMIS tinctoria.

## *Ox-eye Chamomile.*

*SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* chaffy. *Seeds* scarcely bordered. *Cal.* hemisphærical, nearly equal. *Florets* of the radius more than 5, oblong.

SPEC. CHAR. Leaves doubly pinnatifid, serrated, downy underneath. Stem corymbose, erect.

SYN. Anthemis tinctoria. *Linn. Sp. Pl.* 1263. *Sm. Fl. Brit.* 907. *Huds.* 374. *With.* 740. *Hull.* 189. *Dicks. H. Sicc. fasc.* 17. 17. *Don. Herb. fasc.* 2. 42. *Fl. Dan. t.* 741.

Buphthalmum vulgare. *Raii Syn.* 183.

FOUND here and there in fields and stony places, but not frequently. In Ray's time it was observed in the county of Durham. Mr. Dickson has, more recently, gathered it in Essex, and Mr. G. Don near Forfar. In curious gardens it is preserved for its rarity.

We are not sure that the root is more than biennial: hence perhaps the plant is so little stationary as, by the acounts of those who have sought for it, seems to be the case. Stem bushy, corymbose, a foot or two in height, angular, cottony. Leaves doubly pinnatifid, deeply and sharply serrated, flat, downy beneath. Flowers on solitary terminal woolly stalks. Calyx hemisphærical, with jagged cottony scales. Florets of both disc and radius of a rich golden yellow, the latter broadish and elliptical. Scales as long as the tubular florets, yellow, awl-shaped, dilated at the base.

The flowers are said to afford a fine yellow dye.

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

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126.



# ACHILLEA Ptarmica.

*Sneeze-wort Yarrow; or Goose-tongue.*

*SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* chaffy. *Down* none. *Cal.* ovate, imbricated, unequal. *Florets* of the *radius* 5 to 10, roundish, or inversely heart-shaped.

SPEC. CHAR. Leaves lanceolate, pointed, sharply serrated.

SYN. Achillea Ptarmica. *Linn. Sp. Pl.* 1266. *Sm. Fl. Brit.* 908. *Hudf.* 375. *With.* 741. *Hull.* 189. *Relh.* 324. *Sibth.* 260. *Abbot.* 187. *Curt. Lond. fasc.* 5. *t.* 60.

Ptarmica. *Raii Syn.* 183.

THIS, though not a very general plant, is plentiful in some parts of England about wet hedges and the banks of rivers, flowering in July and August. It should seem by Mr. Curtis's account to be more common about London than it is in Norfolk. In gardens it often occurs with a double flower, that is, with the tubular florets of the disk almost entirely exchanged for radiant ones; and indeed it frequently happens that the radius is composed of more florets than the generic character allows. Their peculiar short roundish figure however is always characteristic, independent of their number.

Root creeping, perennial, very difficult to be eradicated where the soil is moist. Stems erect, about 2 feet high, angular, smooth, terminating in a corymbus of several flowers whose disk, as well as the radius, is white. Leaves simple, linear, smooth, very neatly and sharply serrated with little callous prickly teeth. Calyx rather hairy. Seeds compressed, dilated at the edge, but not crowned with any feather or wing. Scales of the receptacle as long as the florets.

The juice is pungent, provoking a flow of saliva if applied to the mouth or gums; and the dried herb occasions sneezing, probably by means of the minute prickles that border the leaves.

# ACHILLEA serrata.

## *Serrated Yarrow.*

*SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* chaffy. *Down* none. *Cal.* ovate, imbricated, unequal. *Florets* of the radius 5 to 10, roundish, or inversely heart-shaped.

SPEC. CHAR. Leaves linear-lanceolate, sessile, downy, deeply serrated; laciniated at the base. Corymbs nearly simple.

SYN. Achillea serrata. *Retz. Obs. fasc.* 2. 25. *Ait. Hort. Kew. ed.* 1. *v.* 3. 241. *Willd. Sp. Pl. v.* 3. 2194.

Dracunculus alpinus, agerati foliis incanis. *Raii Hist. v.* 1. 344.

IN the year 1802 we received specimens of this *Achillea*, gathered wild not far from Matlock, Derbyshire, by Mr. Rupp of Manchester and Mr. Williams of Norton, near Sheffield. Being no Linnæan species, nor in any way known to us, we have kept it long unpublished; but a further search has helped us to the above synonyms. This has possibly been overlooked in England, as well as in Switzerland, for a variety of *A. Ptarmica, t.* 757. There is no probability of its having escaped from gardens, being scarcely known, except in a few of the most curious. The flowers expand about August, and the root is perennial. The whole herb has the habit and strong scent of the garden *A. Ageratum*, but the deeply-cut radiating base of the leaves is considerably different, and the flowers are totally unlike, those of *Ageratum* being not one fifth so large, and extremely numerous, in repeatedly compound corymbs, of a more yellow colour. The flowers of our present plant are more like *Ptarmica*, but smaller and of a yellowish hue. Willdenow reports it a native of Switzerland. Can Haller have confounded it under his n. 117 $\gamma$? We have never met with a Swiss specimen. Ray says he cultivated this species at Cambridge, having received it from London. His description cannot be mistaken.

Apr. 1. 1805 published by Jos. Trundy, London

128.



# ACHILLEA Millefolium.

## *Common Yarrow; or Milfoil.*

*SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* chaffy. *Down* none. *Cal.* ovate, imbricated, unequal. *Florets* of the *radius* 5 to 10, roundiſh, or inverſely heart-ſhaped.

SPEC. CHAR. Leaves doubly pinnatifid, hairy; their ſegments linear, toothed, pointed. Stems furrowed.

SYN. Achillea Millefolium. *Linn. Sp. Pl.* 1267. *Sm. Fl. Brit.* 908. *Hudſ.* 374. *With.* 742. *Hull.* 189. *Relh.* 324. *Sibth.* 259. *Abbot.* 186. *Curt. Lond. faſc.* 6. *t.* 61. *Mart. Fl. Ruſt. t.* 123. *Woodv. Med. Bot. t.* 64.

Millefolium vulgare. *Raii Syn.* 183.

COMMON every where in paſtures, flowering from June to Auguſt, and the creeping perennial root is as difficult to be extirpated as that of A. *Ptarmica*. The young ſubterraneous ſhoots are white, ſmooth and tender, with a pungent, not unpleaſant flavour. The whole herb above-ground is more or leſs piloſe or hairy, and when bruiſed proves aromatic and ſomewhat aſtringent. It has been recommended for curing external wounds, and internal hæmorrhages, but is not uſed by regular practitioners in this country. Linnæus ſays, the miſerable inhabitants of Dalekarlia, the mining province of Sweden, infuſe it in their beer during the fermentation, to increaſe its intoxicating effects. Our public brewers are acquainted with too many foreign adulterations to need this, and the diſhoneſt ones too often have recourſe to them, notwithſtanding the many wiſe prohibitions of our legiſlature; for their villainous gains enable them to defy the penalties.

The Yarrow cannot be confounded with any other Britiſh plant. Its compound leaves diſtinguiſh it from that laſt deſcribed, as well as its much ſmaller flowers, which, though generally white, often have a reddiſh or even purple radius, and become not unornamental.

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129.



# ACHILLEA tomentosa.

## *Woolly Yellow Milfoil, or Yarrow.*

*SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* chaffy. *Down* none. *Cal.* ovate, imbricated, unequal. *Florets* of the radius 5 to 10, roundish, or inversely heart-shaped.

SPEC. CHAR. Leaves doubly pinnatifid, woolly; segments crowded, linear, acute. Corymbs repeatedly compound.

SYN. Achillea tomentosa. *Linn. Sp. Pl.* 1264. *Willd. Sp. Pl. v.* 3. 2209. *Curt. Mag. t.* 498.
Millefolium luteum. *Ger. em.* 1073.

ANOTHER new *Achillea*, here presented to the British botanist, has been sent us from the west of Scotland, several years since, by Mr. Hopkirk of Paisley, near Glasgow, as well as from Ireland more recently. It grows in open sunny hilly pastures, flowering in the latter part of summer; and being frequent in Switzerland, France, Italy, and the north-eastern part of Europe, we do not question its being wild in the places reported.

This species is of humbler stature than the Common Yarrow, *t.* 758, its foliage less cut, and more woolly. The flowers are of a golden yellow, their stalks woolly, repeatedly compound and corymbose. It is a desirable plant for rock-work in gardens.

# CENTAUREA Jacea.

## *Brown or Radiated Knapweed.*

*SYNGENESIA Polygamia frustranea.*

GEN. CHAR. *Recept.* bristly. *Seed-down* simple. *Corollæ* of the radius funnel-shaped, irregular, longer than those of the disk.

SPEC. CHAR. Scales of the calyx membranous, torn; the lower ones pinnatifid. Leaves linear-lanceolate; the radical ones broader and toothed. Branches angular.

SYN. Centaurea Jacea. *Linn. Sp. Pl.* 1293. *Fl. Suec.* 300. Jacea. *Tillands. Ic.* 111.

THE knowledge of our native plants is not yet so complete but that something new may still be expected to reward the curious inquirer, even exclusive of the class *Cryptogamia*. Mr. W. Borrer has found in Sussex the true *Centaurea Jacea* of Linnæus, of which we have already spoken, *v.* 4. 278, as distinct from *nigra*, but which we did not then know to be a native of Britain. On the continent it seems the more common of the two; and yet we can scarcely find a certain figure of it, except in the rare old Swedish work of Tillands. The figure in *Ger. em.* 727, under *Jacea nigra*, is the very same cut with that in Paullis *Fl. Dan.*, which Linnæus quotes for his *C. Jacea*; but it is surely more like *C. nigra*, to which also the *J. nigra pratensis latifolia* of Bauhin seems to belong rather than to *C. Jacea*. In all this uncertainty our plate cannot be unacceptable.

Mr. Borrer's specimens agree precisely with the Swedish ones of Linnæus, and differ from *C. nigra* in having much narrower and sharper leaves, (the radical ones being toothed, and sometimes laciniated,) and radiant flowers; more especially in the calyx-scales being pale brown, membranous and shining; the uppermost rounded at the top and almost entire; the rest with a thin whitish jagged pinnatifid margin, totally different from the black-fringed scales of *C. nigra*. The plant is perennial, and flowers in August and September.

Dec.r 1806 Published by Ja.s Sowerby, London.

131.



# CENTAUREA nigra.

## *Black or lesser Knapweed.*

*SYNGENESIA Polygamia frustranea.*

GEN. CHAR. *Recept.* bristly. *Seed-down* simple. *Corollæ* of the radius funnel-shaped, irregular, longer than those of the disk.

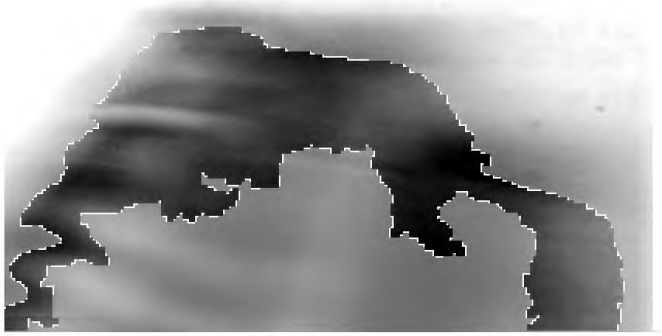
SPEC. CHAR. Scales of the calyx oval, ciliated with upright capillary teeth. Lower leaves lyrato-angulated; upper ones ovate. Flowers without a radius.

SYN. Centaurea nigra. *Linn. Sp. Pl.* 1288. *Huds. Fl. An.* 375. *With. Bot. Arr.* 943. *Relh. Cant.* 325. *Sibth. Oxon.* 260.

Jacea nigra. *Raii Syn.* 198.
Jacea. *Hall. Hist.* No. 184.

COMMON in pastures and by road sides every where, flowering from June to the end of August. The root is strong and perennial, somewhat creeping. Stems very rigid and hard, angular, about 2 feet high. Lower leaves lanceolate, toothed, many of them cut into angular lobes so as to become lyrate; the upper ones are ovate and entire; all of them alternate, but a little clustered under the flowers, which are terminal, solitary, red, consisting of hermaphrodite florets only without any radius. Scales of the calyx very black, finely pectinated, erect. Seed without any down.

Much confusion reigns in the synonyms of this species. Mr. Hudson at first took it for the *C. Jacea* of Linnæus, but corrected himself in his 2d edition, and the Linnæan Herbarium confirms his last opinion. We think with him that Bauhin's *Jacea nigra pratensis latifolia* must certainly be the plant before us. The true Linnæan *C. Jacea*, found in Sweden, is essentially different in having the calyx-scales much paler, membranous, laciniated but not ciliated, and the flowers radiated. This should seem to be Haller's No. 185, which Hudson quotes as a variety of his *nigra*, but erroneously; for though our *nigra* may occasionally acquire a radius, it remains still truly distinct from the *Jacea* in the calyx, as well as in having much broader leaves. Dillenius seems to have been well acquainted with the two species; see his note in *Raii Syn.* 199.



132.



# CENTAUREA Cyanus.

## *Corn Blue-bottle.*

*SYNGENESIA Polygamia frustranea.*

GEN. CHAR. *Recept.* bristly. *Seed-down* simple. *Corollæ* of the radius funnel-shaped, irregular, longer than those of the disk.

SPEC. CHAR. Scales of the calyx serrated. Leaves linear, entire; the lowermost dentated.

SYN. Centaurea Cyanus. *Linn. Sp. Pl.* 1289. *Huds. Fl. An.* 375. *With. Bot. Arr.* 944. *Relh. Cant.* 325. *Sibth. Oxon.* 260. *Curt. Lond. fasc.* 6. *t.* 62.

Cyanus. *Raii Syn.* 198.

THIS is a common weed in corn-fields, flowering about midsummer, or later, and sufficiently obvious to every body. Its white or dark purple varieties, being of rare occurrence, are admitted into the flower garden, though really less beautiful than the natural sky-blue of the wild flower.

The root is small and annual. Stem 2 or 3 feet high, erect, harsh, angular, hollow, alternately and copiously branched, clothed with scattered lanceolate leaves, which are of a light greyish green, beneath somewhat cottony, ribbed, entire, the lower ones only being generally, though not infallibly, toothed; but the radical leaves are entire. A solitary flower terminates each branch, the scales of whose calyx are serrated with brown indentations. Corollæ of the radius bright blue; those of the disk smaller and purplish. The seeds are small and polished, with a short wing or crown.

A blue water-colour is easily prepared from the expressed juice of these flowers mixed with a little cold alum water. This blue is however reported to be not permanent. By way of experiment we have coloured with it the separate floret at the bottom of our plate, as we have already found it last several weeks, and think it may probably be durable enough if not exposed to light.

# CENTAUREA Scabiosa.

## *Greater Knapweed.*

*SYNGENESIA Polygamia frustranea.*

GEN. CHAR. *Receptacle* bristly. *Seed-wing* simple. *Corollæ* of the radius funnel-shaped, irregular, longer than those of the disk.

SPEC. CHAR. Scales of the calyx fringed. Leaves pinnatifid, their segments lanceolate.

SYN. Centaurea Scabiosa. *Linn. Sp. Pl.* 1291. *Hudſ. Fl. An.* 376. *With. Bot. Arr.* 945. *Relh. Cant.* 326.

Jacea major. *Raii Syn.* 198.

THE root is perennial. Stem about two feet high, erect, alternately branched, leafy, bearing at the end of each branch a solitary flower, the scales of whose calyx are triangular, acute, and ciliated or rather pectinated in the margin.

The greater knapweed grows throughout England, more rarely in Scotland, in the borders of fields, in meadows, by road-sides, and sometimes among corn, flowering in July and August. Ray says the flowers are sometimes white. We do not know of its being applied to any œconomical use. Small birds eat the seeds in winter. The permanent calyx in time becomes reflexed, and is very conspicuous at a distance, being of a most beautiful silvery hue.

# CENTAUREA Isnardi.

## *Jersey Star-thistle.*

*SYNGENESIA Polygamia-frustranea.*

GEN. CHAR. *Recept.* bristly. *Seed-down* simple. *Corollæ* of the radius funnel-shaped, irregular, longer than those of the disk.

SPEC. CHAR. Scales of the calyx palmate and spinous. Leaves toothed in a lyrate manner, roughish, slightly clasping the stem. Flowers sessile, terminal.

SYN. Centaurea Isnardi. *Linn. Sp. Pl.* 1295. *Sm. Fl. Brit.* 912. *Dicks. H. Sicc. fasc.* 16. 10. *Hull. ed.* 2. 247.

Calcitrapoides procumbens, cichorii folio, flore purpurascente. *Isnard. Mem. de l'Acad. des Sciences for* 1719: *German edition,* 378. *t.* 19.

NO part of the British dominions is known to produce this plant, except the isle of Jersey, from whence it was sent to Mr. Dickson, who has kindly communicated, last autumn, from his garden, a specimen differing in no respect from wild ones.

This is the only British *Centaurea* whose calyx-spines are simply palmate, not compound. The root is perennial. Stems procumbent, branched, leafy, angular, furrowed, roughish. Leaves scattered, oblong, more or less deeply pinnatifid in a lyrate manner, their lobes tipped with spines, their margins, or both surfaces frequently, rough with short rigid hairs. The upper leaves are lanceolate and nearly entire, several of them placed about the base of the terminal solitary flowers. Calyx ovate, smooth and naked, except the spreading five-cleft thorns of each scale. Corolla pale purple, with darker anthers. Mr. J. D. Sowerby has found the filaments contract when the anthers are touched, as related by many authors concerning *C. Calcitrapa, t.* 125.

Marc. as published by Jas. Sowerby London

# CENTAUREA Calcitrapa.

## *Star Thiſtle.*

*SYNGENESIA Polygamia-fruſtranea.*

GEN. CHAR. *Receptacle* briſtly. *Down* ſimple. *Cor.* of the radius funnel-ſhaped, irregular, longer than thoſe of the diſk.

SPEC. CHAR. Flowers ſeſſile. Calyx with compound ſpines. Leaves pinnatifid, with narrow dentated ſegments. Stem hairy.

SYN. Centaurea Calcitrapa. *Linn. Sp. Pl.* 1297. *Hudſ. Fl. An.* 376. *With. Bot. Arr.* 946. *Relh. Cant.* 326. Carduus ſtellatus. *Raii Syn.* 196.

FOUND not unfrequently in a barren gravelly or ſandy ſoil in waſte ground, by road ſides, and ſimilar places, beginning to flower about Midſummer, and continuing in bloſſom till deſtroyed by cold, being rather tender, when it becomes bleached and blown about by the wind, diſperſing its ſeeds as it goes.

From one annual root ariſes a low, much-branched, and buſhy ſtem, ſtrongly furrowed, clothed with ſlender ſoft hairs, and covered with abundance of pale-green leaves, ſometimes alternate, ſometimes from luxuriance cluſtered under the branches. Theſe leaves are more or leſs deeply pinnatifid, their ſegments long, narrow, acute, and variouſly dentated; the uppermoſt are more ſimple, and ſcarcely divided at all. At each divarication of the ſtem is a ſeſſile flower, its calyx compoſed of very ſtrong, ſpinous, yellowiſh, poliſhed ſcales, pinnated with leſſer ſpines at the baſe of their terminal one. Corolla pale purple, the radiant florets not much larger than the fertile ones of the diſk. The ſeeds have ſcarcely any feather or down, though the receptacle is hairy.

The ſtamina of this plant are ſaid to be irritable, contracting when touched, and drawing their antheræ downward along the ſtyle, like thoſe of the artichoke; but we have never been able to detect this curious property.

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# CENTAUREA ſolſtitialis.

## *St. Barnaby's Thiſtle.*

*SYNGENESIA Polygamia fruſtranea.*

GEN. CHAR. *Receptacle* briſtly. *Seed-down* ſimple. *Cor.* of the radius funnel-ſhaped, irregular, longer than thoſe of the diſk.

SPEC. CHAR. Flowers ſolitary. Calyx doubly ſpinous. Stem-leaves decurrent, without ſpines, lanceolate; radical ones lyrato-pinnatifid.

SYN. Centaurea ſolſtitialis. *Linn. Sp. Pl.* 1297. *Hudſ. Fl. An.* 377. *With. Bot. Arr.* 946. *Smith Tr. of Linn. Soc. v.* 2. 236.

Carduus ſtellatus luteus foliis Cyani. *Raii Syn.* 196.

Yellow Thiſtle. *Petiver Herb. Brit. t.* 21. *f.* 12.

DISCOVERED by Mr. Crowe in a field at Arminghall near Norwich, ſee *Linn. Soc. Tranſ.* above quoted. Upon mature conſideration we have no doubt of this being the real plant of Ray and Hudſon, more particularly as it is that of Petiver, who in this caſe is the beſt and oldeſt authority we can find. His figure is evidently *C. ſolſtitialis*, and not *melitenſis*. The plant has of late been ſought in vain about Cirenceſter; and being ſo very rare a native, we now venture to preſent the public with a figure which, though taken from a garden ſpecimen (Mr. Crowe's being deformed and damaged), perfectly exhibits the true habit of the ſpecies when wild.

The root is annual, whitiſh. Stem near two feet high, alternately branched, winged from the decurrent leaves, which are lanceolate and entire, ſlightly waved; the radical leaves are 4 or 5 inches long, lyrate, the lobes alternate, acute, the terminal one large, and more or leſs triangular. Flowers ſolitary at the end of each branch, bright yellow. Scales of the calyx tipped with palmated yellowiſh ſpines, of which the central one is very long, ſtrong, and different from the reſt. The whole herb is harſh and rigid, but clothed with a cotton-like web (as is the calyx), ſomewhat viſcid, and intenſely bitter. It flowers about Midſummer, whence the name; but laſts till late in autumn, and in the ſouth of Europe even till December.


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