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HIS MAJESTY,

F L O R A R U S T I C A :

EXHIBITING

ACCURATE FIGURES OF SUCH PLANTS AS ARE
EITHER USEFUL OR INJURIOUS IN

H U S B A N D R Y .

DRAWN AND ENGRAVED BY

F R E D E R I C K P . N O D D E R ,

B O T A N I C P A I N T E R T O H E R M A J E S T Y ,

AND COLOURED UNDER HIS INSPECTION.

WITH

SCIENTIFIC CHARACTERS, POPULAR DESCRIPTIONS,
AND USEFUL OBSERVATIONS,

BY

T H O M A S M A R T Y N , B . D . a n d F . R . S .

FELLOW OF THE LINNÆAN SOCIETY,

AND

REGIUS PROFESSOR OF BOTANY IN THE UNIVERSITY
OF CAMBRIDGE.

V O L . I I I .

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Chrysanthemum leucanthemum L. var. *leucanthemum* L. - 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

ANTHEMIS.

SYNGENESIA Polygamia Superflua.

GENERIC CHARACTER.

Calyx hemispherical, nearly equal. *Florets* of the ray more than five. *Down* to the seed none. *Receptacle* chaffy.

SPECIES.

Anthemis arvensis. *Corn Chamomile.*

Lin. spec. 1261. *Huds. angl.* 373. *Wither. arr.* 937.
Hall. helv. n. 103. *Scop. carn. n.* 1091. *Pollich
 pal. n.* 816. *Leers herborn. n.* 666. *Krock. files.
 n.* 1435.

Chamæmelum inodorum. *Baub. pin.* 135.
Raii syn. 185. *Petiv. brit. t.* 19. *f.* 8.

SPECIFIC CHARACTER.

Receptacles conical, chaffs lanceolate, seeds crown-margined, leaves somewhat villose.

DESCRIPTION.

ROOT hard and woody. The whole plant is hoary, or slightly woolly. Stems numerous, slender, hard, but flexible, branched, striated, pale green, with sometimes a tinge of red.

Leaves pinnate, sessile; midrib broad; pinnas either pinnate, or only jagged, sea green, terminated by semi-transparent, conical, sharp points. Peduncles hairy, thickening below the calyx. Scales of the calyx ovate, or ovate-lanceolate, somewhat hairy, with a green line along the back, and membranaceous edges. Florets of the ray white, elliptical, four or five lines in length, with two or three teeth at the end. Florets of the disk have a greenish tube, with a yellow border, bent back. Chaffs lanceolate, acuminate, keeled, as long as the florets. Seeds quadrangular, smooth, slightly furrowed, narrowest at the base, crowned with a blunt margin*.

OBSERVATIONS.

Linneus thus distinguishes his *Anthemis arvensis* from *A. Cotula*, or *Stinking Mayweed*. The root is biennial (others say perennial). The stalks are more diffused; the peduncles longer, with only four or five streaks or fine grooves, whereas that has about eight; the leaves are more hoary, and inodorous; the inner scales of the calyx are dilated at the tip and membranaceous, but in *A. Cotula* they are not at all dilated and scarcely membranaceous; the chaffs in this are lanceolate, in that narrow like a bristle; the apex of the seeds in this is crowned with a four-cornered rim, as in *Matricaria Chamomilla*; in *A. Cotula* the seeds have no crown, and terminate only in a pore.

It is remarked by Dr. Stokes, that the seeds of our plant are inversely conical, slightly angular, truncate, smooth, not covered with rough points, as those of *A. Cotula*, nor the angles or top edged with a membranaceous border, as in

* Withering.

Chrysanthemum inodorum, or an opaque border, as in *A. austriaca* of Jacquin.

This plant is found in corn fields, or fallows, by way sides, and sometimes in pastures: frequently whole arable fields are whitened with it. June and July are the months of flowering.



Chamaemelum nobile L. (Chamomile) - Botanical illustration by J. G. Smith, 1845.

MATRICARIA.

SYNGENESIA *Polygamia Superflua.*

GENERIC CHARACTER.

Calyx hemispherical, scales imbricate, the marginal ones solid, sharpish. *Down* to the seed none. *Receptacle* naked.

SPECIES.

Matricaria Chamomilla. *Corn Feverfew.*

Lin. spec. 1256. *Huds. angl.* 372. *Wither. arr.* 933.
Curtis lond. 5. 63. *Hall. helv. n.* 101. *Scop. carn. n.* 1042. *Pollich pal. n.* 815. *Krock. files. n.* 1432. *Villars dauph.* 3. 198.

Chamæmelum. *Ger. emac.* 754. 1. *Raii syn.* 184. *vulgare.* *Baub. pin.* 135. *Park. theat.* 85. 1. *amarum.* *Baub. hist.* 3. 116. *Raii hist.* 355. *Mor. hist. f.* 6. t. 12. f. 7. *Petiv. brit. t.* 19. f. 9.

SPECIFIC CHARACTER.

Stem upright, ray of the flower spreading, scales of the calyx equal at the edge; receptacle conical.

DESCRIPTION.

ROOT annual. Stem green, striated, branched. Lower leaves doubly pinnate, pinnas distant, pinnules bifid or trifid; upper ones often simply pinnate, pinnas linear, and of an equal breadth with the midrib. Flowering heads single, on

long peduncles, terminating the stem and branches. Scales of the calyx bluntly lanceolate, with a green dorsal line, hairy, with membranaceous edges. Florets of the ray white, almost linear, at first spreading, afterwards reflex. Receptacle conical *. Seeds numerous, minute, pale brown, furrowed, the furrows deeper and more numerous on the inner side, the ridges white †.

OBSERVATIONS.

It is common on cultivated grounds, on dunghills, and by way sides; flowering from May to August, and even October. Several different plants are confounded with this, under the common name of *Mayweed* and *Maithes*. It differs from *Anthemis Cotula*, or Stinking Mayweed, which it most resembles in its smell, in having a higher and larger stalk, the leaves darker green and cut into finer segments ‡. The heads of flowers bruised, smell somewhat like the true Chamomile, only not so pleasant; but those of Stinking Mayweed are intolerably disagreeable, and the plant will blister the skin on being much handled. The petals of the ray in the *Matricaria* are in general longer and much narrower; the disk is more prominent and of a darker yellow than in the *Anthemis*. The seeds of the *Anthemis* are broad and truncated at top, wrinkled, and of a deep brown colour; those of the *Matricaria* are much smaller, paler, and different in shape §.

According to the Swedish observations, kine, goats, and sheep eat this plant, horses are not fond of it, and swine refuse it. It seems to be rejected in general by all quadrupeds with us. It is supposed to possess the same qualities with the officinal Chamomile (*Anthemis nobilis*), but in an inferior degree.

* Woodw. MS. † Stokes in With. ‡ Ray. § Curtis.



Draun, Engraved & Published Nov. 1793, by F. & P. Aitken, No. 15, Brewer's Lane, London.

SCANDIX.

GENERIC CHARACTER.

Corol rayed. *Petals* subulate. *Fruit* emarginate.
Floscules of the disk often male.

SPECIES.

Scandix Anthriscus. *Rough Cicely, or Chervil.*

Lin. spec. 368. *Huds. angl.* 124. *Wither. arr.* 305.
Curtis lond. 1. 19. *Relb. cant. n.* 234. *Hall.*
helv. n. 743. *Pollich pal. n.* 297. *Leers ber-*
born. n. 211. *Scop. carn. n.* 312. *Jacqu. austr.*
2. t. 154. *Fl. dan. t.* 863. *Krock. files. n.* 448.
t. 41. *Petiv. brit. t.* 27. *f.* 12. *Mor. hist. f.* 9.
t. 10. *f.* 2. *row* 1. *Baub. hist. 3. 2.* 182. 1.
Raii hist. 469. 9. *syn.* 220. 7.

SPECIFIC CHARACTER.

Seeds ovate hispid, corollas uniform, stem smooth.

DESCRIPTION.

ROOT annual. Stem commonly a foot or 18 inches in height, but sometimes much higher in moist situations, upright, branching, cylindric, smooth, swelled and slightly striated at the joints, generally of a green colour. Leaves tri-pinnate, soft and tender, slightly hairy, especially underneath and along the midrib, of a yellowish green colour: pinnae opposite, four on each side; leaflets cloven, sharp.—Petioles channelled, villose, embracing the stem at the base

with a large sheath: on the stem the petioles are very short. Peduncles axillary, opposite to the leaves. The general umbel has commonly three rays, sometimes 4 or 5; the partial umbel has from 3 to 5 rays. General involucre usually wanting, though sometimes there is a single leaflet; partial involucre consists of 4 or 5 lanceolate, pointed, ciliate, permanent leaflets. All the corollas are fertile; petals heart-shaped and bent in, nearly equal. Seeds ovate, dark brown, with stiff hairs hooked upwards on the convex side*.

OBSERVATIONS.

This plant is very distinct from another of the same genus †, as will easily appear by comparing the figure and description here given with those at n. 38. In habit it approaches nearer to Chervil ‡, from which however it may readily be distinguished by the want of that pleasant smell which Chervil possesses when rubbed, but especially by the seeds, which in Chervil are black, smooth and glossy, longer and narrower, with two blunt ridges. No one can mistake these two plants who has once compared Jacquin's elegant figures of them in t. 154. and 390. of *Flora Austriaca*. Mr. Curtis's figure of this is excellent. It can scarcely be confounded with the true Hemlock §, that being a much larger plant; with a spotted stalk, the leaves perfectly smooth, not so finely divided, and of a darker green; having a general involucre, and smooth seeds: the strong hircine smell also betrays the Hemlock.

This rough Chervil, or Hemlock Chervil, as our older writers call it, is common by way sides, on banks, in hedges, and under walls: flowering in May and June.

Mr. Miller relates, that there have been some instances of the ill effects of this plant when taken inwardly; some who have eaten this herb in soups, by mistaking it for Garden Chervil, having narrowly escaped with their lives. He does not say whether he speaks from his own experience, and he does not cite any authority. We have not observed his account to be confirmed by other writers.

* Lyons in Relh. Curtis lond. † Scandix Pecten.

‡ Scandix Cerefolium. § Conium inaculatum.



MEDICAGO.

DIADELPHIA Decandria.

GENERIC CHARACTER.

Legume compressed, screw-shaped. *Keel* of the corolla bending down from the banner.

SPECIES.

Medicago polymorpha. *Variable Medick.*

VARIETY.

Med. polym. arabica. *Heart Medick.*

Lin. spec. 1098. 9. *η. mant.* 454. *Huds. angl.* 331.
Wither. arr. 808. *Curtis lond. fasc.* 3. *Camer.*
hort. t. 27. *Ger.* 1021. 4. *emac.* 1190. 4. *Park.*
 1115. 6. *Mor. hist. f.* 2. *t.* 15. *row.* 2. *f.* 12.
 17. *Hall. belv. n.* 383. *Scop. carn. n.* 942. *Raii*
hist. 963. 12. *syn.* 333. 1.

SPECIFIC CHARACTER.

Legumes spiral or screw-shaped, *stipules* toothed, stem diffused or spreading.

CHARACTER of the VARIETY.

Peduncles mostly three-flowered, *legumes* echinate, *leaflets* obcordate or inversely heart-shaped.

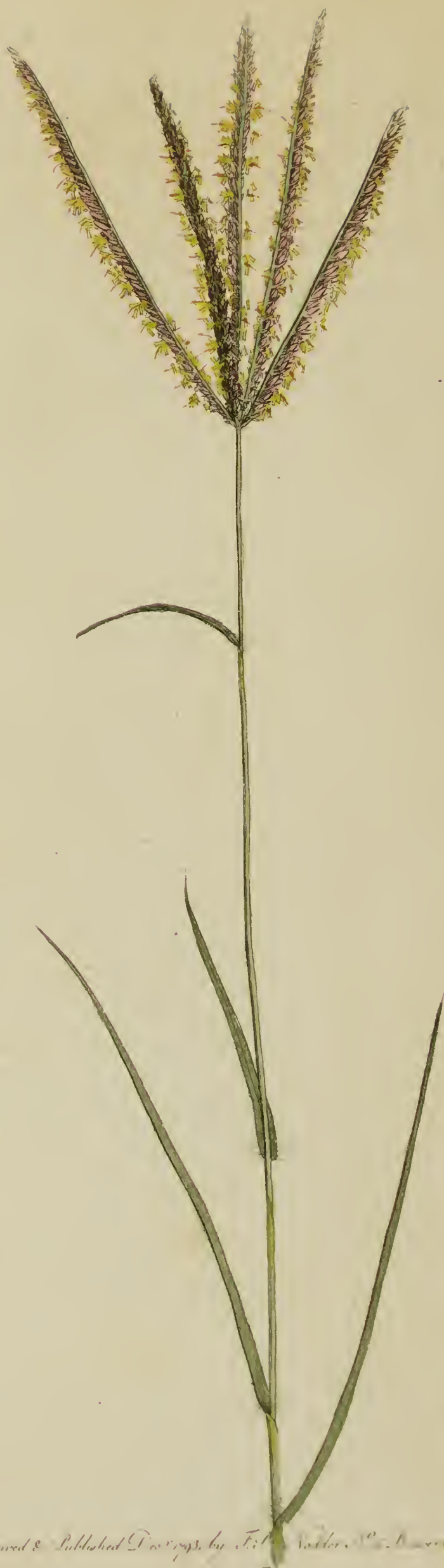
DESCRIPTION.

ROOT annual. Stems numerous, a foot in length, more or less according to the soil, procumbent, hairy, branched. Leaves obscurely ferrate, smooth, with a spot in the middle. Stipules in pairs, semi-sagittate, ferrate. Flowers yellow, from 2 to 4 or 5 together, on round hairy peduncles shorter than the petioles; there is a very small bracte at the base of each peduncle, and a bristle between the flowers of the same length with them*.

OBSERVATIONS.

This Medick is called by Gerard Heart Trefoil; others call it Heart Claver or Clover, which has been corrupted into Heart Liver. But though it agrees with the Trefoils or Clovers in its ternate leaves, yet since it is so materially distinct by its spiral legumes, the name of Heart Medick is to be preferred. It is very common on banks and the borders of fields, in dry sandy pastures, and especially near the sea; flowering in May and June. It varies much in size, as well as in the shape and brightness of the spots on the leaves, which, according to the observation of Linneus, disappear in the flowering plant. We have frequently observed it very luxuriant, when in a state of accidental cultivation, among lucerne, faintfoin or trefoil, but its hairiness and the extreme roughness of the seeds seem to make it not so desirable a fodder for cattle as the Hop-Medick, or Hop-Trefoil; at least it should be cut or pastured when young.

* Curtis.



PANICUM.

TRIANDRIA Digynia.

GENERIC CHARACTER.

Calyx three-valved, third valve least.

SPECIES.

Panicum dactylon. *Creeping Panic-grass.*

Lin. spec. 85. *Huds. angl.* 25. *Wither. arr.* 58.
Hall. helv. n. 1527. *Scop. carn. n.* 73. *Pollich*
palat. n. 61. *Krock. files. n.* 96. *Mor. hist. f.* 8.
t. 3. *row.* 2. *f.* 4, 6. *Ger. emac.* 28. 3. *Park.*
theat. 1179. 5. *Raii syn.* 399. 1.

SPECIFIC CHARACTER.

Spikes fingered, spreading, villose at the base on the inside; flowers solitary; runners creeping.

DESCRIPTION.

ROOT perennial, creeping by runners. Culms from 8 or 9 inches to a foot high, smooth, glaucous, frequently purple at the joints. Leaves somewhat glaucous, from 1 to 4 inches in length, and 1 or 2 lines in breadth, acuminate, roughish, hairy on both sides, especially towards the base.—Sheaths smooth, ending in a very short, hairy membrane or

ligule. Spikes 4, 5 or 6, linear, three-sided, an inch or an inch and half in length, purple when young, at first upright, but gradually spreading till they become horizontal. Spikelets solitary, sessile in each toothlet of the rachis, upright, ovate, acuminate, compressed, about a line in length, purple and smooth, the distance of about half a line from each other. Glumes of the calyx commonly two only, lanceolate, finely tapering, spreading, nearly as long as the corolla.— Inner valve of the corolla ovate, keeled, only half the breadth of the outer, with an awn-like thread from its base, apparently the rudiment of a pedicel, analogous to those in *Melica*, &c*. Anthers purple. Styles and stigmas violet coloured.

OBSERVATIONS.

Native of many parts of Europe, chiefly in sandy ground, in pastures and cultivated fields, by way sides, in waste places, on walls, and in marshes and boggy places. In England it has been remarked by Ray, in Cornwall between Penzance and Market-jeu. It flowers in July and August.

The roots are said to be used in Italy for the same purposes with *Triticum repens*.

* Stokes in Withering.



SPECIES.

Panicum fanguinale. *Slender-spiked Cock's-foot*
Panic grass.

Lin. spec. 84. *Huds. angl.* 25. *Wither. arr.* 57.
Curt. lond. fasc. 4. *Hall. belv. n.* 1526. *Scop.*
carn. n. 72. *Pollich palat. n.* 60. *Krock. files. n.*
95. *Schreb. gram.* 119. *t.* 16. *Mor. hist. f.* 8.
t. 3. *row. 1. f.* 2. *Fl. dan. t.* 388. *Ger.* 25. 2.
emac. 27. 2. *Park. theat.* 1178. 1. *Raii syn.*
399. 2.

SPECIFIC CHARACTER.

Spikes fingered, knotty on the inside of the base;
flowers in pairs, awnless; sheaths of the
leaves dotted.

DESCRIPTION.

ROOT annual. Culms about the same height with the
foregoing, reddish, sometimes branched, bending upwards,
very slender and weak, generally having four joints. Leaves
from an inch to two inches in length, and two or two lines
and a half in breadth, sharp, often waved on one of the edges,
very finely ferrate on both, having a few hairs on each surface.
Sheaths very hairy, the hairs proceeding from little promi-
nent points. Spikes (3-5) sessile on the top of the culm,

from an inch and half to four inches in length, dark purple, or purple and green. Spikelets pointing one way, pressed to the rachis, pedicelled, ovate-lanceolate, sharp, purple or green. Glumes or valves of the calyx three, permanent, the lowest so minute as to be scarcely perceptible to the naked eye; the others opposite, unequal, acute, nerved, rough on the edges, the upper one the length of the corolla, which it enfolds with its margin, the lower one only half the length of the other. The two valves of the corolla equal and smooth. Anthers and stigmas purple*.

OBSERVATIONS.

Native of Europe, Asia, and America, but with us not common. It has been remarked about Elden in Suffolk, Witchingham in Norfolk, Guildford and Battersea in Surry; flowering from July to September.

Haller, Scopoli, and others, from the peculiar disposition of the spikes, have made these Grasses a distinct genus under the name of *Digitaria*.

It derives the trivial name *sanguinale* from a trick which the boys in Germany have, of pricking the nostrils with the spikelets, till they draw blood.

It is said to have been cultivated formerly for the seeds, but that those of *festuca fluitans* superseded it. A sandy soil is congenial to it, and its spreading culms help to keep such a soil moist, and to prevent its being carried off by the winds.

* Curtis.





AVENA.

TRIANDRIA Digynia.

GENERIC CHARACTER.

Calyx two-valved, many-flowered, with a twisted awn at the back.

SPECIES.

Avena fativa. *Cultivated Oat.*

Lin. spec. 118. *Hall. helv. n.* 1494. *Villars dauph.*

2. 147. *Krock. files. n.* 178. *Mill. illustr.*

Blackw. t. 422.

A. disperma. *Mill. dict.*

Var. A. alba. *White Oat.*

Baub. pin. 23. *Baub. hist.* 2. 432. *Raii hist.* 1253. 1.

SPECIFIC CHARACTER.

Panicled, calyxes two-seeded, seeds smooth, one of them awned.

OBSERVATIONS.

THE Oat is so generally known and cultivated as a species of grain or corn, that it is unnecessary to describe it. There are several varieties; as the White Oat, here figured, which is most common in the Southern counties; the black,

more cultivated in the Northern parts of England; the red or brown, much cultivated in Derbyshire, Staffordshire, and Cheshire; Poland, Tartarian Oats, &c.

The principal use of this grain, in Southern countries, is as a food for horses. In the North it is a common substitute for wheat in bread. A sort of beer is made from it; and it is much used for gruel and other messes.

It is remarkable, that we are not able to ascertain the native place of growth, either of this or the other species of grain. Hence some have supposed that they are mere creatures of art, wild grasses improved by culture; whilst others have fancied, very unphilosophically, that such grasses as bear a resemblance to several sorts of corn, are the same species in a state of nature, or relapsed into their former state of degeneracy. Let it suffice to have mentioned such unfounded fancies.



St. lucas Engraved & Published Juny 1793 by J. P. Nodder . 1^o B. m. v. c. G. d. d. d.

SPECIES.

Avena nuda. *Naked Oat.*

Lin. spec. 118. *Huds. angl.* 52. *With. arr.* 113.
Mor. hist. f. 8. *t.* 7. *f.* 4. *Ger. herb.* 68. 2.
emac. 75. 2. *Park. theat.* 1134. 2. *Baub. hist.*
 2. 433. *Raii syn.* 389. 6. *hist.* 1254.

SPECIFIC CHARACTER.

Panicled, calyxes three-flowered, receptacle longer than the calyx, petals awned at the back, except the third flower, which is awnless.

DESCRIPTION.

THIS bears a great resemblance to the common White Oat, but is easily distinguished from it, by the seeds, when ripe, falling out of the husks. Haller observes, that there are sometimes only two flowers in a calyx, and that the awn is neither twisted nor jointed. Ray says, that it has not a hard husk, like the common Oat, but several thin chaffy coats; the grain also is smaller, but fuller bodied, and inclining to tawny, like the red oat.

OBSERVATIONS.

The naked oat is called also *Pillis* or *Pill-corn*, from its quality of depositing the husk or chaff. *Pill*, which we now write *Peel*, being formerly put for the outer coat of any sort of fruit. Mr. Ray informs us, that in his time it was cul-

tivated abundantly in the farther part of Cornwall, where it fetched no less a price than wheat. Dr. Plot also mentions its being cultivated in Staffordshire. According to Mr. Miller, in the North of England, in Scotland, and in Wales, it is cultivated in plenty; being esteemed because the grain threshes clean out of the husk, and need not be carried to the mill to be made into oatmeal or grist. The produce of this is not so great as that of the common Oat, because the grain being small and naked, goes near in measure; but what is wanting in measure is supplied in value*.

* What Mr. Miller says is copied from Worlidge.



From the original & Published Jan. 1801 by G. P. Wills & Co. in the Botanical Cabinet.

SPECIES.

Avena fatua. Wild or bearded Oat.

Lin. spec. 118. *Huds. angl.* 52. *Wither. arr.* 113.
Hall. helv. n. 1495. *Pollich palat. n.* 123. *Leers*
herborn. n. 90. *t.* 9. *f.* 4. *Villars dauph.* 2. 147.
Krock. files. n. 182. *Mill. illustr. Mor. hist. f.* 8.
t. 7. *f.* 5. *Raii hist.* 1254. 4.

SPECIFIC CHARACTER.

Panicled, calyxes three-flowered, all the florets awned and hairy at the base.

DESCRIPTION.

OUR Wild Oat has an annual root. It is a taller plant than the cultivated oat, the culms or straw being frequently three or four feet in height. The leaves are smooth, except about the edge, where they have a few hairs, so that they are rough to the touch when stroked downwards. Panicle pyramidal, with spreading branches, some of them dividing towards the top, from 1 to 6 at a knot. Peduncles hairy. Valves of the calyx from 9 to 11 lines long and ribbed, the outer valve generally a line shorter than the other, containing two florets, both awned; the third is often wanting. The corolla has tufts of hair at the base; outer valve even, the ribs not being prominent, beset with whitish hairs about the insertion of the awn, and some few scattered ones between

it and the base, slightly cloven at the end, but readily separable to the depth of two lines, fawn-coloured when ripe. The awn is twice as long as the corolla, and rough; it is bent aside about a line above the point of the valve*.

OBSERVATIONS.

It is called by our English writers *Bearded Wild Oats* or *Haver*. It is one of our most destructive annual weeds among corn, and is frequently so prevalent among barley, as almost to choke it. The wild oat ripens its seed and falls before the crop itself is ripe, thus filling the ground, where it will lie several years without vegetating. It may be extirpated by repeated fallowing, or by laying down the land to grafs.

The awns are used for hygrometers, and the seeds instead of artificial flies, in fishing for trout.

The *sterilis avena* of Virgil, or the wild Oat of Southern countries, is a different species from this.

* Stokes, &c. in Withering.



Published by P. A. N. ...

DAUCUS.

PENTANDRIA Digynia.

GENERIC CHARACTER.

Corollas sub-radiate, all hermaphrodite. Fruit rough with hairs.

SPECIES.

Daucus Carota. Wild Carrot, or Bird's-nest.

Lin. spec. 348. *Witber. arr.* 274. *Lightf. scot.* 156.

Relb. cant. n. 216. *Hall. helv. n.* 746. *Pollich.*

pal. n. 273. *Scop. carn. n.* 307. *Krock. files.*

n. 406. *Villars dauph.* 2. 652.—Figured in

Fl. dan. t. 723. *Rivin. pent. t.* 28. (Staphyli-

nus) *Ger.* 873. *emac.* 1028. *Park. theat.* 902.

2. *Mor. hist. f.* 9. *t.* 13. *f.* 2. *Camcr. epit.* 508.

Fuchf. 684. *Baub. hist.* 3. 62. (Pastinaca).

Caucalis Carota. *Huds. angl.* 114.

D. vulgaris. *Raii syn.* 218.

SPECIFIC CHARACTER.

Seeds hispid, petioles nerved underneath

OBSERVATIONS.

ROOT fusiform, straight, seldom branched, smaller, paler, more hard and sticky than in the cultivated Carrot,

but having a more aromatic scent. Stems grooved, rough with hairs. Leaves sheathed, hairy, very rough along the nerves, pinnate-pinnatifid, the extreme pinnules toothed, ending in little spines. Involucres many-leaved, the universal pinnatifid, the partial linear-lanceolate. The umbel is composed of 30 or 40 unequal rays; the umbellule of fewer, (about 30) and more equal. Flowers white, in the middle sometimes purple or deep crimson; those in the circumference are frequently defective or quite barren.

OBSERVATIONS.

Wild Carrot is common in pastures, on balks and headlands. It is a biennial plant, flowering from June to August. The umbel is at first a little convex, but becomes gradually flat, and then more and more concave, till it forms a perfect basin, in its feeding state resembling a bird's-nest. It is then easily distinguished, and has derived the common English name from this circumstance. Others, it is said, call it *Bee's-nest*, and that name is recorded by Gerard.

The seeds have been used as diuretics and carminatives, and are highly recommended in fits of the gravel and stone.

Moles are so fond of the roots, that they are a proper bait to take these animals; but garden carrots answer best for this purpose, as well as for destroying crickets, being made into a paste with powdered arsenic and wheat meal; and for poultices to mitigate the pain, and abate the stench, of foul and cancerous ulcers.

Mr. Miller informs us, that he could never improve the wild carrot, so as in any degree to render the roots eatable, like that which is cultivated. In this and the like cases he concludes, that the plants are specifically different; but this is a reasoning not to be admitted. He adds, that the shops

are supplied with old feeds of the garden carrot, instead of fresh ones of the wild sort, to be used medicinally. This is one of the many ways by which efficacious medicines are brought into disrepute; but if wild carrot feeds be really valuable in calculous cases, they may easily be gathered fresh in abundance by every husbandman.



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PASTINACA.

PENTANDRIA Digynia.

GENERIC CHARACTER.

Fruit elliptic, compressed flat. Petals rolled in, entire.

SPECIES.

Pastinaca fativa. Parsnep.

Lin. spec. 376. *Wither. arr.* 309. *Hall. herb. n.* 808. *Scop. carn. n.* 233. *Pollich. pal. n.* 303. *Krock. files. n.* 464. *Villars dauph. 2.* 637.

P. sylvestris. *Huds. angl.* 125. *Relb. cant. n.* 237. *Mill. dict. n.* 1. *Raii syn.* 206. *hist.* 409.

Figured in *Riv. pent. t.* 6. *Ger.* 856. *emac.* 1025. 2. *Mor. hist. f.* 9. *t.* 16. *f.* 2. *Baub. hist.* 3. 149. *Fuchs.* 753.—Cultivated.—*Fuchs.* 751. *Ger.* 870. 1. 2. *emac.* 1025. *Park. theat.* 944. *Baub. hist.* 3. 150. *Mor. f.* 1.

SPECIFIC CHARACTER.

Leaves simply pinnate.

DESCRIPTION.

WILD Parsnep has upright, stiff, pubescent, hollow stems, deeply grooved so as to be angular, and branching;

they are from a foot and a half to upwards of four feet in height. The leaves are large; the leaflets very soft, with a pile of hairs, ferrate, and often three-lobed, especially the end one: petioles sheathed, grooved, pubescent. Umbels broad, composed of 10, 12, or sometimes more unequal rays: umbellule has more rays, 16, 20, and upwards. Corolla yellow, regular. Seeds smooth, grooved, brown.

OBSERVATIONS.

Wild Parsnep is found in pastures, hedges, and the borders of ploughed fields, particularly in a calcareous soil; flowering in July and August.

Mr. Miller makes the same observations respecting the wild and garden Parsnep, as he does on the Carrot.

The roots cultivated abound much more in saccharine juice than those of Carrot; and in the North of Ireland are brewed instead of malt, with hops, and fermented with yeast; the liquor, thus obtained, is said to be pleasant. Being highly nutritious, they are much used by those who abstain from animal food in Lent. The seeds will often cure intermittent fevers*.

Swine are fond of this root, and quickly grow fat with it. Both this and Carrot deserve the attention of the husbandman, where the ground is fit for them, for feeding horses, and fattening hogs and cattle.

* Withering.



FESTUCA.

TRIANDRIA Digynia.

GENERIC CHARACTER.

Calyx two-valved. *Spikelet* oblong, roundish, with acuminate glumes.

SPECIES.

Festuca pratensis. *Meadow Fescue*.

Huds. angl. ed. 1. 37. With. arr. 101. Curtis lond. n. 66. Pract. obs. 16. t. 5.

F. fluitans pratensis. *Huds. angl. ed. 2. 47. γ.*

Poa. Hall. belv. n. 1451.

Gramen paniculatum elatius, &c. Raii syn. 411. 16. Scheuch. 202. 2.

Figured in *Mus. rust. 4. 2. Mor. hist. f. 8. t. 2. f. 2. δ. Scheuch. 4. 6. Park. theat. 1146. 8. (Phoenix.)*

SPECIFIC CHARACTER.

Panicle directed one way oblique, spikelets without awns, almost linear, leaves flat.

DESCRIPTION.

ROOT perennial: Culms two feet high. Leaves two lines or more in breadth, rough to the touch. Panicles

large, loose. Spikelets six or eight-flowered, acuminate, smooth.

As this sort of grass approaches so near to *Festuca elatior*, as to have been confounded with it, to point out the distinctive marks may be more to the purpose, than to give a long description.

This has only half the height of the *elatior*, or little more; the leaves have only half the breadth; the panicle is shorter, and contains about half the number of flowers; the panicle is but once branched, droops but slightly, leans to one side when in flower, and the flowers all grow one way; in the *elatior* the panicle branches twice, it droops greatly at first, and the flowers grow much more loosely; in this also the spikelets are somewhat flat, linear, and obtuse; in that they are more round, ovate, and pointed*.

OBSERVATIONS.

The common place of growth of Meadow-Fescue grass is the meadow; but it is found in a variety of soils and situations, from the sand-pit to the osier-holt. In culture it seems most adapted to middle land, either moderately moist or dry. It is not quite so early as Foxtail and the Meadow-grasses, but it flowers about the middle of June, and has been cut for seed by Mr. Curtis, who has paid great attention to this excellent grass, by the end of the same month. He recommends it as greatly superior to Ray-grass, and as most likely to remedy the deficiencies complained of in that. It is very hardy, sufficiently large and productive of foliage, produces abundance of seeds, easily gathered, and growing readily, and is by no means a late grass. Being now under trial in skilful hands, we shall soon be acquainted with its real merits.

* Curtis.



21 — Eng. and P. Published, & March 1794, by J. P. Nodder, A. S. Brewer, Senec. G. Linn. Sp. Pl.

SENECIO.

SYNGENESIA Polygamia Superflua.

GENERIC CHARACTER.

Cal. cylindric, calyced; scales mortified at the tip. *Down* simple. *Recept.* naked.

SPECIES.

Senecio Jacobæa. *Common Ragwort.*

Lin. spec. 1219. *Huds. angl.* 365. *Lightf. scot.* 480.

Wither. arr. Hall. helv. n. 62. *Scop. carn.*

n. 1072. *Pollich. pal. n.* 797. *Krock. files. n.*

1396. *Villars dauph.* 3. 226. *Fl. dan. t.* 944.

Mor. hist. f. 7. *t.* 18. *f.* 1. *Ger. herb.* 218. 1.

emac. 280. 1. *Park. theat.* 668. 1. *Raii hist.*

284. *syn.* 177.

SPECIFIC CHARACTER.

Corollas rayed, leaves pinnate-lyrate, with the jags subdivided into other smaller jags, stem upright.

DESCRIPTION.

ROOT creeping, truncated, fibrous. Stems two, three, or four feet high, streaked, upright, branched. Leaves generally green, without any down or hoariness; those next

the root pinnatifid at the base only, with a large oval sinuated segment at the extremity; on the stem they are pinnatifid throughout, and their segments laciniated; these are more numerous and finer in proportion to the dryness of the soil. The flowers grow in umbels, and are yellow: peduncles generally downy; calyx smooth, with the scales blackish at the tips; ray spreading, with about 12 flowers; in the disk about 60.

OBSERVATIONS.

Ragwort, called in some parts of the north Seggrum, is a common weed in grass grounds. Where these are mowed, it is easily kept down, since, if it be not biennial, it is not a very lasting plant; but in pastures, it eludes the bite of cattle, and becomes a very large rank weed, occupying much room, and propagating itself abundantly by its downy seeds. Mowing does not destroy it; but it may quickly be pulled up by hand, only observing to perform the operation in moist weather, for if any considerable fibres be left in the ground, the roots will strike again.

It might very probably be of service in dyeing.



MEDICAGO.

DIADELPHIA Decandria.

GENERIC CHARACTER.

Banner and wings almost equal, spreading out in form of a three-petalled corolla.

SPECIES.

Medicago falcata. *Yellow Medick.*

Lin. spec. 1096. *Huds. angl.* 330. *Relb. cant. n.* 549.
Wither. arr. Hall. helv. n. 381. *Scop. carn. n.*
 941. *Pollich. pal. n.* 713. *Krock. files. n.* 1222.
Villars dauph. 3. 400. *Fl. dan. t.* 233. *Rivin.*
tetr. t. 84. (Falcata).

Medica falcata. *Mill. diet. n.* 2. *Mor. hist. f. 2. t.*
 16. *f.* 1.

M. sylvestris. *Baub. hist. 2.* 383. *Raii syn.* 333.

M. frutescens, flavo flore. *Clus. hist. 2.* 243. *Park.*
theat. 1114. 3. *Raii hist.* 960. 2.

Trifolium luteum, &c. *Baub. pin.* 330. 2. *Ger.*
emac. 1191. 8.

SPECIFIC CHARACTER.

Peduncles in racemes, legumes shaped like a crescent, stems prostrate.

DESCRIPTION.

ROOT perennial. Stems procumbent, ascending or bending upwards towards the end, branching, two, three, and sometimes four feet in length. Leaves alternate, petioled; leaflets lanceolate or oblong ovate, truncate or retuse, toothed at the end, the nerve ending in a little spine; the two lateral ones are almost sessile, but the odd one is on a longer petiole. Stipules lanceolate, acuminate, entire. Peduncles axillary, somewhat angular, standing much above the leaf. Flowers in a short raceme. Corolla commonly yellow. Legumes fickle-shaped, not making several turns as in cultivated Lucern, linear, 6 or 7 lines long, and scarcely two broad, slightly pubescent, black when ripe. Seeds smooth, yellow.

Mr. Miller remarks, that the stalks of this are smaller, and never rise so high, as those of the true Lucern, and that they are generally prostrate; that the leaves are not half so broad; that the flowers are produced in short roundish spikes, and are of a saffron colour.

OBSERVATIONS.

Yellow Medick is common in the south of Europe, by way sides, and in dry pastures; flowering from June through the summer. With us it is less common. Linneus recommended it for cultivation; but Haller objects to the hardness of the stalks, and its prostrate manner of growth. In cultivation however the stalks may prove more succulent, and in this state they will support each other. Upon the whole, it may probably turn out not to be superior to the purple Medick or Lucern. The roots strike very deep, and are with difficulty eradicated.





Linnaeus Engraving 2 Published, March 1794, by F. & P. Voelter, v. 1. 15. Brauer, Senec. Carlsb. Square

SPECIES, or rather *Variety*.

Medicago varia. Various-flowered Medick.

OBSERVATIONS.

YELLOW Medick varies much in the colour of its flowers, which are sometimes whitish, quite white, or greenish. The variety here figured is remarkable in having flowers, of colours so different as blue and yellow, on the same stalk. Caspar Bauhin says, that it is found in the south of France with whitish yellow, green, blue, purple, black, and variegated flowers; but he does not affirm that these different colours occur on the same plant. Mr. Ray observed it with a purple flower, between Norwich and Lynn, and doubted whether it was not the true Lucern in a wild state. The stipules are narrower in this than in the foregoing, but whether the difference be permanent we cannot say.



11. *Convolvulus*, Engraved & Published April 1791, by J. P. Aitken, V. S. & B. S. & Co. Golden Square

CONVOLVULUS.

PENTANDRIA Monogynia.

GENERIC CHARACTER.

Cor. bell-shaped, plaited. *Stigmas* two. *Caps.* two-celled, with two seeds in each cell.

SPECIES.

Convolvulus sepium. *Great Bindweed.*

Lin. spec. 218. *Huds. angl.* 88. *Wither. arr.* 213.
Curtis lond. 1. 13. *Relb. cant. n.* 167. *Hall. helv. n.* 663. *Scop. carn. n.* 220. *Pollich. pal. n.* 205. *Leers herborn. n.* 146. *Krock. files. n.* 308. *Fl. dan. t.* 458. *Blackw. t.* 38. *Ger.* 712.
 1. *emac.* 861. 1. *Park. theat.* 163. 3. *Mor. hist. f.* 1. *t.* 3. *f.* 6. *Dod.* 392. *Lob. obs.* 340.
 1. *Fuchsf.* 720. *Baub. hist.* 2. 154. *Raii hist.* 725. 6. *syn.* 275. 1.

SPECIFIC CHARACTER.

Leaves sagittate, with the hinder corners truncate or cut off, peduncles four-cornered, one-flowered, bractes or involucre heart-shaped close to the flower.

DESCRIPTION.

ROOT perennial, white, the thickness of a goose-quill, creeping. Stems many, streaked, twisted, twining about other plants and shrubs to the height of six feet; branches few, alternate. Leaves alternate, smooth, petioled. The large involucre is commonly purplish. Corolla white, very large, obscurely divided, and turned back a little.

OBSERVATIONS.

This plant is very common in hedges, and flowers late, in August and September. It increases prodigiously by its creeping roots, and is not eradicated but with great difficulty; were it not for this property, it might be considered as a very ornamental plant. The flowers sometimes vary to red.

The inspissated juice, in doses of twenty and thirty grains, is a powerful drastic purge. Dr. Withering, therefore, asks, can it be worth while to import Scammony, which is so nearly allied to this, from Aleppo, when a medicine with the very same properties grows spontaneously in our hedges? Though an acrid purgative to the human race, it is eaten by hogs in large quantities without any such effect.



Ipomoea, Engraved & Published April 1792, by S. P. Vaillant, N. S., Bonaparte, Paris, France.

SPECIES.

Convolvulus arvensis. *Small Bindweed.*

Lin. spec. 218. *Huds. angl.* 88. *Wither. arr.* 213.
Curtis lond. 2. 13. *Relb. cant. n.* 166. *Hall.*
helv. n. 664. *Scop. carn. n.* 219. *Pollich. pal. n.*
 204. *Leers herborn. n.* 245. *Krock. files. n.*
 307. *Fl. dan. t.* 459. *Ger.* 712. 2. *emac.* 861.
 2. *Park. theat.* 171. 2. *Mor. hist. f. i. t.* 3.
f. 9. *Clus.* 2. 50. 1. *Dod.* 393. *Lob. obs.* 340.
 2. *Fuchs.* 258. *Baub. hist.* 2. 157. *Raii hist.*
 725. 7. *syn.* 275. 2.

SPECIFIC CHARACTER.

Leaves sagittate, sharp on each side, peduncles commonly one-flowered, bractes awl-shaped at a distance from the flowers.

DESCRIPTION.

ROOT perennial, white, the thickness of a crow quill, creeping. Stems many, twisted, procumbent, branching. Leaves alternate, smooth. Petioles shorter than the leaves, convex below, channelled above. The bractes are at a distance from the flower, and sometimes a second or even a third flower proceeds from the bosom of them. Corolla sometimes wholly white, but frequently variegated with red; it is spreading and plaited.

OBSERVATIONS.

Small or field Bindweed is too common in gardens and arable fields, flowering sooner than the other, namely, in June and July. This does not yield to the Great or Hedge Bindweed in its property of creeping; but it is infinitely more destructive, because that keeps to the hedges for the sake of climbing, whereas this wanders over whole fields, from which it cannot be eradicated without repeated ploughing in dry weather, and burning the roots, every atom of which will grow.

Mr. Curtis has proved by an experiment, that cutting down the plants, even below the surface, only tends to spread them farther.

This species is easily distinguished from the foregoing, by the inferiority in size of all its parts, its procumbency, the tendency of the corolla to variegation, and the more important circumstances pointed out in the specific characters.



Down, Engraved & Published - April 1794. by F. P. Nodder. 1790. Brewer. *Stipa squarrosa*

HORDEUM.

TRIANDRIA Digynia.

GENERIC CHARACTER.

Cal. lateral, two-valved, one-flowered, growing by threes.

SPECIES.

Hordeum vulgare. Common Spring Barley.

Lin. spec. 125. *Hall. helv. n.* 1533. *Blackw. herb.* t. 423. *Mor. hist.* 3. 206. f. 8. t. 6. f. 3. *Mill. dict. n.* 1.

SPECIFIC CHARACTER.

All the flowers hermaphrodite and awned, in two very upright rows.

OBSERVATIONS.

IT is scarcely necessary to describe a plant so well known to the husbandman as Barley. Besides many varieties, there are several distinct species of this grain; as this here figured: 2. *Hordeum Zeocriton*, or long-eared Barley. 3. *H. distichon*, Sprat or Battledore Barley. 4. *H. hexastichon*, Winter or Square Barley, Bear or Big.

The first and third of these are said to be found wild in

Sicily and Tartary; but the plants so observed were probably such only as had escaped from culture.

There are several grasses which evidently belong to the same genus. Three of these have been figured in plates 43, 44, and 45.



POLYGONUM.

OCTANDRIA Trigynia.

GENERIC CHARACTER.

Calyx none. *Cor.* five-parted, calycine. *Seed* one, angular.

SPECIES.

Polygonum aviculare. *Knot-grass.*

Lin. spec. 519. *Huds. angl.* 171. *Wither. arr.* 413.
Curtis lond. 1. 27. *Hall. helv. n.* 1560. *Scop. carn. n.* 471. *Pollich. pal. n.* 386. *Blackw. herb. t.* 315. *Fl. dan. t.* 803. *Mor. hist. f. 5. t.* 29. *f. 1. row 3.* *Ger. herb.* 451. *emac.* 565. *Park. theat.* 443. 1. *Baub. hist.* 3. 375. 1. *Raii hist.* 184. *syn.* 146.

SPECIFIC CHARACTER.

Flowers (eight-stamened, three-styled) axillary, leaves lanceolate, stem procumbent herbaceous.

DESCRIPTION.

ROOT annual. Stems a long span, or about nine inches in length, branched, slender, streaked, smooth, round, swell-

ling a little at the joints. Leaves varying from ovate to lanceolate, and even linear, alternate, smooth. Stipules forming a sheath round the joints, membranous, white, shining, fibrous at top. Flowers two or three together, proceeding with the leaves from the sheaths of the stipules, on short peduncles.

OBSERVATIONS.

This is one of our most common plants, especially in a sandy or gravelly soil, on banks, by roads and paths, and in corn fields; it frequently covers much ground, where the natural grass has been destroyed. It has the generic name *Polygonum*, from the abundance of knots on the stem; the trivial name *aviculare* from the gratefulness of its seeds to small birds; the English name *Knot-grass*, from the knottiness of the stem, and because it is eaten by cattle, such plants having obtained the name of *Grass*, though they bear no similitude to real grasses. Hogs eat it with great avidity, and hence it is known in many counties by the name of *Hog-weed*.



6-1-10-10

COCHLEARIA.

TETRADYNAMIA *Siliquosa.*

GENERIC CHARACTER.

Silicle or pouch emarginate or notched at the end, turgid, rugged; valves gibbous, blunt.

SPECIES.

Cochlearia Coronopus. *Swine's Cress.*

Lin. spec. 904. *Huds. angl.* 284. *Wither. arr.* 680.
Hall. helv. n. 502. *Scop. carn. n.* 860. *Pollich. pal. n.* 613. *Fl. dan. t.* 202. *Blackw. herb. t.* 120. *Mor. hist. f.* 3. *t.* 19. *f.* 9. *Ger. herb.* 340. 2. *emac.* 427. 2. *Park. theat.* 502. *f.* 2, 5. *Baub. hist.* 2. 919. 2. *Raii hist.* 843. *syn.* 304. 6.

SPECIFIC CHARACTER.

Leaves pinnatifid, stem depressed.

DESCRIPTION.

ROOT annual. Stems compressed, often depressed along the middle. Root-leaves prostrate, longer than the branches; leaflets cut along the fore edge, very entire along the back edge, the terminating one linear, very entire. Flowers very small, in racemes; petals white. Nectary, six glands, up-

right, green, blunt, as long as the anthers; four of them oblong, compressed, at the base of the claws of the petals; two cylindrical, narrower, between the longer stamens. Silicle kidney-heart-shaped, terminated by a short conical style, depressed on the sides, with furrows and sharp ridges running towards the edge, where they run out into sharpish points; one of the cells being not unfrequently empty, in which case the fertile seed expands, filling up almost the whole of the seed-vessel, and the style is bent down towards the empty cell*.

OBSERVATIONS.

This is a common weed on rubbish, by road sides, and on dunghills, flowering most part of the summer. It is acrid, and of the same genus with Scurvy-grass and Horse-radish. It was an ingredient in Mrs. Stephens's medicine for the stone.

* Stokes in Withering.



ANTIRRHINUM.

DIDYNAMIA Angiospermia.

GENERIC CHARACTER.

Calyx five-leaved. *Corolla*, the base prominent downwards, nectariferous. *Capsule* two-celled.

SPECIES.

Antirrhinum Linaria. Toad-flax.

Lin. spec. 858. *Huds. angl.* 273. *Wither. arr.* 648. *Curtis lond.* 1. 47. *Hall. helv. n.* 336. *Scop. carn. n.* 768. *Pollich. pal. n.* 594. *Rivin. mon.* 83. 1. *Blackw.* 115. *Mor. hist. f.* 5. *t.* 12. *f.* 10. *Ger. herb.* 440. *emac.* 550. 1. *Park. theat.* 458. 1. *Baub. hist.* 3. 456. 2. *Raii hist.* 752. 1. *syn.* 281.

SPECIFIC CHARACTER.

Leaves lanceolate-linear, crowded; stem upright; spikes terminating, sessile; flowers imbricated.

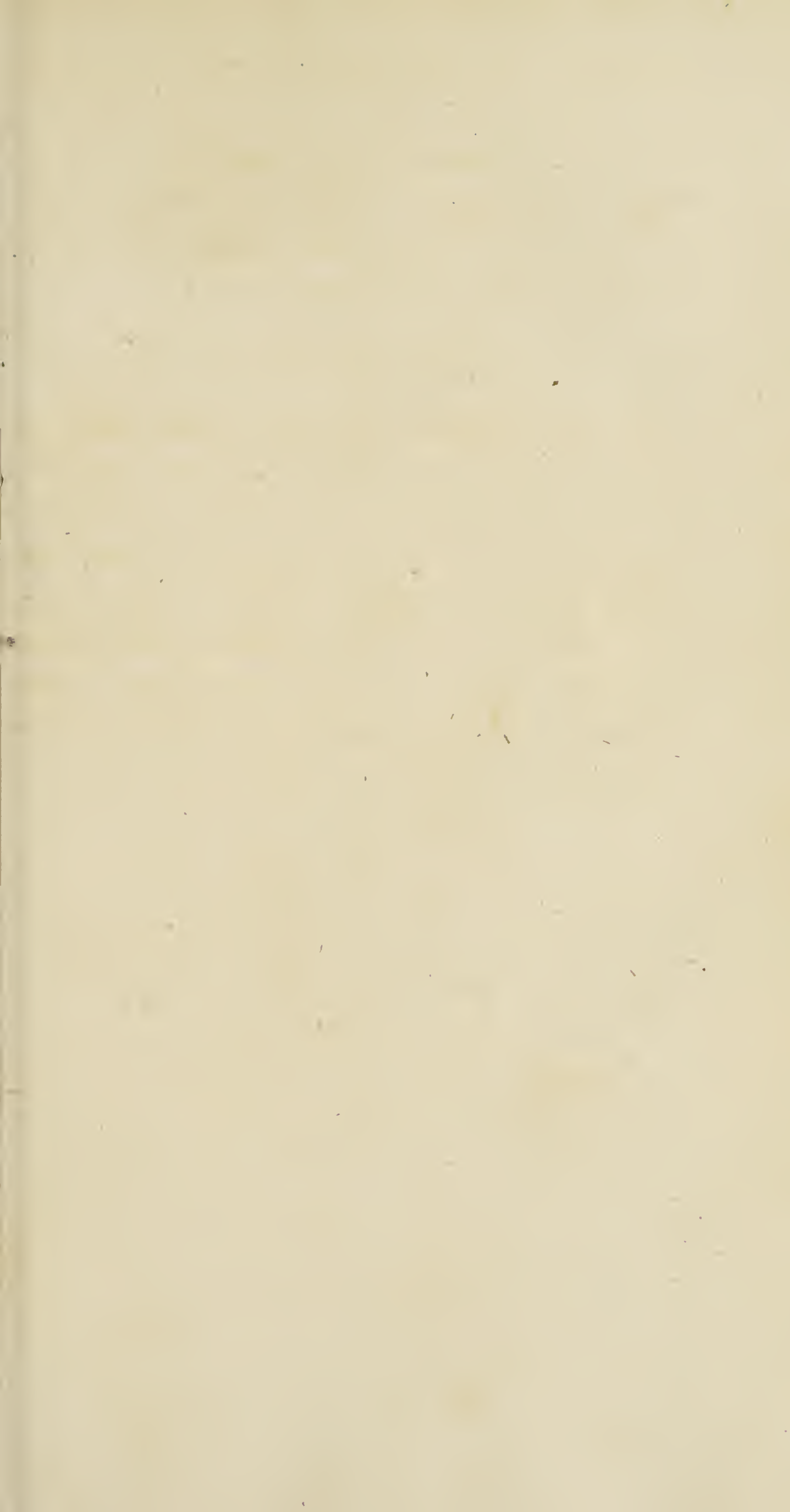
DESCRIPTION.

ROOT perennial, creeping. Stems several, from one to two feet high, leafy, round, smooth. Leaves growing very

thick together on the stem without any regular order, smooth, and of a bluish colour. Flowers in thick spikes on the top of the stems. Corolla yellow, with an orange or saffron-coloured villose palate. Nectary conical. Capsule ovate, splitting at top into several equal divisions. Seeds black, nearly flat, circular, with a shallow notch.

OBSERVATIONS.

This plant is common on banks by road sides, and in dry pastures; flowering from July to September. It has formerly been in much medical repute, and an infusion of the leaves is said to be diuretic and purgative. An ointment prepared from them with lard and the yolk of an egg is recommended in the piles. The expressed juice mixed with milk is a poison to flies. No cattle seem to eat it. In some counties it is known by the name of *Butter and eggs*, which it derives from the colour of the flowers.





TRIFOLIUM.

DIADELPHIA Decandria.

GENERIC CHARACTER.

Flowers in a sort of head. *Legume* scarcely longer than the calyx, not opening, but falling whole.

SPECIES.

Trifolium stellatum. *Star-headed Trefoil.*

Lin. syst. 689. *Wither. arr.* 799. *Murr. prodr.* 174.

Scop. carn. n. 926. *Baub. prod.* 143. *Baub.*

hist. 2. 376. 2. *Mor. hist. f.* 2. t. 13. f. 9.

SPECIFIC CHARACTER.

Spikes hairy, calyxes spreading, with equal teeth, stem diffused, leaflets obcordate.

DESCRIPTION.

STEM woolly, with a few hairs. Stipules in pairs, lanceolate, lengthened out, scored, fringed with long hairs. Upper leaves opposite; leaflets oblong, slightly wedge-shaped at the base, rounded at the end, and sometimes very slightly toothed, smooth, except at the edges, and along the mid-rib

underneath. Petioles short. Peduncles longer. Heads or spikes of flowers oval. Calyx as long as the corolla, divided almost to the base; segments equal, beset at the base with white spreading hairs*.

* Withering.



Ranunculus auricomus L. Published from 1792 by F. P. A. N. de Vries, in *Atlas Botanique*, Paris, Golden Signet.

CARDAMINE.

TETRADYNAMIA Siliquosa.

GENERIC CHARACTER.

Silique or Pod opening elastically, the valves being then rolled back. *Stigma* entire. *Calyx* slightly gaping.

SPECIES.

Cardamine pratensis. Common Ladies' Smock.

Lin. syst. 594. *Wither. arr.* 688. *Curtis lond. fasc.* 3. *Hall. helv. n.* 473. *Scop. carn. n.* 819. *Pollich. pal. n.* 621. *Blackw. t.* 223. *Ger. herb.* 201. 1, 2. *emac.* 259. 1, 2. *Park. theat.* 826. 2. & 1239. *f.* 4. *Mor. hist. f.* 3. *t.* 4. *f.* 7. *Petiv. brit. t.* 47. *f.* 5. *Baub. hist.* 2. 889. 1. *Raii hist.* 814. 2.

SPECIFIC CHARACTER.

Leaves pinnate; leaflets of the root-leaves roundish, of the stem-leaves lanceolate.

DESCRIPTION.

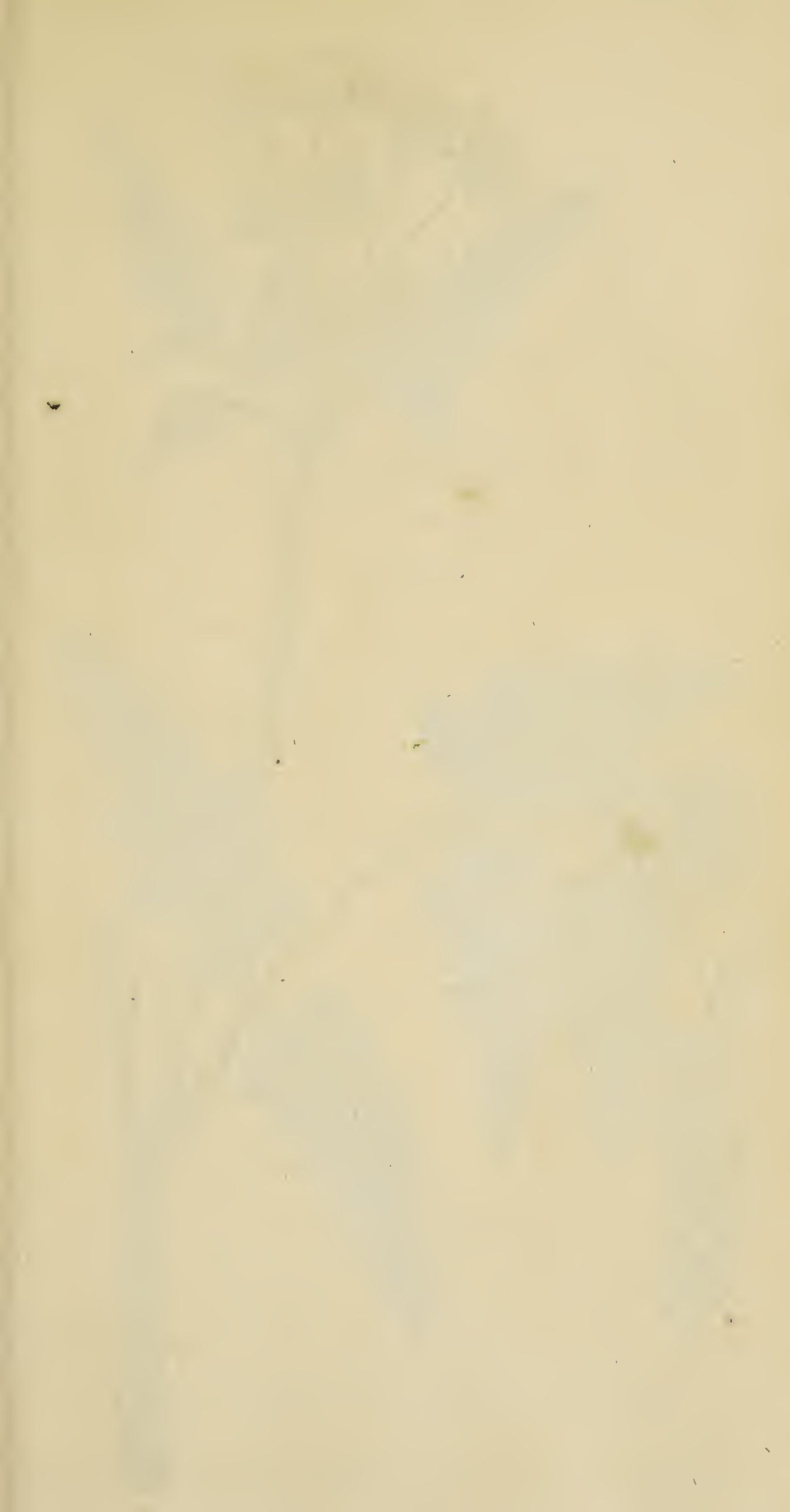
ROOT perennial. Root-leaves on petioles from an inch to two inches in length, composed of three or four pairs of

opposite roundish leaflets, the lower pair commonly smallest, the end leaflet three-lobed and largest. On the lower stem-leaves there are six or seven pairs of ovate leaflets, placed alternately; higher up they become oblong, and finally linear: they are all ciliate round the edge: the stem-leaflets frequently terminate in a point. The root-leaflets are on short petiolules; the lower stem-leaflets are sub-sessile; and the upper ones quite so. A single corymb of about ten flowers terminates a flexuose or waving stem, which is a long span in height. Calyx yellowish green. Corolla large, purple: petals ovate, emarginate, deeply veined. Shorter filaments concealed, the anthers just emerging; the four longer ones stand considerably above the corolla.

OBSERVATIONS.

This plant is common in moist meadows, flowering in April and May. From the early season at which the flowers appear, it is one of the many plants which are known among the common people by the name of *Cuckoo-flower*. It is singular that the poets should have selected this flower as an instance of extreme whiteness, when it has always more or less a tinge of purple, at least till it has been bleached by the sun.

It is recommended in epileptic cases. Kine seldom touch it. Sheep will eat it, at least when they are first turned into a meadow or marsh.





Carota L. S. P. H. ed. p. 179. by F. P. Venturi. V. 1. 1800. *Carota* L.

CHÆROPHYLLUM.

PENTANDRIA Digynia.

GENERIC CHARACTER.

Involucre universal none: partial bent back, concave, five-leaved. *Petals* bent in and heart-shaped. *Fruit* oblong, even.

SPECIES.

Chærophyllum fylvestre. Cow-weed.

Lin. syst. 288. *Wither. arr.* 306. *Curt. lond. fasc.* 4. *Hall. belv. n.* 748. (*Ceræfolium*) *Scop. carn.* n. 366. *Pollich. pal. n.* 298. *Jacqu. austr.* 2. t. 149. *Mor. hist. f.* 9. t. 11. f. 5. *Petiv. brit. t.* 25. f. 2. *Raii hist.* 429. 1.

SPECIFIC CHARACTER.

Stem smooth to the touch, striated, swelling a little at the joints.

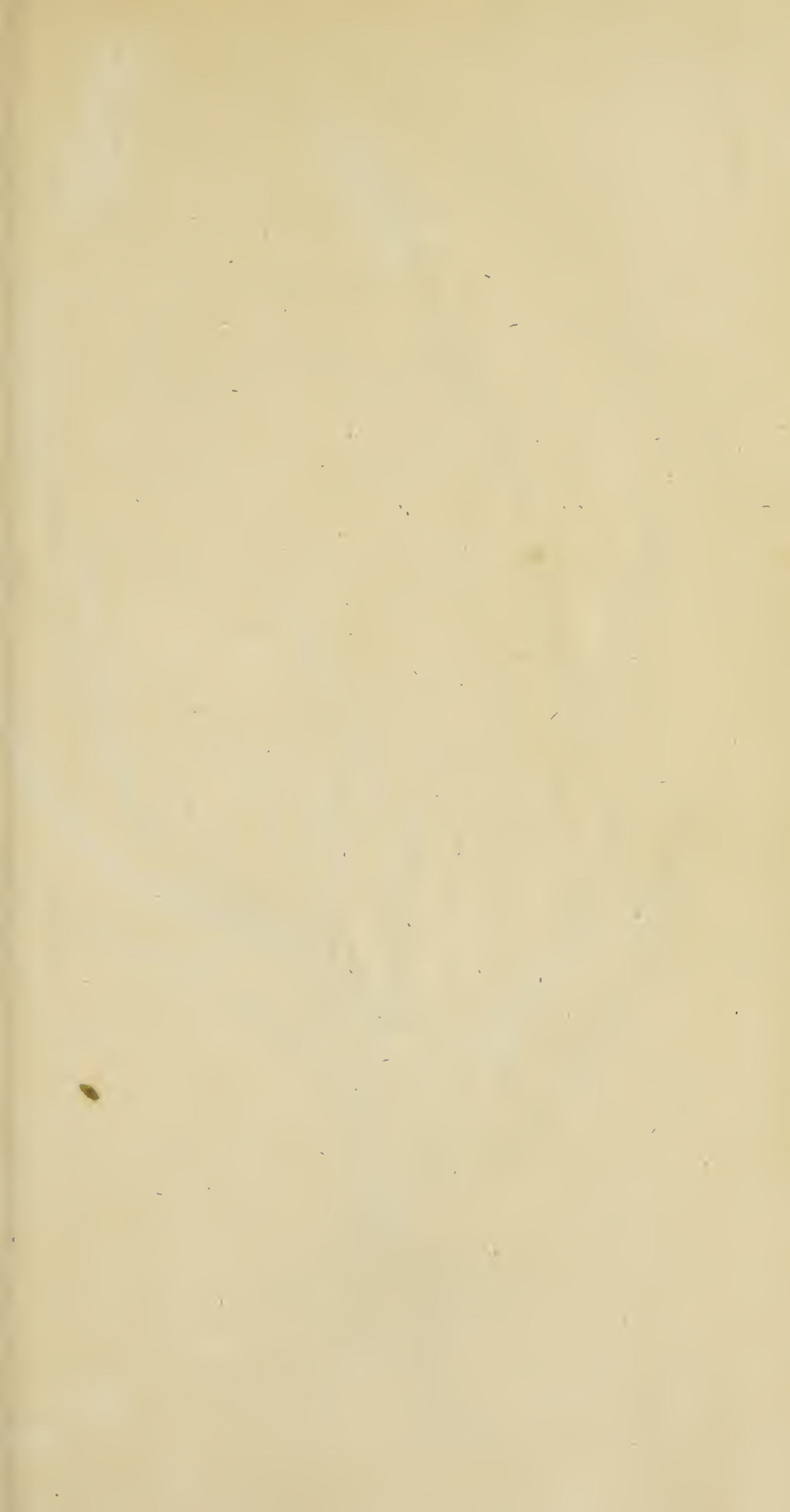
DESCRIPTION.

STEM grooved, hairy, commonly tinged with purple at the joints. Leaf-stalk deeply channelled. Leaves hairy on their under surface, smooth on their upper. Umbels, before they expand, nodding. Rays of the universal umbel about nine; of the partial more. Several of the central

florets barren. Leaflets of the involucre ovate-lanceolate, set with long hairs about the edge. Corolla at first yellowish, but becoming finally white. Petals entire, the inner ones gradually smaller. Fruit glossy, of an even surface, neither grooved nor striated.

OBSERVATIONS.

Cow-weed or Cow-parley, by old writers called Wild-Cicely, is very common in hedges, orchards, and pastures; flowering from April to June. It indicates good land, or at least a strong soil. Cattle are fond of it in the Spring, before it is too rank; and it is commonly given to rabbits. The roots, however, are said to be poisonous.





Drawn, Engraved & Published July 1844 by J. P. Sower, 120, Broadway, New York.

ALOPECURUS.

TRIANDRIA Digynia.

GENERIC CHARACTER.

Calyx two-valved. *Corolla* one-valved.

SPECIES.

Alopecurus geniculatus. *Flote* Fox-tail grass.

Lin. spec. 89. *Huds. angl.* 27. *Wither. arr.* 60.

Curtis lond. 5. t. 6. *Fl. dan. t.* 861. *Mor. hist.*

f. 8. t. 4. *f.* 15. *Leers herborn. t.* 2. *f.* 7. *Ger.*

herb. 13. 2. *emac.* 14. 2.

SPECIFIC CHARACTER.

Stalk spiked, bent at an angle; awns of the corolla concealed within the calyx.

DESCRIPTION.

ROOT perennial. Stalks a foot and eighteen inches in length, or more, procumbent at bottom, and often creeping. The upper side of the leaves, if drawn backwards between the fingers, rough; the under side smooth; the uppermost leaves only an inch or two in length; ligule or strap ovate, pointed; sheath smooth, streaked, ventricose. Spike an inch or more in length, almost cylindrical, varying in form and co-

lour, sometimes blunt, sometimes tapering to a point, greenish, purplish, and even appearing blackish when viewed at a distance, whence it is called in some places *Black-grass*. Valves of the calyx cut off obliquely, pubescent, three-nerved, with a ciliate keel. Valve of the corolla oblong, ovate, truncate, five-nerved, pellucid, without hairs, the awn proceeding from near the base, and twice the length of the corolla. Anthers at first purple, afterwards ferruginous.

OBSERVATIONS.

This grass is easily known, by the frequent joints of the stalk changing their direction at an angle, and thus appearing as if broken. It is common in the wet parts of meadows, and in pools, where it pushes out roots under water from the joints, and thus spreads itself much, the leaves floating on the surface. It sometimes occurs in dry pastures, and even on walls, and then grows more upright, the spike becomes more slender, and the base of the stalk frequently swells out into a kind of bulb. It flowers in June. Cattle eat it readily, but it is not a profitable grass.



POA.

TRIANDRIA Digynia.

GENERIC CHARACTER.

Calyx two-valved, many-flowered. *Spikelet* ovate; valvelets somewhat pointed, scariose or skinny at the edge.

SPECIES.

Poa annua. Annual Meadow-grass.

Lin. spec. 99. *Huds. angl.* 42. *Wither. arr.* 88.
Curtis lond. 1. t. 6. *Hall. helv. n.* 1466.
Scop. carn. n. 102. *Pollich. pal. n.* 91. *Leers*
herborn. n. 70. t. 6. f. 1. *Stilling. misc. t.* 7.
Mus. rust. vol. 4. t. 2. f. 8. *Mor. hist. f.* 8. t.
 5. f. 21. *Ger. emac.* 2. 1. & 3. 2. *Park. theat.*
 1156. *Scheuch. agr. t.* 3. f. 17. *E. Baub. hist.*
 2. 465. 1. 2. *Raii hist.* 1284. n. 3. *syn.* 408. 1.

SPECIFIC CHARACTER.

Panicle spreading horizontally one way; spikelets blunt; culm oblique, compressed.

DESCRIPTION.

ROOT annual, and remarkably full of fibres. Culms numerous, forming a thick tuft, about half a foot high,

(varying from less than three inches to near a foot.) Leaves very numerous, short, keeled, smooth, frequently wrinkled transversely, very finely ferrate. Panicle triangular, flattish; peduncles at the bottom in pairs, one shorter than the other, from the middle often in threes, and at top single. Spikelets ovate, pointed, flattish and sharp on both sides, containing 3, 4, and sometimes 5 flowers*, having no wool at the base.

This species is distinguished from *Poa trivialis* by its general habit, its spreading panicle, its compressed reclining culms, and by its greater softness and delicacy—from *P. pratensis* and *angustifolia* by the branches proceeding from the culm in pairs, by its size, &c.† The spikelets are larger than those of *P. pratensis*‡.

OBSERVATIONS.

If *Gramen* (Grass) be so named, says Ray, *a gradiendo*, or *progrediendo*, no species better merits the name than Annual Meadow Grass. And Mr. Curtis, to whose accounts of Grasses it is difficult to add any thing new, remarks that it differs very considerably from all other annual Grasses, in continually throwing out new shoots, and producing new flowers and seeds, inasmuch that if the ground be moist, a single plant will grow in this manner throughout the year, so that we generally find on the same plant young shoots and ripe seeds. It imitates, therefore, the tropical plants in this circumstance, and is perhaps the only vegetable we have that does so.

It occurs almost every where, and flowers all the year

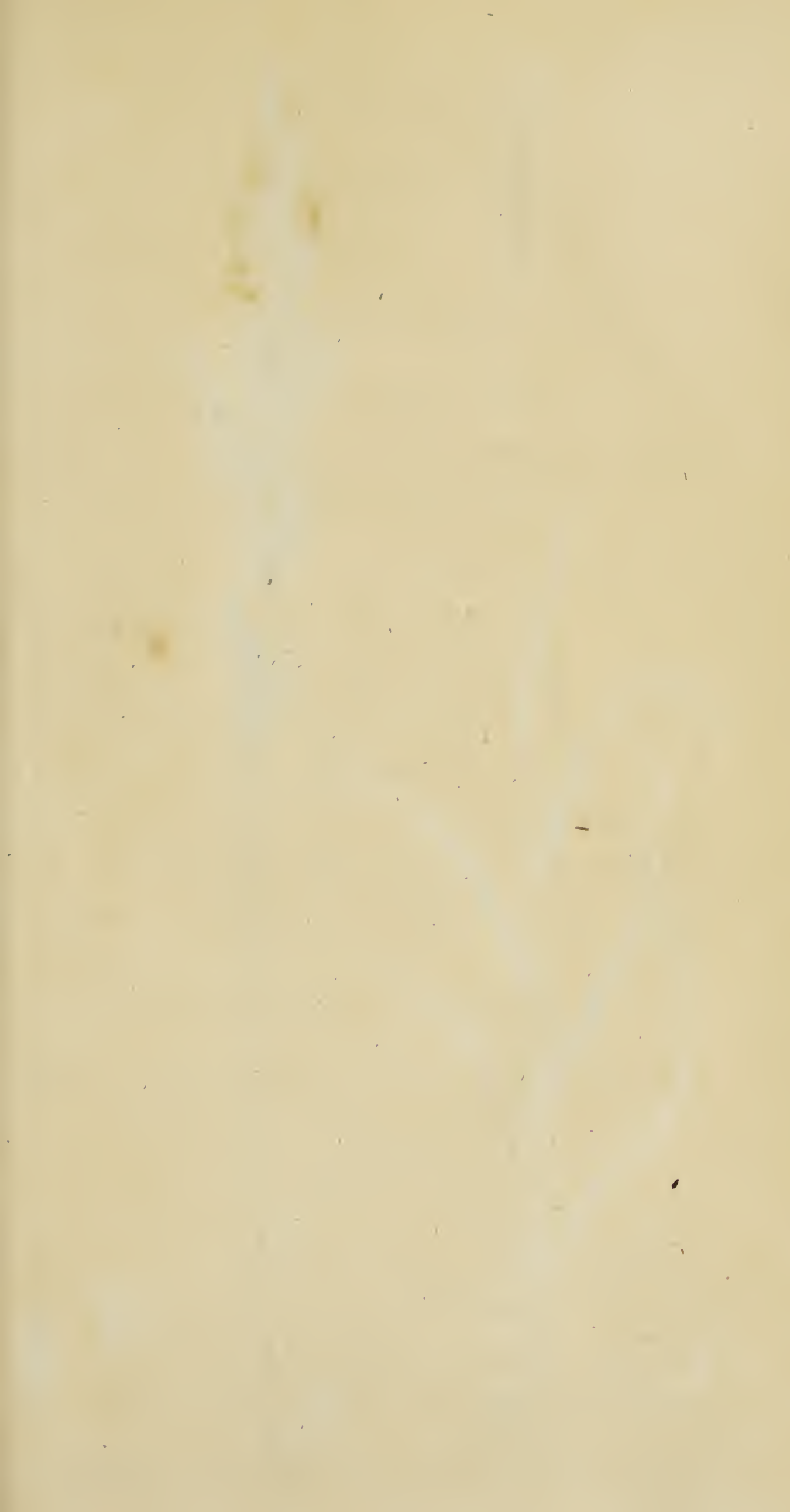
* Curtis. † Pollich. ‡ Dickenson in With.

round, except in severe weather. The panicle frequently acquires a reddish tinge. \

It appears to be one of the first general coverings which Nature has provided; and therefore is a troublesome weed in gardens, particularly in gravel walks and pavements, where Mr. Curtis recommends boiling water as the most expeditious method of destroying it.

Mr. Stillingfleet says that it makes the finest of turfs, that it is called in some parts Suffolk Grass, there being whole fields of it in High Suffolk, without any mixture of other grasses, and that it is likely to be the best grass for the dairy: Its foliage is tender and grateful to cattle, but it never acquires any great height.

May or June is the best time to gather the seed in greatest abundance; but as a single tuft of this grass may be divided into a vast number of plants, and as they grow with wonderful facility, an experiment, on a small scale at least, might be tried with it by transplanting it in moist weather.





Engelmann & Schubert July 1792, Lu. F. P. Münster. No. Brunsvicensis, Golden Age

BROMUS.

TRIANDRIA Digynia.

GENERIC CHARACTER.

Calyx two-valved. *Spikelets* oblong, cylindric, distich: awn below the top.

SPECIES.

Bromus mollis. *Soft Brome-grass.*

Lin. spec. 112. *Huds. angl.* 48. *Wither. arr.* 105.
Relb. cant. n. 87. *Curt. lond. i. t.* 8. *Hall. helv. n.* 1504. *Pollich. pal. n.* 110. *Leers herborn. n.* 82. *t. 11. f. 1.* *Schreb. gram. 60. t. 6. f. 1.* *Mor. hist. f. 8. t. 7. f. 18.* *Scheuch. agr. 254. t. 5. f. 12.* *Raii hist. 1289. 6. syn. 413. 5.*

SPECIFIC CHARACTER.

Panicle rather upright, spikes ovate, pubescent, awns straight, leaves very softly villose.

 DESCRIPTION.

THE whole plant is covered with soft hairs. The stalk is from one to three feet in height, and upright, with very thick joints, 5 or 6 in number. Panicle, when in fruit,

closely contracted. Spikelets ovate-pointed, turgid, having about 8 florets, or rather from 6 to 9, sometimes more, the last frequently abortive. Outer valve of the corolla slightly cloven at the end, but easily separating to the insertion of the awn, which is about half a line below the point; inner flat, and fringed at the edge with bristly hairs.

OBSERVATIONS.

It is an annual grass, comes into spike early, and has generally shed its seed before the meadows are mown. In many places it is the predominating grass. Provided it were sown by itself, it might be cultivated to advantage as an early grass. The seed being large, and the panicle containing nearly as much as that of a common oat, it is remarked by Mr. Curtis, that although cattle may not be very fond of the leaves and green panicle, yet it may perhaps contribute to render the hay more nutritive. The heaviness of the panicle, making it subject to be laid by rain, is a great objection to this grass.

According to Dr. Withering, it is known among farmers by the name of Oat-grass, and is sown with clover. We have observed it frequently to abound among Saintfoin.



MEDICAGO.

DIADELPHIA Decandria.

GENERIC CHARACTER.

Legume compressed, screw-shaped. *Keel* bending down from the banner.

SPECIES.

Medicago arborea. *Tree Medick* or *Moon Trefoil.*
Lin. spec. 1096.

Medica arborea. *Mill. dict. n.* 7.

Cytifus Cæsalp.—*Maranthæ.* *Lob. ic.* 2. 46. *Park. parad.* 439.---*cornutus.* *Ger. herb.* 1124. 7. *emac.* 1305. 7. *Park. theat.* 1471. 1.—*incanus filiquis falcatis.* *Baub. pin.* 389. *Raii hist.* 973.

SPECIFIC CHARACTER.

Legumes crescent-shaped, quite entire about the edge, stem arboreous.

DESCRIPTION.

THIS shrub will grow to the height of eight or ten feet, and being covered with a gray bark, the whole has a hoary appearance. The stem divides into many branches, with trifoliate leaves at each joint, on footstalks about an inch in

length; there being several of these leaves together, the whole shrub is closely covered with them; and it is never destitute of leaves: the component leaflets are small, lanceolate, and hoary on their under side. The flowers are produced on peduncles from the side of the branches, four or five together, and are of a bright yellow. The pods contain three or four small seeds.

OBSERVATIONS.

Tree Medick, or as Parkinson calls it, Horned Tree Trefoil, grows wild in the vicinity of Naples and Abruzzo, and in several islands of the Archipelago.

It bids the fairest of any shrub to be the *Cytisus* of Virgil, and the Roman writers on husbandry; and being celebrated by them as an excellent fodder, has been thought worthy of cultivation here. In hot dry countries it may be of considerable use, but we have a variety of more succulent plants of this leguminous tribe: and besides, though it will bear the open air in England, yet in severe frost, even when not destroyed, it is so much damaged as not to recover its verdure before the middle or end of May, so that it would seldom be of much use for early Spring fodder. This Spring, remarkable for its mildness, after a Winter without frost, the small shoots were much cut, and appeared very ragged in the month of May.

In old shrubs the heart of the wood is said to be of a dark colour, and hard like ebony. The Turks make the handles of their sabres, and the Greek monks their beads with it.

For other species of *Medicago*, already figured, see plates 48, 76, 86, 87.





SINAPIS.

TETRADYNAMIA Siliquosa.

GENERIC CHARACTER.

Calyx spreading. *Corolla* with upright claws.

Glands as in *Brassica*.

SPECIES.

Sinapis arvensis. Charlock, or Wild Mustard.

Lin. spec. 933. *Huds. angl.* 298. *Wither. arr.* 712.

Curt. lond. 5. 47. 321. *Lightf. scot.* 360. *Relb.*

cant. n. 493. *Hall. helv. n.* 467. *Scop. carn.*

n. 842. *Pollich. pal. n.* 642. *Fl. dan. t.* 753.

Ger. herb. 190. *emac.* 233. 2. *Park. theat.*

862. 3. *Mor. hist. f.* 3. *t.* 3. *f.* 7. *Petiv. brit.*

t. 45. *f.* 12. *Baub. hist.* 2. 844. *Raii hist.* 802.

1. *syn.* 295. 2.

SPECIFIC CHARACTER.

Pods with many angles, swollen out in bunches by the seeds, longer than the ancipital or two-edged beak.

DESCRIPTION.

ROOT annual. Stem from nine inches or a foot to a foot and a half in height, upright, round, striated or grooved,

rough with a few stiff hairs, commonly much branched, and the branches spreading. Leaves deeply and irregularly indented and serrated, sometimes entire, but most frequently jagged at the base, and sometimes pinnatifid; they are always harsh or rugged, and have not any cast of sea-green. Flowers at the ends of the stalk and branches, on peduncles the length of the calyx, and slightly hispid. Calyx yellow, half as long as the corolla, standing open at the top. Corolla always yellow. Pods scarce perceptibly angular, sometimes smooth, sometimes slightly hairy, swelling, ending in a short beak. Seeds dark brown, shining, 8 or 9 in a pod.

OBSERVATIONS.

Charlock flowers in May and June, and has perfected its seeds before harvest; it is therefore very abundant in Spring corn. Being an annual, it may be destroyed, or at least checked, by Spring feeding with sheep, or by weeding with the hook, to prevent its flowering. The seed will lie for ever in the ground, till turned up within the sphere of vegetation.

Its classical name in English is Wild Mustard; but it is known among husbandmen by the names of Charlock, Carlock, Garlock, Chadlock, Cadlock, and Kedlock; all evidently the same name originally, but variously pronounced in different counties. We find the last in Fitzherbert, and our other oldest English writers. In some parts of Yorkshire it is called Runsh.

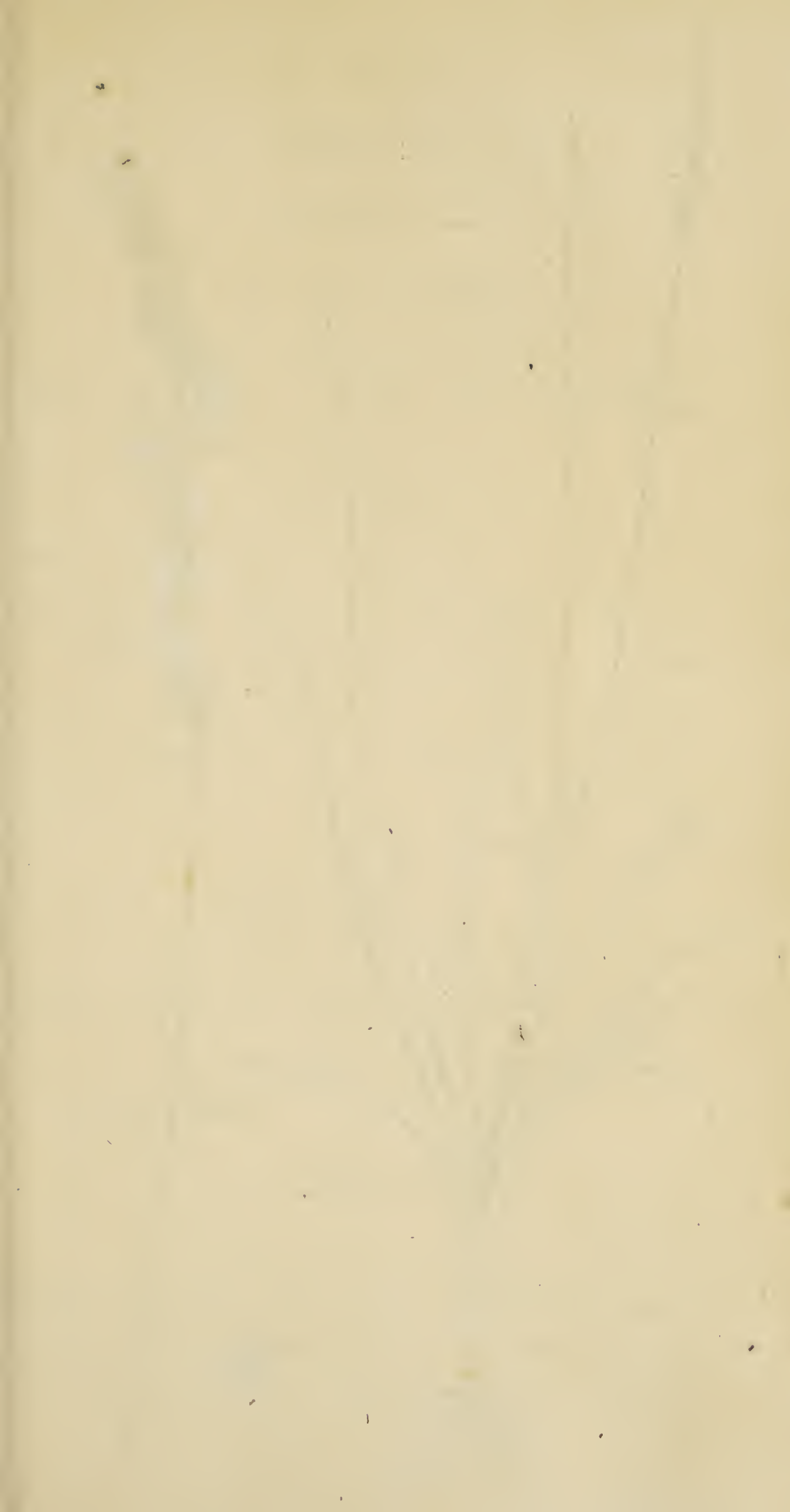
The young plants, and particularly the tender tops, before they flower, are boiled and eaten as greens by husbandmen in many countries.

Mr. Miller affirms, that it is the seed of this species,

which is commonly sold under the title of Durham Mustard feed.

The young plants may be mistaken for turneps. As they grow up they vary in many circumstances. The stem is sometimes wholly green, but more frequently tinged with red. Among corn it is more drawn up, and often scarcely branched. The leaves vary much in form and degree of division. And the plant differs in height and degree of hairiness.

For the distinctions between this and Black and White Mustard, and Wild Radish, see plates 51, 70, and 71.





D. mac. Engremont. Pallasiaca. Annot. 1794. by F. P. Viret. N. B. Brevet in bot. Annot.

FESTUCA.

TRIANDRIA Digynia.

GENERIC CHARACTER.

Calyx two-valved. *Spikelets* oblong, roundish, with acuminate glumes.

SPECIES.

Festuca ovina. *Sheep's Fescue.*

Lin. spec. 108. *fl. suec. n.* 91. *Huds. angl.* 44. *Wither. arr.* 97. *Hall. helv. n.* 1442. *Pollich. pal. n.* 101. *Leers herborn. n.* 74. *t.* 8. *f.* 3, 4. *Stilling. misc. t.* 8. *Mus. rust. vol.* 4. *t.* 2. *f.* 4. *Anderson's essays, vol.* 2. *t.* 4. *Mor. hist. f.* 8. *t.* 3. *f.* 13. *Raii hist.* 1288. *n.* 33. *syn.* 410. 9. *Curtis pract.* 25.

SPECIFIC CHARACTER.

Panicle directed to one side, contracted, awned, culm four-cornered, almost naked, leaves bristle-shaped.

DESCRIPTION.

ROOT perennial. Culm scarcely exceeding six inches in height, somewhat angular, with two or three coloured joints. Root-leaves hairy; stem-leaves smooth. Lower

spikelets peduncled, linear, four-flowered, with the rudiment of a fifth; or, according to Mr. Hudson, 3 to 6 floccules in each spikelet. Glumes unequal, the larger ovate, the smaller sharp or acuminate, but seldom properly awned.

OBSERVATIONS.

Sheep's Fescue is found chiefly on dry sandy soils, and in elevated situations. It has been much celebrated for feeding sheep, since Linneus affirmed that they have no relish for hills and heaths that are without it; and Gmelin said, that the Tartars fix during Summer where there is the greatest plenty of it. Mr. Stillingfleet observed it on all our finest sheep pastures or downs. A learned writer of ours asks, whether the superiority of the Spanish and English wool may not be owing to the abundance of this grass in the hilly pastures? And another does not scruple to affirm, that it is capable of affording an immense quantity of hay, and promises to be one of the most valuable grasses our country produces, and to make a most important acquisition to the farmer.

What culture may do we know not, but naturally its foliage is hard and wiry, and its produce very trifling. Mr. Curtis affirms, that even in a rich moist soil it is still a small plant, and unproductive, and consequently that it can never have any pretensions to be considered as fit for a hay grass. He recommends it as peculiarly adapted to forming a fine grass plat.



Drawn, Engraved & Published Sep. 1794, by T. B. Saunders, W. D. Boscawen del. Colours by J. G. Smeath.

BRASSICA.

S P E C I E S.

Brassica Napus. Rape or Cole-seed.

Lin. spec. 931. *Huds. angl.* 290. *Wither. arr.* 707.

Blackw. t. 224. *Mor. hist. f.* 3. *t.* 2. *f.* two

last. *Ger. herb.* 181. 1, 2. *emac.* 235. 1, 2.

Raii hist. 801.

S P E C I F I C C H A R A C T E R.

Root stalky, fusiform.

D E S C R I P T I O N.

ROOT biennial. Stem branched, cylindrical, smooth, from a foot to two feet in height. Root-leaves lyrate, almost smooth, divided into deeply pinnate lobes, which are again irregularly indented or sinuated on the edges. Stem-leaves smooth, glaucous, sessile, stem-clasping, oblong-heart-shaped, very slightly toothed on the edges. Calyx yellowish green, spreading. The pods have frequently three or four warty excrescences on them.

O B S E R V A T I O N S.

Linneus says, that the Navew grows wild on the sandy shores of Gotland, Holland, and England: with us it is found among corn, and on ditch banks.

It is much cultivated, under the names of Rape and Cole-feed, in the isle of Ely and other parts of England, for its feed, from which Rape Oil is drawn ; and for feeding cattle. What remains after the oil is expressed, is called oil-cake or rape-cake, and is a very efficacious manure. It is not this, but the lint-cake, or residue of flax-feed used in making lint-feed oil, that is used in fattening beasts.

For the generic character see p. and t. 49.



GALIUM.

TETRANDRIA Monogynia.

GENERIC CHARACTER.

Corolla one-petalled, flat. *Seeds* two, roundish.

SPECIES.

Galium Aparine. *Cleavers, or Goose-grass.*

Lin. spec. 157. *Huds. angl.* 70. *Wither. arr.* 157.
Curt. lond. 2. t. 9. *Hall. belv. n.* 723. *Scop.*
carn. n. 157. *Pollich. pal. n.* 157. *Leers her-*
born. n. 117. *Krock. files. n.* 230. *Fl. dan. t.*
 495. *Blackw. t.* 39. *Ger. herb.* 963. *i. emac.*
 1122. *i. Park. theat.* 567. *Mor. hist. f.* 9. t.
 22. f. 1. *Petiv. brit. t.* 30. f. 11. *Raii hist.*
 484. *syn.* 225.

SPECIFIC CHARACTER.

Leaves eight in a whorl lanceolate, keel rugged,
 with prickles pointing backwards, joints
 villose.

 DESCRIPTION.

ROOT annual. Stem four feet high or more, with many
 opposite branches, weak and supporting itself on other
 plants, the angles set with pellucid hairs pointing down-

wards. Leaves in the lower whorls of the stem 8, in the upper 6, on the branches from 6 to 3, 2 and even 1, lanceolate-linear, terminating in an awn, the upper surface rugged, the lower smooth. Flowers few, small, on rough peduncles. Corolla whitish, divided to the base into four ovate acute segments. Styles shorter than the corolla, standing wide asunder. Fruit set with hooked bristles.

OBSERVATIONS.

This plant is very common in hedges and cultivated grounds, flowering from May and June through the Summer, and part of the Autumn. Its well-known property of adhering to whatever it comes in contact with, has acquired it the name of *Cleavers*, or *Clivers*, and *Catchweed* or *Scratchweed*; from its roughness it is called *Hariff*; and from being a favourite food or medicine for Geese, *Goose-grass*, *Goose-share*, and *Gosling-weed*.

The ancients used it as a filtre to take out hairs from the milk; in Sweden they still use it for the same purpose. It is reckoned to purify the blood, and for that purpose the tops are an ingredient in Spring broth. The expressed juice taken to the amount of four ounces, or a quarter of a pint, night and morning, during several weeks, is very efficacious in removing many of those cutaneous eruptions which are improperly called scorbutic. The roots will dye a fine red colour, like madder. These good qualities may in some degree reconcile this importunate weed to the husbandman; a weed which will entirely over-grow and choke his young quickset hedges. Being annual, however, it is easily destroyed, if it be cut or plucked up early; for it begins to seed in June.



Drawn, engraved & published sep. by E. S. Sothern & Co.

Brewer Street Golden Square

AGROSTEMMA.

DECANDRIA Pentagynia.

GENERIC CHARACTER.

Cal. one-leafed, coriaceous. *Petals* five, with claws; border blunt, undivided.

SPECIES.

Agrostemma Githago. *Corn Champion, or Cockle.*

Lin. spec. 624. *Huds. angl.* 198. *Wither. arr.* 471.

Curt. lond. 3. 27. *Fl. dan. t.* 576. *Hall. belv.*

n. 926. *Scop. carn. n.* 527. *Pollich. pal. n.*

436. *Mor. hist. f.* 5. *t.* 21. *f.* 31. *Ger. herb.*

926. *emac.* 1087. *Park. theat.* 632. 9. *Raii*

hist. 998.

SPECIFIC CHARACTER.

Plant hirsute, calyx longer than the corolla, petals entire or slightly emarginate, and naked.

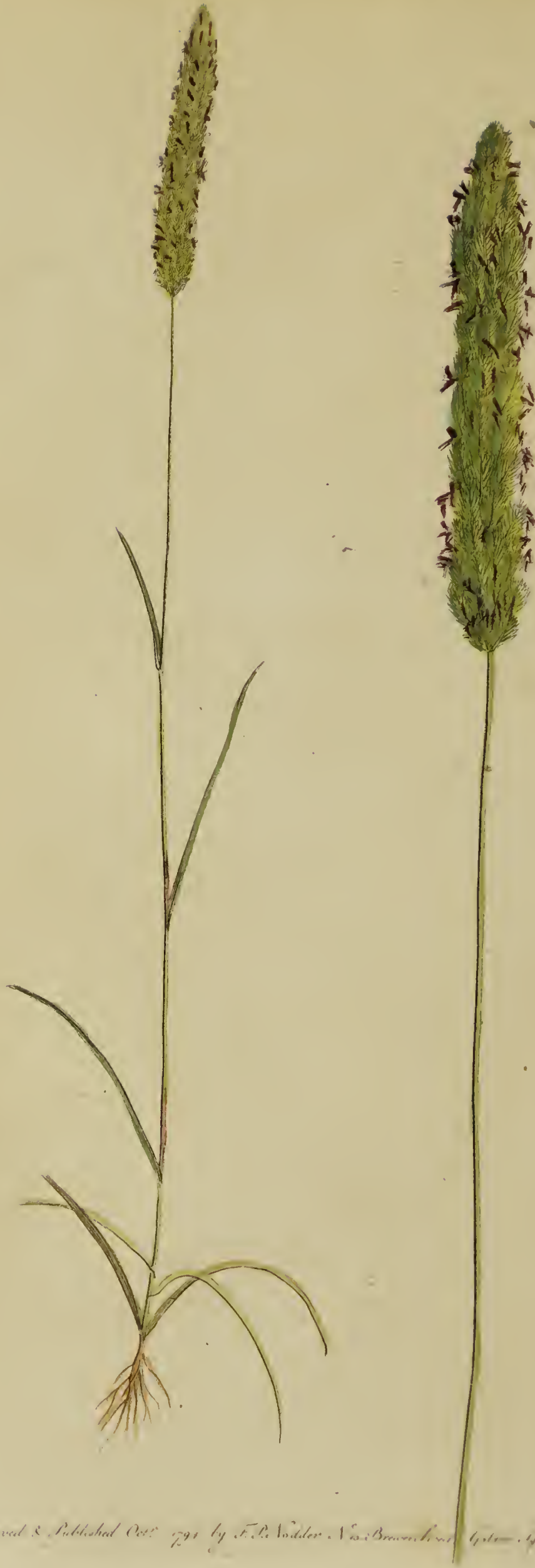
DESCRIPTION.

ROOT annual. Stem upright, two feet high, branched at top. Leaves oblong-lanceolate, keeled, connate, hairy on both sides. Calyx deeply grooved, angular, hairy; the segments lanceolate, with a prominent midrib. Petals large;

showy purple obcordate, the base whitish, with a few interrupted dark green veins. The nectary is formed by a membrane under the germ. Five filaments are inserted into the bases of the petals, and five are placed between them. Anthers pale purple, shaped somewhat like an arrow-head. Capsule almost the size of an acorn, covered with its dried calyx, having ten ribs, the mouth splitting into five teeth. Seeds obovate, compressed, black, with a surface like shagreen, appearing in the microscope like a hedge-hog rolled up.

OBSERVATIONS.

Cockle is a common weed in corn fields, enlivening them, in concert with Poppy and Blue-bottle, at the expence of the careless husbandman. It flowers in June and July, and perfects its seed before harvest. The seeds being almost as large as the grain, will not pass through the sieve. It should be pulled out by hand before it perfects the flower.



Drawn, Engraved & Published Oct: 1791 by F. de Volder. Van Braconk. 1791.

CYNOSURUS.

—————

TRIANDRIA Digynia.

GENERIC CHARACTER.

Cal. two-valved, containing several florets (generally only two). Proper receptacle leafy, fixed to one side.

SPECIES.

Cynosurus cristatus. *Crested Dog's-tail grass.*

Lin. spec. 105. *Huds. angl.* 59. *Wither. arr.* 95.

Hall. belv. n. 1545. *Pollic. pal. n.* 99. *Leers*

herborn. n. 99. *t.* 7. *f.* 4. *Krock. files. n.* 149.

Schreb. gram. 69. *t.* 8. *f.* 1. *Fl. dan. t.* 238.

Stilling. misc. t. 11. *Curt. pract. obs. t.* 6. *Musf.*

rust. vol. 4. *t.* 2. *f.* 2. *Anderson, t.* 10.

Phleum cristatum. *Scop. carn. n.* 81.

Gramen cristatum. *Baub. hist.* 2. 468. 3. *Raii*

hist. 1269. *syn,* 398.—*anglicum.* *Park. theat.*

1159. *f.* 1160. 3.

Gr. pratense cristatum. *Baub. pin.* 3. 1. *prodr.* 8.

Scheuch. agr. 79. *t.* 2. *f.* 8. *A. C. Mor. hist.*

f. 8. *t.* 4. *f.* 6.

SPECIFIC CHARACTER.

Bractes pinnatifid.

DESCRIPTION.

ROOT perennial. Culms from one to two feet high, upright and stiff, having three or four joints. Leaves narrow, flat, smooth on both sides, but roughish along the edge; with smooth streaked sheaths, ending in a short truncate strap. Spike compound, when in flower semi-cylindric, blunt, all the florets facing one way; when out of flower interrupted. Each spikelet has commonly two, sometimes three, florets. The smaller valve of the corolla ends in two points, and the larger one in an awn scarcely a quarter of a line in length. This grass is immediately distinguished by the pectinate or comb-like bractes.

OBSERVATIONS.

It is common on downs and in dry pastures, flowering in July and August. From its running much to stalk, and having comparatively few leaves, it is known to the country people by the name of *Bent-grass*; but this, we apprehend, it has in common with several others. Dr. Anderson says, it is called *Windlestraw-grass* in Scotland.

Several modern writers, echoing Stillingfleet, have celebrated this grass as excellent for sheep. It is certainly predominant on sheep-downs and in some parks; but it is late and unproductive. Mr. Curtis therefore justly considers it as inferior to many other grasses.



Stenon. Engraved & Published Oct. 1791. by T. P. Aitken, 1 No. B. in St. James's Street.

SPECIES.

Hordeum hexastichon. *Winter or Square Barley,*
Bear Barley or Big.

Lin. spec. 125. *Hall. helv. n.* 1534. *Baub. hist.* 2.
129. *Baub. theat.* 439. *Mor. hist. f.* 8. *t.* 6.
f. 3. *Raii hist.* 1244. *syn.* 388. *Park. theat.*
1130. *f.* 2. *Mill. dict. n.* 4.

SPECIFIC CHARACTER.

All the flowers hermaphrodite and awned, in six rows.

DESCRIPTION.

THE spike is much thicker than in common Barley, hence probably the name of *Big*; but it is much shorter: the number of grains, however, in an ear is greater, in the proportion of at least three to two. We have counted forty-two grains when the common Barley had only twenty-two. The ear is seldom more than two inches in length; it is square, with two rows of grains on two of the sides; on the other two a single row of grains runs up the middle; so that the former are awned only laterally, and the latter laterally and along the middle also. The lower flowers are imperfect in both. The outer valve of the corolla has a rough awn or bard, from four to six inches in length.

OBSERVATIONS.

This is seldom cultivated in the southern parts of England; the grain, though large and plump, not being esteemed so good for malting as common Spring Barley: but in the northern counties, and in Scotland, it is generally sown, because it will bear the cold much better.

For the generic character, see p. and t. 90.



Drawn, Engraved & Published, Oct. 1791 by T. P. Aitken. No. 1. 2. Broom, from Calicut, Guzerat.

SPECIES.

Hordeum pratense. Rie-grafs.

Huds. angl. 56. *Wither. arr.* 126. *Hall. belv. n.*

1538. *Villars. dauph.* 2. 174. *Fl. dan. t.* 630.

Vaill. par. t. 17. *f.* 6. *Mor. hist. f.* 8. *t.* 2.

row. 1. f. 6. *Park. theat.* 1144. 7.

Gramen fecalinum. *Raii hist.* 1258. *syn.* 392.

Hordeum murinum. β . *Lin. spec.* 126.

SPECIFIC CHARACTER.

Lateral florets male and awned, involucre bristle-shaped, rugged.

DESCRIPTION.

THIS has been commonly supposed to be nothing more than a variety of the Wall Barley-grass, figured in plate 43. But Mr. Ray observed long since that it differs, in being much taller, and having shorter spikes and awns. Its height is almost double that of the other. The spike is more green, only half the length of that, square, with the awns of the calyx as long as those of the corolla. The anthers also are three times as long, and yellow; whereas those of *Hordeum murinum* are almost square and bluish. The middle floret is smooth; the two lateral ones, though they have a pistil as well as stamens, are very minute, and never come to maturity.

OBSERVATIONS.

Rie-grass is not uncommon in good meadows, and sometimes forms a considerable portion of them. We once saw a clean crop sown of this grass, and it appeared to be a good one. One objection to this grass is its lateness, and it is not thought to be so productive as some others.

For the generic character, see 43 and 90. Compare also with this the three grasses engraved in plates 43, 44, and 45.

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FLORA RUSTICA:

EXHIBITING

ACCURATE FIGURES OF SUCH PLANTS AS ARE
EITHER USEFUL OR INJURIOUS IN

HUSBANDRY.

DRAWN AND ENGRAVED BY

FREDERICK P. NODDER,

BOTANIC PAINTER TO HER MAJESTY,

AND COLOURED UNDER HIS INSPECTION.

WITH

SCIENTIFIC CHARACTERS, POPULAR DESCRIPTIONS,
AND USEFUL OBSERVATIONS,

BY

THOMAS MARTYN, B. D. and F. R. S.

FELLOW OF THE LINNÆAN SOCIETY,

AND

REGIUS PROFESSOR OF BOTANY IN THE UNIVERSITY
OF CAMBRIDGE.

V O L. IV.

L O N D O N :

Printed for, and published by, F. P. NODDER, No. 15, Brewer
Street, Golden Square; and sold by all Booksellers in Great
Britain and Ireland.

1794.





Chrysanthemum leucanthemum L. Published by J. P. Voilley, 1. 10, Boulevard des Capucines, Paris.

CHRYSANTHEMUM.

SYNGENESIA *Polygamia Superflua.*

GENERIC CHARACTER.

Calyx hemispherical, imbricate; the marginal scales membranaceous. *Down* margined. *Receptacle* naked.

SPECIES.

Chrysanthemum Leucanthemum. *Common Ox-eye,*
or Great Daisy.

Lin. spec. 1251. *fl. suec.* 763. *Huds. angl.* 371.
Wither. arr. 928. *Curtis lond.* 5. 62. *Lightf. scot.* 488. *Relb. cant.* 624. *Hall. helv. n.* 98.
Scop. carn. n. 1041. *Pollich. pal. n.* 812.
Allion. pedem. n. 683. *Blackw. herb. t.* 42.
Camer. epit. 635. *Ger. herb.* 509. *emac.* 634.
Park. theat. 528. 1. *Baub. hist.* 3. 114. *f.* 2, 3. *Raii hist.* 350. *syn.* 184.

SPECIFIC CHARACTER.

Leaves stem-clasping, oblong, the upper serrate, the lower toothed.

DESCRIPTION.

ROOT perennial, somewhat creeping. Stem from 12 to 18 inches high and upwards, erect, rigid, angular, at bottom purplish and hairy, above naked, simple or little branched. Root-leaves on long petioles, obovate, scarcely pubescent, deeply ferrate: stem-leaves alternate, sessile or stem-clasping, oblong-wedge-shaped or lanceolate, ferrate, sometimes toothed and even pinnatifid at the base. Flowers terminating, solitary, large and showy; on peduncles finely grooved, and somewhat thicker at top. Calyx a flattened hemisphere; outer scales oblong-ovate, bluntish, the edge membranous and brown; inner lanceolate and pointed. Disk of the corolla yellow and convex: ray white and spreading, with about sixteen oblong, blunt florets, having commonly two or three notches at the end, but sometimes entire. Style, saffron-coloured. Seeds drawn to a point at the base, deeply grooved all round*.

OBSERVATIONS.

It is very common in dry pastures, sometimes on walls, and in corn fields; flowering from May to July, and increasing greatly by seed. The fresh leaves chewed have a sweetish, unpleasant, slightly aromatic taste, somewhat like Parsley, but not hot or biting: they have been recommended in disorders of the breast, and as diuretics, but are now seldom called for; some foreign physicians, however, speak of them with respect. The young leaves are sometimes eaten in salads. According to Linneus, horses, sheep, and goats eat it; cows and swine refuse it.

There are many varieties of this plant, and it is highly

* Curtis.

probable that culture would produce as great a variation in this as in the common daify. Parkinson makes mention of it with double flowers ; and Haller, with fistulous florets in the ray.

In Gerarde, it has the name of *Maudlin-wort* ; and Dr. Withering says, that the plant is called *Moon-flower*, and the flowers *Moons*.



SPECIES.

Chrysanthemum fegetum. *Corn Marygold.*

Lin. spec. 1254. *fl. suec. n.* 762. *Huds. angl.* 371.
Witber. arr. 930. *Curtis lond. n.* 63. *Lightf.*
scot. 489. *Relb. cant. n.* 625. *Pollich. pal. n.*
 814. *Clus. hist.* 1. 334. 2. *Mor. hist. f.* 6. t.
 4. f. 1. row. 2. *Ger. emac.* 743. f. 1. *Park.*
theat. 1370. f. 1. *Petiv. brit. t.* 19. f. 6. *Raii*
hist. 339.

SPECIFIC CHARACTER.

Leaves stem-clasping, the upper jagged, the lower tooth-ferrate.

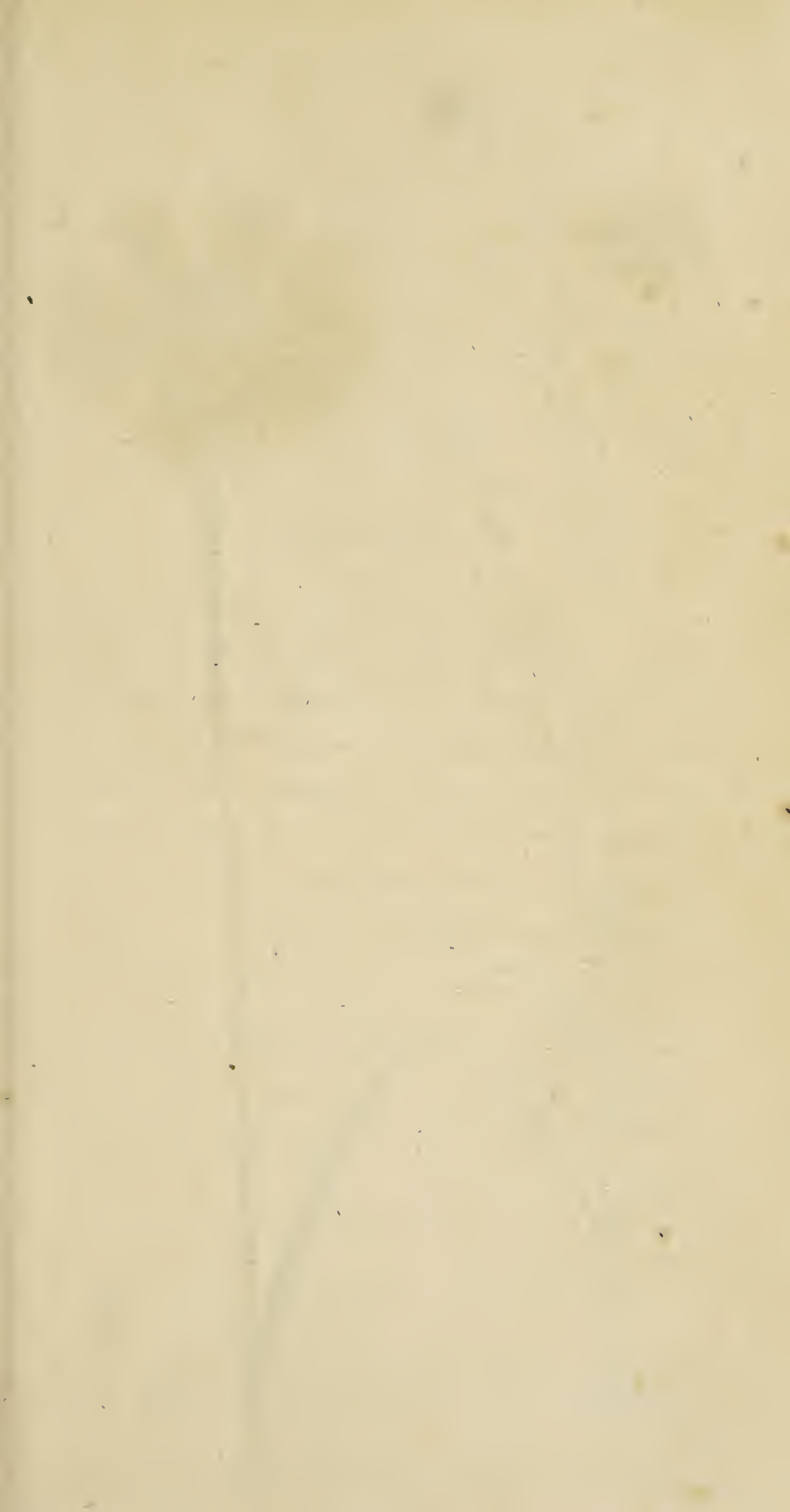
DESCRIPTION.

ROOT annual, slender. The whole plant smooth. Stem a foot or more in height, upright, branched. Leaves alternate, half-stem-clasping, glaucous on both sides, varying in figure, distantly ferrate towards the base, usually deeply toothed or jagged, frequently trifid at the end. Each branch is terminated by one large yellow flower. The peduncle is nearly upright, hollow, and thickened at top. Calyx convex or hemispherical, with ovate scales, lying close over each other; the inner ones gradually larger, with membranaceous edges. Florets of the ray 16 or 18, about half an inch in length, oblong, truncate, scored with two lines, and having generally three irregular teeth at the end.

Seeds oblong, truncate at each end, grooved, slightly angular, a little bent, whitish, or of a pale brown colour.

OBSERVATIONS.

Corn Marygold is an annual weed in corn fields; flowering from June to October. In Kent it is called *Yellow-bottle*; in Norfolk *Buddle*, which doubtless is a corruption of bottle; in the north of England *Coulans* or *Goldins*; and in Scotland *Gules*, *Gools*, *Guills*, or *Yellow Gowans*, from the golden colour of the flowers, which however they may give a brilliancy to fields in tillage, and please the eye of the passing traveller, as Linneus observes, are no very agreeable sight to the farmer; this plant being a very troublesome weed in sandy soils, and in some parts of Europe abounding to such a degree as almost to annihilate the crop. Linneus recommends fallowing the land one year, manuring it well, and harrowing it five days after the corn is sown, in order to extirpate this weed. With us it is commonly weeded out by hand. If it be cut when young in flower, and dried, horses will eat it. The Germans use it for dying yellow.





Centaurea cyanus L. *Pl. Europ. & Asiaticae*, Nov. 1794, by J. P. Aitken, 1795. *Centaurea cyanus* L. *Pl. Europ. & Asiaticae*

CENTAUREA.

SYNGENESIA Polygamia Frustranea.

GENERIC CHARACTER.

Corollas of the ray funnel-shaped, long, irregular.

Recept. bristly. *Down* simple.

SPECIES.

Centaurea Cyanus. *Blue-bottle.*

Lin. spec. 1289. *fl. suec. n.* 776. *Huds. angl.* 375.

Wither. arr. 944. *Lightf. scot,* 498. *Scop. carn.*

n. 1023. *Pollich. pal. n.* 824. *Cyanus. Hall.*

helv. n. 191. *Blackw. herb. t.* 270. *Lob. ic.*

546. 2. *Ger. herb.* 592. 2. *emac.* 732. 2. *Park.*

theat. 482. 2. *Petiv. brit. t.* 22. *f.* 4. *Mor.*

hist. f. 7. *t.* 25. *f.* 4. *Baub. hist.* 3. 21. 3.

Raii hist. 321.

SPECIFIC CHARACTER.

Calyxes ferrate, *leaves* linear, quite entire, the lowest toothed.

DESCRIPTION.

ROOT annual. Stem from one to two feet in height, angular, slightly tomentose, branched at top. Leaves nu-

merous, white underneath, having three parallel ribs; root-leaves toothed or even pinnatifid, the extreme segment very large. Branches one-flowered. Scales of the calyx lanceolate, the outer ones green, tinged with purple, tomentose, sharply ferrate; the inner ones entire. Florets of the ray about nine, quite barren, very wide, two-lipped, the segments lanceolate and pointed. Filaments below the anther surrounded with a villose ring. Style beneath the stigma bearded.

OBSERVATIONS.

This also is a common weed among corn, and flowers from June to August.

The expressed juice of the neutral florets makes a good ink; it also stains linen of a beautiful blue; but the colour is not permanent in any mode hitherto used. Mr. Boyle says, that the juice of the central florets, with the addition of a very small quantity of alum, makes a lasting transparent blue, not inferior to ultramarine.



AVENA.

TRIANDRIA Digynia.

GENERIC CHARACTER.

Calyx two-valved, many-flowered. *Awn* from the back of the corolla jointed, twisted.

SPECIES.

Avena flavescens. *Yellow Oat-grass*

Lin. spec. 118. *suec. n.* 103. *Huds. angl.* 53.
Wither. arr. 114. *Curtis lond.* 3. 5. *Lightf. scot.* 106. *Relb. cant. n.* 97. *Hall. helv. n.* 1497. *Pollich. Pal. n.* 124. *Leers herborn. n.* 93. *t.* 10. *f.* 5. *Schreb. gram.* 76. *t.* 9. *Scheuch. agrost.* 225. *t.* 4. *f.* 19. & 220. *t.* 4. *f.* 17.

SPECIFIC CHARACTER.

Panicle loose, calyxes three-flowered, short, all the florets awned.

DESCRIPTION.

ROOT perennial, creeping. Culm eighteen inches, or from one to two feet high, slender, upright, round, with

three or four purplish joints, about which are numerous short hairs. Leaves two lines in breadth, the upper surface hairy, the under smooth; sheath streaked, hairy especially towards the base. Panicle three inches and more in length; when in flower spreading wide, yellowish green and upright, afterwards closing, with the spikelets mostly one way, becoming yellowish, brown, and shining. The calyxes contain two or three, sometimes four florets, all awned, one sometimes abortive: valves unequal, membranous, pointed. Valves of the corolla also unequal, the least in a manner transparent, membranous, white, and bifid, the largest marked with three or four green nerves, hollow, bifid, and awned. There are two very small glumes, the length of the germ, jagged at top, which are supposed to be the nectary. From the middle of the back of the larger valve springs a straight awn, almost twice the length of the valve, which when the plant is dry becomes recurved,

OBSERVATIONS.

Yellow Oat-grass is easily distinguished from the other species, by its being the least of the genus commonly known, by having its panicle finely divided, and of a yellowish hue, its spikelets small and delicate, generally containing two perfect flowers, and by having its leaves and stems constantly hairy. It becomes larger when cultivated, and the spikelets have then three or four flowers.

This grass occurs in most pastures, especially high ones, in some meadows, and frequently on banks by road sides. In many counties it forms a principal part of the finest pasturage on the downs, and in some meadows contributes to the goodness as well as greatness of the crop. It is not so

early as many of the Poas, nor is it so late as some of the Agrostis genus: it is by no means unproductive, and bids fair to make a good sheep pasture*. This is one of the grasses which Mr. Miller recommends for cultivation next to the Poas or Meadow Grasses, which he prefers to all others.

For others of this genus see plates seventy-nine, eighty, and eighty-one.

* Curtis.



Engraved & Published, Dec. 1799, by F. P. Nodder N^o 15 Brewer Street, Golden Square.

FESTUCA.

TRIANDRIA Digynia

GENERIC CHARACTER.

Calyx two-valved. *Spikelet* oblong, roundish, with acuminate glumes.

SPECIES.

Festuca fluitans. *Flote Fescue-grass.*

Lin. spec. III. *suec.* 95. *Huds. angl.* 46. *Witber. arr.* 100. *Curtis lond.* I. 7. *Relb. cant. n.* 82. *Pollich. pal. n.* 107. *Leers herborn. n.* 80. *t.* 8. *f.* 5. *Krock. files. n.* 159. *Schreb. gram.* 37. *t.* 3. *Fl. dan. t.* 237. *Stilling. misc. t.* 10. *Baub. theat.* 41. *Scheuch. agr.* 199. *t.* 4. *f.* 5. *Monti, f.* 35. *Loesel. pruss.* 108. *t.* 21. *Mor.* 8. 3. 16. *Ger. emac.* 14. *f.* 1. *Park. theat.* 1275. 8. *Raii hist.* 1281. 7. *syn.* 412.

Poa fluitans. *Scop. carn. n.* 106. *Hall. belv. n.* 1453.

SPECIFIC CHARACTER.

Panicle branched upright; spikelets subsessile, cylindrical, awnless.

DESCRIPTION.

ROOT perennial, striking deep into mud. Culm from one to three feet in length, or even much longer in water, creeping at bottom, and sending forth young shoots, afterwards nearly upright; covered with the sheaths of the leaves as far as the panicle. Leaves broadish and smooth; those of the young shoots upright, keel-shaped and shortish; those of the stem longer, flattish, weak and hanging down; in the Winter lying flat on the water. Panicle often more than a foot in length, generally bending down a little, sometimes forming a kind of spike, but most commonly branched; the branches sometimes pressed to the culm, sometimes diverging from it. Spikelets slender, an inch or an inch and a half in length, pressed to the stalk, containing from seven, eight, or nine, to eleven or twelve flowers. Valves of the corolla equal, the lower rather blunt, with uneven points, the upper more pointed, flat, and bifid. Nectary a small heart-shaped gland, like a scale. Stigmas much branched, but the styles not feathered to the germ. Seeds shining, olive-coloured, naked, having two little horns.

OBSERVATIONS.

When this grass has nearly done flowering, the branches of the panicle generally project from the main stalk in an acute angle; the spikelets are always pressed close to the stalk or branches of the panicle: this circumstance, joined to the length and roundness of the spikelets, sufficiently characterises this species; which is common in ditches, ponds, watery places, and slow streams, flowering all the Summer. The parts of fructification are beautiful and large enough to be viewed distinctly with the naked eye*.

* Curtis.

Horses, kine, and swine are all fond of this grass. It has been recommended therefore to be sown on meadows that admit flooding: but Flote Fescue-grass will not flourish, except on land that is swampy, or constantly under water.

The seeds are small, but very sweet and nourishing. In Germany and Poland they are collected under the name of Manna-seeds (Schwaden), and are esteemed a delicacy in soups and gruels. When ground to meal, they make bread little inferior to that from wheat. The bran is given to horses that have worms, keeping them from water for some hours after. Water-fowl and fish are very fond of them*. Trout are said to thrive most in streams where this grass abounds. Schreber informs us, that the Manna-seeds are gathered not only from this grass, but from *Panicum sanguinale*, or Cock's-foot Panic-grass, and that the latter is cultivated in Germany for that purpose.

Mr. Curtis has remarked a disorder in the ear of this grass, similar to that which has been noticed by the French in Rie, and called by them *Ergot*.

* Withering and Linn. fucc.



Drawn, Engraved & Published Dec. 7, 1791 by F. L. Veiller, Vis & Brewer Street

SPECIES.

Festuca sylvatica. *Wood Fescue-grass.*

Huds. angl. ed. 1. 38. Wither. arr. 102. Fl. dan. t. 164. Mor. hist. f. 8. t. 6. f. 4. row. 3. Raii syn. 394.

F. pinnata. β. Huds. angl. ed. 2. 48.

Bromus sylvaticus. Pollich. pal. n. 118.

B. pinnatus. Leers herborn. n. 87. t. 10. f. 3.

B. gracilis. Weigel, 1, 11.

Triticum. Hall. belv. n. 1432. & 1431. δ.

SPECIFIC CHARACTER.

Culm undivided, spikelets alternate sessile in two rows, awn as long as the corolla.

DESCRIPTION.

ROOT perennial. The plant in general hairy. Culms several, from eighteen inches to three feet in height, the upper part of the lower joints hairy when not covered by the sheath. Leaves from seven inches to a foot in length, five lines broad, with soft hairs generally on both sides, the lower surface less so, except towards the base, and sometimes even smooth. Panicle pendulous, from the slenderness and weakness of the peduncles. Spikelets from half an inch to an inch and a half in length, with a few short hairs on them, and nine or ten flowers in each. Valves of the calyx taper-

ing to a point, and often ending in a short awn; that of the larger valve sometimes a line long. The outer valve of the corolla is smooth along the back, but rough on the sides with minute hairs: the inner is rounded at the end, and the edges are fringed with short hairs, except at the end, which is pubescent.

OBSERVATIONS.

Botanists are not agreed respecting the genus of this grass, as may be seen by the names given above. According to Dr. Stokes, it has the habit of a *Bromus*, the artificial characters of a *Triticum*, but in its structure is truly a *Festuca*. It is thought by some to be only a variety of *Festuca pinnata*, or *Bromus pinnatus*; from which, however, it is evidently different. It is common in woods and hedges, and flowers in July. It is never cultivated, nor is it known to be of any particular use.

Two other species have been already figured in plates eighty-four and one hundred and two.



Drawn, Engraved & Published Jan. 1795. by F. P. Voilley, 125, Breuer Street, Golden Square

HEDYSARUM.

DIADELPHIA Decandria.

GENERIC CHARACTER.

Keel of the corolla transversely obtuse. Legume jointed, with one seed in each joint.

SPECIES.

Hedysarum coronarium. French Honeysuckle.

Lin. spec. 1058. *Besl. eyft. æst.* 13. t. 2. f. 1. *Rivlin.*

tetr. t. 98. *Mor. hist.* 2. 129. f. 2. t. 11. f. 7.

Ger. emac. 1235. *Park. parad.* 339. t. 337. f.

10. *theat.* 1087. f. 1. *Raii hist.* 929.

SPECIFIC CHARACTER.

Legumes jointed, prickly, naked, straight, stem diffused.

DESCRIPTION.

ROOT biennial. Stems from two to three feet high, hollow, smooth, branching. Leaves pinnate, composed of five or six pairs of oval leaflets, terminated by an odd one; they are alternate, and from the angles which they form with the stem and branches come out peduncles five or six inches in length, sustaining spikes of beautiful red flowers,

which open in June and July, and perfect seeds in September, after which the roots commonly decay; but if the plants be cut down before they seed, they will last longer. The legume or pod is oblong, a little flattened; it has three roundish joints at most, with a border finely notched, and covered with a thin fungous bark, rough on the outside with little short prickles.

OBSERVATIONS.

Parkinson calls it red Sattin-flower, or red-flowered Fitchling, and says that some foolishly call it red or French Honeyfuckle; the foolish name, however, has obtained.

It is a native of the Southern parts of Europe, as Spain, Italy, and Sicily. In Calabria it grows wild in great luxuriance, near four feet high, affording excellent nourishment to horses and mules, both green and made into hay: but it does not well bear the cold of the Spring, even in the North of Italy. We may presume, therefore, that it will scarcely answer the purposes of husbandry with us at large, though on a small scale it might do well on a warm spot*.

Osbeck mentions that he saw it brought into Cadiz in great bundles, as food for cattle.

It is of the same genus with Saintfoin, figured in plate 47; probably of the same quality, yielding more abundantly, but not perennial, as that is.

* Symonds in Young's Annals, 2. 161. & 3. 158.



Drawn, Engraved & Published, Jan. 24 1795, by P. Voilley, N. 15, Rue de la Harpe, Paris.

VICIA.

DIADELPHIA Decandria.

GENERIC CHARACTER.

Stigma bearded transversely on the lower side.

SPECIES.

Vicia fativa. Common Vetch or Tare.

Lin. spec. 1037. *fl. suec. n.* 654. *Huds. angl.* 318.

Wither. arr. 776. *Fl. dan. t.* 522. *Rivin.*

tetr. 55. *Ger. emac.* 1227. 1. *Park. theat.*

1072. 1. *Mor. hist.* 2. 4. 12. *Baub. hist.* 2.

310. 2. *Raii hist.* 900. 2. *syn.* 320.

SPECIFIC CHARACTER.

Legumes sessile, generally two together, upright, leaves retuse, stipules spotted.

DESCRIPTION.

ROOT annual. Stem erect, striated. Leaves pinnate, terminated by a branched tendril, leaflets about six pairs, opposite, elliptic, blunt, and terminated by a point. Stipules in pairs, lanceolate, toothed, marked with a black shining spot. Flowers mostly in pairs, reddish purple.

In dry soils it has a procumbent stem, sharper leaflets, and

flowers mostly solitary. The stipules are spotted, but obscurely. It varies also in the colour of the seeds, from black to brown and white.

OBSERVATIONS.

The Tare or Vetch has long been cultivated in many parts of Europe chiefly for the seed, but sometimes also for green feed both of cattle and horses. For this latter purpose, and as a meliorating crop, it has obtained very much within a few years past.



Drawn, Engraved & Published, Jun 29 1895, by F. P. Vowler, A. W. Brown, and G. H. R. S. G. S.

SPECIES.

Vicia Cracca. *Tufted Vetch.*

Lin. spec. 1035. *Suec. n.* 652. *Huds. angl.* 317.
Wither. arr. 775. *Fl. dan. t.* 804. *Rivin. tetr.*
 49. *Mor. hist.* 2. 4. 1. *Raii hist.* 903. 19. *syn.*
 322. n. 3.

SPECIFIC CHARACTER.

Peduncles many-flowered, flowers imbricate, leaflets lanceolate, pubescent, stipules entire.

DESCRIPTION.

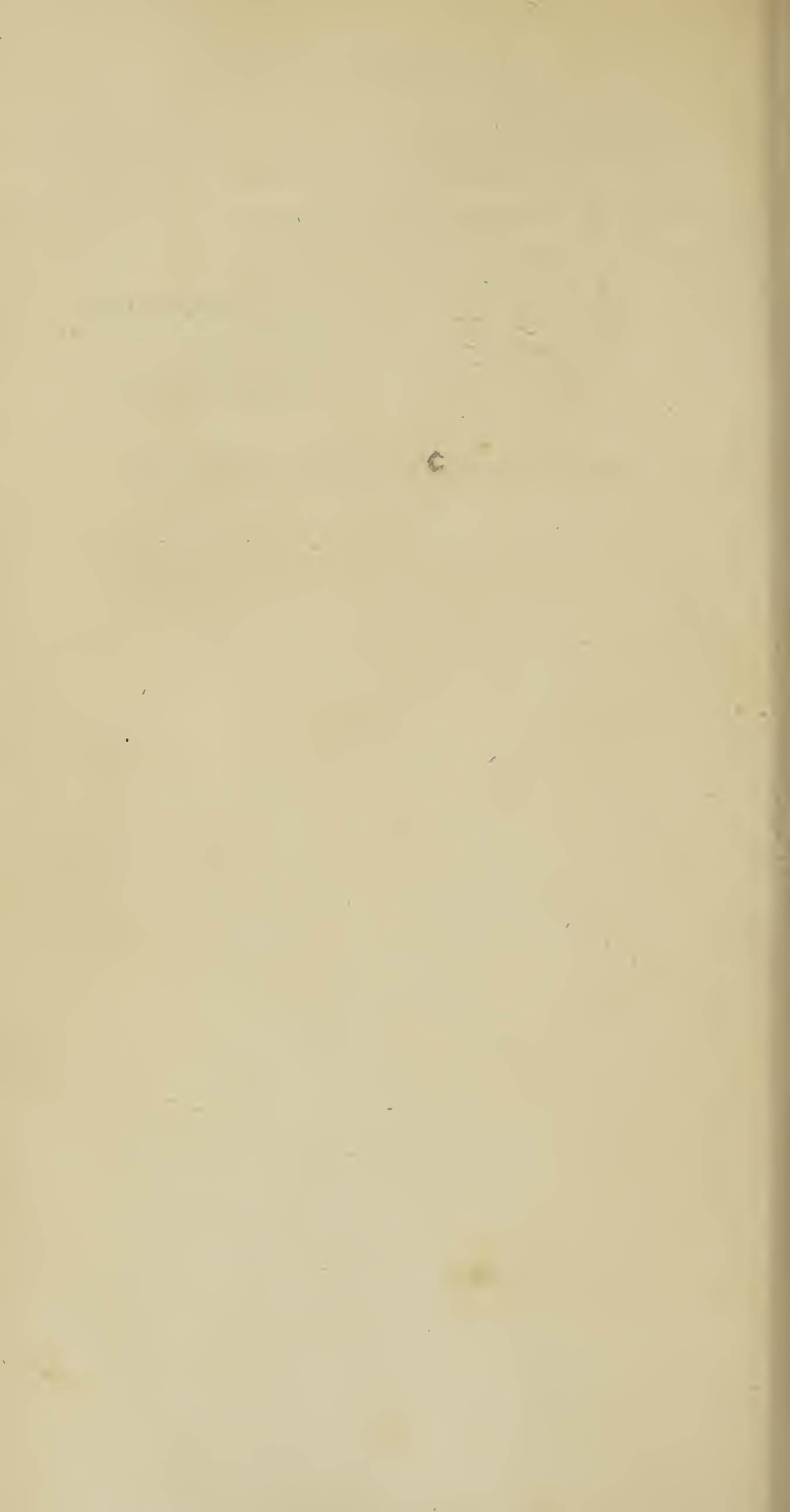
ROOT perennial. Stem quadrangular, striated, slightly hairy, three or four feet high, when climbing on bushes: branches numerous, short, alternate, from the axils of the upper leaves. Leaves alternate, very long, consisting of ten or twelve pairs of leaflets, and terminated by a branched tendril. Leaflets linear, lanceolate, oftener alternate than opposite, hairy, and terminated by a short point: at the base is a pair of semi-sagittate acute stipules. The two upper teeth of the calyx extremely short, the lowest longest, blueish. Flowers small, very numerous, hanging down, closely imbricate on one side of the common peduncle. The corolla is a blueish purple, with two deeper purple spots at the extremity of the keel: the standard is heart-shaped, without a sharp point in the notch. The legumes are about an inch long, and contain 3, 4, or 5 roundish seeds, the size of a lentil, and black when ripe.

OBSERVATIONS.

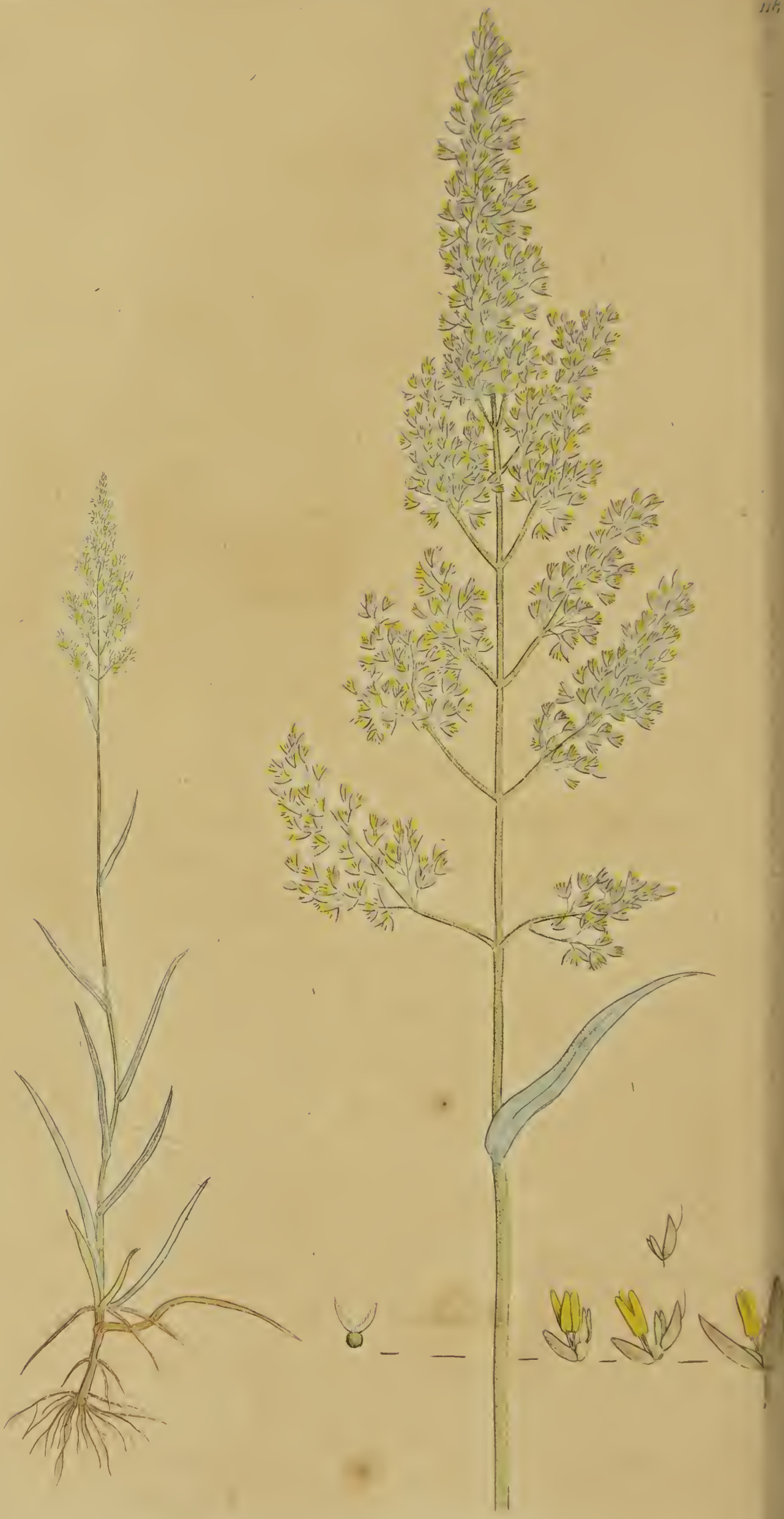
The Tufted Vetch is common in hedges, meadows, and osieholts; flowering in July and August.

Dr. Plot, in his History of Staffordshire, says that this and the *sylvatica* or wood Vetch advance starved or weak cattle above any thing yet known. These perennial Vetches yield such abundance of feed, that they seem to deserve the notice of the agriculturist*.

* See Anderson's Essays, 2. 250. &c. Bath Memoirs, 3. 67.







HOLCUS.

POLYGAMIA *Monoecia.*

Natural Order of GRASSES.

GENERIC CHARACTER.

HERM. *Cal.* a one or two-flowered glume. *Cor.* an awned glume. *Stam.* 3. *Styles* 2. *Seed* 1.

MALE. *Cal.* a two-valved glume. *Cor.* none. *Stam.* 3.

SPECIES.

Holcus lanatus. *Meadow Soft-grass.*

Lin. spec. 1485. *Huds. angl.* 440. *Wither. arr.* 1138. *Curtis, lond.* 4. *Scop. carn. n.* 1238. *Pollich pal. n.* 936. *Leers herborn. n.* 770. *t.* 7. *f.* 6. *Schreb. gram.* 145. *t.* 20. *f.* 1.

Aira. Lin. suec. n. 917.

Avena. Hall. helv. n. 1484.

Gramen lanatum. Dalech. hist. 425. *Baub. hist.* 2. 466. 3.

G. pratense paniculatum molle. Baub. pin. 2. *prodr.* 5. *theat.* 27. *Scheuch. agr.* 234. *t.* 4. *f.* 24. *A, B. Park. theat.* 1155. 1.

G. miliaceum pratense molle. Raii syn. 404.

SPECIFIC CHARACTER.

Glumes two-flowered, villose, hermaphrodite floret without any awn, the male floret with an awn curved back.

DESCRIPTION.

ROOT perennial, but not creeping. Stems from two to three feet high, upright, having three or four joints, pubescent, round. Leaves grayish from being covered with soft hairs, a quarter of an inch in breadth; the sheath marked on the outside with purple lines, and shining within; the ligule or membrane blunt or truncate, hairy on the outside and about the edge. Panicle at first contracted, reddish, and drooping a little, but afterwards upright, spreading, and whitish.

The velvet-like softness of the whole plant, with the redness of the opening panicle, render this grass very conspicuous.

OBSERVATIONS.

It abounds in meadows, is frequent by road sides, and sometimes grows on walls; and flowers in June and July.

Haller speaks highly of this grass as food for cattle, but it is not at all esteemed among us. The seed, however, being easily collected, is sometimes sent to London in great quantities, as pure grass seed.

Mr. Lightfoot says that the stalks are used to make ropes for fishing boats in the isle of Skye; but there are better grasses for this purpose*.

* Curtis.



SPECIES.

Holcus mollis. *Creeping Soft-grass.*

Lin. spec. 1485. *Huds. angl.* 440. *Wither. arr.* 1137.

Curtis lond. 5. *Leers herborn. n.* 769. *t.* 7. *f.* 7.

Schreb. gram. 149. *t.* 20. *f.* 2. *Pollich pal. n.*

937.

Avena. *Hall. helv. n.* 1485.

Gramen miliaceum aristatum molle. *Raii syn.*

404.

Gr. caninum paniculatum molle. *Raii hist.* 1285.

Scheuch. agr. 235. *t.* 4. *f.* 25.

SPECIFIC CHARACTER.

Glumes two-flowered, almost naked, hermaphrodite floret without any awn, male with a jointed awn.

DESCRIPTION.

THIS grass, which some botanists look upon as being hardly a different species from the *lanatus*, is thus well distinguished by Mr. Curtis :

It is usually a smaller plant, or if it be as tall as the foregoing, it has a much more scanty panicle. The spikelets have not that brilliant colour which marks those of the *lanatus* at their first appearance. The root creeps as much as the worst Couch-grass or Quich. The joints are woolly, and the spikelets large and pointed, with the awn much

longer than the glumes of the calyx. Both flowers are hermaphrodite, contrary to what is said in Linneus's specific character given above, and both apparently produce fertile seeds. This grass also rarely occurs but in and about woods and in hedges; whereas the *lanatus* is a very general grass in meadows and pastures.

OBSERVATIONS.

Creeping Soft-grass flowers in July. It is a worse grass than the Meadow soft, and its creeping roots will cause it to be carefully avoided by the farmer. Ray affirms that it is very common in corn fields; but Mr. Curtis says that he has rarely seen it in that situation.



Drawn, Engraved & Published Feb. 1795 by F. P. Voelter. 1. 15. Brown, London.

AGROSTIS.

TRIANDRIA Digynia.

Natural Order of GRASSES.

GENERIC CHARACTER.

Cal. two-valved, one-flowered, a little less than the corolla. *Stigmas* longitudinally hispid.

SPECIES.

Agrostis stolonifera. *Creeping Bent-grass.*

Lin. spec. 93. *suec. n.* 66. *Huds. angl.* 31. *Wither. arr.* 72. *Leers herborn. t.* 4. *f.* 6. *Pollich pal. n.* 71. *Hall. helv. n.* 1473. (*Poa*) *Ger. herb.* 24. 1. *emac.* 26. 1. *Park. theat.* 1174. 4. *Bauh. hist.* 2. 480. 1.

SPECIFIC CHARACTER.

Branches of the panicle spreading, naked; culm creeping; calyxes equal.

DESCRIPTION.

THIS grass is readily distinguished by its creeping stems, putting out roots, and thus producing abundance of new plants. Its culms also or stems are first prostrate, then erect. The leaves are a line in breadth, or somewhat more. The

young panicle is contracted, but afterwards spread open. The glumes of the calyx are equal, conical, long-pointed, and tubercled on the back below the tip. The glumes of the corolla are contracted into an acute conical bag; they are sometimes white, sometimes purple.

OBSERVATIONS.

Creeping Bent-grass is perennial; and native of most parts of Europe, in moist meadows, flowering from June to August.

Mr. Hudson joins it with *capillaris*, *pumila*, *alba* and *sylvatica*, under the name of *polymorpha*.



L. caerulea Engraving & Publication, March 1893 by J. P. Moore, 115 Broadway, New York, N.Y.

TRIFOLIUM.

DIADELPHIA Decandria.

GENERIC CHARACTER.

Flowers in a sort of head. *Legume* scarcely longer than the calyx, not opening, but falling whole.

SPECIES.

Trifolium agrarium. Hop Trefoil.

Huds. angl. 328. *Wither. arr.* 801. *Curt. lond.* 3. 45. *Lightf. scot.* 409. *Hall. helv. n.* 363. *Scop. carn. n.* 931. *Pollich pal. n.* 707. *Fl. dan. t.* 796. *Vaill. par. t.* 22. *f.* 3. *Rivin. tetr. t.* 10. *f.* 1. (*lupulinum*). *Baub. hist.* 2. 381. *f.* 1. *Mor. hist. f.* 2. *t.* 13. *row. 2. f.* 1, 2. *Raii syn.* 330. *n.* 16.

SPECIFIC CHARACTER.

Spikes oval imbricate, standards bent down permanent, flowers very close and numerous, stems diffused.

DESCRIPTION.

STEMS at first upright, afterwards decumbent, much branched, slightly downy. Stipules in pairs, ovate-lanceo-

late, not terminated by an awn, as most of the species are. Leaves alternate, on short footstalks; leaflets ovate or obovate, smooth, slightly ferrate, the middle one on a petiolule a line or a line and a half in length; the side ones subsessile. Peduncles numerous, axillary, solitary, longer than the leaves. Flowers on short pedicels, with each a minute awl-shaped bracte, erect, yellow, after flowering becoming brown and reflected. Calyx small, with five teeth, the two upper very short, the lower longer. Standard of the corolla ovate, striated, longer than the wings, which are somewhat longer than the keel; they all remain, and inclose the short thick pod.

OBSERVATIONS.

No reference is here made to Linneus's works, because our *agrarium* is supposed to be the *procumbens* of that author, who probably regarded our *procumbens* as no more than a variety of his *filiformis*, from which, however, it clearly differs. The specimen of the *agrarium*, in the Linnean herbarium, is a much larger plant than ours; and therefore might be more profitable for cultivation. Our Hop-Trefoil, however, seems to deserve the attention of the agriculturist. It is very well named in English, the heads of flowers being larger and more like the hop than any of our Trefoils. It is common in dry pastures on a gravelly soil, flowering in June and July.

Compare this with Hop-Medick, commonly sown for sheep-feed, under the name of Trefoil, described and figured at No. 19 of this work.





Drawn, Engraved & Published, March 1795, by J. P. Volder, A. P. & Brewer, London.

VALANTIA.

POLYGAMIA *Monoecia.*

GENERIC CHARACTER.

HERM. *Cal.* none. *Cor.* four-parted. *Stam.* four.
Style bifid. *Seed* one.

MALE. *Cal.* none. *Cor.* three or four-parted.
Stam. three or four. *Pist.* obsolete.

SPECIES.

Valantia Aparine.

Lin. spec. 1491.

Galium Valantia. *Wiggers primit.* 12.

G. tricorne. *Wither. arr.* 153.

Aparine. *Vaill. par. t. 4. f. 3.*

SPECIFIC CHARACTER.

Peduncles lateral, almost naked, trifid, pedicels recurved.

DESCRIPTION.

LEAVES from 6 to 8, the upper surface smooth, the rib underneath rough. Umbels on peduncles, generally two to a whorl, opposite, dividing into three branches, not leafy at the base. The peduncles are prickly, and bear three flowers, curved downwards. Fruit roughish, beset with a number of minute tubercles, but which do not end in hairs.

OBSERVATIONS.

This plant appears to be different from *Aparine semine læviore* of Ray, which is commonly taken for *Galium spurium* of Linneus. It is clearly of the same natural genus with the *Galiums*, and much resembles *G. Aparine*, or common Goose-grass. We found it abundant last year (1794) among tares.





Drawn, Engraved & Published, March 1795, by W. P. Aitken . 1. 15. Drawn from Golden Square.

ACHILLEA.

SYNGENESIA *Polygamia Superflua.*

GENERIC CHARACTER.

Calyx ovate, imbricate. *Florets* of the ray about four. *Down* none. *Receptacle* chaffy.

SPECIES.

Achillea Millefolium. *Common Milfoil* or *Yarrow.*

Lin. spec. 1267. *fl. suec. n.* 770. *Huds. angl.* 374.

Wither. arr. 941. *Curtis lond. n.* 63. *Lightf.*

scot. 496. *Woodv. med. bot.* 176. *t.* 64. *Hall.*

helv. n. 107. *Scop. carn. n.* 1095. *Fl. dan. t.*

737. *Pollich pal. n.* 820. *Ger. herb.* 914. 1, 2.

emac. 1072. 1, 2. *Park. theat.* 694. 1. *Petiv.*

brit. t. 19. *f.* 4. *Mor. hist. f.* 6. *t.* 11. *f.* 6, 14.

Raii hist. 345. 347. *syn.* 183.

SPECIFIC CHARACTER.

Leaves bipinnate, naked; divisions linear, toothed; stems grooved towards the top.

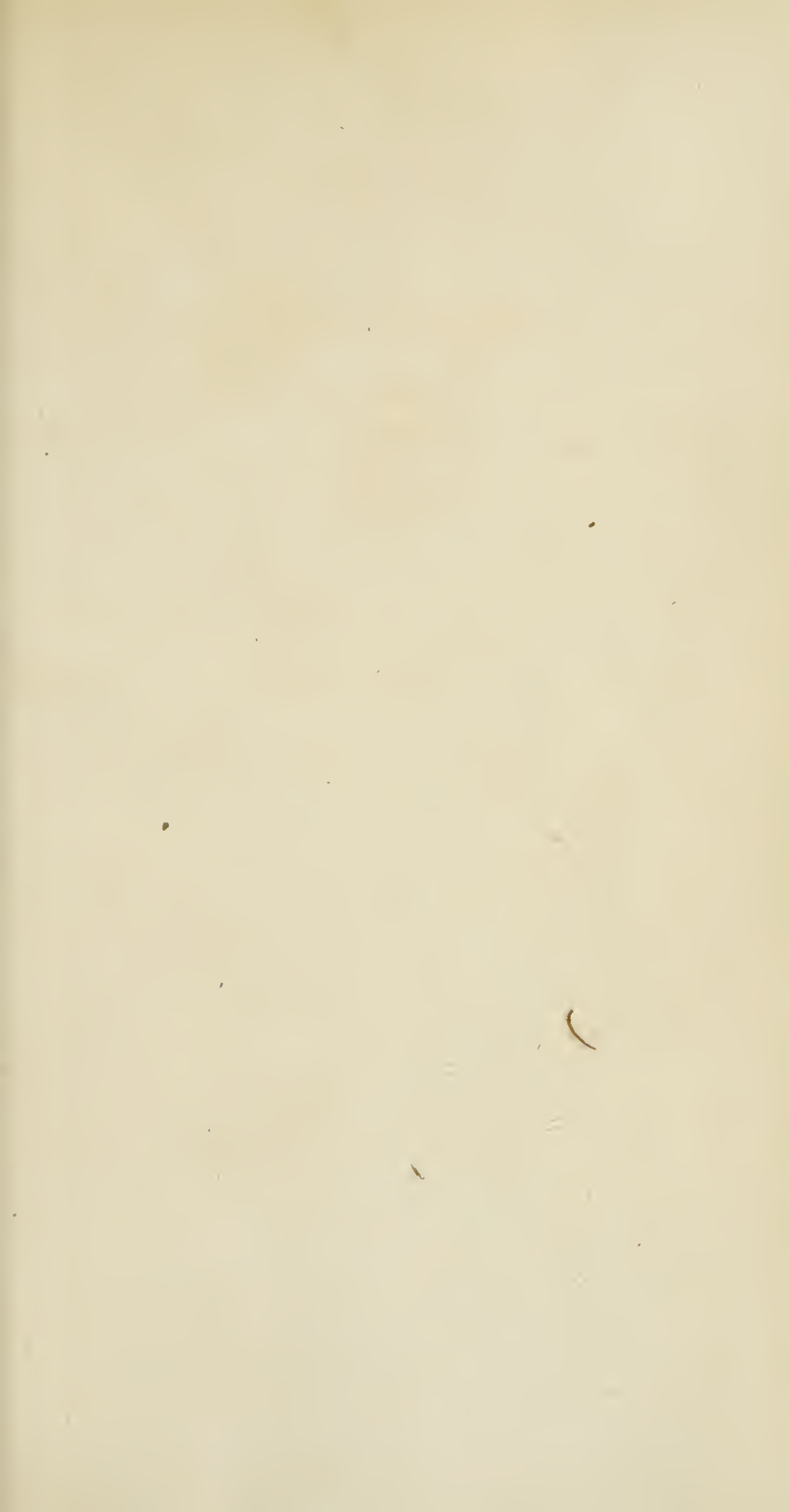
DESCRIPTION.

ROOT perennial, creeping. Stems a foot high or more, upright, almost round, or slightly angular; downy, branched

at top. Leaves alternate, smooth above, a little hairy underneath; very long and finely divided, composed of short pinnas 20 to 25 in number, each subdivided into from 3 to 7 pairs of pinnules, which are again cut into trifid or quinquefid lanceolate segments; those at bottom are petioled, but on the stem they are sessile, or somewhat clasping. Flowers in a close broad-topped corymb, on downy peduncles. Scales of the calyx lanceolate, with a green keel, and pale brown membranaceous edges. Florets in the disk 12 or 15; in the ray 4 or 5, slightly three-toothed; commonly white, but varying with purple of different shades. Seeds oblong, compressed, with a white edge.

OBSERVATIONS.

Common Milfoil or Yarrow is abundant in pastures and by way-sides, flowering from June to September. It has been generally execrated as a noxious weed in pastures; it is found, however, to be eaten by cattle, and to be even liked by sheep; on which account it has lately been recommended for cultivation. Perhaps this, among other herbs of pasture commonly neglected, may be of service to cattle medicinally. An ointment, made with the fresh leaves, is sometimes used in the piles, and is reckoned good against the scab in sheep. Linneus recommends the bruised herb fresh as an excellent vulnerary; and says, that the inhabitants of Dalekarlia mix it with their ale, instead of hops, to increase the inebriating quality of the liquor.







Drawn, Engraved & Published, April 1795 by F. P. Nodder. N. 25. Brewer's root, Epilobium, Agrostis

TRITICUM.

TRIANDRIA Digynia

GENERIC CHARACTER.

Calyx two-valved, solitary, subtriflorous.

SPECIES.

Triticum repens. Common Wheat-grass, Dog's-grass, Quick, Quick, or Couch-grass.

Lin. spec. 128. *Huds. angl.* 57. *Wither. arr.* 128. *Hall. helv. n.* 1426. *Pollich. pal. n.* 133. *Leers herborn.* 95. *t.* 12. *f.* 3. *Schreb. gram. t.* 26. *Fl. dan. t.* 748. *Mor. hist. f.* 8. *t.* 1. *f.* 8, row 3. *Raii hist.* 1255. 1. *syn.* 390. 1.

SPECIFIC CHARACTER.

Calyxes awl-shaped, acuminate, many-flowered (4 to 6 or 8), leaves flat, roots creeping.

DESCRIPTION.

CULMS or stalks two feet high, and where drawn up double that height, round, smooth, striated, upright, with from 3 to 5 or 6 joints, which are frequently tinged with red. Leaves pointed, from 5 to 9 inches long, 3 or 4 lines broad, waved, the lower surface smooth, the upper roughish. Ligula or strap white, very short, truncate. Sheath smooth,

except that the lower ones are slightly pubescent. Spike lanceolate, blunt, compressed, distich, 4 or 5 inches long, and near half an inch broad. Receptacle or rachis flexuose, rugged, toothed. Spikelets ovate, blunt, flattened, smooth, varying in the number of florets from 2 to 4, 5, 6, and even 8, bright or yellowish green, sometimes purplish, solitary, sessile alternately at the teeth of the rachis. Glumes of the calyx three or four lines long, either ending in a point, or in an awn, sometimes not a line, and sometimes from 2 to 4 lines in length, but never so long as the spikelet. Outer valve of the corolla five-nerved, 4 lines in length, either pointed or ending in an awn from 1 to 3 lines long; inner valve flat, except that the edge is often bent in; this is ciliate, and the end is cloven. The seed falls out of the husk.

OBSERVATIONS.

This very common grass is the pest of gardens and arable lands; it abounds also in hedges. Several other grasses, however, with creeping roots are confounded with this by the husbandman, under the names of Quich, Squitch, Couch, &c. all corrupted from Quick, which signifies Living: and this grass was evidently so called, because every particle of the root will grow.

In gardens the common method of destroying it, is by forking out the roots as soon as the blade appears, or by trenching the ground very deep, and turning the quich into the bottom below the reach of vegetation. In arable land it is best got under by fallowing in a dry summer, and frequent harrowing, collecting the roots into heaps, and burning them: also by crops that require frequent hoeing.

This pest of the husbandman is not however without its use. At Naples the roots are collected in large quantities,

and sold in the markets to feed horses; they have a sweet taste, something approaching to that of liquorice: when dried and ground to meal they are said to have been made into bread in years of scarcity. The juice of them drank liberally is recommended by Boerhaave in obstructions; particularly in cases of a scirrhus liver and jaundice. Cattle are frequently found to have scirrhus livers in winter, and to be cured soon when turned out to graze in the spring. It is well known that dogs eat the leaves to excite vomiting. Mr. Miller affirms that the blade is so rough, that cattle will not feed upon it. No animals indeed seem to eat it much, except whilst it is young and tender.







Drawn, Engraved & Published, April 1796, by F. P. Vonder, N. W. Brewer, Street, Göttingen

BROMUS.

TRIANDRIA Digynia.

GENERIC CHARACTER.

Calyx two-valved. *Spikelet* oblong, round, distich: awn below the tip.

SPECIES.

Bromus sterilis. Barren Brome-grass.

Lin. spec. 113. *Huds. angl.* 50. *Witber. arr.* 108.
Curt. lond. 1. 9. *Pollich. pal. n.* 112. *Leers
 herborn. n.* 83. *t.* 11. *f.* 4. *Hall. belv. n.* 1505.
Scop. carn. n. 113. *Krock. files. n.* 165. *Villars
 dauph. 2.* 115. *Scheuch. agrost.* 258. *t.* 5. *f.* 14.
Ger. herb. 69. 1. *emac.* 76. 1. *Park. theat.*
 1148. 1. *Mor. hist. s.* 8. *t.* 7. *f.* 11. *Baub. hist.*
 2. 439. 2. *Raii hist.* 1289. *n.* 5. *syn.* 412. *n.* 1.

SPECIFIC CHARACTER.

Panicle spreading, spikelets oblong distich, glumes subulate-awned.

DESCRIPTION.

ROOT annual. Culms from one to two feet high, almost upright, round and smooth, at bottom crooked, the joints

swelled. Leaves and sheaths covered with short soft hairs. Panicle large, nodding, half a foot long. Peduncles generally simple, and swelled at their base. Spikelets two inches long, flattish, diverging towards the end, containing 6 or 7 flowers. Awn nearly twice the length of the corolla, and straight. Valves of the calyx unequal, long and narrow: outer valve of the corolla longer, seven-nerved, membranous at top, and sharply bifid; inner almost flat, ciliate. The nectary is two small acuminate glumes, with a gland at the base of each. Germ oblong, slightly emarginate at top; the bottom, whence the styles proceed, and which seems to be the true germ, smooth and shining. Seeds purplish brown.

OBSERVATIONS.

This grass is very common under hedges, and flowers in May and June. It is supposed by many to derive its name of *sterilis* or barren from the circumstance of the seeds rarely arriving at maturity; which is not true in fact. What Mr. Curtis asserts is more probable; that it has this opprobrious appellation from its inutility with respect to cattle. Ray calls it great wild Oat-grass or *Drank*, which should probably be *Drauk*, from the Flemish *Dravich*. It is called by our common people in some counties *Black-grass*: and is a troublesome weed in Saint-foin, being so yielding as to let the scythe slip over it, ripening very early, and being very difficult to separate from Saint-foin seed. Being an annual it would answer to pull it out by the roots, where it is not too abundant.





Oriza, Imperata, Ptilinotus, April 1898 to S. P. Velders, N. W. Brewer, Van, Golden Age.

SPECIES.

Bromus asper. *Rough Brome-grass.*

Lin. syst. 119. *Suppl.* 111. *Wither. arr.* 108. *Krock. files.* n. 164. t. 24.

B. nemoralis. *Huds. angl.* 51.

B. ramofus. *Lin. syst. ed.* 13. 102. *Huds. angl. ed.* 1. 40. *Lightf. scot.* 1087.

B. hirsutus. *Curt. lond.* 2. 8. *Relb. cant.* n. 92.

B. montanus. *Retz. obs.* 2. n. 4. *Pollich. pal.* n. 116. *Scheuch. agrost.* 253. t. 5. f. 10. *Mor. hist. f.* 8. t. 7. f. 27.

SPECIFIC CHARACTER.

Panicle branched, nodding, rugged; spikelets linear, roundish, ten-flowered, hairy-awned; culm and leaves rough with hairs.

DESCRIPTION.

LEAVES a foot long, rough and hairy, chiefly along the edges and midrib; sheaths covered with long stiff hairs, bending back. Panicle a foot long or more, branched, and nodding one way. Peduncles very long, in pairs, rough when handled the wrong way. Spikelets more than an inch long, slender, roundish, tinged with dusky red, containing ten flowers. The larger valve of the calyx has three rough ribs on the outside, and ends in a short point; the smaller has only one rib, and a more tapering point. The outer valve of the

corolla has three prominent ribs, the middle one terminating, in a straightish awn shorter than the corolla ; the inner flattish edged with hairs and shorter.

Bromus giganteus is not usually above half the height of this, and the whole plant is much weaker and smoother.

OBSERVATIONS.

Rough or hairy-stalked Brome-grass grows in hedges and woods ; and flowers from June to August. It is the tallest of our English grasses, often exceeding six feet in height ; and may be distinguished from them all by the extreme hairiness of the sheaths which almost cover the stalk. It seems to be annual ; at least the root does not creep. It appears to be much too coarse a grass for cultivation. There is much confusion in the synonyms ; and no grass has had a greater variety of names, or has been considered as more distinct species than that now before us.





Carota, Curcuma & Pablicha. Herb. 1790. Lu. C. P. ...

PIMPINELLA.

PENTANDRIA Digynia.

GENERIC CHARACTER.

Petals bent in. Stigmas subglobose. Fruit ovate-oblong.

SPECIES.

Pimpinella Saxifraga. Less Burnet-Saxifrage.

Linn. spec. 378. Huds. angl. 127. Wither. arr. 313.

Relb. cant. n. 241. Pollich. pal. n. 305. Jacqu.

austr. 4. 395. Fl. dan. t. 669. Blockw. t. 472.

Riv. pent. 80, 82, 83. 1. Clus. 2. 197. 2. Dod.

pempt. 315. 2. Lob. obs. 413. 1. ic. 1. 719. 2.

Ger. emac. 1044. 2. Park. theat. 947. 4.

Raii syn. 127.

SPECIFIC CHARACTER.

Leaves pinnate; root-leaflets roundish, uppermost linear.

DESCRIPTION.

STEM upright, 18 inches high or more, round, striated, pubescent, dichotomous. Leaflets commonly serrate, but sometimes entire, and sometimes even jagged. General

umbel flattish; both that and the partial composed of from 8 to 20 rays. Corollule white, with permanent styles. Fruit striated.

OBSERVATIONS.

It is a perennial plant, common in dry gravelly pastures, flowering from midsummer through the autumn. No cattle seem to refuse it.



Drawn, Engraved & Published, May 1791, by F. P. Waddell, V. to Bruner, Linn. Gledits

PEUCEDANUM.

PENTANDRIA Digynia

GENERIC CHARACTER.

Fruit ovate, striated on both sides, surrounded with a wing. *Involucres* very short.

SPECIES.

Peucedanum Silaus. *Meadow Saxifrage.*

Linn. spec. 354. *Huds. angl.* 116. *Witber. arr.* 285.

Hall. helv. n. 797. *Pollich. pal. n.* 281. *Jacqu.*

austr. i. t. 15. *Leers herborn. n.* 197. *Ger.*

891. *emac.* 1048. 2. *Park. theat.* 904. 3. *Raii*

syn. 216. *Sefeli.*

SPECIFIC CHARACTER.

Leaflets pinnatifid, segments opposite; universal involucre two-leaved (or one-leaved, when cultivated many-leaved.)

DESCRIPTION.

ROOT perennial. Stem upright, cylindrical, grooved especially towards the top, smooth tinged with red above the root, two feet high and more. Root-leaves on long, cylindrical, grooved, smooth petioles. Stem-leaves on shorter petioles, which are membranaceous at the base. Lower leaves

tripinnate; the leaflets cloven into 2 or 3 lanceolate segments. General umbel has from 7 to 10 unequal rays; partial from 12 to 20 or more. Partial involucre has from 8 to 12 lanceolate leaflets, deep blackish purple at the ends. All the florets generally fertile, but some of the central ones sometimes barren. Petals pale yellow. Germ crowned with a glandular yellow receptacle, turning to a deep red as the seeds ripen.

OBSERVATIONS.

It is common in moist meadows, and flowers in July and August. Cattle do not seem to eat it.



Drawn, Engraved & Published, May 1795 by F. P. Nodder, No. 1 Brewer Street, Golden Square.

ONONIS.

DIADELPHIA Decandria.

GENERIC CHARACTER.

Calyx five-parted, with linear segments. *Standard* striated. *Filaments* connate, without a fissure. *Legume* turgid, sessile.

SPECIES.

Ononis spinosa. *Thorny Rest-harrow.*

Huds. angl. 312. *Wither. arr.* 762. *Hort. kew.* 3.
21.

O. spinosa B. *Linn. spec.* 1006.

Hall. helv. n. 356. *Rivin. tetr. t.* 69. *Blackw. t.*
301. *Mor. hist. f. 2. t.* 17. *f. 3. row 2. Fl.*
dan. t. 783. *Baub. hist. 2. 391. 2. Ger.* 1141.
1. emac. 1322. *1. Park. theat.* 994. *1. Raii*
syn. 332.

SPECIFIC CHARACTER.

Flowers axillary, in pairs; leaves ternate, the uppermost solitary; they and the branches villose.

DESCRIPTION.

STEMS decumbent, slightly hairy or woolly, reddish, thorny, especially from the base to the middle. Branches terminating in softish thorns: at the base of the young branches they are strong, but early in the summer not pungent: they are awl-shaped, with sometimes 1 or 2 leaves. Leaves almost smooth. Flowers mostly solitary, but when two they are fixed to a cloven peduncle. Calyx hairy, with awl-shaped unequal segments. Corolla twice as long as the calyx, bright purple marked with lines.

OBSERVATIONS.

Common Rest-harrow abounds in barren pastures, flowering in June and July. Sometimes it occurs in moist meadows. It has the name from the strength of its roots. It is called also Cammock, Petty Whin, and Ground Furze. The flower varies frequently to white. Sheep are said to be very fond of it; and a decoction of the roots has been recommended in cases of stone and jaundice.

We have another sort of *Ononis* like this, but without thorns. Linneus did not regard them as different species. They are, however, seldom found together, and with us at least the unarmed Rest-harrow never becomes thorny. The whole plant is more woody and rigid than *Ononis arvensis*.



Drawn, Engraved & Published June 1793, by W. L. Miller, A. S. Bonnier, Street Golden Square

CENTAUREA.

SYNGENESIA Polygamia Frustranea.

GENERIC CHARACTER.

Corollas of the ray funnel-form, longer, irregular,
Down simple. *Recept.* bristly.

SPECIES.

Centaurea nigra. *Black Centaury* or *Knapweed.*

Lin. spec. 1288. *Huds. angl.* 375. *Wither. arr.* 943.

Lightf. 498. *Pollich pal. n.* 822. *Villars dauph.*

3. 46. *Krock. files. n.* 1455.

Jacea. *Hall. helv. n.* 184. *Cyanus n.* 185.

J. nigra laciniata. *Baub. pin.* 271. 1. *Ger. emac.*

727. *f.* 1. *Park. theat.* 468. 1. *Mor. hist. f.* 7.

t. 28. *f.* 10. *Petiv. brit. t.* 22. *f.* 8, 9. *Raii*

hist. 325. 12. *syn.* 199.

SPECIFIC CHARACTER.

Calyxes ciliate, with the little scale ovate, cilia
capillary erect, leaves lyrate-angular, flowers
floscular.

DESCRIPTION.

STEM from two to three feet in height, angular, scored,
slightly downy, often tinged with purple; branches alternate,

the uppermost in this, as well as the *Scabiosa*, rising above the stem, thickest towards the top, one-flowered. Leaves pinnatifid or toothed, sometimes entire, lanceolate, sessile, more or less downy, rough and hard. Outer scales of the calyx lanceolate, dark purple, almost black, fringed with long cilia, and these hairy; the middle rows yellow, linear at the base, with a lanceolate fringed tip: the inner scales whitish, smooth, shining, linear, terminated by a broad roundish purple scale, ragged not ciliate. Florets all alike, with a whitish, long, narrow tube, and a purple border.

OBSERVATIONS.

This plant resembles *Centaurea Jacea*, which has been confounded with it, but has no neutral ray. This, however, is not always the case; both Hudson and Stokes mention its having sometimes neutral florets in the ray. Long before them, Ray had affirmed this variety to be no less frequent than the common sort in the West of England; and Dillenius afterwards observed it near Oxford: nay, Thomas Willifell showed Ray plants which had the flowers wholly composed of neutral florets. It varies with white flowers; and with leaves entire or jagged.

It has many provincial names, as Knap-weed, Knop-weed, Knob-weed, Horse-knops; all from Knob or Nob, a head. Also Hard-heads, Hard-irons, and Matfellow. In Scotland Horse-knot.

It is found in Germany, Austria, France, &c. With us in England it is a bad weed among grasses; being a harsh stubborn plant, seldom touched by cattle either green or dry, and being extirpated not without difficulty. It is a perennial plant, and increases much by the root.





U. acon. Engraved & Published June 1825 by F. & J. Neave, 15, Broad Street, London.

CARDUUS.

SYNGENESIA Polygamia Æqualis.

GENERIC CHARACTER.

Calyx ovate, imbricate with spiny scales, *Recept.* hairy.

SPECIES.

Carduus lanceolatus. *Spear Thistle.*

Linn. spec. 1149. *Huds. angl.* 350. *Wither. arr.* 868.

Lightf. 850. *Engl. bot. t.* 107. *Hall. herb. n.*

169. *Scop. carn. n.* 1007. (*Cirsium.*) *Pollich*

pal. n. 762. *Leers herb. n.* 625. *Ger. herb.*

1011. 6. *emac.* 1174. 6. *Park. theat.* 982. 9.

Mor. hist. f. 7. *t.* 31. *f.* 7. *Petiv. brit. t.* 21.

f. 7. *Baub. hist.* 3. 58. *Raii hist.* 310.

SPECIFIC CHARACTER.

Leaves decurrent, pinnatifid, hispid, divisions divaricate, calyxes acute, spiny, villose, stem hairy.

DESCRIPTION.

ROOT biennial. Stem upright, from 3 to 4 feet high, angular, downy, frequently tinged with purple. Leaves half-stem-clasping, running down to the next leaf below,

downy and sea-green underneath, hairy and deep green above. Pinnas lanceolate, the terminating one long, the side ones mostly divided to the base into two segments, one pointing upwards, the other downwards, terminating, as do also the wings of the part running down the stem, in sharp stiff white thorns, which are extensions of the rib. Calyx with numerous ranges of lanceolate scales, somewhat tomentose, ending in the same sort of thorns. Corolla purple, sometimes varying to white. Down plumose, almost as long as the floret.

OBSERVATIONS.

This is a very common Thistle by road sides and hedges, and on fallows, flowering in July. In Yorkshire it is called Bur-thistle. It is a very large succulent plant, and is but too well known on strong lands. Nothing is easier to destroy than this and most of the other Thistles, for being biennial plants, they require only to be mowed down before they perfect their seeds. It is best to do this while the plant is yet tender; but if it be delayed till the seeds are forming, it will be a proper precaution to rake the plants into heaps, and burn them. The ashes contain a considerable quantity of salts, and should be spread upon the land.





Prun. Engraved & Published June 1895 by E. R. Vowler, 1, 95, Brewer's Street, Golden Square.

SERRATULA.

SYNGENESIA *Polygamia Æqualis.*

GENERIC CHARACTER.

Calyx subcylindrical, imbricate, awnless.

SPECIES.

Serratula arvensis. *Corn Saw-wort* or *Way-Thistle.**Lin. spec.* 1149. *Huds. angl.* 349. *Wither. arr.* 867.*Leers herborn. n.* 632. *Pollich pal. n.* 761.*Fl. dan. t.* 644.*Carduus arvensis.* *Curtis lond.**Cirsium arvense.* *Hall. belv. n.* 171. *Scop. carn.**n.* 1001.*Carduus.* *Ger. emac.* 1173. 4. *Park. theat.* 959. 7.*Mor. hist. f. 7. t. 32. f. 14.* *Petiv. brit. t. 21.**f. 5.* *Baub. hist. 3. 59. 2.* *Raii hist. 310. syn.*

194.

SPECIFIC CHARACTER.

Leaves toothed, thorny.

DESCRIPTION.

ROOT perennial, creeping. Stem three feet high or more, upright, branched, at the base round and somewhat woolly; above angular and smooth. Leaves gash-pinnatifid,

the uppermost almost entire. Flowers pale purple, varying to white, one or two together on a leafy peduncle, somewhat woolly at top. Down of the seed plumose, sessile. Receptacle hairy.

OBSERVATIONS.

This Thistle is known every where by road sides, too frequently in corn fields, and more rarely in pastures; flowering from June to August.

It has the habit of the Thistles, and is universally called so in English, though Linneus makes it a *Serratula*. It is the worst pest of arable lands, having strong creeping roots, striking down to a great depth, and then branching out horizontally, so that it is very difficult to root it out where it has once got possession. Frequent and deep ploughing in dry weather will destroy it in arable land. In pastures it should be pulled or forked out when the ground is well soaked with wet. Mr. Curtis affirms that repeated mowing or spudding, if they do not effectually overcome, will greatly enfeeble it.

To us mowing has always appeared to make it run more at the root.

The goat and ass will eat it, horses will sometimes crop the heads when young and tender, but no other cattle seem to touch it. It is said to yield a very pure vegetable alkali when burnt.

Drawn, Engraved, and Published by

FRED. P. NODDER,

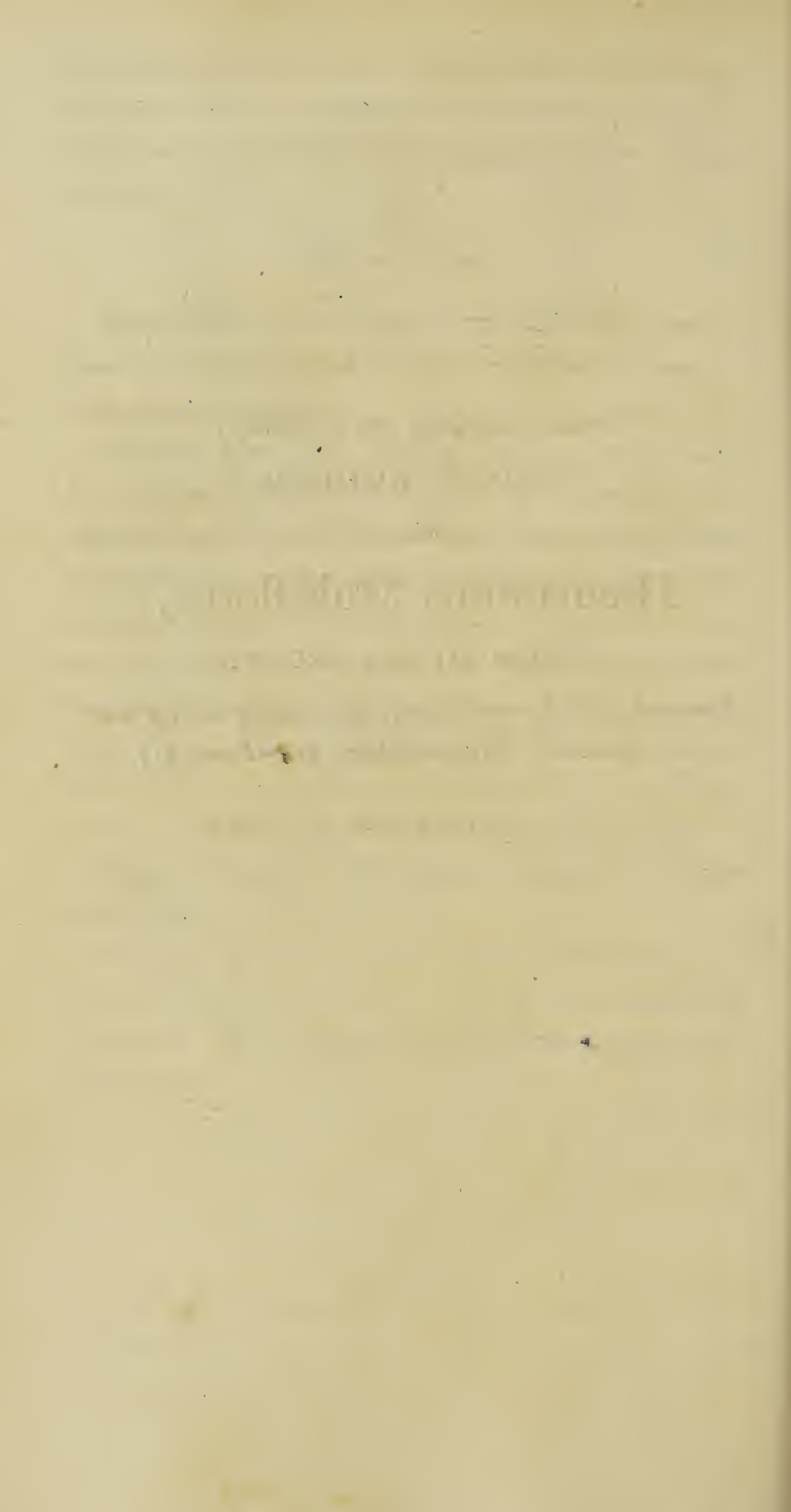
THE

Hæmanthus Multiflorus,

FROM SIERRA LEONE;

*Recovered to the European Stoves, after having been lost near
two Centuries. Price in Colours, 6s.—Plain, 4s;*

WITH A DESCRIPTION AT LARGE.







LINUM.

PENTANDRIA Pentagynia.

GENERIC CHARACTER.

Cal. five-leaved. *Petals* five. *Caps.* five-valved.
ten-celled. *Seeds* solitary.

SPECIES.

Linum usitatissimum. *Common Flax.*

Lin. spec. 397. *Huds. angl.* 133. *Wither. arr.* 328.
Relb. cant. n. 252. *Curtis lond.* *Hall. helv. n.*
836. *Scop. carn. n.* 381. *Blackw.* 160. *Ger.*
emac. 566. *Mor. hist. f.* 5. *t.* 26. *f.* 1. *row.* 2.
Baub. hist. 3. 451. *Raii hist.* 1072. 1. & 1073.
2. *syn.* 362.

SPECIFIC CHARACTER.

Calyxes and capsules mucronate, petals crenate,
leaves lanceolate alternate, stem generally
solitary.

DESCRIPTION.

ROOT annual. Stem upright, round, smooth, leafy,
from a foot and a half to two feet in height, branched only
at top. Leaves sessile, growing closely and irregularly,
smooth, somewhat glaucous, sharp at the end, pointing up-

wards, quite entire. Peduncles one-flowered, round, smooth. Corolla large, fine sky-blue, with deeper-coloured lines, very apt to fall off. The inner edge of the calyx fringed with hairs. Anthers and styles blue.

OBSERVATIONS.

Flax is found among corn and in pastures in several parts of the kingdom, but is not originally a native. It has been cultivated time immemorial in Egypt, where the land is flooded by the Nile.

The oil expressed from the seeds (cold-drawn Linseed oil) is used in medicine, &c. When heat is applied, it acquires a yellowish colour, and is used by painters and varnishers. The farinaceous part remaining after expression, called oil-cake, is used for fattening oxen. The mucilaginous infusion of the seeds is also used medicinally.

Every body knows that the fibres of the stem are manufactured into linen; and that this linen, when worn to rags, is made into paper.



SPECIES.

Linum perenne. Perennial Flax.

Lin. spec. 397. *Huds. angl.* 133. *Witber. arr.* 329.

Relb. cant. n. 253. *Engl. Bot.* 40. *Mill. fig.*

t. 166. *f.* 2. *Raii syn.* 362.

SPECIFIC CHARACTER.

Calyxes and capsules bluntish, leaves alternate, lanceolate, quite entire.

DESCRIPTION.

ROOT strong, knobbed, woody. Stems many, slender, a foot long, spreading in every direction, but more or less curved up. Calyx quite smooth and entire; each leaflet oval, hollow, with a short bluntish point at the end, not fringed or hairy, having five ribs, of which the middlemost is stronger than the rest. Petals of an elegant blue colour, and delicate texture.

OBSERVATIONS.

Perennial Flax is found in dry chalk soils in Cambridgeshire, Northamptonshire, Suffolk, and Norfolk; flowering from June to August.

Ray has distinguished the trailing from the erect plant, but they are probably no more than varieties. Ray himself hints as much, and Hudson affirms that he has gathered both from the same root. He adds, that in the first the stamens are shorter than the styles, in the second longer.



SPECIES.

Linum catharticum. *Purging Flax.*

Lin. spec. 401. *Huds. angl.* 134. *Wither. arr.* 330.
Relb. cant. n. 254. *Curtis lond. fasc.* 3. *Pollich. pal.* 320. *Hall. helv. n.* 839. *Fl. dan. t.* 851.
Blackw. 368. *Ger. emac.* 560. 5. *Park. theat.* 1336. 10. *Petiv. brit.* 55. 12. *Baub. hist.* 3. 455. 2. *Raii hist.* 1076. 21. *syn.* 362.

SPECIFIC CHARACTER.

Leaves opposite, ovate-lanceolate, stem dichotomous, corollas acute.

DESCRIPTION.

ROOT annual. Stem from 3 to 9 inches high, upright, round, smooth, branched at top. Leaves smooth, glaucous, quite entire, opposite, but on the tops of the branches alternate. Flowers white, hanging down before they open. Filaments united, and forming a bag which incloses the lower half of the germ.

OBSERVATIONS.

Purging Flax or dwarf wild Flax, called in some places Mill-mountain, is very common in dry hilly pastures, and is sometimes found in meadows. It flowers from May or June to August.

The husbandman may not be sorry to know that a hand-

ful of the fresh plant, or two drams of it dry, is an excellent purge; acts as a diuretic, and is of service in obstinate rheumatisms. Horses, sheep, and goats are said to eat it.

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ECHIUM.

PENTANDRIA Monogynia.

GENERIC CHARACTER.

Corolla irregular, with the mouth naked.

SPECIES.

Echium vulgare. Common Viper's Bugloss.

Lin. spec. 200. *suec. n.* 168. *Huds. angl.* 83.
Wither. arr. 200. *Lightf. scot.* 136. *Relb.*
cant. n. 155. *Tourn. par. edit. angl.* 1. 233.
Hall. helv. n. 603. *Scop. carn. n.* 200. *Pollich.*
pal. n. 193. *Krock. files. n.* 292. *Fl. dan. t.*
 445. *Rivin. mon. t. 7. f. 1.* *Blackw. herb. t.*
 299. *Clus. hist. 2.* 143. *Matth.* 996. *Dod.*
pempt. 631. 1. *Lob. obs. 312. 2.* *Ger. emac.*
 802. 2. *Park. theat. 414. 1.* *Mor. hist. f. 11.*
t. 27. f. 1. *row. 3.* *Raii hist. 498. syn. 272.*

SPECIFIC CHARACTER.

Stem tubercled and hispid; stem-leaves lanceolate and hispid; flowers in lateral spikes.

DESCRIPTION.

ROOT biennial. Stem upright, 18 inches or more in height; when young single, but becoming afterwards branched. The whole plant is rough with hairs. The stem frequently, and sometimes the leaves, are beautifully spotted with red. The hairs on the stem spring from glossy tubercles, what form the spots. The root-leaves come out in a tuft, near two feet in diameter, and are petioled. The stem-leaves are sessile, four or five inches long; all lanceolate, quite entire, rugged and hairy on both sides. Flowers numerous in spikes; those of each spike pointing one way, and closely wedged together. Calyx fringed with white hairs. Corolla, before it expands, of a fine red; afterwards of a bright blue. The colour, however, varies to pale red and white. If the corolla be blue, the stems are blueish, the stamens purple, and the bulbs from which the hairs spring are blood-red; but if the corolla be pale red, then the other parts of the flower are of the same colour, and the hair-bulbs are yellow; and if it be white, all the parts of the flower are of that colour, and the hair-bulbs green. The outside of the corolla has short hairs on it, and is marked with five ribs from the middle of each segment to the base; the upper and lateral segments are rounded, the lowest pointed. The filaments are red, sometimes much longer than the corolla, sometimes very little longer, or barely equal to the upper segment. Anthers gray. Germs bedded in a fleshy receptacle. Style very hairy.

OBSERVATIONS.

Viper's Bugloss is a very showy plant, and if it were not common, would probably have a place in our gardens. It

is a weed among corn, and sometimes appears among grafs, and is found by paths, on walls, &c. Linneus fays it is extremely common in Scania. With us also in Cambridgefhire, it is the common peft of the fpring corn: they obferve that it appears moft plentifully every third year, and then many fields appear as entirely blue with this weed, as others do red with poppies, or yellow with charlock, to the difgrace of the husbandman. The country people there call it *Cat's-tail*. Bees are fond of the flowers, but it is faid that their wings are apt to be torn by the ftrong hairs. No cattle feem to eat it, and no wonder, confidering what a rough hairy plant it is.





Annals of Botany, London & Published Augth 1795, by J. P. Nodder, A. P. S. & Decker, Printers, London & Paris.

PRUNELLA.

DIDYNAMIA *Gymnospermia.*

GENERIC CHARACTER.

Filaments forked, one of the divisions only having an anther. *Stigma* bifid.

SPECIES.

Prunella vulgaris. *Common Self-beal.*

Lin. spec. 837. *Huds. angl.* 264. *Wither. arr.* 631. *Curtis lond.* 4. 42. *Lightf. scot.* 321. *Relb. cant. n.* 450. *Hall. helv. n.* 277. *Scop. carn. n.* 715. *Pollich. pal. n.* 577. *Villars dauph.* 2. 396. *Krock. siles. n.* 964. *Mill. fig. t.* 69. *f.* 2. *Blackw. herb. t.* 24. *Rivin. mon. t.* 29. *f.* 1. *Dod. pempt.* 136. 1. *Lob. obs.* 251. 3. *ic.* 1. 474. 2. *Fuchs.* 621. *Matth.* 963. *Ger.* 507. 1. *emac.* 632. 1. *Park.* 1680. 1. *Mor. hist. f.* 11. *t.* 5. *f.* 1. *row.* 1. *Petiv. brit. t.* 32. *f.* 11. *Baub. hist.* 3. 428. 2. *Raii hist.* 551. *syn.* 238.

SPECIFIC CHARACTER.

All the leaves ovate-oblong, ferrate, petioled.

DESCRIPTION.

ROOT annual, small, with many long fibres. Stem inclining to be square, but not regularly so, with a deep groove on each side, hairy, and purplish, especially towards the top: branches a pair at each joint, rising upwards. Leaves in pairs, rough, with little prominent points on the upper surface, and the nerves of the lower sometimes slightly indented about the edge, and sometimes not, beset with short hairs; petioles channelled above and hairy along the edges. At the top of the stem, and the end of each branch, is a subcylindrical spike of flowers, truncate at top, the largest an inch in length; at the foot of it is a pair of sessile leaves, and in opposition with them a pair of heart-shaped, broad, pointed bractes, membranaceous, white, with green veins, fringed and purple round the edge, smooth and shining above, but having scattered white hairs underneath: there is a pair of similar bractes between each of the whorls that compose the whole spike, and each whorl has six flowers. Calyx somewhat longer than the bractes; upper lip broad, flat, truncate, with three small teeth, one on each side, and a third in the middle, ribbed, edges fringed, purple except at the base; lower lip narrower, cloven; the clefts acuminate, ribbed, hairy at the base, purple at top. Corolla violet-coloured, with a white tube, easily falling; upper lip villose on the outside, slightly notched at the end; the middle segment of the lower lip is finely toothed. Stamens light violet, forked; anthers two-lobed, placed on the inner fork. Seeds ovate, small, obtusely angular, smooth, brown, terminated by a white point.

This plant varies much in size, from a finger's length, in open exposed situations, to a foot and even eighteen inches

in height, when drawn up in meadows and woods; in the former case it is trailing, in the latter it grows upright, but still with a flexuose or bending stem, branching little, and have very long internodes. The whole plant is usually thinly set with hairs. The calyx is of a singular structure, and closes to protect the seeds. The corolla varies to red and to white.

OBSERVATIONS.

Self-heal is common in pastures and meadows, flowering from June to August. According to Linneus, kine, sheep, and goats eat it, but horses refuse it. Being astringent, it was formerly used in fluxes, and was considered as one of the best vulnerary herbs, but it is now out of use.



RHINANTHUS.

DIDYNAMIA Angiospermia.

GENERIC CHARACTER.

Calyx bellying, four-cleft. *Capsule* two-celled,
blunt, compressed.

SPECIES.

Rhinanthus Crista galli. *Yellow Rattle, or Cock's-*
comb.

Lin. spec. 840. *Suec. n.* 542. *Huds. angl.* 268.
Wither. arr. 634. *Lightf. scot.* 322. *Relb.*
cant. n. 453. *Pollich. pal. n.* 579. *Krock. files.*
n. 968. *Hall. belv. n.* 313. *Scop. carn. n.* 751.
Rivin. mon. t. 92. *f.* 2. *Dod. pempt.* 556. 1.
Lob. obs. 285. 2. *ic.* 1. 529. 2. *Ger.* 912. *emac.*
1071. 1. *Park. theat.* 713. 2. *Mor. hist. f.* 11.
t. 23. *f.* 1. *row.* 2. *Petiv. brit. t.* 36. *f.* 2.
Baub. hist. 3. 436. 3. *Raii hist.* 769. *syn.**
284.

SPECIFIC CHARACTER.

Upper lip of the corolla compressed and shorter.

DESCRIPTION.

ROOT annual, small, with few fibres. Stem four-cornered, smooth, upright, rigid, sometimes single, sometimes branched, with long narrow purple spots on it. Leaves opposite, lanceolate, sessile, marked with parallel nerves, terminating in the serratures, underneath beautifully reticulated with white tubercles, deeply serrate. Bractes like the leaves, but broader at the base, and more deeply cut in; the notches pointed. Flowers on short peduncles, solitary, forming a sort of terminating spike. Calyx remarkably large, inflated, of a pale green colour. Corolla yellow, except the tube, which is white, and widens at bottom; upper lip flattened, notched at the end, the anterior edge blueish on each side; lower trifold, the lateral segments flat and wrinkled, the middle one larger, rolled in at the edges. Anthers hairy. Germs smooth, surrounded at the base by a membranaceous nectary, and in the front a short thick crooked horn-shaped gland; style white, but just below the stigma dark blue; stigma yellowish green, slightly notched. Capsule bordered at the edge, and terminating in a short point.

OBSERVATIONS.

Yellow Rattle is common in pastures, and flowers early in June. It is known in some counties by the name of Penny-grass. Horses, sheep, and goats are said to eat it, and kine to refuse it. Others affirm that cattle in general at liberty refuse it, but that they will eat it in the stall or stable; others again, that they will eat it when fresh, but reject it when dry among hay. As it comes early, it is usually far advanced when grass is mowed, and the leaves

dropping off, nothing remains but the stalk and the membranaceous seed-vessels. In this state the seeds, being loose, rattle in the capsule; hence its English name: and Linneus informs us, that this circumstance indicates to the Swedish peasant the time of mowing his grass for hay. We commonly mow earlier, whilst it is in flower. The growth of this plant is remarkably quick, and it is supposed in some foreign countries to be very injurious to the crop of Rye. With us it abounds only in indifferent pastures.





Drawn, Engraved & Published Sep. 1795, by F. P. A. Adler, 125, Broad Street, Golden Square

SOLANUM.

PENTANDRIA Monogynia.

GENERIC CHARACTER.

Corolla wheel-shaped. *Anthers* flightly joined, opening by a double pore at top. *Berry* two-celled.

SPECIES.

Solanum tuberosum. *Common Potatoe.*

Lin. spec. 265. *Baub. pin.* 167. *prodr.* 89. *fig.* *Raii hist.* 675.

Lycopersicon tuberosum. *Mill. diet.*

Battata virginiana. *Ger.* 781. *emac.* 927. *Park. parad.* 516. *t.* 517. *f.* 3.

SPECIFIC CHARACTER.

Stem herbaceous, unarmed; leaves pinnate, quite entire; peduncles subdivided.

DESCRIPTION.

ROOT tuberous. Stem from 2 to 3 feet in height, succulent, somewhat angular, striated, slightly hairy, frequently spotted with red, branched, the branches long and

weak. Leaves interruptedly pinnate, having 3 or 4 pairs of leaflets, with smaller ones between, and one at the end larger than the rest; the leaflets are somewhat hairy, and dark green on the upper surface. The flowers are either white or tinged with purple, or, as old Gerarde describes them, of a light purple, striped down the middle of every fold or welt, with a light show of yellowness. The fruit is a round berry, the size of a small plum, green at first, but black when ripe. Seeds many, small, flat, roundish, white.

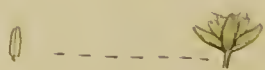
OBSERVATIONS.

The Potatoe, now so well known, appeared at the end of the 16th century, two hundred years ago, as a curiosity in botanic gardens. Gerarde (in 1597) informs us, that he received roots of it from Virginia, otherwise called Norem-bega, which grew and prospered in his garden, as in their own native country. He calls it Potatoe of Virginia, to distinguish it from the Spanish Potatoe, (*Convolvulus Battatas*) which was then much better known, and called exclusively Potatoe, Potatus or Potades, from the Spanish Battata.

The best accounts say that our modern Potatoe was first introduced into culture here, or probably in Ireland, by the celebrated Sir Walter Raleigh. Mr. Miller says about the year 1623; but Sir Walter returned from Virginia in 1584, and he either brought it with him, or it was sent to him soon after.

Much confusion has arisen from the authors of voyages and travels not having distinguished the Spanish Potatoe, or original Battatas, from the Virginian, or our now common sort, which derived its name Potatoe only from the similitude of the root to the other. Parkinson (in 1629) has three kinds of Potatoe; the Spanish, (*Convolvulus Battatas*) the

Virginian, which some, as he says, foolishly call Apples of Youth, (*Solanum tuberosum*) and the Canadian, which, says he, we in England, from some ignorant and idle head, have called Artichokes of Jerusalem (*Helianthus tuberosus*). The latter, in his time, seems to have been almost as commonly cultivated as the Virginian Potatoe is now.



CANNABIS.

DIOECIA Pentandria.

GÈNERIC CHARACTER.

MALE. *Calyx* five-parted. *Corolla* none.

FEMALE. *Cal.* one-leafed, entire, gaping on one side. *Cor.* none. *Styles* two. *Nut* bivalve within the closed calyx.

SPECIES.

Cannabis fativa. *Common Hemp.*

Lin. spec. 1547. *Hall. herb. n.* 1616. *Blackw. herb. t.* 322. *Mill. fig. t.* 77. *Ger.* 572. *emac.* 708. *f.* 1, 2. *Park. theat.* 598. *Baub. hist.* 1. 447. *f.* 448. *Raii hist.* 158.

DESCRIPTION.

ROOT annual. Stem the height of a man or more, branched, hairy, as are also the leaves, which are digitate, slender, ferrate; the leaflets seven, the outer ones smallest. In the female plant the flowers are solitary in the axils: in the male they are in thin pendulous spikes, at the ends of the stem and branches.

OBSERVATIONS.

Some female flowers are frequently found among the males, and some males among the females? it is therefore no objection to the sexual system, that female plants have produced perfect seed, when no male plants have been near them. All the old writers in botany, blindly following the ancients, call the male plants female, and the females male: the mistake is still continued among the practical cultivators, who call the male plants fimple, femble, or thimble-hemp, which is evidently a corruption of female.

Like most plants in general cultivation, it is difficult to ascertain its native country; we may, however, trace it, with many others, to the East.

The uses of Hemp for a variety of linen cloths, and its importance to the navy for sails and cordage, are well known. An oil is extracted from the seeds, and the seeds themselves are a common food for small birds, and are said to occasion hens to lay a greater quantity of eggs.

Hemp is esteemed a cleansing crop, but a great exhauster of land, at least if it stands for seed.



CORIANDRUM.

PENTANDRIA Digynia

GENERIC CHARACTER.

Corolla radiate; petals inflex-emarginate. *Involu-*
cre universal, one-leaved: partial, halved.
Fruit spherical.

SPECIES.

Coriandrum fativum. Common Coriander.

Lin. spec. 367. *Huds. angl.* 123. *Wither. arr.* 302.
Engl. bot. t. 67. *Woodv. med. bot.* 492. *t.* 181.
Hall. belv. n. 764. *Krock. files. n.* 444.
Blackw. herb. t. 176. *Rivin. pent. t.* 70, 71.
Mor. hist. f. 9. *t.* 11. *f.* 1. *Ger.* 859. *emac.*
 1012. *f.* 1. *Park. theat.* 918. *f.* 1. *Raii hist.*
 470. *syn.* 221.

SPECIFIC CHARACTER.

Fruit spherical.

DESCRIPTION.

ROOT annual, small. Stem from a foot to eighteen inches in height, smooth and branched. Leaves doubly pin-



Drawn, Engraved & Published, Oct: 1795, by F.P. Nodder, N. 15, Brewer Street, Golden Square.

SANGUISORBA.

TETRANDRIA Monogynia.

GENERIC CHARACTER.

Cal. four-leaved. *Germ.* between the calyx and corolla.

SPECIES.

Sanguisorba officinalis. Great Burnet.

Lin. spec. 169. *Huds. angl.* 65. *Wither. arr.* 147. *Relb. cant. n.* 119. *Hall. belv. n.* 705. (Pimpinella.) *Scop. carn. n.* 166. *Pollich. pal. n.* 164. *Krock. files. n.* 243. *Fl. dan. t.* 97. *Sabb. hort. 2. t.* 70. *Mor. hist. f. 8. t. 18. f.* 7. *Petiv. brit. t. 4. f.* 11. *Dod. pemp.* 105. *Lob. obs. 412. 4. Matth.* 1033. *Ger.* 889. 2. *emac.* 1045. 2. *Park. theat.* 582. 3. *Bauh. hist. 3. 120. Raii hist. 402. 2. syn.* 203. 2.

SPECIFIC CHARACTER.

Spikes ovate.

DESCRIPTION.

ROOT perennial. Stalk three feet high and more, somewhat angular, smooth. Leaves pinnate, alternate, smooth;

leaflets 9 or 11 alternate, cordate-ovate, blunt, serrate, on long foot-stalks, frequently with auricles, and smaller leaflets between the larger ones, the upper leaflets lanceolate, nearly sessile. Stipules large, cordate, serrate. Spikes ovate, approaching to cylindric, naked, mulberry-coloured. Leaves of the calyx unequal, skinny, woolly, yellowish brown. Segments of the corolla mulberry-coloured; tube four-cornered, white, a little hairy, fleshy, inclosing the germ; its mouth filled with a thick, flattish, glandular ring, closely embracing, but not adhering to the style. Filaments mulberry-coloured, with black anthers. Germ ovate, small, with a purplish red style; the stigma is a fringed tuft of a dark mulberry colour.

OBSERVATIONS.

The Great Burnet differs from the small or common Burnet figured at t. 69, in being a much larger and taller plant, with a longer, darker-coloured spike, containing hermaphrodite flowers with four stamens. The upper flowers, however, in the Great Burnet are imperfect. It grows also in moist meadows; whereas the small or cultivated Burnet is found in high chalky pastures. They are evidently of the same natural genus, and afford us an instance, among many, of the imperfection that attends all artificial arrangements.

The whole plant is astringent. The leaves are an ingredient in cool tankards and salads. It is coarse, and does not seem to be very acceptable to cartle.



STIPA.

TRIANDRIA Digynia.

GENERIC CHARACTER.

Cal. two-valved, one-flowered. *Cor.* with the outer valve terminated by an awn which is jointed at the base.

SPECIES.

Stipa juncea. *Rush-leaved Feather-Grass.*

Lin. spec. 116. *Scop. carn. n.* 123. *Hall. herb. n.* 1513. a.

Festuca junceo folio. *Baub. pin. 9. theat.* 145. *Scheuch. gran.* 151. *Raii hist.* 1291.

SPECIFIC CHARACTER.

Awns naked, straight; calyxes longer than the seed; leaves smooth within.

DESCRIPTION.

THIS is a tall handsome grass, three feet high. The leaves, like those of the rush, rolled up into a round form, with a longitudinal groove. The spike is very long and narrow, and issues from a convoluted leaf, as from a sheath.

Calyx white. Corolla woolly at the base. Awn very long, without hairs, and straight.

OBSERVATIONS.

This grass is a native of France, Switzerland, &c. It is joined by Haller with another, which Linneus has distinguished by the name of *Stipa capillata*, which is indeed very like it, but differs in having the leaves stiffer, shorter, and less rugged than this, with the upper surface more unfolded, and somewhat pubescent. The calyx is reddish, or a bay colour. The awns are shorter, and, as they advance, are variously curved. They are handsome Grasses, but are of too dry a nature to be of much use for feeding cattle.



CICHORIUM.

SYNGENESIA Polygamia Æqualis.

GENERIC CHARACTER.

Cal. calyced. Down slightly five-toothed, obscurely hairy. *Recept.* somewhat chaffy.

SPECIES.

Cichorium Intybus. Succory.

Lin. spec. 1142. *Huds. angl.* 348. *Witber. arr.* 862.

Curt. lond. 4. t. 56. *Hall. helv.* n. 1. *Scop.*

carn. n. 991. *Pollich. pal.* n. 758. *Fl. dan.* t.

907. *Blackw.* t. 183. 177. *Baub. hist.* 2. 1007.

f. 1008. *Raii hist.* 255. *Ger. emac.* 284. 1.

Park. theat. 776. 2. *Mor. hist. f.* 7. t. 1. *f.* 2.

SPECIFIC CHARACTER.

Flowers twin sessile, leaves runcinate.

DESCRIPTION.

ROOT perennial. Stalk from one to three feet in height when wild, more when cultivated, upright. Leaves next the root numerous, runcinate, roughish: those on the stalk smoother, alternate, half surrounding the stalk, lanceolate,

toothed towards the base, fringed with bristly hairs, the teeth and ends having a sharp stiff awn. Flowers generally in pairs, sessile in the bosom of the upper leaves, of a fine blue colour. Seeds obovate, irregularly five-cornered, flattened a little, obscurely streaked, smooth, straw-coloured.

OBSERVATIONS.

Succory, or Chicory, has generally been regarded as a weed; it has, however, for several years past, been cultivated in France as food for cattle, and was introduced here for that purpose by Arthur Young, Esq. in the year 1788. In Lombardy it is reputed to increase both the milk and flesh of cattle, and to be very nutritious when made into hay; it is an important object for summer-foiling horses and cattle; and it is freely eaten by sheep.

This plant is abundantly more large and succulent in cultivation than in its wild state. The stalks are so thick and stiff as to support themselves against winds and the heaviest rains; it defies drought, being of early growth, and the first large spreading leaves covering the ground, so as to retain the moisture; the most severe cold does not injure it; it grows fast, and furnishes abundance of salutary fodder at a season when green food is scarce. Two cuttings may be made of it the first year, and three or four, according to the season, every year after; either in April, June, August, and October, or in May, July, and October; or it may be cut constantly and gradually for foiling every day as it is wanted, and thus yield a constant supply of fresh food during 7 or 8 months. Observe not to let it stand till it becomes hard and sticky. In our moist climate, this succulent plant seldom dries well for hay, unless the season be very favourable.

ADVERTISEMENT

TO THE

FOURTH VOLUME.

THE fourth volume of the *Flora Rustica* being now completed, we have no intention of proceeding any farther in it; at least for the present. We have received the most flattering testimony to the usefulness of our work from several public societies, and many respectable individuals; but our pecuniary encouragement has not been such as to warrant our carrying it on to any great extent. We shall not stay to inquire into the reasons for this want of patronage, but submit ourselves quietly to the judgement of the Public.

Our design at setting out was to figure and describe such plants as are either useful or injurious in Husbandry; interspersing here and there some of the more remarkable Grasses; an interesting tribe of plants that have never been well figured in any one work. Our plan, we confess, has not been completed; but that it has been considerably advanced will appear from the following statement:

Of plants useful in culture or in the arts, exclusive of grasses, trefoils, and other legumes, about thirty are inserted; among which are Buckwheat, Turnep, Mustard, both black and white; Caraway, Coriander, Saffron, Plantain or Ribwort, Burnet, Oats of two sorts, Barley of two sorts, Carrot, Parsnep, Rape or Cole-seed, Flax, Potatoe, Hemp; and several vegetables that are serviceable in dying, as Weld, Woad, Agrimony, Yellow Ladies' Bedstraw, Ragwort, Corn Marygold, Blue-bottle, &c.

No less than forty species of Grasses are given in the course of the work; and fourteen of that useful genus the Trefoil. Leguminous plants, in general, either form such excellent artificial pastures, or contribute so much to strengthen natural pastures, that the knowledge of them is interesting to the husbandman; we have therefore not only figured Saintfoin and Lucerne, but we have recommended several of them to farther trial, as the Everlasting Pea, French Honeyfuckle, Purple Coronilla, and Yellow Vetchling. We have also inserted several plants of other tribes, which have been introduced partially in modern culture, as Burnet, Rib-grass, Succory, Milfoil or Yarrow, &c.

Of destructive plants or weeds infesting our pastures, we have given about twenty-seven; and of such as are found principally in arable lands, upwards of twenty. Among the former will be found Pilewort or lesser Celandine, different species of Ranunculus or Crowfoot, Ragwort, Toad-flax, Cow-weed, Ox-eye or great Daisy, Burnet-

Saxifrage, Meadow Saxifrage, Rest-harrow, Knapweed, Self-heal, Yellow-rattle or Cock's-comb, and several others of less note. Among the latter are Mouse-tail Grass, Corn-salad, Dead-Nettle, Shepherd's Needle, Red Eye-bright, Corn Crowfoot, Fumitory, Corn or wild Radish, Charlock, Melilot, Corn Chamomile, Corn Feverfew, Great and small Bindweed, Knot-grass, Cleavers or Goose-grass, Cockle, Corn Marygold, Blue-bottle, Spear Thistle and Way-Thistle, Viper's Bugloss, and Wild Oats.

Although the above plants be stigmatized with the opprobrious name of weeds, yet we are not therefore to set them down as useless; many of them are serviceable in their proper places, economically or medicinally, and hence we have been led accidentally to figure several of our native plants that are or may be used in medicine; as Agrimony, Flixweed, Meadow-Saffron, Ground-Ivy, Wild Germander, Melilot, Wild Carrot, Swine's-Cress, Toad-flax, Ladies' Smock, Purging Flax, Cleavers.

All the plants in this work have been drawn and engraved, not from other plates or dried specimens, but from living subjects, and are at least faithful portraits of the individual from which they were taken. Grasses put on appearances so different in the several stages of their growth, that it is difficult to give an adequate representation of them on a single plate, especially on the small scale of an octavo page. The characters of the fructification are generally given; and thus this work, at the same time that it serves the main

purpose of rural information, may assist the Botanist in understanding the classes of the Linnean system. Thus, for

Class Diandria, see t. 66.

Triandria Monogynia, t. 24 and 58.

Digynia, Grasses, t. 4, 5, 6, &c.

Tetrandria, t. 54, 67, 104, 142.

Pentandria Monogynia, t. 62, 89, 136, 139.

Digynia, t. 38, 55, 75, 82, 83,
96, 127, 128, 141.

Pentagynia, t. 133, 134, 135.

Hexandria, t. 60.

Octandria, t. 46, 91.

Decandria, t. 105.

Dodecandria, t. 37, 40.

Polyandria, t. 21, 28, 29, 30, 56.

Didynamia Gymnospermia, t. 25, 26, 61, 137.

Angiospermia, t. 42, 93, 138.

Tetradynamia, t. 41, 49, 50, 51, 57, 70, 71,

92, 95, 101, 103.

Diadelphia Hexandria, t. 68.

Decandria, t. 1, 2, 3, 8, 9, 13,
15, 16, 19, 34, 47, 48, 52, 53, 86, 100,
115, 116, 117, 129.

Syngenesia Polyg. *Æqualis*, t. 131, 132, 144.

Superflua, t. 73, 74, 85, 109, 110,
123.

Frustranea, t. 111, 130.

Monoecia, t. 10, 11, 12, 69.

Dioecia, t. 140.

Polygamia Monoecia, t. 122.

Seven of the classes are here] wanting, not to mention Cryptogamia; namely Monandria, Hep-
tandria, Enneandria, Icofandria, Monadelphia,
Polyadelphia, and Gynandria.

Since the commencement of our humble work, we have to congratulate our countrymen, and the civilized world at large, on the institution and progress of the Board of Agriculture, which has already done more for this most useful of all arts, than ages before had been able to accomplish,

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